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Article in *Clinical Schizophrenia & Related Psychoses* · December 2020

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In the community but not of it: The Social Integration of Nigerian Patients with Schizophrenia

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Abstract

Background: Schizophrenia is a severe and chronic psychotic disorder leading to impairment of most domains of cognitive functioning and functional disability. Social integration is central to the concept of recovery for patients with schizophrenia.

Aim and Objectives: To determine the correlates and predictors of social integration among patients with schizophrenia attending the outpatient clinic of the Neuropsychiatric Hospital in Abeokuta, Nigeria.

Methods: One hundred and fifty-one patients attending the outpatient clinic were recruited. MINI-PLUS (Psychotic module), Social Integration Scale, and PANSS were administered.

Results: Factors associated with poor social integration were being single ($F=3.116$, $df=2,148$, $p=0.047$), being unemployed ($F=5.169$, $df=2,148$, $p=0.007$), and PANSS negative score ($\beta=-1.133$, $t=-3.807$, $p=0.0001$). In the regression analysis, only unemployment ($\beta=4.337$, $p=0.025$) and greater severity of negative symptomatology ($\beta=-0.936$, $p=0.002$) emerged as independent predictors of poor social integration among the respondents.

Conclusion: Patients with schizophrenia have poor social integration. Clinicians planning rehabilitation of patients with schizophrenia should pay attention to factors that predict poor levels of social integration.

Keywords: Social Integration • Schizophrenia • Recovery

Introduction

Schizophrenia is a severe and chronic psychotic disorder characterized by positive symptoms (i.e., delusions, hallucinations, disordered thinking, and disorganized behaviors) and negative symptoms (i.e., deficits in motivation, affect, and socialization) [1]. It is associated with various degrees of impairment in several domains of functioning such as cognition and fulfilment of social roles, capability for employment and overall productivity [2–5]. As the treatment of schizophrenia emerged, it became increasingly evident that symptom resolution was not enough in getting the patients integrated fully into society; other areas of interventions, such as employment, shelter, and social interaction, needed to be addressed as well. Interventions are designed, pharmacotherapy being the mainstay, to achieve certain treatment goals that include: symptom remission, social integration, development of professional skills, and improvement in the quality of social interactions; these goals are summed up in the concept of recovery [6–9].

Social integration is central to the concept of recovery for patients with schizophrenia [10]. Social integration is a multidimensional construct for which several studies have used different terms such as social networks, social ties, social connectedness, integration, activity or embeddedness. Despite the multiplicity of these terms, there is a uniformity in the definition of social integration as involvement with ties spanning the range from intimate to the extended. The perception of being supported by a social network is

of major importance for community adaptation in individuals suffering from schizophrenia [11]. However, network sizes for patients with schizophrenia have been found to be smaller than for non-psychotic patients or healthy individuals, and where adequate, there is a low level of engagement [11,12]. The aim of this study was to determine the level of social integration among patients with schizophrenia attending a Nigerian tertiary hospital and to determine the sociodemographic and clinical correlates among them.

The study was carried out among patients with a diagnosis of schizophrenia attending the Out-Patient Clinic (OPC) of the Neuropsychiatric Hospital, Abeokuta, Nigeria. The diagnosis of schizophrenia was confirmed using the Psychotic module of the Mini-International Neuropsychiatric Interview (M.I.N.I. PLUS) a structured interview for the major Axis I psychiatric disorders in the DSM-IV and ICD-10 developed by Sheehan et al. [13]. Patients were recruited if they were aged 18 – 64 years, had no comorbid chronic medical illness or substance use disorder, and had no psychiatric admissions in the previous one year.

Materials and Methods

Measures

Social integration measured using the Social integration Scale (SIS) developed by Aubry et al. [14]. It is a 13 item self-administered questionnaire rated on a 5 point Likert scale that assesses the frequency

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Received 23 October, 2020; Accepted 06 November, 2020; Published 13 November, 2020

of social interaction with higher scores indicating a greater degree of social integration. Previous study has determined its suitability for use in a non-western setting [15].

Symptom Severity: measured using the Positive and Negative Syndrome Scale (PANSS) developed by Kay et al. a 30-item [16], 7-point rating instrument. It comprises of Positive, Negative, General Psychopathology, and Composite scales, with scores ranging from 7–49 for the Positive and Negative Scales and 16–112 for the General Psychopathology Scale. The Composite Scale is arrived at by subtracting the negative from the positive score, with scores ranging from -42 to +42.

Data collection method

Patients were recruited at the OPC while awaiting clinical consultation. Eligible patients were identified by going through their case notes and were approached to participate. The purpose of the study was explained and the voluntary nature emphasized. The patients were also told in clear terms that non-participation would not affect the quality of their care. Those who consented signed the consent form after which the study instruments were administered. To ensure confidentiality, serial numbers were assigned to the participants.

Data Analysis

The data were analyzed using the Statistical Package for Social Sciences (SPSS) version 21. Independent two-sample t-test and an ANOVA was used to test for associations between the clinical and sociodemographic variables and the Social Integration Scale. A linear regression analysis was performed to examine the relationship between the PANSS positive scale scores, negative scale scores, composite scores, and general psychopathology scores as independent variables, and the SIS score as the dependent variable. In order to identify the independent predictors of the SIS score, a multiple linear regression analysis was done using the variables that showed association with SIS in the bivariate analysis. The confidence interval for all the tests was set at 95% with the level of statistical significance set at $\alpha=0.05$.

Ethical Approval

Ethical approval was obtained from the Research and Ethical Committee of the Neuropsychiatric Hospital, Aro, in Abeokuta, Ogun State, Nigeria where the study was carried out.

Results

Of the 151 participants, 66 (43.7%) were females, 56 (37.1%) were single, 42 (27.8%) were unemployed, with mean (SD) age of 40 (10.2) years. Regarding the clinical characteristics, mean (SD) age of onset of illness was 29.2 (8.1) years, 99 (65.6%) developed illness between ages 25 – 45 years, 105 (69.5%) had two or more episodes, 86 (56.9%) had one or more hospitalizations in the past, and 101 (66.9%) had an illness duration of 6 or more years.

Table 1 shows the correlates of social integration. Respondents who were married had the highest SIS score with a mean ($\pm$ SD) score of 34.05 ($\pm$ 11.74) compared with those who were single (29.54 $\pm$ 9.44) and the SDW group with a mean score of 30.13 $\pm$ 9.66 ($F=3.116$, $df=2,148$, $p=0.047$). Being unemployed was associated with a lower SIS score (27.21 $\pm$ 10.50) compared with those who were employed (33.32 $\pm$ 10.00) and those who were retired/students (33.00 $\pm$ 12.55) ($F=5.169$, $df=2,148$, $p=0.007$). A regression analysis of the relationship between the PANSS scores and the SIS score was carried out, however the positive scale scores were

excluded from the analysis because it showed significant multicollinearity (Tolerance=0.000). Only the scores on the negative scale of the PANSS showed a significant association with the SIS score ($=-1.133$, $t=-3.807$, $p<0.0001$), demonstrating an inverse relationship between the PANSS negative scale score and the SIS score.

Table 1. Relationship between socio-demographic characteristics of the respondents and Social integration Scale scores.

Variables	Frequency	SIS Mean (SD)
Age (years)		
15 – 24	10	32.50 (10.64)
25 – 44	100	31.32 (10.87)
45 – 64	41	32.05 (10.46)
F, $df=2,148$ (p-value)	0.105 (0.901)	
Gender		
Male	85	32.27 (10.55)
Female	66	30.73 (10.87)
t, $df=149$, (p-value)	0.880 (0.380)	
Marital status		
Single	56	29.54 (9.44)
Married	65	34.05 (11.74)
SDW	30	30.13 (9.66)
F, $df=2,148$ (p-value)	3.116 (0.047)	
Employment status		
Employed	98	33.32 (10.00)
Unemployed	42	27.21 (10.50)
Retired/students	11	33.00 (13.33)
F, $df=2,148$ (p-value)	5.169 (0.007)	
Age of onset of illness (years)		
15 – 24	47	31.89 (10.48)
25 – 45	99	31.38 (10.82)
>45	5	33.00 (12.02)
F, $df=2,148$ (p-value)	0.080 (0.923)	
Number of episodes		
One	46	34.24 (10.38)
Two	53	30.30 (9.52)
Three or more	52	30.58 (11.80)
F, $df=2,148$, (p-value)	2.061 (0.131)	
Duration of illness (years)		
1 – 5	50	31.60 (9.77)
10-Jun	45	31.62 (10.94)
>10	56	31.57 (11.43)
F, $df=2,148$, (p-value)	0.000 (1.000)	

t: Independent student T-test; df: degree of freedom; SDW:

Separated/Divorced/Widowed group; F: one-way ANOVA. P value

<0.05=significant.

Table 2 shows the multiple linear regression analysis of the socio-demographic and clinical correlates of the Social Integration Scale scores of the respondents. The variables entered into the multiple linear regression model were: marital status, employment status, and the PANSS scores.

Table 2. Regression analysis of the socio-demographic and clinical correlates of Social integration Scale score.

SIS	Variables	Beta	Standardized t Beta	p-value
	PANSS negative scale	-0.936	-0.441	-3.111 0.002
	PANSS general psychopathology	0.255	0.192	1.521 0.131
	PANSS composite score	-0.029	-0.014	-0.124 0.902
	Marital status married	3.154	0.147	1.726 0.086
	Marital status SDW	-0.771	-0.029	-0.339 0.735
	Marital status single	Reference		
	Employment status Unemployed	-4.337	-0.182	-2.268 0.025
	Employment status retired/students	-0.553	-0.013	-0.173 0.863
	Employment status employed	Reference		

The PANSS negative scale score ($=-0.936$, $t=-3.111$, $p=0.002$) and unemployment ($=-4.337$, $t=-2.268$, $p=0.025$) emerged as independent predictors of social integration scores in a model that predicted 20.9% of the variance in the SIS scores ($R=0.457$, $R^2=0.209$).

Discussion

The aim of the study was to determine the correlates of social integration among patients attending the OPC of the Neuropsychiatric Hospital, Abeokuta, Nigeria. The social integration of the respondents was measured using the social integration scale, which measures the interaction of respondents within their neighborhood, ranging from superficial to deep interactions. The mean SIS score of the respondents in this study was higher than that found by Aubry et al. and Prince et al. among Canadian patients with schizophrenia [14,17,18]. The outcome of schizophrenia has been found to be better in developing countries compared with developed countries, and the extended family structure has been found to play a role in this relationship [19,20]. The increased level of social integration observed in this study may be a result of the role of the extended family in the treatment and subsequent rehabilitation of patients with schizophrenia. It is also possible that in the two-decades lag time between the current study and that conducted by Aubry et al., psychiatric services have greatly improved, with consequent improved outcomes for patients with schizophrenia.

This study found that being single, unemployed, and having more severe psychopathology was associated with a lower level of social integration among the respondents. The association between employment and social integration has been noted in a study by Ruesch et al. in which they found an inverse relationship between employment and social integration. Abdallah et al. and Baumgartner et al. found that more severe psychopathology was inversely related to social integration, concluding that patients with schizophrenia never truly become part of the communities in which they live [21-23].

Social integration is rarely studied as an outcome measure of mental health interventions and very few studies have been carried out among mentally ill patients [23]. Perhaps this is because social integration is a multi-faceted construct and no single instrument has been designed to fully capture it in its entirety [23]. However, there is a consensus that patients with schizophrenia do not get fully integrated into their communities and they most often rely on places or groups with mentally ill persons to forge their identity and engage in social interactions [24,25]. Similar to this study's findings, Tsai et al. Kilian et al. and Kawata et al. found an inverse relationship between symptom severity, especially negative symptoms

[26-28], and social integration. Negative symptoms – alogia, anhedonia, apathy, avolition, and asociality – often hinder patients with schizophrenia from initiating or maintaining social interactions, hinders participation in and reciprocity of social roles, and thus lead to low levels of social integration.

Unemployment has been found to be associated with poorer social integration as, similar to the findings from this study, being gainfully employed offers opportunity for social interactions, widening of an individual's social network, and can result in better social integration [21,23]. The fulfillment of roles gives individuals a sense of meaning and purpose to life, which enhances a feeling of communality and well-being, and this increases the capability for connectedness and citizenship [12,29]. According to Cohen, meeting role expectations results in cognitive benefits such as increased feelings of self-worth and control over one's environment which can generate positive affect [30]. Vocational rehabilitation has been one of the strategies for re-integrating patients with schizophrenia back into the community because the ability to work, interact with others, and move toward self-actualization is an important concept of recovery [31,32]. Better social integration has also been linked to better utilization of specialized mental health services and also better outcomes in patients with mental illness and particularly patients with schizophrenia [33,34].

It is important to consider some limitations in interpreting this study's findings. First, this study is limited to patients with schizophrenia in only one psychiatric hospital in Nigeria and therefore the results cannot be generalized to patients with schizophrenia elsewhere. Secondly, patients who attend the outpatient clinic are generally stable; severe patients are likely to be hospitalized or have defaulted from follow up, which may affect the study findings. Despite these limitations, the study is among the few studies to investigate the level of social integration of patients with schizophrenia in Nigeria.

Conclusion

This study highlights the need for greater attention to social outcome measures such as social integration among patients with schizophrenia who come in contact with psychiatry services, and not just during symptom remission. Thus, in planning the rehabilitation of patients with schizophrenia, attention needs to be focused on indicators of social integration such as quality of interaction and network size, and providing social services and opportunities for employment, housing, and other social amenities to help improve community integration and quality of life. There is also a need for larger, multisite studies that examine the level of social integration among patients with schizophrenia in Nigeria.

Funding

This study reports no external funding

Conflict of Interest

Temitope Ogundare, Peter Onifade, Senait Ghebrehwet, Christina Borba, and David Henderson declare they do not have any conflicts of interest.

Ethical approval

The study was conducted in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

This article does not contain any studies with animals performed by any of the authors.

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How to cite this article: Ogundare, Temitope, Peter O Onifade, Deji Ogundapo, and Senait Ghebrehewet, et al. "In the community but not of it": The Social Integration of Nigerian Patients with Schizophrenia." *Clin Schizophr Relat Psychoses* 14(2020). DOI: 10.3371/CSRP.OTOP.112320