Original article

Medication non-adherence factors and difficulties among psychiatric patients in Madinah

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Abstract

Background &Aims:
Adherence to medication is an important part of patient management, Adherence rates may be lower among patients with psychiatric disorders compared to patients with a physical disorder. Our aim was to measure adherence to medication among outpatient psychiatric patients, and the factors associated with it.

Methods:
A cross-sectional study was conducted in Al-Amal Hospital for Mental Health in Al-Madinah. Eligible participants met with one of the data collectors for assessment of their adherence. Adherence was investigated by use of the Morisky Medication Adherence Scale plus Information about the demographics and reasons of difficult adherence were collected.
Descriptive Statistical analysis was performed using Statistical Package for Social Sciences, version 20 (SPSS Inc., Chicago, IL, USA). P< 0.05 was considered as significant. Correlation between adherence and other independent variables was calculated.

الملخص

الخلفية والأهداف:
يعتبر الالتزام بأخذ الدواء جزءًا مهمًا من خطة علاج المرضى ، ووجد أن معدلات الالتزام أقل بين المرضى الذين يعانون من اضطرابات نفسية مقارنة بالمرضى الذين يعانون من أمراض عضوية، الهدف من الدراسة هو قياس مدى الالتزام بالأدوية بين المرضى النفسيين المراجعين للعيادات الخارجية بالمدينه، والعوامل المرتبطة بذلك.

طريقة البحث:
دراسة مقطعية أجريت في مستشفى الأمل للصحة النفسية في المدينة المنورة.جمعت المعلومات عن طريق مقابلة المرضى وتعبئة الإستبانه والتحقق من الإلتزام بأخذ الدواء بإستخدام مقياس Morisky Medicatio Adherence
بالإضافة إلى المعلومات الديموغرافية وأسباب صعوبة الإلتزام.تم إجراء التحليل الإحصائي الوصفي باستخدام
برنامج SPSS.

النتائج:
جمع حوالي ٣٨٥ استبانة من مرضى منطبق عليهم شروط المشاركة بالبحث. من بين هؤلاء كان ٢٤٤ (٦٣,٤ ٪) من الذكور في حين أن ١٤١ (٣٦,٦ ٪) من الإناث ، أعمارهم ما بين ٢١-٥٠ سنة. أفاد نصف المرضى (٥١,٢ ٪) انخفاض معدل الالتزام بأدويتهم ، مع وجود فروق ذات دلالة إحصائية بين الالتزام والعوامل المتعلقة

Results:
A total of 385 patients met the inclusion criteria and participated in the study. Of those, 244 (63.4%) were males while the remaining 141(36.6%) were females. Half of the patients (51.2%) reported low adherence to their psychiatric medication, with statistically significant differences was observed related to sex and education level.

Conclusions:
Our study concluded that adherence to psychiatric mediations is low among psychiatric patients in a hospital in Madinah. Our study highlighted the important socio-demographic factors affecting adherence of psychiatric mediations.

Keywords:
Al-Amal hospital-Madinah KSA, Non-adherence, psychiatric patient.

بالجنس ومستوى التعليم.

الاستنتاجات:
انخفاض الالتزام بالأدوية مشكلة شائعة بين المرضى النفسيين في المدينة المنورة. حسنت هذه الدراسة لفهم الأسباب المرتبطة بالالتزام بأدويتهم.

الكلمات المفتاحية:
مستشفى الأمل ، المدينة المنورة ، المملكة العربية السعودية ، عدم الالتزام ،مرضى الأمراض النفسية.

INTRODUCTION:

Adherence to medication is an important part of patient management, The WHO defines adherence as "the extent to which the individual behaviour including drugs-taking coincide with agreed recommendations from a healthcare provider.[1]

Medication adherence behaviour refers to compliance by patients in taking their prescribed medications as ordered by their treating doctor (adherence) as well as following out their orders throughout the duration of drug course (persistence).[2] [3]

Non-adherence has been a major concern to healthcare workers and an important health problem that jeopardizes the patient's therapeutic outcome, especially psychiatric patient.[4] Non-adherence has a major effect on illness it increase probability of relapse leading to higher rate of hospitalization.[5] It includes unwillingness to follow psychiatrist instructions ,not initiating the drug therapy and termination before desired time. The typical rates of non-adherence in general about 50% for prescribed medication, ranged from 10% to 76% among psychiatric patients. [4,6] It's found that Adherence rates lower among psychiatric individual compared to patients with a physical disorder. [7] Different studies have reported different non-adher-

ence rates of psychiatric medication that vary between different types of psychiatric illnesses. Non-adherence range for major depressive disorder was 28% - 52%, for bipolar disorder (20%-50%), and for schizophrenia (20% - 72%). Furthermore, it was reported as 57% for anxiety disorders in one of the studies.[8] One of the important reasons of non-adherence to psychiatric medication is the chronic nature and long duration of treatment. Many studies reported that most of the medicines which were prescribed for chronic diseases were not actually recommended.[9] Studies showed that violence , suicide, relapse, readmission to hospital highly increase with non-adherent consumers compared with adherent ones[10,11,12], confirming that adherence to antipsychotic medication decrease the risk of violence according to study in Canada among schizophrenia patients. [13] This emphasize that low adherence to medication is pivotal for relapse after depressive episode and hence proven that this is an important public health issue to address.[14]

Patients having an attitude of non- adhering to medications can suffer from other complications due to relapse of psychiatric disease thereby resulting in re-hospitalization. One of the challenges that a psychiatrist facing during discussing treatment modality is to ensure patients adherence to medication. Factors of non-adherence include the attitude of the patient towards medication which could be a probably a result of any previous trial, lack of understanding or knowledge , severity of the case, support from caregiver or society which plays an major important role as well as relationship between the psychiatrist and patient. [15] Patient-related factors such as age, sex, education , patient beliefs about drug and cultural myths.[16,17] A study in Saudi Arabia on depressed patients showed that there is a high relationship between non-adherence and patient beliefs about antidepressant medication.[18] Others important factors like disease-related factors and physician-related factors.[16] Some factor related to side effect like psychotropic medication cause sleep disturbance, weight change, and sexual dysfunction. In Pakistan, a study found that psychotropic medication side effect is a common cause of non-adherence. [19]

Fürthauer et al, reported that the factors associated with non-compliance against the psychiatric medications were physicians' limited knowledge, and patients' lack of awareness. This calls for improving the physician's knowledge related to these factors, communication and understanding and taking patient involvement as a key strategy to improve adherence to medications. [20] To the best of researcher's knowledge, there was no previous

study conducted in Madinah that find out the prevalence of non-adherence and its associated factors among psychiatric patients. Therefore, our study would report the magnitude of non-adherence of psychiatric medication among adult psychiatric patients in al-Amal hospital. Our study findings would help in finding the actual magnitude of this non-adherence issue in our study population that will eventually help in devising intervention to resolve this important public health issue.

The aim of our study was to measure adherence to psychiatric medications among outpatient psychiatric individuals, and the factors associated with non-adherence.

SUBJECTS AND METHODS:

We conducted a cross sectional study by recruiting 385 patients taken as systematic random sample every tenth patient attend the outpatient clinic who visited Al-Amal Hospital for Mental Health in Al-Madinah between 30 September to 31st October 2017. The sample size was calculated using online sample size software by assuming the proportion of non-adherence to be 50-52% (18), 5% precision with 95% confidence interval.

Inclusion criteria for this study were mainly adult psychiatric follow-up patients, whose age was more than 18 years and they were on prescribed psychiatric medications, while we excluded patients who were not able to communicate because of lack of insight. Data collected from the patients by interview, written consent was obtained from each respondent. Study tool was questionnaire included three parts that assessed patient socio-demographics, patient self-reported medication and adherence attitude. Adherence attitude was based on the 10 item The Medication Adherence Rating Scale (MARS) that evaluated both attitudes about medications and actual medication-taking behaviour. It also addressed common reasons for difficulty in medication adherence. Score for each patient was calculated using online calculator

(https://healthengine.com.au/info/psychosis-medication-adherence-rating-scale)

MARS was developed from Morisky et al's Medication Adherence Questionnaire (MAQ). The reliability of this tool is good, but the validity is moderate. Items in the MARS about attitude to medication is very helpful for clinicians which addresses in identifying barriers to adherence in individual cases. The validity and reliability of MARS has been established by Thompson et al .and then Flako et al. [21] [22]. The total score ranges from 0-10 with a higher score ≥6 indicating better adherence. Weaknesses of MARS Scoring required some

interpretation as, "yes" response does not necessarily indicate a positive attitude or behaviour.

Study Outcomes and Measures:

Dependent Variables:

• Non-adherence rate

• Factors associated with non-adherence

Independent Variables:

• Age

• Gender

• Education level

After IRB approval taken, the questionnaire was filled by interviewing the patients with different psychiatric disorder (Depression, anxiety, schizophrenia and bipolar disorder) to measure their non-adherence rate with medications according to MARS scale and factors associated with non-adherence according to Culig scale.

Statistical Analyses:

Descriptive Statistical analysis was performed using Statistical Package for Social Sciences, version 20 (SPSS Inc., Chicago, IL, USA).

P< 0.05 was considered as significant. Correlation between adherence and other independent variables were calculated.

Ethical Considerations:

Ethical approval was granted by the local committee of ministry of health -Madinah Saudi Arabia in 4/7/1439H (IRB-143).

Informed Consent:

Participation were voluntary and written informed consent were obtained from all the participants after describing the aim of the study. Privacy and confidentiality were assured.

RESULTS:

Most of the sample were men 244 (63.4%). Their ages mostly ranged from 21 to 50 years (56.4%) and level of education mainly secondary and university level 235 (97.9%) (table 1).

Table.1. Sociodemographic characteristic of study participates (n = total 385)

Variable		n	%
Gender	Male	244	63.4
	Female	141	36.6
Age group (years)	<15	23	6.0
	15-20	33	8.6
	21-50	217	56.4
	>50	112	29.1
Education level	Illiteracy	51	13.2
	Primary and elementary	99	25.7
	Secondary & university	235	97.9

Frequency of non- adhere in our study is 197 (51.2%), almost like study conducted by Al Jumah K among 403 depressed patient showed Half of them (52.9%) had low adherence to their antidepressant drug [18] but lower than the following two studies one at King Abdul-Aziz Hospital-Makkah among 342 psychiatric patients results showed74% of them not adherence to medication[23] second study in TAIF among 233 from Mental Health Hospital clinic the Incidence of non-adherence was high (84.1%) but the tool used was a self-administered questionnaire. [24]The most frequently endorsed items were Forgetting to take medication (74.5%), medication makes them feel tired and sluggish (48.3%), sometimes stopped when felt worse (47.5%). take medication only when they sick was one of the less frequently endorsed items (38.2%). (Table 2)

:Table.2. Frequencies of responses on Medication Adherence Rating Scale questions

Questions	Response	n	%
1-Do you ever forget to take your medication?	Yes	287	74.5
	No	98	25.5
2-Are you careless at times at taking medication?	Yes	170	44.2
	No	215	55.8
3- When you feel better do you sometimes stop taking your medication?	Yes	161	41.8
	No	224	58.2
4- Sometimes if you feel worse when you take the medication do you stop taking it?	Yes	183	47.5
	No	202	52.5
5- I take my medication only when I am sick	Yes	147	38.2
	No	238	61.8
6- It is unnatural for my mind and body to be controlled by medication	Yes	159	41.3
	No	226	58.7
7- My thoughts are clearer on medication*	Yes	263	68.3
	No	122	31.7
8- By staying on medication, I can prevent getting sick*	Yes	261	67.8
	No	124	32.2
9- I feel weird, like a zombie, on medication	Yes	154	40.0
	No	231	60.0
10- The medication makes me feel tired and sluggish	Yes	186	48.3
	No	199	51.7

* disagreeing with this item connotes non-adherenc
Note: that higher MARS scores indicate lower adherence

Frequencies of Reasons of difficulty adherence to medication among participants often because patient did not want to see by other while they take their medicine (23.4%), Drug is toxic (21.3%), afraid to being dependence on drug (20.0%). sometime mainly because also drug dependence (40.5%), high drug price (39.7%) and forget to take drug (37.9%). very rare cause because of drug not available (26%) and never because if they have cold (41.3%), numbers of drug per day (39.2%).
(Table 3)

Table. 3.Reasons of difficulty of adherence to medication among participants:

Variable	Never		Very rare		Sometime		Often	
	n	%	n	%	n	%	n	%
1- Not at home at time of drug take	140	36.4	83	21.6	113	29.4	49	12.7
2 - Drug not available	125	32.5	100	26.0	112	29.0	48	12.5
3 - Forget to take drug	83	21.6	94	24.4	146	37.9	62	16.1
4 - Many drugs per day	151	39.2	68	17.7	95	24.7	71	18.4
5 - To avoid the side effect	116	30.1	69	17.9	128	33.2	71	18.4
6 - Did not want to see by other	124	32.2	64	16.6	107	27.8	90	23.4
7- doctor change treatment plan frequently	148	38.4	81	21	49	24.4	61	15.8
8 - Because Drug is toxic	120	31.2	59	15.3	124	32.2	82	21.3
9 - Drug time is at my sleeping hours	113	29.4	80	20.8	221	31.4	71	18.4
10 - When I have cold	159	41.3	80	20.8	93	24.2	52	13.5
1 1- Because I feel depressed	139	36.1	63	16.4	125	32.5	57	14.8
12 - Inappropriate drug time with me	145	37.7	54	14	138	35.8	48	12.5
13 - Consume all available drug	148	38.4	68	17.7	101	26.2	68	17.7
14 - I feel well	124	32.2	57	14.8	138	35.8	66	17.1
15 - Afraid to be dependent	96	24.9	55	14.3	156	40.5	77	20.2
16 - Drug price is high	112	29.1	59	15.3	153	39.7	61	15.8

There was significant correlation between adherence and gender of participant p value 0.00. in favour of the male sex,91% of men versus 9.0% women and between education level and adherence p 0.00. 73.8% of adherent group had secondary or university level of education (table 4).

Table 4. Relationship between adherence to medication and Sociodemographic factors

Variable		Adherence*		Non - adherence		Chi square (X2)	P. value
		n	%	n	%		
Gender	Male (171+73=244)	171	70	73	30	120.4	0.000
	Female (17+124=141)	17	12	124	88		
Age group (yrs.)	<15 (12+11=23)	12	52	11	48	3.39	0.3
	15-20 (21+12=33)	21	64	12	36		
	21-50 (102+115=217)	102	47	115	53		
	>50 (53+59=112)	53	47	59	53		
Education level	Illiteracy (9+42=51)	9	18	42	82	28.1	0.000
	Primary & elementary (39+52=91)	39	43	52	57		
	Secondary & university (135+100=235)	135	57	100	43		

• Score ≥ 6 indicate adherence.

Rate for those adhere was 188(48.8%) and non-adhere 197(51.2%)

DISCUSSION:

The aim of this study was to measure adherence rate towards medication among outpatient psychiatric patients in Madinah city and its associated factors. Studies on reasons of non-compliance on drugs and difficulties that face the patient is important to address this problem and add strategy to decrease it by increase awareness of doctors toward this factor.

Our results showed that the frequency of non-adherence to medication by the patient was 51.2%, not far from other studies 66.9% [25] India, 55.5% Benin City Nigeria,[4] 54.2% [37]Maiduguri in North-eastern Nigeria, 41% [26] 39.6%[27] Ethiopia 39%[30] Pakistan non-adherence rates. Further-

more, 52.9% participants having major depressive disorder in Saudi Arabia reported low adherence to their antidepressant medication.[18] Ademola et al, reported 50.6% patients were adherent with the appointments of psychiatric clinic, while 57.4% reported to be non-adherent to medication in Nepal. [28]

From my view these high rates of non -adherence because nature of psychiatric illness and the long duration need it before symptoms resolved. Non-adherence to anti-depressive medication would eventually increase cost to healthcare systems. Reasons included were relapse, multiple admissions to the emergency room, re hospitalizations and further consultation by psychiatrics physicians. [29-30]

We found that important reasons for not adhering to prescribed medication were fear of toxic effect of drug and to become dependence. In Saudi the drug is free for citizen for that cost or drug availability not considered as obstacle to adhere to drug unlike other country like India[31] studies showed that the most common reasons for poor medication adherence were financial problems (41%), long distance to facilities (35%) and in Pakistan[32] the most prevalent reasons for non-adherence include drug cost (22%),in Andhra Pradesh medication cost (42%).[33] Forgetting to take medication (74.5%) in our study was much higher than forgetting to take medication (36%) [32] Pakistan and forgot to take medication (18%). [33]

In a study conducted in specialized hospital in Ethiopia it was found that prevalence of non-adherence to psychiatric medication was 41.2% and it was also reported that non-affective psychosis contributed 44.5%. In addition, around three fourth (78.2%) of psychiatric patients reported forgetting for their non-adherence [34].The common reasons reported for non-adherence to medication in Canada [35] and India [31] were feeling better and forgetting to take medication in time. In our study males were found to be more adherer than females. Our finding is supported by a study conducted in tertiary hospital in India, which reported that women were three times more likely to be non-adherent as compared to men (AOR 2.7; 95% CI: 1.1–7.1) [25] But in Ethiopian referral hospital women were 2.3 times more adherer to psychiatric medications as compared to men [36] (AOR 2.34; 95% CI: 1.45–3.74). Furthermore, another study showed that females were twice likely to be adherent as compared to males. [40] Another study conducted in Saudi Arabia among major depressive disorder patients reported higher level of adherence among males as compared to females and this was also statistically significant difference. [18] Another study conducted in Nigeria

among out-patient clinics of a Psychiatric Hospital found that there was no statistically significant difference between lower adherence to psychotropic medications and socio-demographic characteristics. [4] In our study education correlate better with adherence, around 73.8% of adherent group had secondary or university level of education. Similarly, a study conducted among psychiatric patients in Ethiopia reported that tertiary education (AOR 2.69; 95% CI: 1.46–4.85) was associated with better adherence. [36] Another study conducted in psychiatric inpatients in Austria, participants having higher education were statistically significantly found to be twice as adherent as compared to those who were illiterate. [40] Another study reported that illiteracy was statistically significantly associated with non-adherence, which is consistently reported in other studies. [38, 39] Role of physicians to the non-adherence of psychiatric mediations is vital. There may be several reasons which included: unable to prescribe simple prescription, failure to describe the advantages / side effects of therapy and not considering patients' lifestyle and treatment cost. We support the recommendation state that other healthcare providers such as pharmacists, nurse and their immediate family members should play their roles for improving psychiatric mediation adherence among high risk patients. [41]

This study strength points are used of well-validated scales, data collectors were interviewed participant face to face, while the limitation was the adherence patterns taken from patient in one hospital, so the study generalizability may be limited.

CONCLUSION

Our study concluded that adherence to psychiatric mediations was about 49% among psychiatric patients in a hospital in Madinah, highlighted the important socio-demographic factors affecting adherence of treatment.

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