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Role of Spirituality in Quality of Life of Patients with Schizophrenia

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Abstract

Background: Schizophrenia is a chronic disabling condition that affects approximately 24 million people globally which translates into 1 in 300 people worldwide. Despite spirituality's ability to bolster patient resilience, the exact role of spirituality in the recovery process of patients with schizophrenia is still unclear. This study aimed at assessing the role of spirituality in the quality-of-life of patients with schizophrenia in Ghana

Methods: This was a descriptive cross-sectional study of patients aged 16 yrs and above who were already diagnosed of schizophrenia and attending out-patient unit of Korlebu Teaching Hospital and Accra Psychiatric Hospital. The Socio-demographic questionnaire, World Health Organization Quality of Life brief Version (WHOQOL-BREF) and the Santa Clara Strength of Religious Faith Questionnaire (SCSRFQ) were used. The domains of WHO-QOL and total level of spirituality were presented in frequencies and proportions. Socio-demographic characteristics such as age, gender, ethnicity marital status, religion and education were subjected to correlation at significance of 5%. All associations were subjected to linear regression at significance of 5% and 95% confidence interval.

Results: 102 participants were recruited. Age ranges from 16 to 70 yrs with a mean of 37.5 (SD13.3). 52.9% (54) were males and 47.1 % (48) were females. Participants had good level of spirituality with a mean score of 33.08(SD 4.82) All participants had good quality of life all the four domains (Physical mean score 67.59, psychological 68.37, social 73.37 and environmental 68.84). Spirituality positively correlated with physical domain ($r(102)=0.249$, $p<0.05$) and social domains of the WHOQOL ($r(101)=0.366$ $p<0.05$) respectively. It is also negatively correlated with psychological domain of the WHOQOL ($r(101)=-0.202$, $p<0.05$). Gender, ethnicity and educational level were predictors of spirituality ($p<0.05$).

Conclusion: Spirituality has association with specific domains of the quality of life of patients living with schizophrenia, and should be considered in planning care of patients as it may influence recovery process.

Keywords: World Health Organisation quality of life (WHO-QOL); Schizophrenia, Santa clara strength of religious faith questioanaire (SCSRFQ). Korlebu teaching hospital (KBTH); Accra psychiatric hospital (APH)

Introduction

Background

Schizophrenia is a chronic disabling condition associated with impairments in a patient functioning [1]. It is a serious mental illness and often characterized by lost touch with reality affecting the way the person thinks, feel, and behave adversely impacting functioning [2]. According to World Health Organization [3], schizophrenia is characterized by impairments in the way reality is perceived and changes behaviour related to persistent delusions, persistent hallucinations, and experiences of influences, disorganized thinking, highly disorganized behaviours and extreme agitations with sometimes negative symptoms. Quality of life is defined by WHO is "individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectation, standards and concerns [4]. There has been growing concern of the quality of life of patients with schizophrenia because its severity, disabling and lifelong impact on their social and occupational functioning [4]. There has been increasing attention of the association between spirituality and mental illness. Spirituality refers to "one's search for meaning and belonging and the core value that influence one's behaviour" while religiosity is refers to "shared beliefs system and communal ritual practice" [5]. However spirituality is synonym with religiosity with some authors [5]. Spirituality has the tendency of increasing the delusions of some patients with schizophrenia. For instance some may belief that they are God sent and they are great prophets however for some spirituality helps in their process of recovery of some patients. Spirituality also helps in making sense of the world in the way they could not when suffering from psychotic delusions thus improve their quality of life [6]. Fiagbe et al. [7] highlighted that phonemic fluency correlated positively with physical health and environment health thus creates or improves the quality of life of patient with schizophrenia. The study also showed that social relationships of the WHO quality of life correlate negatively with Montreal Cognitive global score, this shows that patient with high neurocognitive function are able to understand relationship matters and this explicitly identify stigma, abuse and poor reciprocal relationship with relative and neighbour therefore have effect on their quality of life. The same study showed strong social relationship with religiosity thus indirectly improve quality of life of patient with schizophrenia, considering in Ghana many churches encourages members to attend

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church regularly and this in the long-term foster strong relationship which patient can utilize to improve their quality of life [7]. The prevalence of religious delusions in schizophrenia is high ranging from 21% in Western Europe to 64% in Luthania. Spirituality provides resources for coping with symptoms of schizophrenia while in other cases; spirituality is a source of suffering [8]. With regards to treatment, a study in India indicated that many patients with mental disorder seek spiritual help first and consider spiritual factors as a causative agent and there is a gradual consensus forming that spirituality makes a significant and distinctive contribution to quality of life [9].

Problem statement: Schizophrenia is one of the top 25 leading causes of disability worldwide and accounts for a tremendous economic burden to patients, families, caregivers, and wider society [10]. Despite spirituality's ability to bolster patient resilience, the exact role of spirituality in the recovery process of patients with schizophrenia is still unclear. These knowledge gaps have led to speculations that retard the clinician decision to include or exclude spirituality and related therapies in their management plans. It is therefore expected that this research will bridge the gap and provide data that will assist clinicians in the management of schizophrenia and inform policy makers.

Aim of the Study

- To assess the role of spirituality in quality of life of patients with schizophrenia

Specific Objectives

- To assess the quality of life of schizophrenic patients
- To determine the relationship of spirituality with quality of life of schizophrenia
- To determine the socio-demographic predictors of quality of life

Methodology

Study location and population

The study was conducted in two [2] different institutions; One hundred and two patients with schizophrenia receiving antipsychotic treatments at the Korle Bu Teaching Hospital as well as clients from the Accra Psychiatric hospital were recruited into the study. The study was conducted at the outpatient and in-patient sections of the psychiatric department in Korle-bu Teaching hospital. The study was conducted over a year. Korle-Bu Teaching Hospital (KBTH) is a tertiary referral centre located in the National capital of Ghana, Accra. The hospital is in the Ablekuma South sub-metropolis of the Greater Accra Region with bed capacity 2000 and twenty-one departments. The psychiatric ward, also known as the Brief Assessment Ward, is a 12-capacity bed operating under guidance of two consultant psychiatrist; there are seven specialist psychiatrists who see to the daily running of clinical cases on the ward. The ward had a bed occupancy of 50% in 2018. The outpatient however sees up to an average of 30 patients per weekday. Accra Psychiatric hospital (APH) is Ghana's biggest and, oldest psychiatric hospital. It has 20 wards. The outpatient section sees close to 100 patients per day. It is a major referral Centre for the country and the sub-region. It is open 24 hours to all psychiatric emergencies.

Study design: This study was a cross sectional descriptive study of patients attending the outpatient unit aim at assessing the role of spirituality in quality of life with patient with schizophrenia.

Eligibility criteria

Inclusion

- Patients diagnosed with schizophrenia for about six months
- Patient from the age of 16 years and above
- Patient that consented

Exclusion

- Patients with acute psychotic disorders
- Patient with substance use disorder
- Patient with severe co-morbid Neurological disease

Sampling technique

One hundred and two participants were recruited from the department of psychiatry of the Korle-bu Teaching Hospital and Accra Psychiatric Hospital for participation in this study. The sample size was determined by Cohen's [11] formula for clinical sample size determination. Cohen's statistical Analysis is regularly used in behavioural sciences for sample size determination. The four factors required in the determination include, significance level or criterion, effect size, power of study and estimated variance. α=0.05(the probability of wrongly rejecting the null hypothesis thus committing a type I error), effect size=ƒ 2=0.15(essentially measures the distance or discrepancy between the null hypothesis and a specified value of the alternative hypothesis. Each statistical test has its own effect size index), power is 0.8 (1-β), β is the probability of wrongly accepting the null hypothesis when is actually false thus committing a type II error. β=0.2. The last factor is the standard deviation; most studies have reported grand mean effect size of schizophrenia on cognitive performance of 0.98 standard deviations82. Using Cohen's table and the above parameters we deduced that a figure of 102 will yield significant statistical value using regression analysis which might lead to appropriate rejection of null hypothesis. N= ƛ/ƒ 2 is an alternate formula for obtaining sample size using the Cohen's approach. Simple random sampling technique was used as data was collected from the psychiatric department of the Korle-Bu Teaching Hospital and Accra Psychiatric Hospital; Based on average number of patients with schizophrenia in both institutions, 53 from Accra Psychiatric Hospital and 49 from Korle-Bu Teaching.

Study instruments

A socio-dermographic questionnaire, World Health Organisation Quality Of life Brief Version (WHOQOL-BREF), and Santa Clara Strength of Religious Faith Questionaire was used in the study. Demographic variables included gender of subject, age, length of stay, educational level and religion obtained directly from patient or guardian.

World Health Organization QUALITY OF LIFE BRIEF VERSION

The WHOQOL-BREF is a 26-item Likert type scale that assesses four domains of quality of life: physical health (e.g. "How much do you need any medical treatment to function in your daily function in your daily life?"), psychological health (e.g.: How often do you have negative feelings such as blue mood, despair, anxiety or depression?"), social relationships (e.g. "How satisfied are you with your sex life?"), and environmental wellbeing (e.g. "How safe do you feel in your daily life?"). There are various facets that are incorporated within the four domains. The WHOQOL Group [12] assessed Cronbach alpha for the four domains: physical health being 0.8; psychological health being 0.76; social relationship is 0.66 and environmental wellbeing is 0.80. Test

retest reliabilities for the four domains were 0.66 for physical health, 0.72 for psychological health, 0.76 for social relationship and 0.87 for environmental wellbeing. The WHOQOL-BREF was found to correlate 0.90 with the longer version of the instrument, the WHOQOL-1.

Santa Clara Strength of Religious Faith Questionaire (SCS-RFQ)

The Santa Clara Strength of Religious Faith Questionnaire (SCSRFQ) is a brief (10-item, or five-item short form version), reliable, and valid self-report measure assessing strength of religious faith and engagement suitable for use with multiple religious traditions as well as for people without any interest in or affiliation with religious organizations or traditions and perspectives. The scale is a 10-item instrument that includes a variety of brief statements about religious faith (e.g., "I pray daily", "My religious faith is extremely important to me", "I look to my faith as a source of inspiration") using a 4 point Likert-like scale ranging from strongly disagree to strongly agree. Studies that have investigated the internal consistency of the scale have found corrections ranging from 0.94 to 0.97 using Cronbach Alpha's and split-half reliability scores ranging from 0.90 to 0.96. The 10 items are then scored from 1 to 4 such that total scores range from 10 (low strength of faith) to 40 (strong strength of faith)91. A pilot testing was conducted to solve ambiguity and to check the validity, reliability and feasibility of the instruments or measures adapted. This was done prior to the actual collection of data. In the present study, the instruments were administered to ten medical students who were readily available from University of Ghana Medical School and these participants were not included in the actual study. Internal consistency reliability of the instrument was determined for the total and for the subscales using Cronbach's alpha. The computed Cronbach's alpha coefficients of 0.85 obtained for quality of life.

Data management: All data collected was cleaned, summarized in tables, charts and percentages. The Statistical Package for Social Sciences (SPSS) was used to analyze the data. Participants' socio-demographic characteristics were presented in proportions and frequencies for categorical data and mean, mode, median and standard deviation for the continuous data. . The qualities of life of patients were presented in percentages and frequencies. Levels of spirituality of participants are also presented in percentages and frequencies. Socio-demographics characteristics such as age, gender, ethnicity and marital status were subjected to correlation test at a significance of 5%. All significance associations were subjected to logistic regression at significance of 5% and 95% confidence interval.

Ethical considerations

Ethical approval: Ethical approval was obtained from The Ethics and Scientific Review Committee of the Korle bu Teaching Hospital The conduct of the study was guided by fundamental principles of voluntary participation; free, prior and informed consent; privacy and confidentiality. The consent form was clearly and fully described the nature of the study, and the rights of the participants to withdraw from the study at any time without penalty or consequences.

A total of 102 participants were selected for the study. All (100%) of the participants completed the interview. The findings from the participants in this study carried in Koele bu Teaching Hospital and Accra Psychiatric Hospital are presented by the objectives as follows:

- To assess the pattern of quality of life of patients with schizophrenia
- To determine the effect of spirituality on the quality of life of patients with schizophrenia
- To identify the predictors of poor quality of life in patients with schizophrenia.
- The socio-demographic characteristics provide background information about the entire sample population.

Socio-demographic characteristics: Out of the 102 participants 54(52.9%) were males and 49(47.1%) were females. The ages of the participants ranged from 16 to 70 years with an overall mean age of 37.4 (SD: ±13.3 years) Majority 53(52%) were recruited from APH and 49(48%) from KBTH. 18(17.6%). Table 1 shows the summary of the sociodemograhics characteristics. The Akans constituted 59.0 % (of participants in this study; this was followed by Ewes (23%) then The Ga/Ga Adangbes formed 15.0 % of the study population. This study indicates Christianity is the dominant N=93(91.2%) religion in the study population followed by Islam 3(2.9%). Three participants said they did not have affiliations with any religious sect. The study shows the marital statuses of participants as follows; fifty-four (54) participants were single representing 52.9% of the entire population under study. Thirty-six (36) participants were married representing 36.7%; one participant had under gone a divorce, six (6) were separated from their spouses and one person was unable to disclose his marital status. Three participants did not respond to interviewers. The Table 2 below shows some essential demographic information by gender. A significant proportion of males were diagnosed with schizophrenia for more than six years than their female counter parts.

Distribution level of WHOQOL domains among participants: The Table 3 below shows the various domains assessed by the WHOQOL. The Social Domain had the highest mean score (73.38) amongst all domains assessed.

Level of spirituality in proportion: The Table 4 below showed that most of the participants has good level of spirituality with a mean score of 33.0870.

Relationship of spirituality and the domains of WHOQOL: The Table 5 below showed that religiosity is positively correlated with physical(r=0.249, p=0.013) and social domains of the WHOQOL (r=.366 p=0.00) respectively. It is also negatively correlated with

Table 1: Demographic characteristics of the participants.

Variables Facility	Frequency (F)	Percentage (%)
Accra psychiatric Hospital	53	52.0
Korle Bu Hospital	49	48.0
Gender		
Male	54	52.9
Female	48	47.1
Age (mean, SD)	37.4(13.3)	
Duration of Diagnosis		
0.5-1 year	18	17.6
1-3years	18	17.6
3-6years	22	21.6
>6years	44	43.1
Educational level		
Primary	8	8.1
JHS/Middle Sch	18	18.2
SHS	15	33.3
Tertiary	40	40.4
No formal education	0	0.00

Table 2: Demographics characteristics by gender.

Variables	Category	Male	Female	Total
Age		X= 36.0 (SD=12.96)	X =38.9 (SD=13.65)	
Ethnicity	Akan	1	7	8
	Ewe	7	19	26
	Ga/Ga-Dangme	14	23	37
	Others	9	17	26
Marital Status	Married	17	19	36
	Single	32	22	54
	Divorced	0	1	1
	Separated	3	3	6
	Other	1	0	1
Estimated Duration of Diagnosis	6MO-1YR	10	8	18
	1-3 YRS	11	7	18
	3-6 YRS	8	14	22
	>6YRS	25	19	44
Religion	Christianity	49	44	93
	Islam	1	2	3
	Others	2	1	3
Occupation	Unemployed	18	10	28
	Formal	9	7	16
	Informal	15	21	36
	Student	11	8	19
Religion	Christianity	49	44	93
	Islam	1	2	3
	Others	2	1	3

Table 3: Distribution level of WHOQOL domains among participants.

Domains	Cut-off	frequency	Percentage	Mean score	Std. Deviation
Physical	<60	58	56.9	46.3103	9.81622
	>60	48	43.4	67.5952	6.67379
	Total	102	100		
Psychological	<60	66	64.7	44.2121	10.63017
	>60	36	35.3	68.3793	5.15761
	Total	100	100		
Social	<60	66	64.7	41.6818	16.02897
	>60	36	35.3	73.3793	6.73166
	Total	102	100		
Environmental	<60	57	55.9	45.2807	12.30092
	>60	45	44.1	68.8421	5.99787
	Total	102	100		

Table 4: Distribution of participants with their level of spirituality.

Cut-off	Frequency	Percentage	Minimum	Maximum	Mean Score	Std Deviation
<=20	10	9.8	10.00	18.0	15.400	2.87518
>20	92	90.2	21.00	40.00	33.0870	4.82587
Total	102	100				

psychological domain of the WHOQOL (r=-.202, p=.001) r (101) =0.25 p<0.05.

Sociodemographics with spirituality: Age, gender, religion, ethnicity marital status, education and duration of illness have no statistically significant with religiosity/spirituality. This is illustrated in Table 6.

Discussion

This study is a descriptive cross-sectional study carried out to determine the role of spirituality in the quality of life of patients with Schizophrenia.

The findings of this study are discussed under three broad headings as follows:

- Socio-demographic characteristics of the participants
- The proportions of the domain of quality of life among the participants
- The proportion of level of spirituality among the participants
- Socio-demographic correlates associated with spirituality and quality of life

Socio-demographic characteristics of the participants: There are

Table 5: Correlation matrix of spirituality and the domains of WHOQOL.

		Physical	psychological	social	environmental
TOTAL SPIRITUALITY SCORE	Pearson Correlation	0.249*	-0.202*	0.366**	0.013
	Sig. (2-tailed)	0.013	0.050	0.000	0.432
	N	102	102	102	102

Table 6: Predictors of total religiosity score.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
GENDER	239.996	1	239.996	6.232	0.014
ETHNICITY	339.382	3	113.127	2.938	0.038
DURATION OF DGx	310.197	3	103.399	2.685	0.051
NO OF YRS EDU	167.347	1	167.347	4.346	0.04
PHYSICAL	208.753	1	208.753	5.421	0.022
PSYCHOLOGICAL	104.238	1	104.238	2.707	0.103
SOCIAL	130.809	1	130.809	3.397	0.069
ENVIRONMENTAL	14.887	1	14.887	0.387	0.536
Error	3388.693	88	38.508		
Total	104193	101			
Corrected Total	5012.554	100			
a R Squared = .324 (Adjusted R Squared = .232)					
a R Squared = .324 (Adjusted R Squared = .232)					

more males (52.9%) than females and the age range from 16 years to 70 years. This could be attributed to the fact that males have earlier onset of schizophrenia than females [13]. As well as been diagnosed of schizophrenia 1.4 times more than females [14]. The study showed more participants being single (55.2%) than being married (36.7%). This is in keeping with a study that single status people have higher risk of having psychotic disorder than married people who have feelings of reciprocity and sharing thus decreasing the risk of developing schizophrenia [6]. The study illustrated that most participants were Christian 91.1% (N=93) compare to other religions, this could be attributed to the fact that Christianity accounts for 71.3% of the population of Ghana [15].

The proportions of domains of WHOQOL among the participants: The study showed that overall quality of life among the participants was good in all the domains as illustrated by their means scores (physical domain mean score of 67.59, psychological domain mean score of 68.38 social domain mean score of 73.3793 and environmental health mean score of 68.84 respectively. This is in-keeping with a study in schizophrenic patients attending community mental health centre in Italy indicated a quite satisfaction of their quality of life similarly Schizophrenic patients in Riyadh, Irbid, and Jordan showed a relatively good quality of life irrespective of age and sex [16].

The proportion or level of spirituality among the participants: The study revealed a good level of spirituality among the participants with a mean score of 33.0870; this is in keeping with a study on religiosity among patients with schizophrenia which demonstrated a high level of religiosity among the participants with schizophrenia [17]. Sylvia et al [18] revealed that spirituality in schizophrenia was high because 60% of patients extensively used spirituality as their coping strategy to their illness. A study in Germany reported a 61% of patients living with schizophrenia rated they to be religious and similarly a study conducted in India with patients with schizophrenia showed almost 99% being participatory in religious activity [17]. A study conducted in United State showed 91% of patients with schizophrenia are involved in private religious activities [17]. However high level of spirituality is associated with religious delusions and hallucinations but spirituality helps in making sense out of the world during this psychotic symptoms, thus improve their quality of life [19]. This study revealed that good level of spirituality was associated with good quality of life both physical and social domains of the WHOQOL ($r(101)=0.249$, $p=0.013$) and $r(101)=0.366$ $p=0.001$) respectively. The study also indicated that participants with higher spiritual level had a poor performance in their psychological domain of WHOQOL ($r(101)=-0.202$, $p=0.05$). This is similar to a study on contribution of spirituality to quality of life of patients living with schizophrenia which showed that spirituality was significantly correlated with all the domains of the WHOQOL scale [9]. However, the poor performance in the psychological domain of WHOQOL with level of spirituality could be related to the fact the long duration schizophrenia is associated with cognitive decline that can affect their psychological well-being [20]. This study showed that there is no gender difference in quality of life patients which is similar to a study in Singapore of patients with schizophrenia attending outpatient unit which showed no gender difference in quality of their life of person living with schizophrenia [21]. The study demonstrated that gender has no significant association with quality-of-life, this is consistent with a study in Ethiopia on schizophrenia patient attending out-patient unit [22]. However this study also showed that age has no significant association with quality of life which is contrary to a study by Hsiao et al. [23] on quality of life of individuals with schizophrenia living in the community which showed a significant relationship with age and quality of life of people living with schizophrenia, this study used Pearson and Spearman's coefficient to detect the association between quality of life and the sociodemograhics variables, we used the multiple regression analysis. This study also highlighted ethnicity and higher educational level as a predictor of spirituality; this is similar to Munro et al. [24] who demonstrated that ethnicity builds a sense of identity of people living with schizophrenia. Zafar et al. [25] also showed that higher educational level is related with increase spirituality in people living with schizophrenia. Gender is also a predictor of spirituality in this study, this is consistent with Duno et al. [26] which shows that women living with schizophrenia were more involve in spiritual activities than men.

Limitation

This study was a cross-sectional survey and therefore does not

depict causal relationship. In addition, the study was conducted in only two Psychiatric facilities of Ghana and may not be representative of the entire nation. However, a study done in all the regional psychiatric hospitals in the country may give a better representative data.

Conclusion and Recommendation

The study showed that patients with schizophrenia had good quality of life in all the domains of the WHOQOL scale and spirituality was related with good quality of life in social and physical health domains. It is therefore pertinent that health workers be aware of the spiritual context of their patients in the process of care. Policy makers should also consider spirituality in the protocol of care of persons living with schizophrenia. This study can serve as baseline for further studies in spirituality and quality of life of patients living with schizophrenia.

Consent for Publication

Not applicable

Disclosure

Authors declare no conflict of interest

Competing Interests

Not applicable

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Data Availability and Materials

Data will be made available on request

Authorship

DF was involved in the research design, performance of research, manuscript writing and data analysis. BN-P, SDJ, DA &EA contributed to the design and manuscript writing. KJ supervised aspects of the work.

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