ORIGINAL RESEARCH PAPER

Efficacy of a brief psychoeducation module on medication adherence and quality of life among caregivers of individuals with chronic schizophrenia

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ABSTRACT

Background: Schizophrenia is a complex psychiatric disorder that affects both individuals and their families, with psychoeducation playing a crucial role in enhancing patients' understanding of their illness and treatment. *Aim:* This study examined the impact of caregiver psychoeducation on medication adherence, and quality of life among individuals with schizophrenia. *Methods:* A quasi-experimental research design with a control group was used, involving 60 participants purposively selected from the inpatient and outpatient departments of the Psychiatry Department at Sassoon General Hospital and the Maharashtra Institute of Mental Health, Pune. Assessment tools included the Self-Designed Socio-Demographic questionnaire, WHOQOL-BREF, and the Medication Adherence Rating Scale. *Results:* Findings showed a highly significant improvement in medication adherence, and quality of life after psychoeducation ($p < .001$). *Conclusion:* The study concludes that integrating psychoeducation with standard treatment can significantly enhance outcomes for individuals with schizophrenia compared to routine care.

Keywords: Psychoeducation, chronic schizophrenia, caregivers, quality of life, drug adherence

INTRODUCTION

Schizophrenia is a severer and chronic mental disorder characterized by a range of symptoms, including delusions, hallucinations, disorganized thinking, and profound disruptions in cognition and emotional regulation. It affects how a person thinks, feels, and behaves, often making it difficult for them to function in daily life. Schizophrenia typically requires long-term treatment, and its exact cause is believed to involve a combination of genetic, biological, and environmental factors.[1]

Psychoeducational programs involve direct interaction between the person receiving the information and the provider. In the medium term, for every four individuals treated with psychoeducation rather than standard care, one person showed clinical improvement. Medication nonadherence is common among patients with schizophrenia and due to a variety of factors including lack of insight, psychopathology, substance use disorder, issues associated with treatment, stigma, fragmentation of care, cultural influences, and socioeconomic status.[2-3]

The prevalence of schizophrenia and other psychotic disorders is 0.5% for current cases and 1.4% for lifetime experiences, indicating a significant presence. The rates are slightly higher in males (0.5%) compared to females (0.4%). The 40-49 age group has the highest prevalence of current schizophrenia and other psychotic disorders at 0.6%. Additionally, the prevalence is higher in urban metro areas (0.7%) compared to other locations.[4-5]

Psychoeducation based on motivational interview techniques provided for schizophrenia patients was found to be effective in enhancing their medication adherence, hope, and psychological well-being levels.[6-8]

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Thus, the aim of the study was to assess the efficacy of a brief psychoeducation module on medication adherence and the quality of life of caregivers of individuals with schizophrenia.

METHODS AND MATERIALS

This quasi-experimental study with a control group included 74 participants initially selected purposively from the inpatient and outpatient departments of the Psychiatry Department at Sassoon General Hospital and the Maharashtra Institute of Mental Health, Pune. After screening, 14 participants were excluded, and the remaining were randomly assigned to either the experimental or control group, resulting in a final sample of 60 (30 in each group). The experimental group received a brief psychoeducation intervention consisting of seven sessions (details on table 1), each lasting approximately 45–55 minutes, while the control group received routine care alone. The study participants included male and female caregivers of individuals diagnosed with schizophrenia as per ICD-10-DCR,[9] aged between 20 and 45 years. Participants with at least a primary level of education were included, and written informed consent was obtained from them. Exclusion criteria included any significant neurological or physical illness, history of epilepsy, organic brain disorders, history of substance dependence, or multiple family members having psychiatric illnesses. Caregivers, including parents, siblings, children, or spouses who had lived with the patient for at least two years. The following assessment tools were used in the study:

Socio-demographic Questionnaire: A self-made data sheet was prepared for the study, including a social-demographic profile, clinical profile (including the history of present complaints, medical and psychiatric family and personal history, and clinical examination diagnosis).

Positive and Negative Syndrome Scale (PANSS): It was developed by Kay, Fiszbein, and Opler, is a widely used clinician-administered tool for assessing symptom severity in schizophrenia. Derived from the Psychopathology Rating Schedule (PRS) and the Brief Psychiatric Rating Scale (BPRS), it consists of 30 items divided into three subscales: Positive Syndrome (7 items) assessing symptoms like hallucinations and delusions, Negative Syndrome (7 items) evaluating deficits in emotional expression and motivation, and General Psychopathology (16 items) covering overall psychiatric symptoms such as anxiety and cognitive impairments. Each item is rated on a 7-point Likert scale (1 = absent to 7 = extreme), with higher scores indicating greater severity. The scale, commonly used in psychopharmacological studies, takes approximately 45–50 minutes to administer and requires trained clinicians to ensure consistency and reliability. PANSS has high inter-rater reliability and construct validity.[10]

WHOQOL-BREF: The WHOQOL-BREF is a 26-item tool that assesses four areas: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items). It also includes questions on overall quality of life (QOL) and general health. Each item is rated on a 1 to 5 scale, which follows a five-point ordinal format. The individual scores are then converted to a 0–100 scale.[11]

Medication Adherence Rating Scale (MARS): It was, developed by Thompson et al. in 2000, was created to address limitations in the Drug Attitude Inventory (DAI) as a measure of medication adherence. It combines aspects of both the DAI and the Morisky Adherence Questionnaire (MAQ) from 1986, but is said to offer better validity and clinical usefulness. Thompson and colleagues concluded that MARS has demonstrated strong psychometric properties, with high internal consistency (Cronbach's alpha > 0.80) and test-retest reliability. It has also shown good construct and criterion validity, making it a reliable and valid tool for measuring adherence to psychoactive medications.[12]

Statistical analysis: Statistical analyses were conducted using Statistical Package for the Social Sciences version 16 (SPSS 16.0).[13] The Chi-square test was used to compare differences between groups, while the independent sample t-test and Mann-Whitney U test were used to compare experimental and control groups. Two types of data categorical and continuous were assess. The comparison of mean or significant differences between the experimental and control groups looked at all domain of the scale.

Table 1 Brief-Psychoeducation Module

45-55 Minutes Session	Target	Component
Session 1-2	Therapeutic Alliance	➢ Introduction of the Participants ➢ Development of interpersonal and therapeutic relationship ➢ Explain Purpose and objectives of the group
Session 3	Drug Adherence	➢ Informed about the importance of drug adherence for chronic schizophrenia. ➢ Facts about faced in long time treatments handling that
Session 4-5	Family Involvement	➢ To explain importance of family involvement during the recovery ➢ Advise to maintaining and causing factors
Session 6	Relaxation	➢ Deep breathing, using of five senses, living in the present, Letting go, non-judgemental attitude
Session 7	Termination	➢ Feedback and reassurance that help will be provided when need by the individuals and caregivers

RESULTS

Table 2 Socio-demographic details of the (caregivers) participants (N=60)

Variable	**Experimental Group N=30**	**Control Group N=30**	**Mann Whitney U Test**	**Z**	**P**
Caregiver Age Mean ± SD	38.87 ± 7.30	43.30 ± 9.59	332.500	1.740	.082
			χ^2	**df**	**P**
Relation with Individual with Schizophrenia			5.867	4	.209
Spouse	24	16			
Father	1	1			
Mother	3	7			
Son	0	2			
Other	2	4			
Gender			.601	1	.438
Male	17	14			
Female	13	16			
Caregiver mother tongue			2.069	1	.150
Marathi	28	30			
Hindi	2	0			
Caregiver education			4.622	4	.328
Illiterate	0	4			
Primary	7	7			
Secondary	10	8			
Higher secondary	6	4			
Graduate	7	7			
Caregiver occupation			4.489	4	.344
Farmer	1	4			
Professional	10	5			
Housewife	8	12			
Student	1	1			
Other	10	8			

Table 2 presents the sociodemographic characteristics of the participants; the mean age of experimental group were 38.87 ± 7.30 years and control group of participants were 43.30 ± 9.59 years. It indicated there was no significant differences between the experimental and control groups.

Table 3 Baseline comparison of Quality-of-life between Experimental and control group (N=60)

Value	Experimental (n=30)	Control (n=30)	Mann-Whitney U test	Z	P Value
	Mean Rank	Mean Rank			
Physical health	32.52	28.52	389.500	00.907	.365
Psychological health	35.88	25.12	288.500	2.423	.015
Social Relationship	29.83	31.43	430.000	0.303	.762
Environment	31.43	29.57	422.000	0.417	.677

Table 4 Comparison of Pre & Post assessment of Quality-of-life of Experimental Group (N=60)

Value	Pre (n=30)		Post (n=30)		t (df=58)	p Value
	Mean	SD	Mean	SD		
Physical Health	13.06	3.07	22.43	5.00	8.731	.000
Psychological Health	9.66	2.17	12.96	1.18	7.303	.000
Social Relationship	5.40	1.88	9.16	2.01	7.467	.000
Environment Health	10.26	1.81	22.23	6.17	10.148	.000

Table 5 Comparison of Pre and Post assessment of Quality-of-life Control Group (N=60)

Variable	Pre (n=30)		Post (n=30)		t (df 58)	p Value
	Mean	SD	Mean	SD		
Physical health	13.06	3.07	1.59	.11	1.597	.116
Psychological health	11.90	2.56	1.40	.16	1.402	.166
Social Relationship	5.40	1.88	.078	.93	.078	.938
Environment health	14.53	3.71	.98	.32	.987	.328

Table 3 shows that comparison between experimental and control group pre intervention. The comparison was based on the four domains of the scale (physical health, psychological health, social relationship, environment health) Mann Whitney U test used to compare difference among both the groups. Result shows that there is no significant difference in baseline assessment among experimental and control group.

Table 4 show comparison between the Quality of life of the experimental group participants. The paired sample t-test is used to assess if the difference is statistically. The intervention had a significant positive impact on all four domains of quality of life in experimental group. The p-value (.000) which shows that highly significant at (p>.001) level intervention found improvements at pre and post assessments.

Table 5 shows that comparison between the pre and post quality of life of control group participants. Result shows there is no significant difference between pre control group or post control group, in domain of QOL scale. This indicates that without the intervention, there was no significant improvement in physical health, psychological health, social relationships, or environmental satisfaction. Table 6 shows comparison between the experimental and control group pre intervention. The comparison was based on Medication Adherence Rating Scale. Mann Whitney U test was used for this purpose. Result shows that Mean rank of experimental group 26.85 and control group Mean rank is 34.15, there was no significant difference in the pre research condition of both the groups, when compared on all the responses of Checklist for Medication Adherence rating Scale at baseline.

Table 6 Baseline comparison of medication adherence between experimental and control group (N=60)

Experimental (n=30)	Control (n=30)	Mann Whiney U test	Z	p Value
Mean Rank	Mean Rank			
26.85	34.15	340.50	1.67	.096

Table 6 shows comparison between the experimental and control group pre intervention. The comparison was based on Medication Adherence Rating Scale. Mann Whitney U test was used for this purpose. Result shows that Mean rank of experimental group 26.85 and control group Mean rank is 34.15, there was no significant difference in the pre research condition of both the groups, when compared on all the responses of Checklist for Medication Adherence rating Scale at baseline.

Table 7 Comparison of Pre and Post assessment of Medication Adherence on Experimental group (N=60)

Pre (n=30)		Post (n=30)		t (df=58)	p
Mean	SD	Mean	SD		
12.23	1.97	17.06	.58	12.842	.000

Table 7 shows comparison between the pre and post level of Medication Adherence Rating Scale, (MARS) of the experimental group participants. Result shows participants improved significantly on the responses of Medication Adherence Rating Scale, (MARS) of Persons with schizophrenia. Result showed that pre assessment scores of participates is 12.23±1.97 and post assessment is 17.06±.58.

Table 8 Comparison of pre and post assessment of Medication Adherence of control group

Pre		Post		t (df=58)	p Value
Mean	SD	Mean	SD		
12.60	1.15	12.66	1.84	.167	.868

Table 8 Shows comparison between the pre and post assessment of Medication Adherence Rating Scale of control group participants. Result shows participants no significance change on the responses of Medication Adherence Rating Scale. Result showed that minimal difference in both mean and SD assessment scores of participates is 12.60±1.15 and post assessment is 12.66±1.84.

DISCUSSION

Chronic Schizophrenia is a severe mental health condition that affects a person's thinking, emotions, and behaviours. It may cause a variety of symptoms, including hallucinations, delusions, and disorganized thinking, along with other behavioural challenges. Hallucinations involve perceiving things or hearing voices that others do not, while delusions are strong beliefs in things that are not true. Individuals with schizophrenia may lose touch with reality, making everyday life challenging.

People with schizophrenia typically need lifelong treatment, which includes medication, therapy, and support in learning how to handle daily activities. This may involve counselling and psychotherapy. However, many individuals with schizophrenia are unaware of their condition, or they may deny it, refusing to seek help. Untreated psychosis can lead to more severe symptoms, prolonged hospital stays, and worsened cognitive abilities, social interactions, and even death. Early intervention can often reduce these risks and improve long-term outcomes by controlling symptoms before complications become severe.[14] Similar study found there using a psychoeducation as an intervention for families of individual with schizophrenia there was assess patients and their families' demographic details like a Gender, age, duration of illness Education, Marital status and divorced/separated. Tests using an independent t-Test and Mann Whitney U test as well as chai square test, and found there is no significantly difference observed from the among group.[15]

Similar study Found that demographic like the mean age of individual with schizophrenia was 38.5 years, with a standard deviation of 10.2 years. Gender of participant the sample consisted of 40% females and 60% are male. Marital Status of patient with schizophrenia 30% are married, 50% are single, and 20% is divorced or widowed. Education Level of person with schizophrenia 40% participant had completed primary education, 30% of secondary education, and 30% participant was higher education. Occupational Status: Only 20% participant employed, while 80% were unemployed. Duration of Illness individual with schizophrenia the mean duration of illness was 10.2 years, with a standard deviation of 5.4 years.[7-16]

Quality of life

Result shown that participant improved significantly on four domains of Quality-of-life scale that is scale that found that highly significant at (p>.001) level. The intervention had a significant positive impact on all four

domains of Quality of life in experimental group. Similar study found there using a psychoeducation as an intervention for families or among the individual with schizophrenia there was assess Quality of life and they found participant and their family member improving quality of life after the intervention.[14]

Randomized Comparison of Group Cognitive Behaviour Therapy and Group Psychoeducation in Acute Patients with Schizophrenia Effects on Subjective QoL improved significantly among the group treatments in most QoL dimensions. Within-group effect sizes for general QoL at follow up were 0.25 for CBT and 0.29 for PE. No significant difference among the group.[17]

Similar study found relate with the current Study, there was significantly difference in Quality-of-life experimental group ($p < 0.05$). The intervention had a positive impact on the participant's Quality of life.[18]

The study was randomized control. There was using a Psychoeducation as a treatment for participant and they observe improving participant Quality of life.[19] Quality of life can be affected by the different relationships between the caregiver and the patient (such as parents, partner, or child). For example, a recent study [20] found that parents of a patient generally have a lower quality of life than the patient's siblings. Many similar studies have focused more on the patient's quality of life rather than that of the caregiver. [21] However, one recent RCT from India showed a notable improvement in the overall quality of life for caregivers in the experimental group compared to the control group after six months. The efficacy of family psychoeducation in patient with schizophrenia has been well established in previous studies. [7&22] A review of the literature showed that family intervention can improve relapse and hospital admission rates in early psychosis. Additionally, studies conducted in chronic schizophrenia found that family psychoeducation can reduce the risk of relapse. [23] These interventions have also been shown to be cost saving and are included in international treatment guidelines [15,21,24] These findings highlight the importance of incorporating family psychoeducation as a part of the comprehensive treatment plan for patients with Chronic Schizophrenia.

CONCLUSION

This study demonstrates that integrating psychoeducation with standard treatment significantly improves outcomes for caregivers of individuals with schizophrenia compared to routine care alone. The findings indicate that understanding of illness characteristic can significantly lower the rates of relapse or hospital readmission which impacted on individuals Quality of life. Although it seems to help some patients take their medication more consistently, the exact impact on medication adherence is still not fully understood. The research also suggests that psychoeducation improve a person's medication adherence of Individuals with schizophrenia.

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