

Cognitive, Work and Social Functioning of Patient with Schizophrenia

Leivon Aphia Kom¹, Arunjyoti Baruah², Chitra Bora³

¹M.Sc. Nursing, Department of Psychiatric Nursing, Lokopriya Gopinath Bordoloi Regional Institute of Mental Health, Tezpur, Assam, India

²Professor & Head of Department, Department of Psychiatric Nursing, Lokopriya Gopinath Bordoloi Regional Institute of Mental Health, Tezpur, Assam, India

³Nursing Tutor, Department of Psychiatric Nursing, Lokopriya Gopinath Bordoloi Regional Institute of Mental Health, Tezpur, Assam, India

ABSTRACT

Background: Schizophrenia is a chronic and severe mental disorder characterized by disturbances in thought and verbal behavior, perception, affect, motor behavior and relationship to the external world. The prevalence of schizophrenia worldwide is about 1 percent of the population. Schizophrenia carries great burden to the patient and their families. It has negatively affected key areas of functioning like daily activities, social interaction and lifestyle of the person. Evaluating social functioning also helps in the effective treatments for schizophrenia patients. Because it plays an important role in everyday life and schizophrenia patients with low social functioning showed the poor prognosis.

Objectives: The study objectives were to assess the cognitive function, work function, social functioning of patient with Schizophrenia, to find out the association of cognitive, work and social functioning with selected socio demographic and clinical variables and to determine the relationship among cognitive, work and social functioning of patient with Schizophrenia.

Materials and methods: Quantitative research approach and descriptive research design was adopted. 30 patients with Schizophrenia attending OPD were selected by using Purposive sampling technique. Brief Psychiatric Rating Scale, Mini mental status examination, self-structured work functioning tool and social occupational functioning scale were used.

Results: Out of 30 subjects it was found that 36.7% (f=11) belongs to age group of 18-25, 53.3% (f=16) were male, 36.7% (f=11) studied up to primary education, 50% (f=15) were married, 80% (f=24) belongs to upper lower socioeconomic class, 40% (f=12) were housewife, 96.7% (f=29) belongs to nuclear family, 100% (f=30) were living with family, 96.7% (f=29) were having acute mode of onset, 76.7% (f=23) were improving in the progress of their illness, 100% (f=30) have no precipitating factor, 60% (f=18) have insight regarding illness, 73.3% (f=22) were not having any history of mental illness in their family, 36.7% (f=11) have moderate impairment in cognitive functioning, 43.3% (f=13) have moderate work functioning and 56.7% (f=17) have mild impairment in the social functioning. Significant association was found between cognitive functioning with education and insight regarding illness, social functioning with occupation among the patient with Schizophrenia. Positive correlation was found between cognitive functioning and social functioning. **Conclusion:** The result showed that there is significant association between education and cognitive functioning, insight regarding illness and

cognitive functioning, significant association between occupation and social functioning and positive correlation between cognitive and social functioning.

Keywords: Schizophrenia, Cognitive function, work function, social functioning.

INTRODUCTION

Schizophrenia is a chronic and severe mental disorder affecting 20 million people worldwide. World Health Organization ranked Schizophrenia as one of the top 10 illnesses contributing to the global burden of disease.¹ It is characterized by disturbances in thought and verbal behavior, perception, affect, motor behavior and relationship to the external world. There is decreased functioning in work, social relations and self-care, as compared to the earlier levels with Schizophrenic patient.² Impairment in work functioning that includes restriction of activities in areas of daily activities, is a common accompaniment of schizophrenia which has led to considerable distress to the family and relatives. This is because such impairment often results in difficulties in performing the activities of daily living as well as maintenance of interpersonal relationships with others. So all these problems will in turn, contributes to low levels of productivity with high rates of unemployment among the person with Schizophrenia. However, a number of factors like environmental, cultural, psychosocial and treatment related factors determine the differences in outcome and the level of impairments in schizophrenia. Family support, psychoeducation and taking up preventive measures will help in reducing the burden of the caregiver of the patient with Schizophrenia. It also helps at the same time in preventing the frequency of relapse and the poor treatment compliance.³ Social functioning has been defined as the capacity of a person to function in different roles such as homemaker, worker, student, spouse, family member, or friend.² In a study conducted by Talreja on cognitive functions in Schizophrenia about 70% patients of schizophrenia were found to have cognitive dysfunction for attention, concentration, memory, language, and executive.⁴ Studies have suggested that patient with Schizophrenia who have impaired performance on neurocognitive tests correlates with deficits in everyday living in aspects of self care and independent living, academic achievement and vocational functioning.

MATERIALS AND METHODS

Quantitative research approach and descriptive research design was used in the present study to accomplish the objectives. Purposive Sampling technique was used for obtaining the desired sample size. The sample consists of 30 patients with Schizophrenia attending OPD of Tertiary mental health care institute. The tools used were Brief Psychiatric Rating Scale for assessing the active psychopathology of the patient, Mini mental status examination for cognitive functioning, self-structured work functioning tool for assessing the work functioning and social occupational functioning scale for assessing social functioning. The inclusion criteria were Patient diagnosed with Schizophrenia attending OPD of Tertiary Mental Health Care Institute along with family members, age between 18 to 50 years, having at least one year duration of illness and patient whose BPRS score is less than 30. The self-structured Work Functioning tool and Social Occupational Functioning Scale were translated into local Assamese language prior to data collection. Data were collected after obtaining necessary permissions from concerned authority and informed consent was taken from participant. Descriptive and inferential statistics were used to analyze and interpret the data. Statistical package for science (SPSS) 20 version was used for the analysis.

Data collection

Subjects were identified from the OPD registration counter based on the inclusion criteria and interviewed the patient with their family members. Purpose of the study was explained to the subjects and an informed consent was taken from the subjects of the study. Patients were assured for their confidentiality of the information given by them for ethical consideration. Approximately 30-35 minutes was taken by each subject and attendant for the entire data collection.

Data analysis

Data were entered into Microsoft excel. The Statistical Package of Social Sciences (SPSS) 20 version was used in the study for computing various descriptive and inferential statistics. The frequency, percentage distribution, mean, median, standard deviation were calculated. Chi-square test was done to find out the association between selected socio-demographic profile and clinical profile with cognitive functioning, work functioning and social functioning of Schizophrenia patients. Pearson’s correlation test was done.

Ethical approval and informed consent

Ethical clearance was obtained to conduct the study. Written informed consent was taken before data collection.

Results

The result showed significant association between cognitive functioning and education i.e. ($\chi^2=24.693$, $P=0.016$), insight regarding illness ($\chi^2=15.938$, $P=0.001$), social functioning and occupation ($\chi^2=22.099$, $P=0.016$) at 0.05 level of significance. There was a significant relationship between cognitive functioning and social functioning ($r=0.558$, $p=0.001$) at 0.01 level of significance.

DISCUSSION

Section-A: Description of socio-demographic variables of patient with schizophrenia.

Table 1(a): Frequency and percentage distribution of socio demographic variables according to age, gender, education, marital status, residence, socio-economic status, religion of patient with Schizophrenia.

VARIABLE	CATEGORY	FREQUENCY (f)	PERCENTAGE (%)
AGE	18-25	11	36.7%
	26-35	9	30%
	36-50	10	33.3%
GENDER	Male	16	53.3%
	Female	14	46.7%
EDUCATION	Illiterate	4	13.3%
	Primary	11	36.7%
	High school	8	26.7%
	Higher secondary	4	13.3%
	Graduate	3	10%
MARITAL STATUS	Married	12	40%
	Unmarried	15	50%
	Separated/Divorced	1	3.3%

	Widow/widower	2	6.7%
RESIDENCE	Rural	28	93.3%
	Urban	2	6.7%
SOCIO ECONOMIC STATUS	Upper class	1	3.3%
	Upper middle	3	10%
	Lower middle	24	80%
	Upper lower	2	6.7%
RELIGION	Hindu	19	63.3%
	Muslim	11	36.7%

Majority of the subjects i.e. 36.7% (f=11) belongs to age group of 18-25 whereas in contrary to this, a study conducted by Jain M⁵ to assess the cognitive function and disability in Schizophrenia, maximum number of patients i.e. 53.33% were in the age group of 26-35 years. Most of the subjects i.e., 53.3% (f=16) were males and 46.7% (f=14) were females. Similar to the study findings, National Mental Health Survey of India, 2015-16 shows that the rate of Schizophrenia among males were slightly higher than those among females. It also reveals that 36.7% (f=11) have primary education, 26.7% (f=8) studied upto high school, 13.3% (f=4) studied upto higher secondary, 13.3% (f=4) are illiterate and 10% (f=3) studied upto graduate. Majority of the subjects i.e. 50% (f=15) were unmarried. The reason is maximum of the subject were aged between 18-25 yrs. In similar to this a study conducted by Jain M⁵ to assess the cognitive function and disability in Schizophrenia, majority of the subjects (66.67%) were unmarried. Data also reveals that majority of the subjects i.e., 93.3% (f=28) were from rural area and 6.7% (f=2) were from urban area. Majority of the subjects i.e., 80% (f=24) belongs to upper lower socio economic status, 10% (f=3) belongs to lower middle socio economic status, 6.7% (f=2) belongs to lower socio economic status and 3.3% (f=1) belongs to upper middle socio economic status. National Mental Health Survey of India, 2015-16 reveal that mental disorder was significantly high in households with lesser income. So their access and utilization of mental health services is also limited due to economic issues. The findings also shows that 63.3% (f=19) were following Hindu religion and 36.7% (f=11) were following Muslim religion. This can be due to the fact that majority of the population in Assam were following Hindu religion. In similar to this, a study conducted by Jain M⁵ to assess the cognitive function and disability in Schizophrenia, it was found that majority of the subjects were Hindu (93.3%). [Table 1a].

Table 1(b): Frequency and percentage distribution of socio demographic variables according to occupation, family type, living with family, social support in terms of primary, secondary and tertiary of patient with Schizophrenia.

VARIABLE	CATEGORY	FREQUENCY (f)	PERCENTAGE (%)
OCCUPATION	Housewife	12	40%
	Student	4	13.3%
	Agriculture worker/self employed farmer	1	3.3%

	Industrial worker skilled	1	3.3%
	Agriculture worker unskilled or semi skilled	2	6.7%
	Unemployed	10	33.3%
FAMILY TYPE	Nuclear	29	96.7%
	Joint	1	3.3%
LIVING WITH FAMILY	Yes	30	100%
PRIMARY SOCIAL SUPPORT	Adequate	30	100%
SECONDARY SOCIAL SUPPORT	Adequate	25	83.3%
	Inadequate	5	16.7%
TERTIARY SOCIAL SUPPORT	Adequate	2	6.7%
	Inadequate	28	93.3%

Majority of the subjects i.e. 40% (f=12) were housewife, 96.7% (f=29) belongs to nuclear family, 100% (f=30) were living with family, 100% (f=30) got adequate primary support, 83.3% (f=25) got adequate secondary support, 93.3% (f=28) got inadequate tertiary support. [Table 1b].

Section-B: Description of clinical variables of patient with schizophrenia.

Table 2: Frequency and percentage distribution of clinical variables according to mode of onset, progress, precipitating factor, insight regarding illness and history of mental illness in the family of patient with Schizophrenia.

VARIABLE	CATEGORY	FREQUENCY (f)	PERCENTAGE (%)
MODE OF ONSET	Acute	29	96.7%
	Insidious	1	3.3%
PROGRESS	Improving	23	76.7%
	Deteriorating	7	23.3%
PRECIPITATING FACTOR	Absent	30	100%
INSIGHT REGARDING ILLNESS	Yes	12	40%
	No	18	60%
HISTORY OF MENTAL ILLNESS IN THE FAMILY	Present	8	26.7%
	Absent	22	73.3%

Majority of the subjects i.e. 96.7% (f=29) were having acute mode of onset, 76.7 % (f=23) were improving in the progress of their illness, 100 % (f=30) have no precipitating factor, 60% (f=18) have insight regarding illness, 73.3 % (f=22) were not having any history of mental illness in their family [Table 2].

Table 3: Mean and standard deviation (SD) of duration of treatment, duration of illness, and no of hospitalizations of patient with Schizophrenia.

Variables	Minimum	Maximum	Mean	SD
Duration of treatment (months)	12	156	70.80	43.321
Duration of illness (months)	12	144	69.20	40.929
No of Hospitalisations	0	2	0.30	0.535

Mean of duration of treatment in months is 70.80 ± 43.321 , In contrary to this finding a study conducted by Talreja BT⁴ on cognitive function in Schizophrenia and its association with socio demographics factors, it was found that the mean treatment duration was 45.30 ± 33.4 in months. The mean duration of illness in months is 69.20 ± 40.929 , Contrast to this finding, a study conducted by Talreja BT⁴ on cognitive function in Schizophrenia and its association with socio demographics factors, found that mean duration of illness was 58.52 ± 37.93 in months. and no of hospitalizations is $0.30 \pm .535$. [Table 3].

Section-C: Discussion of the cognitive functioning of patient with Schizophrenia.

The study reveals that for the cognitive functioning among the participants 36.7% (f=11) have moderate impairment in cognitive functioning, 33.3% (f=10) have mild impairment in cognitive functioning, 26.7% (f=8) have questionably significant which means good cognitive functioning and 3.3% (f=1) has severe impairment in cognitive functioning. In a study conducted by Jain M⁵ to assess the cognitive function and disability in Schizophrenia, cognitive functioning was assessed and it was found that the patients of schizophrenia had a maximum disability in the areas of cognition which is similar to the current findings.

Section-D: Discussion of the work functioning of patient with Schizophrenia.

The study reveals that for the work functioning, among the subject 43.3% (f=13) have moderate work functioning, 33.3% (f=10) have poor work functioning and 23.3% (f=7) have good work functioning. In Contrast to this a study conducted by Suresh KK⁶ on work functioning of schizophrenia in rural south Indian community, it was found that nearly two-thirds of subjects had satisfactory work functioning.

Section-E: Discussion of the social functioning of patient with Schizophrenia.

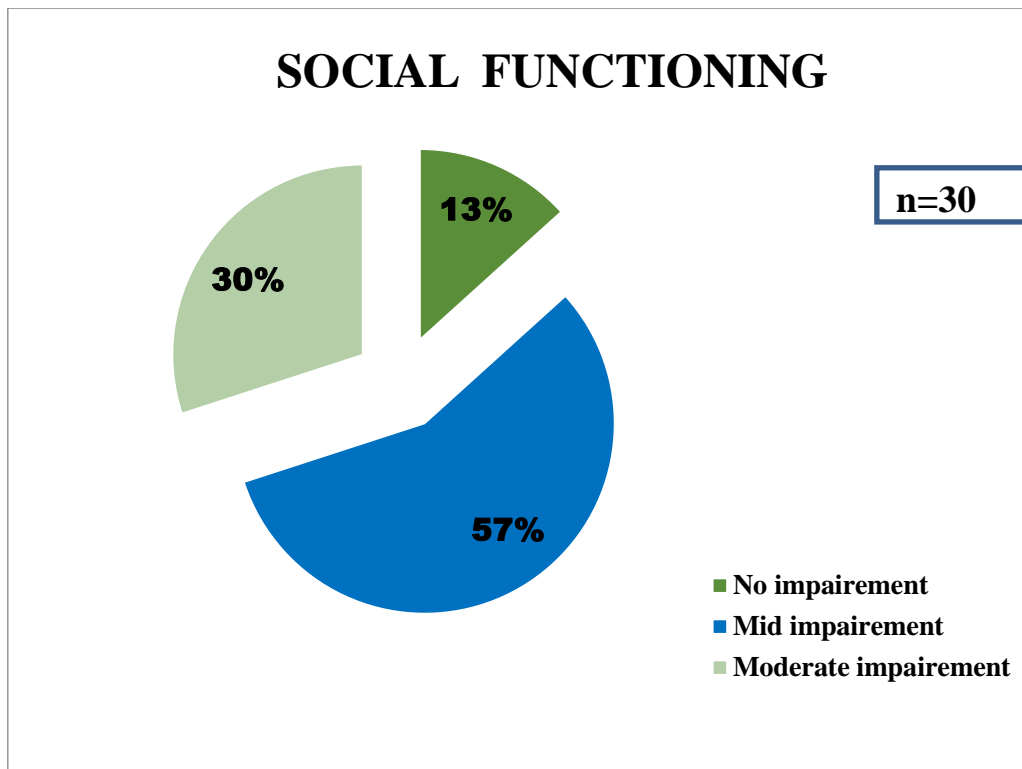


Figure 1: Exploded Pie diagram showing the percentage distribution of social functioning of patients with Schizophrenia.

Among the subjects, majority i.e., 56.7% (f=17) have mild impairment, 30% (f=9) have moderate impairment and 13.3% (f=4) have no impairment in the social functioning [Figure 1].

Section-F: Discussion of the association between cognitive function with selected socio demographic variables of patient with Schizophrenia.

Result shows that there are significant association between cognitive functioning and education i.e. ($\chi^2 = 24.693$, $P=0.016$), cognitive functioning and insight regarding illness i.e. ($\chi^2 = 15.938$, $P=0.001$) at 0.05 level of significance. This shows that the subject who have insight regarding their illness and education have better cognitive function. In contrary to this finding, a study conducted by Talreja BT⁴ on cognitive function in Schizophrenia and its association with socio demographics factors, found that there was significant association between unmarried, Duration of illness more than 2 years with cognitive functioning whereas no associations were found with age, sex, socioeconomic class, diagnosis and treatment duration.

Section-G: Discussion of the association between social function with selected socio demographic variables of patient with Schizophrenia.

The finding reveals that there is significant association between occupation and social functioning ($\chi^2 = 22.099$, $P=0.016$) at 0.05 level of significance. In contrary to this, a study conducted by Gopalakrishnan R⁷ on factors affecting social occupational functioning in Schizophrenic patient, found that there was significant association between male gender.

Section-H: Discussion of the relationship between cognitive function with social function of patient with Schizophrenia.

Results shows that there is positive correlation and significant relationship at 0.01 level of significance between cognitive functioning and social functioning i.e. ($r=0.558$, $p=0.001$). This shows that when the cognitive function of the patient is improved, the social function is also improved. Similar to this, the study conducted by Santosh S⁸ on cognitive self-regulation and social functioning in Schizophrenia, found that cognitive functioning is significantly and positively correlated to social functioning.

Limitations

Limitation of the study was imposed by Covid 19 pandemic.

Implications

The study findings have several implications in the fields of nursing practice, nursing education, nursing administration and nursing research. So, the nurses need to assess the cognitive function of the patient, recognize the degree of impairment and accordingly plan any intervention. Psychoeducation to the patient and family members about the nature of the illness, making them understand how it affects in performing day to day activities is also one of the interventions to be carried out.

Recommendation

The study can be conducted with a larger sample and can be replicated in similar and in different settings.

Conclusion

The findings of the study shows that majority of the subjects have moderate cognitive impairment, moderate work functioning impairment and mild impairment in social functioning. There is significant association between education and cognitive functioning ($\chi^2=24.693$, $P=0.016$), insight regarding illness and cognitive functioning ($\chi^2=15.938$, $P=0.001$) at 0.05 level of significance. It was also further found that there is significant association between occupation and social functioning ($\chi^2=22.099$, $P=0.016$) at 0.05 level of significance. There is positive correlation between cognitive functioning and social functioning of the participants ($r=.558$, $p=.001$) at 0.01 level of significance. It is important for a mental health nurse to have sound knowledge and skill in assessing cognitive function and its impact on work and social function of patient diagnosed with Schizophrenia.

Conflicts of Interest

There are no conflicts of interest.

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