

A Study to Assess the Effectiveness of Psychoeducation on Knowledge of Antipsychotics Drugs among Caregivers of Schizophrenia Patients at Gauhati Medical College and Hospital, Guwahati, Assam

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Abstract: *Background:* Antipsychotic drugs are an essential treatment for most individuals with schizophrenia and are considered first-line pharmacotherapy. The main aim of antipsychotic treatment is to prevent acute relapse and to help keep the person well and stable. The primary objectives in the treatment of schizophrenia are to reduce frequency and severity of psychotic exacerbation, ameliorate a broad range of symptoms, and improve functional capacity and quality of life. Treatment includes medication and a range of psychosocial interventions. *Objectives of the study:* To find out the effectiveness of Psychoeducation on knowledge of antipsychotics drugs among caregivers of Schizophrenia patients. *Methods of the study:* The research design adopted was pre-experimental design, one group pre-test-post-test design. Totally 60 caregivers were selected by purposive sampling method. The study was conducted in psychiatric ward at Gauhati Medical College and Hospital, Guwahati, Assam. The data was collected through Self-Structured Knowledge questionnaires of 30 items. Subsequently Psychoeducation of antipsychotic drugs was given to all participants in group for 10-15 minutes. The post test was conducted by the same Self-Structured Knowledge questionnaires on 7th day. *Result:* During pretest, none of the participants had adequate level of knowledge. 42 (70%) had moderate adequate knowledge and 18 (30%) had inadequate knowledge on antipsychotic drugs. After the Psychoeducation, the knowledge level of caregivers after 7th days of post test showed that 32 (53.3%) had adequate knowledge, and 28 (46.7%) had moderate adequate knowledge. There was significant difference found between before and after Psychoeducation. The overall pre-test mean with SD was (2.980) and post-test mean with SD was (3.882). Thus, the result showed that Psychoeducation of antipsychotic drug was highly effective. There was a marked difference in knowledge score of caregivers ($t = 15.79$) after the psychoeducation of antipsychotic drugs. *Conclusion:* The findings of the study are consistent with the literature and have support from the other studies.

Keywords: Antipsychotic Drugs, Psychoeducation, Effectiveness, Caregivers of Schizophrenia patients

1. Introduction

“Medicines are nothing in themselves, if not properly used, but the very hands of the Gods, if employed with reason and prudence”

-(Herophilus)

Antipsychotic drugs are those psychotropic drugs, which are used for the treatment of psychotic symptoms. These are also known as neuroleptics as they produced neurological side-effects, major tranquillizers, D₂-receptors blockers and anti-schizophrenic drugs. Antipsychotic medicines cannot “cure” the illness, but they can take away many of the symptoms or make them milder.¹

Antipsychotic drugs are an essential treatment for most individuals with schizophrenia and are considered first-line pharmacotherapy. Antipsychotic drugs can help to treat acute symptoms, and maintain remission from the illness.²

Caregivers are the most important in the sense that it gives basic strength as a person. The people who have smooth and well settled family life are generally less scared of life. Those who are apart of taking care of the patients should be more knowledgeable about how they can manage and deal with the various problems that occur in the patients.³

Psychoeducation has very important place in treatment and rehabilitation of patients with psychiatric disorders. Psychoeducation gives directions to individuals with mental disorders and their family member about nature, course and prognosis about illness.⁹

2. Background of the Study

The primary objectives in the treatment of schizophrenia are to reduce frequency and severity of psychotic exacerbation, ameliorate a broad range of symptoms, and improve functional capacity and quality of life. Treatment includes medication and a range of psychosocial interventions.¹⁰

Improved understanding of the dose-response relationship of antipsychotic in terms of efficacy, adverse effects, and mortality can help to optimize the pharmacological treatment of schizophrenia.¹¹

The nurse is in a pivotal position to educate the patient and the family caregivers about antipsychotic drugs and its effects. This includes teaching simple information to the patient, so that it is understood, discussed and accepted.¹²

Caregivers are usually involved in caring for the patients who are receiving antipsychotic drugs. Thus, it is essential

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that all caregivers understand the medication, side effects, precautions and the caregiver's role. Investigators have proved that education caregivers on the importance of antipsychotics drugs, side effects and their role in caring for mentally ill patients can reduce relapse.¹³

3. Need of the study

Antipsychotic drugs are powerful, mind-altering drugs that are prescribed to control psychotic symptoms. A person with psychiatric disorders is unable to differentiate between the reality and his thoughts. The two major symptoms of psychosis are hallucinations and delusions.¹⁶

In India, the prevalence of usage of antipsychotic drugs lies in the range of 1.8 to 3.6% among individuals aged 60 to 65 years. The treatment of psychiatric disorders in the past had often constituted or institutionalized (i. e., admission in an asylum or mental hospital), sometimes along with the treatment which now seems either ridiculous or fantastic or mostly both. The duration of treatment with antipsychotic medications depends upon the reason for using the drugs. Patients with schizophrenia or manic-depressive illness may require long-term treatment, i. e., years to decades.¹⁷

Right attitude of caregivers towards the management of antipsychotic drugs is very important. Greater understanding of concepts also leads to positive attitudes. Very little research has been conducted on the knowledge of antipsychotic drugs among caregivers.²¹

Due to short hospital stay and the involvement of the family members in the care of the patient, the contact of the patient with healthcare personnel is minimal. It is the family which stays with the patients for 24 hours of the day helping the patient meet his/her needs. So, it is very important that caregivers receive sufficient knowledge as to how to care for their relatives of the patients who are on antipsychotic drugs.²³

By reviewing the literature, it was found that there was very limited number of researchers done based on knowledge of antipsychotics drugs. So, here the investigator feels the need of the study to assess the effectiveness of psychoeducation on knowledge of antipsychotics drugs among caregivers of schizophrenia patients who are admitted at psychiatric ward of Gauhati Medical College and Hospital, Guwahati, Assam.

4. Review of Literature

Nobu Hiro Nagai et al (2020) conducted a study on patients' perspectives toward pharmacotherapy are expected to be directly influenced by their motivation and understanding of the treatment that they are currently receiving; no study has comprehensively investigated the impact of insight into illness and knowledge for the ongoing pharmacotherapy on the attitude towards drug treatment among patients with schizophrenia. One hundred forty-eight Japanese outpatients diagnosed with schizophrenia, according to the ICD-10th edition, were included (Mean±SD age, 47.3±12.4 years; 90 men (60.8%)). Attitudes toward antipsychotic treatment and insight into illness were assessed with the Drug Attitude Inventory-10 (DAI-10) and

the VAGUS, respectively. In addition, a multiple-choice questionnaire that was designed to examine patients' knowledge about therapeutic effects, types, and implicated neurotransmitters of antipsychotic drugs they were receiving was utilized. The mean±SD of DAI-10 score was 4.7±4.2. The multiple regression analysis found that lower Positive and Negative Syndrome Scale (PANSS) scores, higher VAGUS scores, and longer illness duration were significantly associated with higher DAI-10 scores ($\beta=-0.226$, $P=0.009$; $\beta=0.250$, $P=0.008$; $\beta=0.203$, $P=0.034$, respectively). This study concludes that there was a significant difference in the DAI-10 scores between the subjects who gave more accurate answers regarding the effects of their primary antipsychotic and those who did not (mean±SD, 5.57±4.38 vs 4.13±4.04, $P=0.043$); however, this finding failed to survive the multiple regression analysis.²⁸

Sharma Dinesh Kumar, (2016) conducted a quasi-experimental study to assess the effectiveness of informational booklet for caregivers regarding care of patient receiving antipsychotic drugs in MansikArogya Sala, Mental Hospital, Gwalior.30 samples were selected by using convenient sampling technique. Data were collected by administering a structured knowledge questionnaire. This study revealed that the mean post-test knowledge score ($x = 24$) was higher than the mean pretest knowledge scores ($x = 16$). The "t" value computed (" $t = 13.38$; $P < 0.05$) showed a significant difference suggesting that the informational booklet was effective in increasing the knowledge of caregivers. Conclusions of the study shows that there was no association found between the pre-test knowledge scores and selected variables like education, religion, income and previous experience in caring for mentally ill patients.³²

Kazunari Yoshida, et al (2021) conducted a study to improve understanding of the dose-response relationship of antipsychotics in terms of efficacy, adverse effects, and mortality can help to optimize the pharmacological treatment of schizophrenia. This narrative literature review summarizes current evidence on the relationship of antipsychotic dose with efficacy, adverse effects, and mortality in patients with schizophrenia. The efficacy of antipsychotics generally appeared to be highly dose dependent in the acute phase of schizophrenia, with each antipsychotic having a specific dose-response curve. The presence or absence of dose dependency and its extent varied according to the type of adverse effect. The following adverse effects might be at least somewhat dose-dependent: akathisia, tardive dyskinesia, osteoporosis, sexual dysfunction, diabetes mellitus, myocardial infarction, stroke, thromboembolism, QT interval prolongation, anticholinergic adverse effects, somnolence, pneumonia, hip fracture, and neuroleptic malignant syndrome. Conclusions of these findings helped clinicians to optimize antipsychotic treatment in patients with schizophrenia by balancing risks and benefits in clinical practice. However, further investigations with larger sample sizes and more robust study designs that focus on each antipsychotic agent are needed.⁴⁰

BireRohidas S., et al (2018) conducted a study on Cross sectional descriptive study was conducted to assess the awareness and practice on management of side effects of

antipsychotic drugs among patients receiving maintenance treatment at Under Hospital, Srirampur. 100 patients were selected as a sample. The self-prepared dichotomous questionnaires and checklist was used. The study results showed that mean score of awareness on side effects of antipsychotic drugs and its management was 54.62 with SD ± 3.33 and mean score on practice was 52.94 with SD ± 2.70 which indicated that patients receiving maintenance treatment had average level of awareness. The researcher concluded that those patients doing regular follow up should have knowledge regarding side effects of antipsychotic drugs.⁴⁵

TriatmiDyahWahyuning et al (2018) conducted a quasi-experimental study to assess the effect of a brief interactive psychoeducation intervention on caregivers towards family care burden for schizophrenic patients in PuskesmasKasih II (Community and Primary Health Care Centre). 68 caregivers were selected as a sample divided into treatment and control groups. The Burden Assessment Schedule questionnaire was used. The treatment group received a brief interactive psychoeducation of schizophrenic patient care over one week for 4 sessions while the control group received the prescribed essential medicines as usual. This study showed that the average scores of the pre-test for the two groups were not significantly different (p value 0.77), while the averages of the post-tests were significantly different (p value 0.001). It was concluded that a 17 brief interactive psycho-education for caregivers of schizophrenic patients was effective to decrease family care burden.⁵⁹

MugeBulut., (2016) conducted a quasi-experimental study to evaluate the effectiveness of psycho education among caregivers of patients with schizophrenia. Nonrandomized with pre-tests and post-tests were used. While the patients in both the intervention and the control group received treatment as usual (TAU), only the caregivers in the study group were offered two sessions of psycho education a week for one month with a total of eight sessions. Effectiveness of the psycho education given was evaluated by comparing scores of Perceived Family Burden Scale (PFBS) and Positive and Negative Syndrome Scale (PANSS) obtained before and three months after delivery between the intervention and the control groups. Conclusion of the study was found that psychoeducation offered to the caregivers along with TAU offered to patients might resulted in diminished perceptions of burden among care givers and enhanced improvement in the clinical course of patients as a result of psycho education offered to caregivers.⁶³

5. Problem Statement

“A Study to Assess the Effectiveness of Psychoeducation on knowledge of Antipsychotics Drugs Among Caregivers of Schizophrenia Patients at Gauhati Medical College and Hospital, Guwahati, Assam.”

Objectives

General Objective:

To find out the effectiveness of psychoeducation on knowledge of antipsychotics drugs among caregivers of schizophrenia patients.

Specific Objectives:

- To Assess the level of knowledge of antipsychotics drugs among caregivers of schizophrenia patients.
- To evaluate the effectiveness of psychoeducation on knowledge of antipsychotics drugs among caregivers of schizophrenia patients.
- To find out the association between pre-test knowledge and score on antipsychotics drugs among caregivers of schizophrenia patients with their selected demographic variables.

Operational Definitions

Psychoeducation

Psychoeducation refers to the process of education and information to those caregivers on antipsychotic drugs, its side effects and the importance to remember when administering the antipsychotic drugs to the schizophrenia patients.

Antipsychotics Drugs:

Antipsychotics drugs are those psychotropic drugs, which are used for the treatment of Schizophrenia which is prescribed by psychiatrists.

Caregivers:

Caregivers are those who are constantly taking care of the schizophrenia patients undergoing treatment of antipsychotic drugs like parents, spouse, son or daughter, paid caregivers and who are staying with the patients for the last one year and are present at the time of data collection.

Schizophrenia patients:

Schizophrenia Patients are those psychotic patients who are diagnosed according to ICD-10 criteria and admitted in psychiatric ward of GMCH.

Assumption

The study assumes that the Psychoeducation may be an effective method to improve the knowledge of Antipsychotics drugs among caregivers of Schizophrenia patients at Gauhati Medical College and Hospital, Guwahati, Assam.

Hypotheses

Hypotheses are tested at (0.05) level of significance.

- 1) H1: There is a significant difference in knowledge before and after psychoeducation.
- 2) H2: There is a significant association between the pre-test knowledge score with selected demographic variables.

Delimitation

The study is limited to the:

- Caregivers who are staying with the patient for the last one year.
- Caregivers of the schizophrenia patients with age 20 years & above
- Caregivers those who can understand Assamese and Hindi

6. Research Methodology

A quantitative research approach was adopted by the researcher to assess the effectiveness of psychoeducation on knowledge of antipsychotics drugs among caregivers of schizophrenia patients at Gauhati Medical College and Hospital, Guwahati, Assam. The study population were caregivers of schizophrenia patients admitted in psychiatric ward of GMCH and 60 samples were selected by using purposive sampling techniques. The variables are divided as-

- **Independent variable:** Psychoeducation
- **Dependent variables:** Antipsychotics drugs among caregivers of schizophrenia patients

7. Analysis and Interpretation

The analysis of data was arranged under the following sections:

- **Section I:** Frequency and percentage distribution of demographic proforma.
- **Section II:** Frequency and percentage distribution on knowledge of antipsychotics drugs among caregivers of schizophrenia patients.
- **Section III:** Evaluate the effectiveness of psychoeducation on knowledge of antipsychotics drugs among caregivers of schizophrenia patients.
- **Section IV:** Association between Pre-test knowledge score on antipsychotics drugs among caregivers of schizophrenia patients with their selected demographic variables.

Section I: Frequency and percentage distribution of demographic proforma, N=60

S. no.	Particulars	Frequency (f)	Percentage (%)
1	Age in year		
	a.20-29 years	13	21.7
	b.30-39 years	17	28.3
	c.40-49 years	16	26.7
2	Gender		
	a. Male	26	43.3
	b. Female	34	56.7
	Education		
3	a. Primary level	19	31.7
	b. Middle school	13	21.6
	c. High school	11	18.3
	d. Secondary level	10	16.7
	e. Graduate and above	7	11.7
4	Occupation		
	a. Unemployed	14	23.3
	b. Housewife	16	26.7
	c. Business	9	15
	d. Daily workers	11	18.4
	e. Self employed	5	8.3
	f. Government	3	5
g. Students	2	3.3	
5	Income		
	a. Rs<10, 000	25	41.6
	b. Rs 10, 000-20, 000	19	31.7
	c. Rs 20, 0001-30, 000	10	16.7
6	d. Above Rs 30, 000	6	10
	Relationship with the patient		

	a. Father	10	16.7
	b. Mother	17	28.3
	c. Sister	9	15
	d. Brother	6	10
	e. Spouse	9	15
	f. Paid caregiver	0	0
	g. Children/Offspring's	9	15
7	Length of stay in the hospital		
	a. <1 month	33	55
	b. 1-3 months	27	45
8	c. > 3months	0	0
	Religion		
	a. Hinduism	28	46.6
9	b. Christian	16	26.7
	c. Muslim	16	26.7
	Marital status		
10	a. Married	28	46.7
	b. Unmarried	17	28.3
	c. Divorced	5	8.3
	d. Widowed	7	11.7
	e. Separated	3	5
11	Duration of illness		
	a. 1-3 months	19	31.7
	b. 4-6months	18	30
12	c. Above 6 months	23	38.3
	How many times admitted in the hospital?		
	a. 1-3 times	23	38.3
13	b. 4-6 times	25	41.7
	c. Above times	12	20

Section II: Frequency and percentage distribution of level of knowledge of antipsychotics drugs among caregivers of schizophrenia patients. N=60

Level of Knowledge	Pre-test		Post-test	
	f	%	f	%
Adequate knowledge	0	0	32	53.3
Moderate knowledge	18	30	28	46.7
Inadequate knowledge	42	70	0	0

Section III: Evaluate the effectiveness of psychoeducation on knowledge of antipsychotics drugs among caregivers of schizophrenia patients, N=60

Comparison of level of knowledge	Mean	SD	Mean difference	t test value	Df	p value
Pre-test	9.63	2.980	10.70	15.79	59	0.001*
Post-test	20.33	3.882				

*P<0.05 level of significance

Section IV: Association between Pre-test knowledge score on antipsychotics drugs among caregivers of schizophrenia patients with their selected demographic variables, N=60

Demographic variables	Pre-test level of knowledge		χ ² value	df	p value
	Inadequate knowledge	Moderate knowledge			
Age in years			0.808	3	0.848
20-29 years	8	5			
30-39 years	13	4			
40-49 years	11	5			
50 years and above	10	4			
Gender			4.667	1	0.031*
Male	22	4			
Female	20	14			

Education					
Primary level	16	3	10.7	4	0.030*
Middle school	9	4			
High school	6	5			
Secondary level	9	1			
Graduation and above	2	5			
Occupation					
Unemployed	9	5	6.415	6	0.378
Housewife	9	7			
Business	8	1			
Daily workers	7	4			
Self employed	5	0			
Government service	2	1			
Students	2	0			

*p<0.05 level of significance

8. Discussion

Objective 1: To Assess the level of knowledge of antipsychotics drugs among caregivers of schizophrenia patients.

The result of the study revealed that majority of the participants i. e., 53.3% have adequate knowledge on antipsychotics drugs and 46.7% have moderate knowledge on antipsychotics drugs and non-participants have inadequate knowledge on antipsychotics drugs.

The study findings support the study conducted by **G. IdahTheBoral (2018)**, Coimbatore, Tamil Nadu on side effects and its management of antipsychotic drugs among caregivers of schizophrenia patients, in the pre-test 25 (62.5%) of the participants had inadequate knowledge, 15 (37.5%) of the participants had moderately adequate knowledge. During post-test regarding side effects and its management of antipsychotic drugs most of the care givers 37 (92.5%) had adequate knowledge, 3 (7.5%) had moderately adequate knowledge.2

Objective 2: To evaluate the effectiveness of psychoeducation on knowledge of antipsychotics drugs among caregivers of schizophrenia patients.

The present study showed that among 60 participants pre-test mean knowledge score was 9.63 ± 2.980 and post-test mean knowledge score was 20.33 ± 3.882 with mean difference was 10.70. The comparison was tested using paired t test with obtained ($t=15.79$) was statistically significant at $p<0.05$ level.

This study findings supports the study conducted by **Sayali Devidas Dambhe et al., (2018)** on effectiveness of planned teaching about knowledge regarding side effects of antipsychotics among the primary caregivers pre-test mean and SD was (10.1 ± 2.74) whereas post-test Mean and SD was (18.05 ± 2.34) and the calculated "t" value was ($t=13.71$) which shows statistically significant at $p<0.05$ level.3

Objective 3: To find out the association between pre-test knowledge score on antipsychotics drugs among caregivers of schizophrenia patients with their selected demographic variables.

In the present study, while determining the association between pre-test knowledge score on antipsychotics drugs among caregivers with their selected demographic variables result of chi square shows that there is significant association between knowledge and gender ($\chi^2=4.667$, $df=1$, $p=0.031$) education ($\chi^2=10.70$, $df=4$, $p=0.030$) and duration of illness ($\chi^2=6.862$, $df=2$, $p=0.032$) were statistically found significant association at $p<0.05$ level.

These findings are contradicted to study by **Benedicta Jane et al., (2015)** to assess knowledge on atypical antipsychotic drugs among caregivers of mentally ill patients. There was a significant association between 100 care givers and demographic variables such as age, education, occupation monthly income, relationship with the patient, duration of illness at the level of $p<0.05$.

9. Conclusion

The study can be concluded that caregivers of schizophrenia patients should receive psychoeducation and improve the level of knowledge on antipsychotics drugs. Hence, it revealed that the knowledge on antipsychotics drugs among caregivers of schizophrenia patients increased.

10. Nursing Implication of the Study

Nursing education:

The nursing students should have adequate knowledge and learning experiences about assessment, planning, implementation and evaluation nursing interventions related to management of antipsychotics drugs side effects and early management.

Nursing administration:

- Administration can set protocol for demonstration in OPDs, PHC, CHC, sub center, tertiary care Centre and community people.
- Nurses can use self-Instructional Module for giving psychoeducation to caregivers. At the time discharge instructional booklet about management on side effects of antipsychotics can provide to the patient and the caregivers.
- Administrator should organize staff development programs through continuing education, in-service education, workshop, conferences etc. to encourage the staff and make them update with different care policies and latest research findings for effective care and for evidence-based practice.

Nursing practice:

Based on the findings of the study, nursing practice can be improved in the hospital as well as community setting. As the majority of the participants had moderate knowledge of antipsychotics drugs, nursing practice should extend to the limit so that patients and caregivers will have adequate knowledge of side effects of antipsychotics drugs and to know the signs symptoms.

Nursing research:

- Nursing research promotes improvement of nursing profession in a scientific basis. This research

methodology can use in future research study in same or different context.

- Exploring the different ways in which the present study can be done also help in exploring new ideas and gain different evidences for nursing practice.
- The research helps to plan new interventional strategies for management of antipsychotics drugs and how to prevent relapse to the patients.

11. Recommendation

- 1) The similar study can be replicated with larger samples.
- 2) The similar study can be conducted by using descriptive, experimental and control group to determine the effectiveness of psychoeducation on knowledge of antipsychotics drugs.
- 3) The similar study can be done with a comparative study with other mental illness care givers.
- 4) Longitudinal study can be performing to evaluate the effectiveness of psychoeducation on knowledge of antipsychotics drugs among caregivers of schizophrenia patients.
- 5) A study can be undertaken to assess the problems faced by the caregivers of patients on antipsychotic drugs.

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