

# Adherence to Antipsychotics among Patients with Schizophrenia at Selected Tertiary Level Hospitals

Bhim Maya Yakha<sup>1</sup>, Dorwin Das<sup>2</sup>, Suraj Tiwari<sup>3</sup> and Pujan Sharma<sup>4</sup>

<sup>1</sup>PhD Scholar, Psychiatric Nursing Department of Nursing, Mansarober Global University, India

<sup>2</sup>Professor, Department of Nursing, Mansarober Global University, India

<sup>3</sup>Professor, Department of Psychiatry, Mental Hospital Lagankhel, Nepal

<sup>4</sup>Psychologist, Manmohan Memorial Medical College and Teaching Hospital, Nepal

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## Corresponding Author

Bhim Maya Yakha

bhima\_me@hotmail.com

<https://orcid.org/0009-0005-0898-4600>

## ABSTRACT

**Background:** Schizophrenia is a severe mental disorder where nonadherence is present in patients so that relapse, rehospitalization and treatment resistant can occur. **Objectives:** To identify the level of adherence to antipsychotics among patients with schizophrenia and to find its association with socio-demographic variables. **Materials and method:** A descriptive, cross-sectional study design was used for the study. 422 samples were collected using the purposive sampling technique Data was collected by the face-to-face interview technique during March, April, and May 2023. Questionnaire related to Socio-demographic information, standard valid tool Drug Attitude Inventory (DAI-10) was used as instrument. Data were analyzed using descriptive and inferential statistics with SPSS version 20. **Results:** The mean age of the respondents was 41.02,  $\pm 12.77$ . More than half 52 (12.3%) of respondents were taking antipsychotics for more than 15 years. Majority of respondents 342 (81.0%) were taking atypical types of antipsychotics. Only 220 (52.1%) of respondents has moderate level of adherence towards antipsychotic medicine. Significant association was found between duration of illness and adherence level where  $p=0.006$ . There is mean difference found  $p<0.001$  from nonadherent group to moderate adherent and adherent group and from moderate adherent-to-adherent group. **Conclusion:** Nonadherence was found important factor low Quality of life among schizophrenia patient. Implementation of community mental health program is necessary to reduce treatment gap and decrease nonadherence. It is essential to improve adherence on antipsychotic for better quality of life among schizophrenia patient.

## KEYWORDS

Adherence, Antipsychotics, Schizophrenia

## INTRODUCTION

Schizophrenia is a severe mental disorder characterized by vague symptoms like positive symptoms, negative symptoms, and cognitive symptoms. It is a chronic condition with mixed outcomes. Thinking is vague and speech sometimes incomprehensible. There is functional impairment and changes in personality affects in all major area of life (Świtaj, 2012). Nonadherence to medication is a leading cause of poor treatment outcomes among patients with schizophrenia. After discharge from the hospital, 30% to 50% of patients change the dose and rate of their medication without consulting a doctor (Barkhof, 2012). Non-adherence to pharmacological treatment, associated with substance abuse, suicide attempts, violence, and the deterioration of long-term functioning in these patients, is one of the most important risk factors for relapse, re-hospitalization, and treatment resistance in patients diagnosed with schizophrenia (Acosta, 2012). Estimated nonadherence rates in schizophrenia are about 50%, widely ranging from 4% to 72% (Lacra, 2002). Nonadherence is a spectrum that affects more than a third of individuals with schizophrenia each year (Haddad *et al.*, 2014).

## METHODOLOGY

A descriptive cross-sectional study design was adopted in the study. The sample size was 422, and purposive sampling technique was used to select the sample. Data was collected through face-to-face interviews during March, April, and May 2023. Participants were assured of anonymity and confidentiality. No name or personal identification number were reflected on the questionnaire. Informed consent was obtained from each respondent. Ethical approval for the study was taken from Nepal Health Research Council. Research questionnaire consisted of two parts: Part A- Socio-demographic variables of respondents, Part B- Standard valid tool Drug Attitude Inventory (DAI-10) was used as instrument. Data were analyzed using descriptive and inferential statistics with SPSS version 20.

## RESULT

Out of 422 respondents majority of 160 (37.9%) were from age group 30-44 years followed by 115 (27.3%) from age group  $\leq 30$  years. The mean age of the respondents was 41.02 with a standard deviation of 12.77. More than half of respondents 237 (56.2%) were male followed by 185 (43.8%) female. More than half of the 277 (53.8%) respondents were educated up to secondary education. Near about half 210 (49.8%) of respondents married followed by 144 (34.1%) unmarried, twenty-three (5.5%) of respondents were widow and 41 (9.7%) of respondents were divorced. worker etc. Altogether 139 (32.9%) of respondents were diagnosed with schizophrenia between 5-10 years ago. The majority of respondents 342 (81.0%) were using atypical antipsychotic. Only 126 (29.9%) of respondents has substance taking behavior.

**Table 1: Adherence level of Antipsychotic among Respondents**

n=422				
Characteristic	Categories	Score	Frequency (f)	Percentage (%)
<b>DAI-10</b>	Adherent	6-10	95	22.5
	Moderate Adherent	0-5	220	52.1
	Non adherent	Negative score	107	25.4

Table 1 illustrates that more than half 220 (52.1%) of respondents has moderate level of adherence towards antipsychotic medicine which score range from 0-5 and 107 (25.4%) of has negative score which indicate non- adherent and rest of respondents 95 (22.5%) score from 6-10 which indicates adherent to antipsychotic medicine.

**Table 2 Association of demographic variables with Adherence to Antipsychotics n=422**

Variables	Adherence		Odds Ratio	95% Confidence Interval		P value	
	Non adherence (n=105)	Adherence (n=315)		Lower	Upper		
<b>Gender</b>	Male	52 (12.32%)	185 (43.83%)	.664	.428	1.032	0.006
	Female	55 (13.03%)	130 (30.80%)				
<b>Education</b>	Illiterate	27 (33.3%)	54 (66.7%)	1.03	.670	1.610	0.086
	Literate	80 (23.5%)	261 (76.5%)	.8			
<b>Marital status</b>	Married	54 (25.7%)	156(74.3%)	1.03	.670	1.610	0.911
	Others	53(25.0%)	159 (75.0%)	.8			
<b>Types of family</b>	Nuclear	65 (27.0%)	176 (73.0%)	1.22	.782	1.912	0.429
	Joint and extended	42 (23.2%)	139 (76.8%)	.2			

<b>Occupation</b>	Employed	18 (18.9%)	77 (81.1%)	.625	.354	1.103	0.091
	Unemployed	89 (27.2%)	238 (72.8%)				
<b>Religion</b>	Hindu	67(28.8%)	166 (71.2%)	1.50	.959	2.357	0.091
	Others	40 (21.2%)	149 (78.8%)	3			

Table 2 shows that there is no relationship between age, marital status, occupation, types of family, and religion with adherence level. However, an association was found between gender and level of adherence ( $p = 0.006$ ).

**Table 3: Clinical Factors Contributing to Adherence to Antipsychotics**

Clinical characteristic	Categories	Adherence		Odds Ratio	95% Confidence Interval		P value
		Non adherence (n=105)	Adherence (n=315)		Lower	Upper	
		<b>Duration of illness</b>	Less than 5 years		42	118	
	more than 5 years	65	197				
<b>Types of Antipsychotic</b>	Typical Antipsychotic	22	58	1.147	.663	1.985	0.876
	Atypical Antipsychotic	85	257				
<b>History of Admission</b>	Yes	23	71	1.065	.661	1.714	0.587
	No	84	244				
<b>State of Substance</b>	Yes	33	93	1.065	.661	1.714	0.650
	No	74	222				

Table 3 shows that there is no significant association between the duration of illness, types of antipsychotic drugs and history of admission.

## DISCUSSION

A total of 422 sample were selected, age from 18 year to 80 years. The mean age 41.02,  $\pm 12.77$ . More than half 237 (56.2%) of respondents were male. The socio-demographic characteristic respondents are similar and comparable with earlier study done in Bhairawa, Nepal (Subedi, 2020). Maximum patients were came from state three (Bagmati Province). This suggest that community mental health programme is

necessary to make treatment accessible and assessable to the community people, which reduce treatment gap, and improves adherence among patient.

Antipsychotic nonadherence rate of 25.4% found in this study was more than previously reported study conducted by S. Lama ( S. Lama et al., 2020) where 37% and less than 65.95% study done by (Subedi S. 2020) among patient attending Outpatient Department. Measurement of adherence employed by researcher may account wide range of difference in nonadherence rate in same country with different in setting. Difference found among other study 11.8% in Ethopia (Alejendra *et al.*, 2020), 41.05 (Tarake M et al., 2018) the rate was below 66.9 reported in Egypt by Amr et al. (2013) respectively. The moderate level of DAI score sample reflects a general positive attitude toward antipsychotic medication. When more extension and thorough analysis of the literature review done, nonadherence rates among people with schizophrenia were found to range from 20% to 80%, on average 50% (Mueser, 2005).

Present study did not found association between nonadherence and demographic variables such as age, gender, ethnicity, education level, marital status, types of family and occupation. This finding is similar to the findings of previous study conducted by (Subedi, 2020) p values <0.005. Regarding age patients less than 45 years found non-adherent (48.46%) than those of age above 45 years. Present findings found similar to other study done in Hyderabad, India (Chandra, 2014). It could be because of younger patient negative perception of medicine, experience of harmful side effect, perception of ability to control their condition or this may be because as they get older and get more experience with their psychotic condition, patients learn that stopping their neuroleptic medication intake can prevent relapses, so they take their prescription as directed. Here in present study analysis showed that those patients who are less than 45 years and non-adherent has history of current substance use 21.42% however no association found. There is no more difference in adherence among males and females between groups. This is concurrent with the previous findings (Diaz, 2005) but inconsistent with another study female patients reported negative attitude towards medications (p<0.05, Jiansong, 2016), contradictory with another study (Galdas *et al.*, 2005), male patients showed more negative attitude towards antipsychotic medications than female patients (39.6%) did. It could be because of community literacy on the treatment of mental illness.

## CONCLUSION

Nonadherence is found common among patient with schizophrenia. Adherence plays important role low quality of life in patients. Additional factors that were found to be linked included education level, length of sickness, and history of substance use. Implementation of a community mental health program can reduce treatment gap and decrease nonadherence.

## RECOMMENDATION

Intervention targeted to address drug nonadherence from the outpatient department is necessary for improving quality of life among schizophrenia patients. Longitudinal and experimental studies would be better to identify temporal relationships between risk factors and nonadherence.

## LIMITATION

The present study design was cross-sectional, therefore there was a there was a temporal relationship between contributing factors and antipsychotic nonadherence. Although data was collected from a tertiary referral hospital, it is just one setting.

## CONFLICT OF INTEREST

None

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