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Disability and socio-occupational functioning in persons with schizophrenia

Abstract

Background: Schizophrenia is a chronic mental illness which severely affects the functioning of individuals in their daily life. Functional disability in chronic illness is one of the major concerns for mental health professionals. The study aims to assess the disability of persons with schizophrenia and its relationship with age of onset, total duration of illness, and socio-occupational functioning. **Methods and materials:** The present study is a descriptive cross-sectional study. Sixty persons with schizophrenia were selected using simple random sampling from the outpatient department (OPD). Written informed consent was taken from the participants who fulfilled the inclusion and exclusion criteria. Clarifications were made regarding the basic purpose of the study before administration of tools. The study was undertaken with the permission of the Scientific Advisory and Institute Ethics committees. Sociodemographic datasheet, the revised Kuppuswamy scale, the Brief Psychiatric Rating Scale (BPRS), the Indian Disability Evaluation and Assessment Scale (IDEAS), and the Social Occupational Functioning Scale (SOFS) were administered. Collected data were analysed using the software (Statistical Package for the Social Sciences [SPSS] 25.0) using the statistical methods of mean, standard deviation, frequency, percentage, and Pearson correlation. **Results:** The findings showed that most of the respondents (71.7%) were having moderate level of disability and moderate impairment (40%) in socio-occupational functioning. The global score of disability has a significant positive correlation with total duration of illness ($r=0.255$, $p<0.05$) and negative correlation with age of onset of illness ($r=-0.075$), and there is significant positive correlation ($r=0.829$, $p<0.01$) between socio-occupational functioning and global disability. **Conclusion:** Disability has an impact on socio-occupational functioning in persons with schizophrenia. A higher level of disability can lead to higher level of impairment.

Keywords: Chronic Illness. Age of Onset. Impairment.

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INTRODUCTION

Schizophrenia is a mental illness that can cause functional impairment in people, dysfunction in interpersonal relationship, difficulties in carrying out their jobs, and sometimes, it leads to self-destructive behaviour which can lead to suicide. According to Mueser *et al.*[1] and Tsang *et al.*,[2] schizophrenia with persistent psychotic symptoms has effect on vocational rehabilitation. According to the National Mental Health Survey (NMHS),[3] the lifetime and current prevalence of schizophrenia and other psychotic disorders were 1.53% and 0.50%.

Disability is one of the factors which effect the socio-occupational functioning of persons with schizophrenia. The World Health Organization (WHO) in the International Classification of Functioning states that disability is multi-dimensional and a product of an interaction between an individual's certain conditions and his or her physical, social, and attitudinal barriers.[4] People with schizophrenia continue to experience long-term impairments, and as a result, they can have a considerable effect on personal, social, and occupational lives. Social-occupational functioning is the overall functional outcome and the ability of the individual to live in a community of which he or she is a part.[5]

Many studies have evaluated the relationship of socio-occupational functioning with positive, negative symptoms and psychopathology, while the relationship between disability and socio-occupational functioning has not been explored adequately. Studies suggest that there is significant negative correlation of social functioning with general psychopathology in patients and whenever negative, positive symptoms, and general psychopathology increased, then socio-occupational functioning decreased.[6,7]

This study, therefore, is aimed to explore the disability of persons with schizophrenia and their relationship with age of onset, total duration of illness, and socio-occupational functioning. Psychosocial intervention is equally important along with pharmacological management in treating persons with schizophrenia. Socio-occupational functioning is one of the areas to address during intervention with persons with

schizophrenia. Thus, it is important to assess the disability and socio-occupational level of persons with schizophrenia prior to provision of psychosocial intervention and plan for rehabilitation for persons with schizophrenia to live a productive life.

Objectives

1. To assess the sociodemographic and clinical variables of persons with schizophrenia.
2. To assess the level of disability and socio-occupational functioning in persons with schizophrenia.
3. To find the relationship of age of onset, total duration of illness, and socio-occupational functioning with disability in persons with schizophrenia.

METHODS

In the present study, the research design was descriptive in nature. The present study was conducted in the outpatient department (OPD) of Lokopriya Gopinath Bordoloi Regional Institute of Mental Health (LGBRIMH), Tezpur, Assam, India. The study was conducted between the period of August and November 2017. The study consisted of persons living with schizophrenia and who came for treatment and follow-up, hailing from all over. Data was collected with the voluntary consent of the participants as well as of the family members. A consent form and information sheet was prepared. All the tools were translated into the local language as per WHO translation procedure of forward and backward translations.[8] Permissions were taken from the authors for the use of the tools. The sample selected by simple random sampling comprised of 95 samples; out of which, 60 fulfilled the inclusion criteria. Sample size calculator was used to determine the sample size.[9] Cases of schizophrenia according to the diagnosis criteria of the tenth revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10),[10] aged between 18-60 years who scored less than 31 in the Brief Psychiatric Rating Scale (BPRS)[11] with at least two years duration were included. Respondents with any other comorbid psychiatric, physical, and neurological disorder were excluded. Respondents were also excluded if caregivers were absent at the time of data collection and when there was missing information.

Patients were evaluated on the following tools:

Sociodemographic and clinical datasheet

A self-structured sociodemographic data and clinical sheet was developed by the researchers for the purpose of assessing the sociodemographic characteristics and clinical information of persons with schizophrenia.

Socioeconomic status

Revised Kuppuswamy scale,[12] having three domains of education, occupation, and monthly family income, was used to assess socioeconomic status (SES) of the persons with schizophrenia.

The Brief Psychiatric Rating Scale

BPRS[11] consists of 18 items of negative, positive, and affective symptoms. Persons diagnosed as schizophrenia who scored less than 31 were included in the study. It was used to screen respondents.

The Indian Disability Evaluation and Assessment Scale

The Indian Disability Evaluation and Assessment Scale (IDEAS)[13] is a scale for measuring and quantifying disability in mental disorders. The alpha value was 0.86, indicating good internal consistency between the items. The scale measured functioning in four domains, i.e. self-care, interpersonal activities, communication, and understanding work. Each item is rated from zero to four, ranging from no disability to profound. Total scale score was calculated by summing the scores of the four items with weightage for duration of illness (DOI). DOI of less than two years, score to be added is one with the total score; two to five years, two is added; six to ten years, three is added, and more than ten years, four is added. The global score is interpreted, (zero) no disability=zero per cent, (one to six) mild disability<40%, (seven to 13) moderate disability=40-70%, (14-19) severe disability=71-99%, and (20) profound disability=l00.

The Social Occupational Functioning Scale

The Social Occupational Functioning Scale (SOFS)[5] was used to measure the socio-occupational functioning of persons with schizophrenia. It consists of 14 items. SOFS demonstrated adequate internal consistency and retest reliability. The coefficient alpha for the total score was 0.91. Each item is rated on five-point Likert scale. The responses are one=no impairment (behaviour is appropriate to social background), two=mild impairment (minor deviations or problems occasionally, able to work or function independently), three=moderate impairment (obvious deviations or problems occur), four=severe impairment (marked deviation from normal behaviour, usually requires assistance to function), five=extreme impairment (incapable of functioning, needs constant supervision). Total scale score was calculated by summing all 14 items. Higher scores on SOFS indicate greater impairment in social and occupational functioning.

Ethical issues

Written informed consent was taken from the participants who fulfilled inclusion and exclusion criteria, and clarifications were provided regarding the basic purpose of the study before administration of scales. Confidentiality was maintained and the present study was undertaken with the permission of scientific and ethics committee.

Statistical analysis

After the data collection, analysis was done using the software (Statistical Package for the Social Sciences [SPSS] 25.0) according to the objectives of the study. Statistical test (Pearson correlation) was used to find out the relationship between the variables.

RESULTS

In the present study, total sample of 60 participants was included. The mean age of the study sample was 34.47

(standard deviation [SD]=8.57) and was in the age group of 21-50 years with majority being male (70%). Majority (75%) of respondents claimed to be a Hindu by religion, and hailed from rural area (88.3%) and nuclear family type (73.3%). Majority (55%) were married, hailing from lower upper SES (61.7%). Only 35% of the respondents were educated up to high school level and 55% reported being unemployed.

As shown in Table 1, the mean age of onset of illness was 24.61 (SD=6.43) years, duration of illness was 9.87 (SD=6.44) years, and global disability score was 9.18 (SD=2.92). As shown in Table 2, among the 60 respondents, 71.7% of the respondents were found to have moderate level of disability while 16.6% of the respondents had mild level of disability, ten per cent of the respondents had severe level of disability, and 1.7% had no disability.

In the present study (Table 3), it was found that among the 60 respondents, 40.0% of the respondents were found to have moderate level of impairment in socio-occupational functioning, while 36.7% of the respondents had mild level of impairment, 20% of the respondents had severe level of impairment, and 3.3% had no impairment.

Correlation summary (Table 4) shows that the global score of disability has a significant positive correlation with total duration of illness (r=0.255, p<0.05) and negative correlation with age of onset of illness (r=-0.075). There is significant positive correlation (r=0.829, p<0.01) between socio- occupational functioning and global disability.

Table 1: Mean and standard deviation (SD) of age of onset, duration of illness, and global disability (N=60)

Variables	Mean	SD
Age of onset (years)	24.61	6.43
Total duration of illness (years)	9.87	6.44
Global disability score	9.18	2.92

Table 2: Frequency and percentage of disability in persons with schizophrenia (N=60)

Level of disability	Frequency	Percentage (%)
No disability	1	1.7%
Mild (<40%)	10	16.6%
Moderate (40-70%)	43	71.7%
Severe (71-99%)	6	10%

Table 3: Frequency and percentage of socio-occupational functioning in persons with schizophrenia (N=60)

Level of impairment	Frequency	Percentage (%)
No impairment	2	3.3%
Mild impairment	22	36.7%
Moderate impairment	24	40%
Severe impairment	12	20%

Table 4: Correlation of disability with age of onset, total duration of illness, and socio- occupational functioning

Variable	Age of onset	Total duration of illness	SOFS
IDEAS	-0.075	0.255*	0.829**

*Correlation is significant at the 0.05 level (2-tailed), **Correlation is significant at the 0.01 level (2-tailed), SOFS: The Social and Occupational Functioning Scale; IDEAS: The Indian Disability Evaluation and Assessment Scale

DISCUSSION

Disability is one of the factors which has its impact on the socio-occupational functioning of an individual. In this study, it was found that the mean for total duration of illness was 9.87 (SD=6.44) years. Similar findings were reported by Gogoi,[14] where the majority of the patients' duration of illness was found between six and ten years. In the present study, most of the respondents were found to have a moderate level of disability. According to NMHS,[3] nearly one-third of the respondents with a mental morbidity reported disability in either work or family life. As per the estimates for global burden of a disease study,[15] schizophrenia is the sixth leading cause for years lived with disability. Lyngdoh and Ali[16] in the same setting (LGBRIMH), where the study has been conducted, reported that most of the respondents have moderate level of disability. Thara and Rajkumar[17] found similar findings and reported moderate disability in schizophrenia, who have remained stable over a period of time with minimal fluctuations. Ali[18] reported that majority of the respondents have mild to moderate level of disability.

Findings suggest that most of the persons with schizophrenia were having moderate level of impairment in socio-occupational functioning which can be supported by the study of Srinivasan and Tirupati[19] and Rajni *et al.*[7] The global score of disability has a significant positive correlation with total duration of illness (r=0.255, p<0.05) and negative correlation with age of onset of illness (r=-0.075, p<0.075) which can be interpreted as more the duration of illness, higher the disability and less the age of onset, higher is the disability. This finding is also supported by the study conducted by Karthick *et al.*,[20] where it was found that most of the patients with schizophrenia having a duration of illness of more than five years had moderate to severe disability. There was no improvement in disability over the long-term duration of illness.

After analysis, it was also found that there is significant positive correlation (r=0.829, p<0.01) between socio-occupational functioning and global disability. The findings show that an increased impairment in social and occupational functioning leads to higher disability. Schizophrenia has been identified as one of the most disabling conditions which is associated with deterioration from the previous level of functioning. This deterioration is reflected in various functional deficits leading to social isolation and poor occupational functioning. Impairment in social and occupational functioning will be high when disability is high. Harvey *et al.*[21] reported that disability is visible in vocational activities and persons living with schizophrenia find it difficult to perform their work. Thara and Rajkumar,[17] whose study on the nature and course of disability in schizophrenia, reported that deficits in patients' ability to care for themselves and to meet others' expectations are the main challenges faced by people living with schizophrenia and the one that leads to disability. Initiation of occupational mobilisation should be a

target, right from the time of diagnosis when pharmacological and non-pharmacological treatments are started.

Limitations and future directions

The study findings reflect the level of disability and its relationship with age of onset, total duration of illness, and socio-occupational functioning in persons with schizophrenia. The study was conducted in a single tertiary mental health institute. The study included those patients who attended OPD during the data collection period. Absence of control group is another limitation. Gender comparison was not done. The patients had long duration of illness; hence, the findings may not be generalised to those experiencing first episode of schizophrenia. Further, planning multi-centric, larger sample size, and community-based patient population studies, will help in overcoming the limitations of small sample studies and further focus on patients in different phases of illness.

The study postulates that persons with schizophrenia face moderate to mild difficulties in performing the daily living activities' impairments in socio-occupational functioning. Facilitating social and vocational skills training centres to improve functioning level of the persons living with schizophrenia to support functionality at individual, family, and community level should be a mandatory requirement in every psychiatric treatment centre. Assessing the disability of a person with schizophrenia can help him or her to get the disability certificate as well as it will help to plan for rehabilitation.

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