

# Social factors associated with medication noncompliance in schizophrenic patients who attending psychiatric teaching hospitals

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**Abstract:** *A descriptive cross-sectional study that was carried out during the period of March 20, 2019 to September 10, 2019. The study aim was to assess the level of medication non-compliance and the social factors associated with medication non-compliance among schizophrenic patients. A purposive (Non-Probability) sample of 150 schizophrenic outpatients was selected. Data were collected through the use of the constructed questionnaire and the process of the structured interview and administrative questionnaire. The questionnaire was constructed as a main instrument, which consisted of three parts; the first part includes two sections which are the covering letter to obtain the agreement of patients to participate in the present study and the socio-demographic and clinical characteristics of the patients; the second part is the questionnaire with 20 items measure the social factors associated with medication non-compliance in schizophrenic patients; the third part of Questionnaire is concerned with medication non-compliance level in patients with schizophrenia. The study result found that social factors were moderately associated with non-compliance to medication among patients (75.3%). The findings also shows that high level of non-compliant to medication (60.7%). The study recommended strengthen psychiatric social work departments through adequate training and laying down infrastructure to ensure that the patients social assets are holistically assessed and utilized appropriately to enhance medication compliance and thus improve quality of life.*

**Keyword:** *social factors, medication non-compliance, schizophrenic patients.*

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## INTRODUCTION

Medication non-adherence is a common problem which can be found in all populations and diseases, If a simple answer to the problem of medication non-adherence in schizophrenia existed, it already would have been discovered <sup>1</sup>. It is estimated that 20% to 80% of patients fail to self-administer their medication as prescribed. Approximately one-third of patients diagnosed with schizophrenia do not adhere to their prescribed medications at any given time, Non-adherence is a significant barrier to treatment success <sup>2</sup>. A significant proportion of hospital admissions can be attributed to medication noncompliance. Symptom relapse as a result of non-compliance can be more severe and dangerous than those occurring while patients remain compliant with their antipsychotic medications <sup>3</sup>. In the United States alone, medication non-adherence accounts for approximately 125,000 deaths annually, and it accounts for 10% to 25% of hospital and nursing home admissions <sup>4</sup>. Treatment non-adherence is more complex than not taking medications as prescribed, It also involves not keeping scheduled appointments, failure to follow recommended dietary and/or lifestyle changes, and failure to follow other aspects of treatment or recommended preventive health practices <sup>4</sup>. Patient non-adherence to treatment is a complex issue which places a significant encumbrance on our healthcare system <sup>4</sup>. Overwhelming evidence points to the fact that antipsychotic medications can be efficacious in the treatment of symptoms of schizophrenia, yet the failure of many persons with schizophrenia to take their medications as prescribed severely undermines the benefits of this class of medications <sup>5</sup>. As our population continues to age and cost containment matter accumulate, the health-delivery industry will be faced with the duty of discovering adequate means of empowering patients to suppose a greater role in the management of their diseases, one method by which patients can better manage their diseases is by complying to their medication regimens <sup>5</sup>. Antipsychotic medication

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compliance plays a key role in patients with schizophrenia, and regular treatment regimen has been proven to improve symptoms and minimize relapse proportion in schizophrenic patients<sup>6</sup>. However, treatment non-compliance remains one of the greatest challenges in psychiatry<sup>7</sup>. A comprehensive review<sup>8</sup> reported that the rate of medication non-compliance in patients with schizophrenia is as high as 40%–50%. Non-compliance to antipsychotic medication has a negative effect on the course of disease resulting in consequences to patients, society and healthcare systems, many studies investigated that hospitalization rates were significantly higher among non-compliant patients compared with compliant ones. Although there was heterogeneity in the definition of compliance and measures of adherence used, a consistent connection between lower adherence proportion and higher hospitalization risk has been revealed. A systematic review<sup>9</sup>.

The factors consistently associated with non-compliance in patients with schizophrenia are deficiency of insight, attitudes towards their disease and the medication, past experiences with their disease and its treatment, substance abuse, adverse drug reactions and lack of social support<sup>10</sup>.

## **MATERIALS AND METHOD**

A descriptive cross-sectional study was utilized to assess the level of medication non-compliance and the social factors associated with medication non-compliance among schizophrenic patients. The study was carried out during the period of March 20, 2019 to September 10, 2019. The study was conducted in outpatients clinics in Al-Rashad and Ibn Rushed psychiatric teaching hospitals which is located in Al-Rusaffa sectors in Baghdad, and from Al-Kademia teaching Hospital which is located in Al-Karkh sector in Baghdad.

**Study Sample:** A purposive (Non-Probability) sample of one hundred and fifty schizophrenic outpatients, The participants were selected purposively from Both genders (males and females) aged from 18 to 50 year and above. patients diagnosed with schizophrenia and patients with full insight and have at least one year after diagnosis. Schizophrenic patients attending outpatient psychiatric clinic.

### **Instrument of the study:**

**Demographic Data:** this part includes gender, age, marital status, occupation, level of education, live with, duration of illness, type of house, residence, income, time of admission.

**Social factors questionnaire:** This part of the questionnaire is include social factors scales which consisted of twenty item that measure the social factors associated with medication non-compliance in schizophrenic patients. this scale were translated into Arabic language after making necessary modifications before collecting the data.

**Medication non-compliance scale:** This part of the questionnaire were consist of eighteen items.

**Data Collection and Data Analysis:** The data collection was carried out from (20 March to 10<sup>th</sup> september, 2019) The data was collected after obtaining the permission from the directorate of psychiatric hospitals for the present study through the utilization of the administrated questionnaire as a mean of data collection, the data were collected through the utilization of structured interview. The data collection procedures have been done at outpatient psychiatric clinic. The researcher has met the respondents in a side places at outpatients clinics in the hospital which referring by the psychiatrists. The researcher conducting The interview with the schizophrenic patients who are stable and combination with one relative of patients. All the patients in present study diagnosed by psychiatrist as schizophrenic patients which fulfill the inclusion criteria mentioned previously. A prior permission has been taken from the psychiatrist to refer patients to the researcher to interview with them. The decision of insight level was made by the psychiatrist. The researcher conducting an interview with the participants and the research objectives were after obtain their agreement to participate in the study to maintain the ethical consideration and respect autonomy of the

participants. The participants need approximately 30-45 minutes to complete all items of the questionnaire. The data of current study were analyzed by using (SPSS) version (24.0).

## RESULT AND DISCUSSION

Table one shows that The analysis of data in this table shows that (59.3%) of patients were males while (27.2%) their age group (40-49 )years and ( 24.7%)of them (30-39 years). The marital status for patients refers that they were married (40%) and (34.7%) of them were still single. The highest percentage among levels of education is referring that patients were with primary school education (46%). Regarding the monthly income, less than half of patients were perceiving that they were associated with sufficient monthly income (46.6%), while (30.7%) of them were perceiving barely sufficient income. Most of patients were shown that they resident in urban area (93.3%) who were reported that they living with their parents (49.3%). More of the patients reported that they were living in a family house (72.7%). And figure one shows that only (24.6%) of patients were working; (11.3%) were governmental employee and (13.3%) of them were self-employed. While (75.4%) of them doesn't working because of illness (70.6%) and retirement (4.8%). Figure tow shows that (52%) of patients have ( $11 \leq$  years) duration of illness and (27.3%) are having (1-5 years) duration of illness. Figure three shows this figure shows that about two third of patients were admitted (1-3 times) to psychiatric hospitals (78%). Table 2 shows that (60.7%) of patients were showing non-compliant behavior to medication, while only (24.7%) showing moderate-compliant to medication. Table 4 shows that social factors were moderately associated with non-compliance to medication among patients as referred with high percentage (75.3%). The study result shows that schizophrenic patients in the current study were males (59.3%). This finding reflects two indicators: the first one is that the prevalence of schizophrenic disorder is higher in males than in females in the Iraq community; the second one is that male- female ratio could be explained as female psychiatric patients were less frequently brought to the psychiatric hospitals in Iraqi culture due to many social factors such as stigma. On the other hand, it should be considered that during the period of data collection for the present study that the chance of being male patients are more than females. This gender distribution is supported by Tadele Eticha et al (2015)(11) who reported that 72% of the patients were males as represented in their study. The age distribution of the sample in this study indicated that 27.2% were aged of 40-49 years old and (30-39 years; 24.7%).this refer to most sample from middle age. This age distribution is supported by (Ashish V,et al.2015)(12) who reported 33% of patients were 40 years old.

The marital status of the present sample (table 4.1) revealed that 40% of the patients were married and 34.7% of them unmarried (single). This finding was inconsistent with Tadele Eticha et al (2015)(11) who found that 23.7% were married. The high percentage concerning level of education has been reported as low education, 46% of the sample have primary school educational level(table 4.1).this finding supported by (EDITH WANJIKU,2012) (13) . Was congruent with the current results they found that most of patients with low level of education 44%. The analysis of the results in table (4.1) reveals that nearby half of the patients (46.6%) had insufficient income. Such finding can be integrating to the employment status of the sample which indicates that 70.6% of the sample were unemployed taken into consideration the cost of the treatment and the patients themselves who are unemployed that might be a source of burden on the family. This result was supported by (Mohammed ,2014)(14) .who found that 47% of patients are associated with insufficient monthly income. The high percentage of residence urban 95.3% this result due to the density of population distribution, which is concentrated in cities and not in rural areas because of the availability of infrastructure, services and job opportunities and availability advanced hospitals. The results shows half of patients participate in this study live with parents (49.3%). And More of the patients reported that they were living in a family house (72.7%).This indicate the patients unable to care himself and the parents more careful and tolerate burden of psychiatric patients. EDITH WANJIKU (2012)(13) supported this study they found that most of patients live with parents(35.2%). The finding in figure (4.2)shows the duration of illness for schizophrenic patients which revealed that the higher percentage(52%). Of them had 11 years and above duration of illness This finding was consistent with the result of (Mohammed,2014)(14), who reported that duration of illness was 11 years and above. The finding consistent with Ashish V,et al(2015)(12)who found (61.5%)of their sample have 7-11 years duration of illness. Figure (4.3) shows the distribution of the patients regarding to their number of admissions. 78% of schizophrenic patients had 1-3 admission to the psychiatric wards. Such finding may be confirmed by the theory of non-adherence to medication and cause relapses and impact on mental health. The finding was supported by (Ashoor,2015)(15) who reported the same numbers of admission (72.5%). It was known of the current result in the table (4.2) that (60.7%) of schizophrenic patients are associated with high level of non- compliant behavior to medication ( $M.S=2.46$ ) this finding shows that medication non- compliance widespread among schizophrenic patients in our culture. The finding of current study concerning medication non- compliance in schizophrenic patients could be explained by the nature of our culture and people. Chronic nature of illness, transportation problem, medication related factors like side effects of

drug and lack of effectiveness of drugs, relatives insight toward illness, lack of knowledge, misconception about psychiatric disorders and patient's insight towards illness were also revealed as contributing factors to non-compliance. This finding was supported by Ashish V,et al(2015)(12) who found that most of their sample perceiving high level of non-compliance medication in schizophrenic patients (69%). The table (4.4) shows the means of scores and standard deviations of the social factors were moderately significant associated with non-compliance to medication among patients as referred with high percentage (75.3%) The result reflect the lack of insight and knowledge toward the medication and nature of illness may cause moderate level of non-compliance this finding was supported by (13-30).

## RESULTS:

**Table (1): Distribution of Patients according to their Socio-demographic Characteristics**

List	Characteristics	f	%	
1	<b>Gender:</b>	Male	89	59.3
		Female	61	40.7
		<b>Total</b>	<b>150</b>	<b>100</b>
2	<b>Age:</b>	≤ 19 years	3	2
		20 – 29 years	22	14.7
		30 – 39 years	37	24.7
		40 – 49 years	41	27.2
		50 – 59 years	31	20.7
		60 ≤ years	16	10.7
		<b>Total</b>	<b>150</b>	<b>100</b>
List	Characteristics	f	%	
3	<b>Marital status:</b>	Single	52	34.7
		Married	60	40
		Divorced	27	18
		Widowed/Widower	11	7.3
		<b>Total</b>	<b>150</b>	<b>100</b>
4	<b>Level of education:</b>	Doesn't read & write	25	16.7
		Primary school	69	46
		Intermediate school	20	13.3
		Secondary school	15	10

		Institute / College	21	14
		<b>Total</b>	<b>150</b>	<b>100</b>
5	<b>Monthly income:</b>	Sufficient	34	22.7
		Barely sufficient	46	30.7
		Insufficient	70	46.6
		<b>Total</b>	<b>150</b>	<b>100</b>
6	<b>Residence:</b>	Urban	142	95.3
		Rural	8	4.7
		<b>Total</b>	<b>150</b>	<b>100</b>
7	<b>Lives with:</b>	Alone	6	4
		Spouse	45	30
		Parent	74	49.3
		Siblings	25	16.7
		<b>Total</b>	<b>150</b>	<b>100</b>
<b>List</b>	<b>Characteristics</b>		<b>f</b>	<b>%</b>
8	<b>House type:</b>	Rented	19	12.7
		Owned	22	14.7
		Family house	109	72.7
		<b>Total</b>	<b>150</b>	<b>100</b>

f: Frequency, %: Percentage

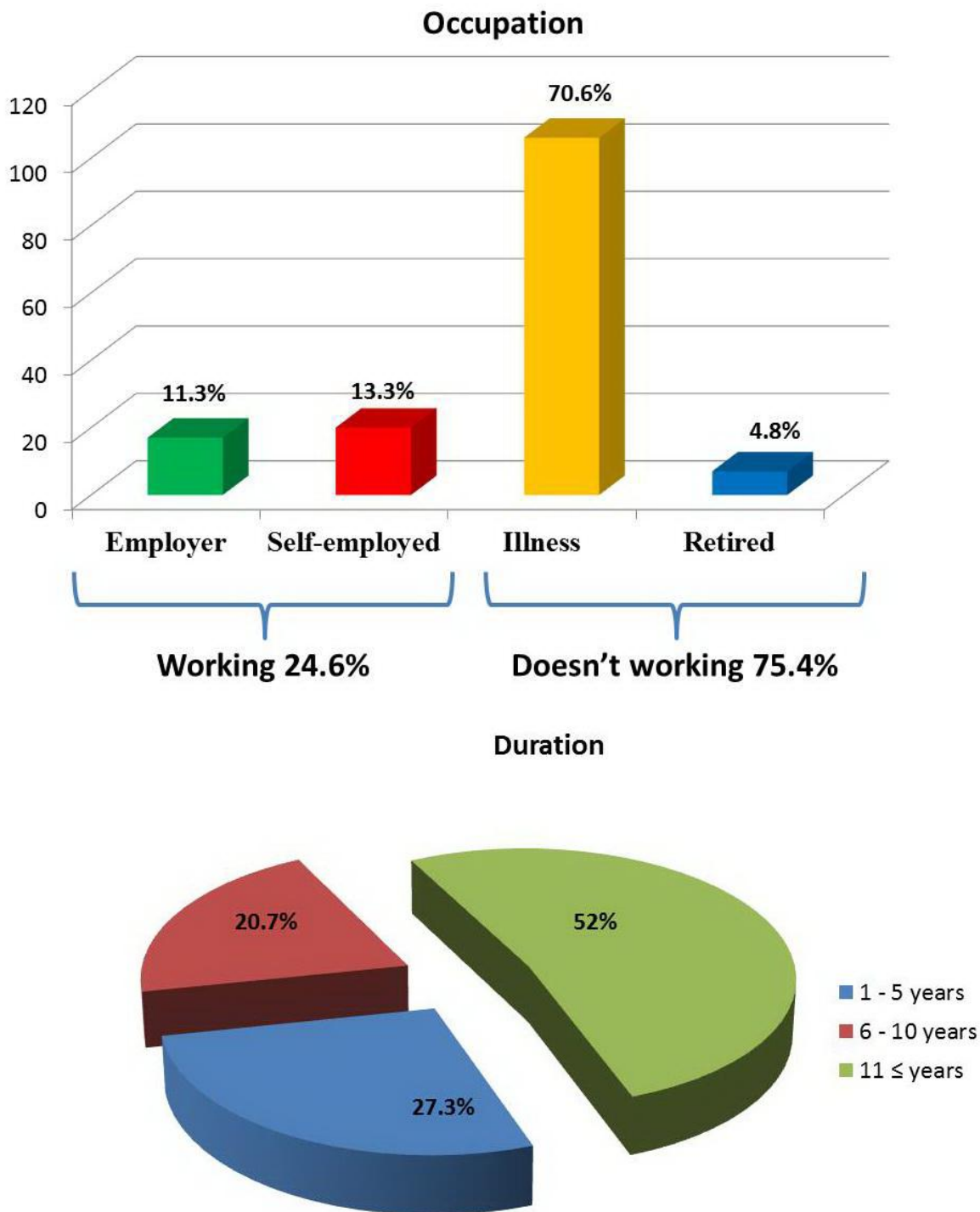


Figure (4-2): Distribution of Patients according to Duration of Illness (N=150)

Table (4-2): Levels of Medication Non-compliance among Patients with Schizophrenia

Levels	f	%	M.S	SD

Non-compliant	91	60.7	2.46	0.738
Moderate-Compliant	37	24.7		
Good Compliant	22	14.6		
<b>Total</b>	<b>150</b>	<b>100</b>		

f: Frequency, %: Percentage, M.S: Mean of score, SD: Standard Deviation

Good-compliant= 18-24, Moderate-Compliant= 24.1-30, Non-compliant= 30.1-36

**Table (4-4): Overall Assessment of social Factors among Patients with Schizophrenia**

Levels	f	%	M.S	SD
Low	3	2	2.21	0.453
Moderate	113	75.3		
High	34	22.7		
<b>Total</b>	<b>150</b>	<b>100</b>		

f: Frequency, %: Percentage, M.S: Mean of score, SD: Standard Deviation

Low= 18-30, Moderate-Compliant= 31-42, Non-compliant= 43-54

## CONCLUSION

The majority of the participants are married male with ages range from 30 to 44 years old and with low level of education. The most schizophrenic patients live in urban in family house with insufficient monthly income. There are less admitting times although the long duration of illness for schizophrenic patients. There are highly significant non-compliant behaviors to medication in schizophrenic patients. The social factors were moderately associated with non-compliance to medication among schizophrenic patients.

## RECOMMENDATIONS:

Strengthen psychiatric social work departments through adequate training and laying down infrastructure to ensure that the patients social assets are holistically assessed and utilized appropriately to enhance medication compliance and thus improve quality of life.

Put in place mechanisms of reducing cost of care. Clinicians must involve the patient in the prescription process. If an expensive drug must be used in the cases of resistance, or intolerance to cheaper options, the clinician must discuss with the patient other sustainable means of acquiring the drugs.

## Financial disclosure

There is no financial disclosure.

## Conflict of interest

None to declare.

## Ethical Clearance

All experimental protocols were approved under the College of Nursing and all experiments were carried out in accordance with approved guidelines.

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