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Factors affecting treatment compliance in psychiatric setting

Cover Page Footnote

ABSTRACT BACKGROUND Compliance with the medication has a direct relation to the outcome of patients under treatment. Various factors influence the compliance to treatment which includes a financial situation, age at onset, employment, the stigma of illness, relationship with a therapist, the severity of illness, access to treatment and side effects of medication. However socio-economic status is an important factor associated with the treatment compliance of people with psychiatric illness. The objective of the study was to find out the various factors that contribute to treatment with non-compliance among patients suffering from psychiatric disorders.

FACTORS AFFECTING TREATMENT COMPLIANCE IN PSYCHIATRIC SETTING

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ABSTRACT

BACKGROUND Compliance with the medication has a direct relation to the outcome of patients under treatment. Various factors influence the compliance to treatment which includes a financial situation, age at onset, employment, the stigma of illness, relationship with a therapist, the severity of illness, access to treatment and side effects of medication. However socio-economic status is an important factor associated with the treatment compliance of people with psychiatric illness. The objective of the study was to find out the various factors that contribute to treatment with non-compliance among patients suffering from psychiatric disorders.

DESIGN

A cross-sectional retrospective study based on data from the Hospital Management System(HMS) of Karwan e Hayat.

METHOD

The data of admitted & OPD patients suffering from severe mental illness was retrieved from Hospital Management System(HMS) Karwan e Hayat from Jan 2004 to April 2016 and was evaluated through Medication Compliance Scale for treatment compliance. Then using SPSS the association of treatment compliance was assessed in relation to different demographic factors including gender, socio-economic status, and education.

RESULT

The Medication Compliance Scale reveals that 57.1% male and 47.5% female were adherent to treatment. The association between age and treatment compliance was statistically significant ($p=0.00$). Patients with no formal education were at higher risk of being non-adherent as compared to more educated patients ($P=0.00$). There were no relationship found between treatment adherence and socioeconomic status in this study.

CONCLUSION

The study highlighted that education, gender, and age are the major factors that contributed to therapeutic non-compliance in a psychiatric setting.

KEY WORDS: Treatment Compliance, Severe psychiatric illness, Effecting Factors

INTRODUCTION

The use of medicine is to achieve better outcomes in patients. However, despite all the best efforts of healthcare professionals, those might not be achievable if patients are non-compliant [1]. Different factors for medicine non-adherence may be related to disease severity, treatment characteristics, or even external environmental factors such as therapeutic support [2]. But in psychiatric illnesses, other factors may also contribute to non-adherence such as

psychotic symptoms, co-occurring disorders, insight, patient's family or sociocultural background, and his or her beliefs regarding the usefulness of treatment [3]. Socioeconomic status has remained an important factor in the maintenance of general health outcomes especially mental health. Socioeconomic status is the social standing or class of an individual or group. Socioeconomic status is often seen as an integration of education, income, and occupation. Inquisition of socioeconomic status often reveals discrimination in

access to resources, plus issues related to privilege, power, and control. Socio-economic status is associated with the treatment compliance of people with psychiatric illness.^[3] Poor health outcomes would reduce earning ability. The dimensions of wellness have shown causal links in both directions such as poor health and earning abilities in five developing countries in a study by Das et al^[4].

Multiple studies^[5-8] have also shown various factors that influence the compliance to treatment which includes a financial situation, age at onset, employment, the stigma of illness, relationship with a therapist, the severity of illness, access to treatment, and medications, side effects of medication, etc.

The treatment in terms of compliance not only includes medication but also includes diet, exercise, or lifestyle changes. A number of studies have been conducted in developed countries regarding therapeutic non-compliance^[9]. The estimated rate of long-term medication therapy compliance was between 40% and 50%^[10]. It is estimated that 50% of chronic psychiatric patients are not taking medication as prescribed after six months^[11]. Therefore we need to explore actual factors of treatment compliance.

With this background in the present study, we have attempted to find out the various factors influencing the non-compliance in patients with psychiatric disorders.

METHODOLOGY

A retrospective approach was adopted. The study included the data set of Hospital Management System (HMS) Karwan e Hayat from Jan 2004 to April 2016. A total of 1564 participants, who fulfilled the inclusion criteria of a minimum of 6 months of taking medicine were included in the study. Psychiatric diagnosis was confirmed, according to ICD-10 criteria for this study. The study protocol was approved by the institutional review board of the Karwan e Hayat Institute of mental health care.

OBJECTIVE

The objective of the study was to evaluate multiple factors associated with adherence to treatment with severe mental illness in psychiatric patients.

INCLUSION & EXCLUSION CRITERIA

The inclusion criteria were; a minimum of 6 months of taking medicine, the psychiatric Diagnosis was confirmed according to ICD10 criteria, and Individuals aged between 18-65 years. The following exclusion criteria were; incomplete data set on HMS and Less

than 6 months of treatment.

OUTCOMES MEASURES

The Primary outcomes of medicine adherence compare with socio-economic status, gender, and education were measured. Secondary outcomes age was documented through the Hospital Management System (HMS) of Karwan e Hayat.

STATISTICAL ANALYSIS

The statistical analysis was performed using SPSS, version 20. The primary outcome for the study was medicine adherence, socioeconomic status, gender, and education. The medicine adherence was compared with socioeconomic status, gender, and education using the t-test. P-values < 0.05 were considered to be statistically significant.

RESULTS

The first hypothesis was that patients pertaining severe mental illness will explicate various level of compliance in consonance with the patient's socioeconomic status. In the light of this hypothesis we juxtapose two categories of socioeconomic status which contained high and low socio economic status. We initially hypothesized that certain patients in conjunction with higher socio economic class would indicate better treatment compliance comparatively lower socio economic status. Contrarily this was disapproved over concluding the data shown where the degree of compliance and adherence of patients pertaining to low socioeconomic status was clinically comparable to high socioeconomic status.

The second hypothesis was concerning gender which proposed that there will be a significant difference among the male patients for treatment compliance as compared to the female patients. In total there were 1564 patient selected among which 541 were females while 1023 were male patients. However the results reveal that the male patients visit was 51% and higher in treatment compliance as compared to female patients which was 47.5%. This difference was not statistically significant but this was concurrent with the previous findings.^[12] This might be because males receive more family and social support than females, which makes them more compliant to medication. The third hypothesis was the level of education which proposed that there will be significant difference between educated patients and patients with no formal education. Our study finding show high ratio in non-compliance with patients having no formal education. The difference was statistically significant (p=0.00).

The fourth hypothesis was Poor compliance which was determined high in epoch of being advanced years especially 40 years when compared to younger (<30 yrs.) and middle (31-40 yrs.) age groups. Our study finding revealed significant difference between group (p=0.00).

DEMOGRAPHIC CHARACTERISTICS

Characteristics of respondents have been presented in Table 1. 34.6% female and 65.4% male patients participated. The major age group was 26-30 years (20.3%).

Table 1: Demographic Characteristics of the Studied Patients

Characteristics		N	%
Gender	Female	541	34.6
	Male	1023	65.4
	Total	1564	100
Age(Years)	18-20	62	4
	21-25	258	16.5
	26-30	318	20.3
	31-35	284	18.2
	36-40	215	13.7
	41-45	136	8.7
	46-50	128	8.2
	51-55	84	5.4
	56-65	79	5.1
	Total	1564	100

FACTORS OF MEDICINE ADHERENCE

Provides estimates effect of socio economic status, gender, education and Age on medicine adherence in Table 2-5. A total 1564 patients were included in the study. According to result finding there were no difference seen between high socioeconomic group and low socioeconomic group in non-adherence. The Medicine Compliance Scale indicates that the 51% male and 47.5% female showed adherence to treatment. Patients with no formal education were at higher risk of being non-adherent as compared to educated patients (P=0.00). Poor compliance was found more in the age group of more than 40 years when compared to younger (<30 yrs.) and middle

(31-40 yrs.) age groups. There were no difference seen between high socioeconomic group and low socioeconomic group in non-adherence.

Table 2: Medicine Compliance with Socioeconomic Status

Table 3: Medicine Compliance with Gender

Gender	Scale	N	%
Female	Compliance	257	47.5
	non-compliance	284	52.5
	Total	541	100
Male	Compliance	522	51
	non-compliance	501	49
	Total	1023	100

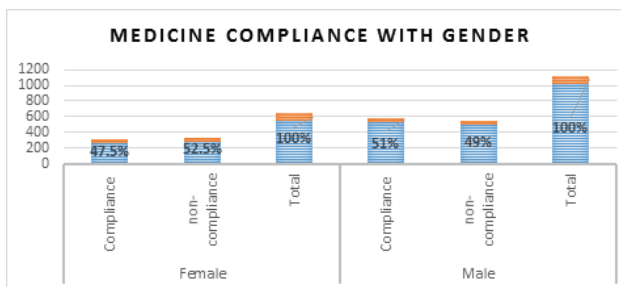


Table 4: Medicine Compliance with Education

Paired Samples Test

Qualification	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Bachelors	-.143	1.073	.122	-.386	.101	-1.169	76	.246
Intermediate	-.180	1.061	.094	-.365	.006	-1.917	127	.058
Masters	-.192	1.059	.208	-.620	.235	-.926	25	.363
Matric and less	-.068	1.010	.043	-.152	.016	-1.591	558	.112
No formal education	-.204	1.006	.036	-.275	-.133	-5.647	773	.000

Socioeconomic status	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
High Socioeconomic	-.324	1.070	.104	-.531	-.117	-3.102	104	.002
low Socioeconomic	-.138	1.012	.026	-.190	-.086	-5.200	1458	.000

Table 5 : Medicine Compliance with Age group

Age Group	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
18-40	-.169	1.028	.031	-.229	-.109	-5.536	1136	.000
41-65	-.101	.984	.048	-.194	-.007	-2.114	426	.035

DISCUSSION:

Multiple factors involved in the measure of treatment compliance at Karwan-e-Hayat psychiatric rehabilitation care were explored through a retrospective study. Various important factors were explored in the study.

In various researches, socioeconomic status was considered plausible in the repercussion of mental illness and their treatment. It was comprehended in a study (2017) that patients belonging to low socioeconomic position (SEP) were more likely to utilize fewer mental health services.^[13] But in this study reveal that there was no association between socioeconomic factors affecting medicine non-compliance. Possible reasons for these findings may be that the majority of them were on charity basis.

In this study, the male patient's visit was 51% and higher in treatment compliance as compared to female patients which were 47.5%. Allied to this study outcome, reported better compliance to treatment among men^[14]. However, findings divergent to this study have been reported from the USA and Belgium where men were more likely to discontinue treatment without physician consent^[15, 16]. This variance is reported in the findings may be due to socio-cultural differences. The various roles assumed by women included homemakers, professionals, spouses, mothers, and care providers which may contribute to their inability to adhere to prescribed treatment. Additional women were likely to report that they found it difficult to visit the hospital as they had to attend the household activities. Another reason may be that in our society, men are given more importance because they are head of the families.

Poor compliance was determine higher in epoch of being advanced years especially 40 years when compared to younger (<30 yrs.) and middle (31-40 yrs.) age groups. The association between age and non-compliance was statistically significant ($p=0.00$). This was made believe that people with more than 40 years with psychiatric morbidity are dependent and the neglected population in our society. This finding was similar to previous study^[17].

This was analogous to the early observation of Nose et al, 2003, which constitute that education was positively interrelated with compliance. Better compliance in psychiatric population is pertinent considering higher education obviously promotes insight to the illness and a better account for the need of the treatment.^[18]

LIMITATIONS:

This retrospective study design and participants data were center-based. Due to that reason further variables could not be explored.

CONCLUSION

The study highlighted that education, gender and age are the major factors that conferred to therapeutic non-compliance in psychiatric setting. Consequently furthermore extensive longitudinal study should be carried out focusing on doctor/patient relationship and related social, financial, educational and clinical factors.

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Yasirah Gohar; concept, data collection, data analysis, manuscript writing, manuscript review

Uroosa Talib; data collection, data analysis, manuscript writing, manuscript review

Nasir Mehmood; data collection, data analysis, manuscript writing, manuscript review