Effect of Structured Interventional Package on Work Behaviorof Patients with Schizophrenia

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Abstract: *The present study objectives were to assess the work behavior of patients with schizophrenia, to evaluate the effectiveness of structured interventional package on work behavior of patients with schizophrenia and to find out the association between work behavior and selected socio-personal variables.The study was conducted at Rehabilitation Centre of Govt. Mental Health Centre, Kuthiravattom, Kozhikode, Kerala, India. Forty subjects (20 males and 20 females) with schizophrenia attending rehabilitation center were selected by using purposive sampling technique.The research design selected was pre-experimental one group pre-test post-test design. The tools used were an interview schedule to assess socio-personal data and Work Behavior Assessment Rating Scale (WARS). Structured interventional package consisted of mindfulness meditation for 15 minutes, group discussion for 20 minutes and games for 30 minutes. Results showed a significant difference in the pre and post-test work behavior scores of patients with schizophrenia (t=20.06, p<0.001).Therefore, it could be concluded that structured interventional package is effective in improving work behavior of patients with schizophrenia.There was significant association between work behavior of patients with schizophrenia and their religion, type of family, family history of mental illness, family moral support, family monthly income, hobbies, duration of treatment, duration of rehabilitation and type of work.*

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I. Introduction

Schizophrenia is a chronic, debilitating mental illness accompanied by significant social and/or occupational dysfunction.[1] Late adolescence and early adulthood are the peak periods for the onset of schizophrenia, critical years in a young adult's social and vocational development.[2] Social withdrawal, sloppiness of dress and hygiene, loss of motivation and judgment are common in schizophrenia.[3] Difficulties in working is also profound due to the deficits in long-term memory, attention, executive functioning, and speed of processing.[4] The main goal of rehabilitation in schizophrenia is to help these disabled individuals to develop the emotional, social and intellectual skills needed to live, learn and work in the community. Vocational rehabilitation is an important area of psychiatric rehabilitation that stresses the need of work for patients with mental illness.[5]The cognitive and psychosocial deficits occur with the onset of schizophrenia leads to poor work behaviors with respect to major aspects of work like punctuality, interpersonal relations, completeness and enthusiasm at work. There lies the necessity of cognitive and psychosocial interventions along with the normal work at rehabilitation. These help to promote the psychological, social, cultural and economic well-being of these individuals which are very important to live as healthy and productive individuals in the society.[6]

II. Material and Methods

This experimental study was carried out on Schizophrenic patients working in the Rehabilitation center at Govt. Mental Health Centre, Kuthiravattom, Kozhikode, Kerala,India.
Study Design: Pre-experimental one group pre-test - post-test design
Study Location: study conducted atRehabilitation center at Govt. Mental Health Centre, Kuthiravattom, Kozhikode, Kerala, India.
Study Duration:30 days
Sample size: 40 patients(20 males & 20 females)
Subjects & selection method: The study population was selected from the schizophrenic patients attending the Rehabilitation center at Govt. Mental Health Centre, Kuthiravattom, Kozhikode, Kerala, India. Sampling method used is purposive sampling.

Inclusion criteria:
1. Fulfilling ICD 10 criteria for Schizophrenia
2. Score ≤2 in Clinical Global Impairment Scale
3. Patients between 20-60 years of age

4. Patients attending rehabilitation center
5. Patients willing to participate

Exclusion criteria:
1. Patients with intellectual disability
2. Patients who are deaf and dumb
3. Patients with physical problems impeding the structured intervention package

Procedure methodology

After getting approval from Institutional Research Committee, Ethical Committee and Superintendent of Govt. Mental Health Centre, the investigator introduced herself before the patients and explained the purpose of the study. Using purposive sampling technique, 20 males and 20 females was selected as sample. Confidentiality was assured and informed written consent for the study was taken from the selected sample. The study was conducted separately for males and females as they were working as two different sections of the same center.All the study subjects were given pretest and then the structured interventional package was given for a period of 10 days. After 5 days of the intervention, a post test was done from the subjects. The tools used are an interview schedule to collect the socio-demographic and the clinical data and a Work behavior Assessment Rating Scale (WARS), to assess the work behavior of the sample.

All the male sample were assessed initially with the interview schedule, followed by the Work- behavior Assessment Rating Scale(WARS).This is taken as the pretest score. The pretesting of the 20 male sample were done in 3 days.The structured interventional package includes a group of activities given for a time duration of one hour five minutes for 10 days. The activities include mindfulness meditation for 15 minutes in the morning, group discussion for 20 minutes during the lunch break after their food and games for 30 minutes immediately followed by the dispersal of the center in the evening. The sample were reassessed with WARS after 5 days of intervention and this score forms the post test score. The post test of all the 20 male samples was done in 3 days.

After completing the post test of the male samples, the pretest of the 20 female sample was done and the study was repeated in the similar way as done in male sample. The patients cooperated well during the entire period of the study. Pilot study was also conducted before the actual study at 5 schizophrenic patients attending another center to check for the feasibility of the study.

Statistical analysis

Data was analyzed using SPSS package. Socio personal data was analyzed by frequency and percentage. Work behavior assessment analysis was done by mean and standard deviation. The effect of structured interventional package on work behavior was analyzed using paired 't' test. The association of work behavior with selected socio-economic variables was done using chi square test.The 'p' value <0.05 was considered as significant.

III. Result

The results are presented under 4 sections

Section I: Sample Characteristics

This section deals with the socio personal data of the sample and the factors affecting the work behavior of patients with schizophrenia attending rehabilitation center. The results are the following:

- 30% of the sample belonged to the age group above 40 years
- 50% of the sample were from Hindu religion.
- 55% of the sample had only primary education
- 40% were unmarried
- 65% belonged to joint family.
- 40% of the sample had family history of mental illness in their first-degree relatives
- 65% obtained moral support from their family
- 30% having a monthly income within range of 1001-2500 rupees
- 45% of the sample were interested in games
- 50% of the sample were unemployed before attending rehabilitation center
- 15% of the sample had the habit of alcoholism and smoking
- 45% were having mental illness for more than 12 years
- 45% took psychiatric treatment for more than 12 years
- 25% were hypertensive
- 40% of the sample having only less than 3 years duration of rehabilitation

- 45% were currently treated with atypical antipsychotics
- 70% of the sample did not have any hospitalization within last one year

Section II: Assessment of work behavior before and after structured interventional package
Table no 1 Shows distribution of sample based on work behavior score before and after intervention. It shows 15 %of the sample had good work behavior before administration of structured interventional package. After intervention, 55% of the sample had good work behavior.

Table no 1: Distribution of sample based on work behavior scores before and after intervention

Work behavior	Score range	Before intervention		After intervention	
		f	%	f	%
Good	90-125	6	15	22	55
Average	40-89	20	50	18	45
Poor	0-39	14	35	0	0

Table no 2:Mean and standard deviation of the work behavior scores before and after intervention. It shows that the mean work behavior of the patients before intervention was 66.40 with a standard deviation of 21.43 and the mean work behavior score after interventions was 78.93 with a standard deviation of 20.34.

Table no2 Mean and standard deviation of the work behavior scores before and after intervention

Work behavior	Obtained Score		Mean	SD
	Min.	Max.		
Pre-test score	34	97	66.40	21.43
Post-test score	49	112	78.93	20.34

Section III: Effect of structured interventional package on work behavior
Table no3:Mean, standard deviation, 't' value and 'p' value of work behavior scores before and after intervention. It shows that 'p' value is <0.001, which is significant at <0.05 level. It shows significant difference in pre and post test scores of work behavior of patients with schizophrenia. This its inferred that structured interventional package is effective in improving the work behavior of patients with schizophrenia.

Table no3:Mean, standard deviation, 't' value and 'p' value of work behavior scores before and after intervention

Work Behavior	Mean	SD	't' value	'p' value
Pre- test	66.40	21.34	-20.26	<0.001***
Post- test	78.93	20.34		

***significant at 0.001 level, df =39

Section IV: Association between work behavior and selected socio-personal variable
Table no4:Association between work behavior and selected socio-personal variable. The data were subjected to chi-square test, at <0.05 level of significance. There is significant association between religion, type of family, family moral support, family monthly income, hobbies, duration of treatment, duration of rehabilitation and type of work at rehabilitation center with work behavior of schizophrenic patients attending rehabilitation center

Table no 4: Association between work behavior and selected socio-personal variable.

Characteristics	chi square value	df	'p' value
Age	8.71	8	0.370
Sex	1.75	2	0.416
Religion	9.70	4	0.046*
Marital status	4.97	6	0.547
Education	8.38	4	0.079
Type of family	7.30	2	0.026*
Family history of mental illness	5.00	2	0.082
Family moral support	11.16	2	0.004**
Previous occupation	11.98	6	0.062
Unhealthy habits	7.83	6	0.251
Physical co-morbidity	9.20	6	0.162
Current treatment	8.62	6	0.071
Duration of rehabilitation	12.76	6	0.047
Type of work at rehabilitation center	16.79	6	0.010*

* significant at 0.05 level
**significant at 0.01 level

IV. Discussion

Schizophrenia is a severe, lifelong brain disorder. The broad range of unusual behaviors cause profound disruption in the lives of people suffering from the condition, as well as in the lives of people around them.Medication, rehabilitation and other community-based supports can often help people living with schizophrenia lead meaningful, satisfying lives. Vocational rehabilitation enhances outcomes at work and there are several psychosocial interventions which can be incorporated with these activities that could make the patient back to live successfully in his community, which is the essence of rehabilitation. The present study was aimed to evaluate the effect of structured interventional package on work behavior of patients with schizophrenia attending rehabilitation center.

The present study findings showed that 55% of the sample had only primary education. The finding of the study is supported by the study conducted on neuropsychological function in schizophrenia which revealed a selective deficit in memory and learning compared with other functions that lead to low level of education in people with schizophrenia.[7]

The findings of the present study showed that 40% of the sample were unmarried and 50% of the sample were unemployed before attending rehabilitation centre. This finding is well supported by a case control study on marital and labor market status in the long run in schizophrenia. The findings showed that individuals with schizophrenia had significantly higher frequencies of being unmarried and not being fully employed.[8]

The present study findings showed that 30% of the sample earned a family monthly income within the range of 1001-2500 rupees. This finding is in accordance with the finding from a 17-year retrospective follow up on socio economic mobility among patients with schizophrenia. The study showed that there is a constant downward drift in the socio-economic structure and the number of schizophrenics in the occupational category were 30-50% lower than the expected.[9]

In the present study, 15% of the sample had the habit of smoking. The finding is equally supported by a study on initiation of daily smoking and nicotine dependence in schizophrenia and mood disorders which revealed that schizophrenia was associated with a greater probability of ever daily smoking (83%) than mood disorders and with higher rates of initiation of daily smoking after 20 years old.[10]

The present study revealed that 25% of the sample had hypertension as a medical co-morbidity. This finding is in accordance with a study conducted on the association of medical co-morbidity in schizophrenia with poor physical and mental health. The study results showed that majority of the patients with schizophrenia had at least one medical health problem and high blood pressure was the most common co-morbidity. This finding is in contradiction with another finding from a study conducted on multiple health co-morbidities in schizophrenia, which revealed that people with schizophrenia had lower rates of hypertension(OR 0.71, 95% CI 0.67 to 0.76).[11]

It was revealed in the present study that current treatment in 45% of the sample was with atypical antipsychotics. The finding is highly supported by a study conducted on socio demographic pattern and utilization of antipsychotic drugs among schizophrenic patients. Results showed that atypical antipsychotics are the most preferred treatment choice in schizophrenia and Olanzapine was the commonest drug used(34.3%).[12]

The present study revealed that structured interventional package is effective in improving the work behavior of patients attending rehabilitation. The finding is supported by a study on the effect of behavioral interventions on work performance which indicated that behavioral interventions could improve work performance, particularly for interpersonal behaviors.The present study finding is also supported by a study on benefits of mindfulness meditation. Results showed that mindfulness meditation is effective in self-control, objectivity, affect tolerance, enhanced stability, equanimity, improved concentration and mental clarity. [13]

In the present study it was identified that work behavior has significant association with family moral support. The findings are supported by a study on systemic review of predictors of vocational outcomes among individuals with schizophrenia, which proved family moral support as a significant predictor of vocational outcome.[14]

The present study revealed that there is no significant association between work behavior of the patients with schizophrenia and their sex, marital status and unhealthy habit. The findings are supported by the study of systemic review of predictors of vocational outcomes among individuals with schizophrenia. The study showed that substance abuse, gender and marital status comprises of the non-significant predictors of vocational outcome among schizophrenics.[14]

V. Conclusion

The structured interventional package consisting of mindfulness meditation, group discussion and games was very effective in improving the work behavior of patients with schizophrenia.

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