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EXPLANATORY MODEL OF PSYCHOSIS: IMPACT ON PERCEPTION OF SELF STIGMA BY PATIENTS IN THREE SUB-SAHARAN AFRICAN CITIES

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INTRODUCTION

Mental disorders are cross-culturally ubiquitous [1]. Psychosis is, by far, the more easily recognisable form of mental disorder by the lay public and traditional healers [2]. While the experience of psychosis is universal, interpretation of the experience, notions of causation, treatment, preferred source of care, and the consequences and perceptions of associated stigma vary from one culture to another [3–7]. Biological (medical) attribution of symptoms predominates in western cultures, while supernatural and psychosocial attributions are commoner among non-western cultures. Most cultures in sub-Saharan Africa subscribe to the belief that the root cause of psychosis is supernatural, often characterised by afflictions/possession by evil spirits and being a victim of witchcraft [8–12]. This notion of supernatural causation of psychosis is not limited to, or unique to cultures south of the Sahara as there are reports of the Bedouin Arabs [13], Algerians [14], Haitians [15] as well as Indians [3, 16] with similarly strong beliefs in the supernatural causation of psychosis.

Cultural models of psychosis inform diagnosis and treatment and the perceptions of stigma by individuals with psychosis in many cultures. The experience of psychosis can also confer a specific cultural status. For example, residents of Bali (a Pacific island) believe that to

Ethical standards: This study was approved by the ethics review committee of the participating institutions and has been carried out in full compliance with standards laid down in the 1964 declaration of Helsinki and its later amendments. All respondent gave informed consent prior to the interviews.

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become a traditional healer one has to experience an episode quite similar to psychosis which when resolved without active treatment is confirmation that an individual has been selected supernaturally to be a healer and hence endowed with special ability and powers [17].

Stigma as conceptualised by Goffmann (1963) is a process of social construction of identity that takes an individual from the position of being “normal” to that of being discredited or discreditable [18]. Link and Phelan (2001) expanded this view further by elucidating factors whose co occurrence result in stigma namely labeling, stereotyping, separation, status loss and discrimination [19]. Stigma has been identified as a major barrier to recovery from mental illness and impacts on whether an individual will seek care and what their pathway to care will be [20]. Stigmatizing attitudes to the mentally ill by the community, and especially to people living with psychosis, has been shown not only to be prevalent but also strongly associated with explanatory models of illness causation [21].

Earlier work on stigma focused on the stigma of mental illness from the perspective of the public. More recently, the prevalence and importance of self-stigma (internalised stigma) in patients with psychosis and other mental disorders have become a growing focus of mental health research. Yanos et al (2008) described self-stigma as a transformation process whereby one’s previously held identity is supplanted by a stigmatised less desirable view of one’s self [22]. Self-stigma has been associated with low self-esteem [22–26], poor coping skills [27] and ultimately poor recovery from psychosis [25]. As self-stigma has been identified as a potential barrier to recovery in patients with psychosis, a number of interventions directed at reducing self-stigma have been developed [22, 28–31].

However, few studies have explored the link between the explanatory model held by individuals with psychosis and the experience of self-stigma [3]. Previous research on explanatory models of psychosis in relation to stigma have been quantitative in design, leaving unanswered the ultimate question of what in the content of the belief system of causation predicts the presence (or not) of self-stigma. If this is identified it can be included as a focus of intervention to reduce self-stigma and to promote recovery. This study aims to explore the relationship between explanatory models for psychosis through in depth interviews and perceptions of self-stigma using a stigma scale. We report on the analysis of interviews with individuals seeking care for psychosis from traditional medical practitioners conducted in three sub-saharan African cities.

METHODS

Design

We used a mixed-methods approach consisting of in depth interviews with key informants to explore respondents’ explanatory models of the causation of psychosis as well as questionnaire assessment of the level of internalized (or self) stigma. Our key informants were patients receiving care for psychosis at complementary and alternative practitioners’ facilities. They were interviewed with McGill Illness Narrative Interview (MINI) [32], described below, and were also administered the Internalised Stigma of Mental Illness (ISMI) [25] scale concurrently in a triangulation design model. The choice of a scale over

interview in establishing stigma is borne of the need to study atypical cases which is achievable by categorizing stigma. Key informant interviews are often conducted with knowledgeable individuals about a program or process. These individuals can be program coordinators, managers, executives but may also include beneficiaries of the program. Our respondents are not only beneficiaries of a mental health treatment system but also have unique experiential knowledge of stigma of living with mental illness.

Instruments

The conduct of the interviews was guided by the specifications of the McGill Illness Narrative Interview (MINI) [32], a semi-structured interview guide which, among other things, elicits lay illness narratives. The MINI has five sections with the section on explanatory model of illness from the perspective of the patient being the focus of this study. The explanatory model narrative section of the MINI explores the individual's understanding of the causes of his/her illness (both primary and secondary causes), reasons why the illness started, the meaning of the illness to the respondent, and the response of others to the presence of the illness in the individual. The stigma assessment was carried out using the ISMI [25]. This is a 29-item self administered questionnaires with 5 sub-domains of alienation, discrimination experience, social withdrawal, stereotype endorsement and stigma resistance. It has been validated in several languages and has been shown to have good psychometric properties [33–35]. A multinational review of its validation studies reported good reliability and validity, including the Yoruba and Swahili versions [36]. A Cronbach's alpha of 0.90 for internal reliability and a test-retest reliability coefficient of 0.92 have been demonstrated for the tool [25]. It has also been used in several studies in Africa [37, 38] with a Cronbach's alpha of 0.84 and a test retest reliability coefficient of 0.86 in a Nigerian population [37]. Each item on the scale is scored from 1 to 4 likert scale. Both the MINI and the ISMI instruments were translated to the local language of the respective study site by a panel of bilingual experts using iterative back translation method.

Setting

Interviews were conducted in Ibadan (Nigeria), Kumasi (Ghana) and Nairobi (Kenya) at the premises of Complementary and Alternative Practitioners (CAPs). Respondents were persons receiving care for severe mental disorders in these facilities as determined by the research assistants who had earlier been trained on identifying signs and symptoms of psychosis. A review of the symptoms at presentation as reported by the caregiver and the CAPs ensured the sample was comprised of patients with psychosis. Those who were judged to be well enough by the CAPs to participate in the study, who were aged between 15 and 65 years and who provided informed consents were included. Subjects with physical illnesses alone or comorbid with mental illness, as well as those who were too ill to be interviewed were excluded from the study. Interviews were conducted in private (i.e., in the absence of the proprietor of the facility), as far as this was possible to minimize response bias.

Data Collection Procedure

A purposively selected sample of patients who were receiving treatment from traditional healers was interviewed. The purpose of the interview, as well as the wider focus of the project (Partnership for Mental Health Development in sub-Saharan Africa (PaM-D), was

explained to respondents. Written consent for audio recording of the interviews was obtained from the informants prior to the commencement of the interview sessions. The interviews were conducted in the local language of each site. Each session lasted 60 minutes on average. Each session was moderated by a research assistant with a background in social science who was experienced in conducting qualitative studies. The research assistants were Graduate students pursuing MSc/PhD degrees in the humanities at the respective collaborating Universities. The research assistants were experienced in conducting mental health research and had received prior training in identifying severe mental illness. The audio recorded sessions were transcribed, translated into English and coded. A pilot of the interviews were conducted at each of the sites to ascertain the ease of understanding of the questions, the average time for administration as well as the acceptability to informants. Data was collected from March 2013 to June 2014.

Analysis

The transcribed interviews were read several times by the first author and subjected to thematic analysis. Following sufficient familiarization with the data, emerging themes were coded using MAXQDA software. Initial codes were generated based on two broad themes from the literature namely supernatural and biopsychosocial themes. Further exploration of the data resulted in the assignment of subcodes namely witchcraft, spiritual attacks, biological, stress and drugs and alcohol. The coding was done by the first author (VAM) with rigorous efforts at cross validation achieved by presentation of the data to co-authors at several research meetings where the process of the coding was discussed, critiqued and suggestions incorporated. This step ensured fidelity of assignment of codes and subcodes to the narratives as well as ensuring that there was a consensus process with regards to other aspects of the analysis and report writing. Ratings on the ISMI Scale were categorized into minimal, mild, moderate and severe scores, corresponding to levels of reported self-stigma by the respondents using a scoring system earlier employed by Lysaker et al. (2007) [24]. The two extremes reported as high and low scorers correspond to minimal or severe categories of Lyserka et al (2007) [24]. Respondents in these categories were identified and the content of their explanatory models of causation scrutinized for any recurring theme or associations.

Ethics

Permission from the proprietors of the CAP facilities was sought and obtained. Rapport was initially established through group meetings with their respective associations. Informed consent was obtained from both the patients with a separate signed consent for audio-recording of the sessions. Ethical approval was obtained from the respective Institutional review Boards of the three study sites.

RESULTS

Twenty four (24), 31 and 30 interviews were conducted in Ibadan, Kumasi and Nairobi respectively. The mean age of respondents per site was 34 $\pm$ 8.7, 31 $\pm$ 9.4 and 33 $\pm$ 10.6 respectively. The majority of respondents were aged between 15–44 years (83, 90 and 83%

at the three sites, respectively). Other sociodemographic features of the respondents are as shown in Table 1.

Self -stigma

Employing the four-category method previously adopted by Lysaker et al (2007) [24] revealed that 42.1 % of the Nigerian respondents had a high (severe) perception of self-stigma while the respective figures were 20.7% and 37.5% for Ghanaian and Kenyan respondents.

Frequency of explanatory models

Overall, the two main themes, supernatural and biopsychosocial, were evenly expressed by the respondent with a slight preponderance of biopsychosocial attribution (table 2). Table 2 goes here.

Relationship between explanatory models and self stigma

The explanatory models proffered by people with scores at the two extremes were explored for discernible trends and themes. Those with minimal or no stigma (<2) (low scorers) were contrasted with those with severe self-stigma (3 and above) (high scorer) on the four categories scoring style. There was a clear trend with the biopsychosocial explanatory models of illness being more commonly employed by low scorers on the internalised stigma scale (no stigma) while the majority of high scorers tended to hold supernatural beliefs. While only four (4) out 12 respondents (33.3%) who reported low self stigma reported supernatural attribution, 14 out of 20 respondents (70%) with severest form of self stigma reported supernatural attribution across the 3 sites.

Low scorers—The majority of the low scorers held biopsychosocial views of causation. A respondent from Ghana among the low scorers summarized her view of the cause of her illness thus:

“because this problem started when I started going out (dating) with a man; then people will gossip about me to him; so the man stopped the relationship with me after I had delivered a baby; taking care of myself and the baby became a problem, so I think about it and that brings (brought) back my problem.”

Another low scorer from Kenya believed her illness had no supernatural cause as she was born with it:

“I was told that I had it from birth so I guess I was born with it”

A male respondent from Nigeria who endorsed the biopsychosocial model of causation described a scenario of persistent fever being the cause of his experience of psychosis:

“Then it started with rise in body temperature and I realized the temperature continued rising for three days, then I experienced that I (was) no more able to control myself, at times any single person I saw turned double, and even male looked like female. Then one of my closest (friends) confirmed to me that what

(had) happened to me (was) not ordinary malaria but chronic fever which needed urgent attention...”

Stress and “thinking too much” were reported as factors by several respondents who endorsed the biopsychosocial explanatory model. A male respondent from Nigeria ascribed the cause of the illness to excessive thinking or rumination about a difficult circumstance in his life.

“Another cause that is common is whenever someone is thinking too much about a particular thing that continued to worry (bother) him/herself.”

Few of the low scorers (33.3%) ascribed a supernatural origin to their illness and when they did, their description often had a religious connotation. A 46 year old female respondent from Nigeria opined thus:

“What I observed was that I received a call to the Lord’s vineyard and that was when I was challenged health wise.”

Similarly a 31 year old male respondent from Ghana reported:

“When I was a child I received a spiritual gift that I was supposed to utilize but I kept it without using it and instead of telling my parents so that they could do something about it, I didn’t tell them and now it is haunting me. I was at work one day and suddenly the illness started”-

Another low scorer, a 40 year old female from Ghana with supernatural attribution also reported the possibility of the illness being of religious origin:

“,,as at the time illness started, I used to attend a church that is a spiritual church . When we prayed, my tongue would be turning. I then went for prayers and was told I was being anointed (being supernaturally endowed with spiritual powers) but I didn’t believe initially. Afterwards the experience kept recurring”

High scorers

Respondents with high self-stigma (i.e., score 3 and above) were more likely to ascribe a supernatural cause to their illness. A central theme of the narratives of respondents in this category was the role of supernatural forces in the etiology of their illness. This may be through witchcraft or a “spiritual attack” out of envy by others. A fifty year old female respondent from Nigeria asserted that

“It was all those evil spirits that caused the chronic fever”.

A thirty nine year old male respondent from Nigeria affirmed his believe in the supernatural origin of the illness thus

“As you know, it seems as if it involved evil-doers, when there is a disagreement between one and others...”

A thirty two year old male respondent from Nigeria expressed an emphatic believe in the illness being of supernatural origin through a spiritual attack:

“From my own experience, I do not think there is anybody that cannot be spiritually attacked, because my own attack was from my working place, but my prayer is for God’s protection and guidance, because those people that attacked me spiritually came down to Ibadan to plead for forgiveness. Although whenever evil-doers attack, it is usually done as group, they never act alone.”

A thirty seven year old male (Nigerian) respondent was convinced that seeking care from orthodox sources was a waste of time based on his conviction that the illness was of supernatural origin

“It was so strange to me, and this makes me to believe that there is spiritual attack, and most of these madness (people living with psychosis) that roamed the street are not responsible for their plight but have been afflicted by spiritual attack, and this is the reason it is difficult to cure because it cannot be medically cured, it cannot be cured with medical ways of treatment but in traditional ways.”

Similar narratives were endorsed by respondents from Ghana and Kenya. A twenty four year old female respondent from Ghana believed the reversal of a curse she placed on someone was responsible for her illness:

“I was staying with someone in Kumasi and the person was a pastor. I got pregnant and the servant of the pastor was responsible and he was in school at that time so he denied the truth and I cursed him. He later came with his mother to ask for forgiveness so he gave me 50 Cedis to go to the hospital. They took care of me when I gave birth so that resulted in the illness as the healer told me. She said it is the curse that has turned on me.”

A belief that the cause of the illness being was witchcraft was alluded to by a 46 year old man from Kenya:

”my illness is caused by witchcraft. I was attacked with illness due to jealousy from neighbours as I was doing very well before the attack”

However, supernatural explanations were not universal among high scorers with some respondents ascribing biopsychosocial reasons for the illness. For example: a forty year old male respondent from Kenya was of the view that the illness could be a consequence of stress resulting from coping mechanisms being overwhelmed.

“What I think is that, too much stress and thoughts could have caused the mental illness too. You know your thoughts are determined by the amount of problems you have- you can be having a problem that you can’t even solve and it eats you up”.

A thirty three year old male respondent from Nigeria reported anxiety about a job promotion being the cause of his illness

“Well what caused it was that I was very young then, my former job required more experience than I possessed then for me to be promoted ... so the anxiety for promotion caused my sickness.”

A thirty year old male respondent from Ghana reported a dual attribution (both biopsychosocial and supernatural causes):

“Sometimes it is caused by alcohol, cannabis, stealing and sometimes people can buy it for you*.” *(the phrase buy it for you means to be afflicted or attacked spiritually)

DISCUSSION

Negative attitudes and stigma towards people with mental illness by the public are rife and many publications have documented this [21, 39, 40]. Research reporting stigma from the perspective of the person with the illness is a growing area of interest. [41–44]. The majority of respondents in this study reported experiencing stigma as a consequence of their psychotic disorder. High perceptions of self-stigma in individuals with mental disorders have been reported across cultures. The few reports from Africa are not dissimilar to those from elsewhere [38, 44]

Respondents from Nigeria and Kenya were more likely to report high perceptions of self-stigma compared with respondents from Ghana. This is an interesting finding given the broadly similar cultural and social attributes of these countries. Furthermore, a previous study from Ghana reported high stigmatization of the mentally ill by the community in Southern Ghana and more negative attitudes toward people with mental illness by students attending high school and colleges in Ghana compared to their American peers [44]. Qualitative studies have also reported high perceptions of stigma by the carers of persons living with mental disorders [45, 46]. However, Quinn (2007) reported less stigmatizing attitudes towards the mentally ill in more rural areas of northern Ghana compared to more urban areas in a study comprising using community interviews with relations and carers of people living with mental illness [45]. Our interviews were conducted on respondents from the rural and semi urban areas of Brong Ahafo and Ashanti regions; this may partly explain the relatively low rate of perception of self stigma among the respondents in keeping with the earlier reports by Quinn (2007). A similarly plausible explanation is that respondent from Ghana were significantly more likely to have a secondary level of education and its attendant benefits of employment and lower tendency to be poor. stigmatising attitude has been reported to be less the higher the level of education [39, 40] .

Explanatory models of illness have been shown to impact on perceptions of stigma in people living with mental disorders. Among respondents in our study with a high perception of self stigma (those with ISMI score of 3 and greater), supernatural attribution predominated (70%). Charles et al (2007) reported similar findings in their study in India that explored the impact of explanatory models on perceptions of self-stigma [3]. This appears to mirror findings in studies that focused on the public’s attitude towards people with mental illness. Gureje et al (2006) and Adewuya et al. (2008) reported negative attitudes towards people with mental illness by the public with significant associations with religio-magical or supernatural causations of mental illness [21, 40]. The predominance of supernatural beliefs of causation among individuals with high self-stigma is therefore not unexpected. The respondents in this study are a product of the society they live in and the socialization processes that predominate; hence they would be expected to internalize negative societal attitudes prior to illness onset to such an extent that once illness sets in these negative attitudes are not mitigated.

However, a few of the respondents (33.3%) who had a low perception of self stigma also endorsed had supernatural attributions. This suggests that supernatural attributions are not synonymous with high or severe forms of self stigma in the respondents. Exploration of the responses of the four respondents in this category revealed a consistent theme of the illness being a sort of religious experience with the narrative being that of being called to serve God or some manifestation of being supernaturally gifted. Similar findings have previously been reported by Franklin et al (1996) who, in their work in Senegal, observed positive attitudes towards individuals with mental illness despite prevalent beliefs in supernatural causes[47]. The key factor as described by the authors is the absence of blame ascribed to the patient as relatives regard supernatural causes as being out of the control of the patient. In a qualitative study of four regions in Ghana, (Quinn 2007) reported universal positive attitudes and acceptance of individuals with mental illness in rural areas of the Northern region in the presence of overwhelming endorsement of supernatural causation [45]. He highlighted the fact that this could be explained by the majority of supernatural causes being ascribed to “bad spirits blowing in the air” which may absolve patients of any responsibility or complicity in the development of their illness. Our finding of religion mitigating the perception of self stigma among respondents may, in part, explain why patients are absolved of blame. Being called to serve God is usually viewed in a positive light and arguably something to be desired, in these three cultures studied.

The aforementioned findings strongly suggest that the determinants of internalized stigma and negative attitudes of the public towards the mentally ill are more than just the endorsement of supernatural explanatory models, as has been reported in quantitative studies. This strongly suggests that the content as well as the context of the explanatory models or beliefs about causation are as important as the endorsement of supernatural causation with regards to the development of self-stigma and its attendant consequences.

Given the complexity of the interaction between explanatory models of causation and perceptions of self-stigma among individuals with psychosis, universal interventions designed to reduce or minimise self-stigma may, of themselves, be insufficient. In this study and a study by Charles et al (2007) in India, explanatory models may have both aggravating and mitigating effects on self-stigma (depending on the presence or not of blame on the patient) [3]. Furthermore, the dynamism of an explanatory model of psychosis needs to be accounted for, as demonstrated by Johnson et al (2012) in a five year follow up which found that there was an increase in the number of non-medical explanatory models year on year [48]. The authors have suggested that this reflects the recruitment of non-medical models to cope with the persistence of symptoms despite seemingly adequate medical treatment received by their cohort. Despite previous associations of supernatural explanatory models with poorer insight and more psychopathology and the obvious desirability of the biopsychosocial model by western trained psychiatrists, interventions designed to educate against supernatural explanatory models need to be embraced with caution. This is important as the base or support upon which the self-esteem of some patients stands may be inadvertently eroded leading to despondency, hopelessness and suicide.

Strengths

The strengths of this study include the conduct of the interviews in three country sites which afforded cross-site comparisons to be made and the opportunity to explore explanatory models through qualitative interviews in addition to a self stigma questionnaire

Limitations

The cross-sectional nature of the study (interviews were conducted once only) precludes any conclusions on causality. The only longitudinal study on explanatory models has shown that the explanatory model are in fact dynamic and lends themselves better to longitudinal assessment [48]. Another limitation could be the small sample size. While 85 interviews may seem adequate for a qualitative study sample, same cannot be said of a quantitative scale such ISMI. Exploring the correlates of self stigma in a non randomly selected sample may be tenuous. Furthermore, we could have recruited more respondents from Nigeria in view of the country being the most populous of the three study sites. The populations studied were attendees of traditional healing facilities in a defined and selected catchment area. This could have introduced an inherent bias and limit generalisability of the relationship between explanatory model and self stigma to patients receiving care from orthodox facilities. It would be desirable in future studies to include samples drawn from both conventional and traditional healing centres. There may also be some limitations of the applicability of a Western derived stigma scale to respondents in a non-western culture. This said, the stigma scale used has been reported to have good cross-cultural validity and reliability [36].

CONCLUSION

Supernatural and biopsychosocial explanatory models of the causation of psychosis were both endorsed by our respondents. Despite this, the majority of the respondents with severe forms of self stigma held supernatural attributions. . However, we also found that some respondents with low self-stigma embraced a supernatural model while some respondents with high self-stigma proffered a biopsychosocial explanation. Our findings suggest that individualising interventions to minimize self-stigma may be a better approach than programs that generically promote biopsychosocial models or discourage supernatural models.

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Figure 1.
Showing the degree of perception of Self Stigma among respondents across the three sites

Table 1

Sociodemographic variables of the respondents

Characteristics	Nigeria N (%)	Ghana N (%)	Kenya N (%)	Statistics Chi ²	P-value
Age					
15–29	6(25.0)	14(45.2)	12(40.0)	2.928	0.570
30–44	14(58.3)	14(45.2)	13(43.3)		
>=45	4(16.7)	3(9.7)	5(16.7)		
Gender					
Male	17(70.8)	23(74.2)	16(53.3)	3.316	0.191
Female	7(29.2)	8(25.8)	14(46.7)		
Marital status					
Single	10(41.7)	15(48.4)	17(56.7)	2.425	0.658
Married	9(37.5)	8(25.8)	9(30.0)		
Others	5(20.8)	8(25.8)	4(13.3)		
Employment status					
Employed	20(83.3)	19(61.3)	12(40.0)	17.757	0.001 *
Unemployed	2(8.3)	9(29.0)	18(60.0)		
Others	2(8.3)	3(9.7)	-		
Education					
0–6	14(58.3)	4(12.9)	6(20.0)	17.409	0.002 *
7–14	7(29.2)	22(71.0)	22(73.3)		
15–21	3(3.5)	5(16.1)	2(6.7)		
Religion					
Christian	11(45.8)	25(80.6)	28(93.3)	36.025	P<0.0001 *
Islam	13(54.2)	3(9.7)	-		
Traditional	-	3(9.7)	-		
others	-	-	2(6.7)		
Respondent gone to bed hungry for lack of food					
No	11(45.8)	25(80.6)	15(50.0)	8.762	0.013 *
Yes	13(54.2)	6(19.4)	15(15.0)		

* significance@p<0.05

Table 2

showing the frequency of codes (themes) and subcodes (MAXQDA software)

Themes (Codes)	Frequency	Percentage	Total
Biopsychosocial			
Biological *	28	42.42	50.8
Drugs and Alcohol	13	19.70	
Stress	25	37.88	
Supernatural			
Witch craft	25	39.06	49.2
Spiritual attack	39	60.94	

* = this includes severe malaria, chronic or high fevers, and seizure disorder