

Adherence to Antidepressants Medication Among Patients with Depression in Oman: A Cross-Sectional Study

Khlood Al Dameery¹, Mohammad Qutishat¹, Rasha Abu-Baker¹, Omar Al Omari^{1*}, Fadwa Alhalaiqa², Mohammed ALBashtawy³, Abdullah Alkhalwaleh³, Sulaiman Al Sabei¹, Loai Abu Shahrour⁴

¹College of Nursing, Sultan Qaboos University, Muscat, Sultanate of Oman

²Faculty of Nursing, Philadelphia University, Amman 19392, Jordan

³Princess Salma Faculty of Nursing, Al Al-Bayt University, Mafrqa, Jordan

⁴Nursing Department, Higher Colleges of Technology, Ras Al Khaimah, UAE

Abstract

Aim: Poor adherence to medication can be a major barrier to the successful management of depression. This study aimed to explore the level of medication adherence among patients with depression in Oman.

Design: This cross-sectional study enrolled 206 participants with depression who completed the Medication Adherence Rating Scale (MARS) and a demographics sheet.

Results: The average adherence score was 5.8 (SD=1.7, Mdn=6). Patients who lived with their families had significantly higher adherence levels to medication (mean (m) =6.76; SD=2.11) compared with their counterparts who lived alone (m=5.75, SD=1.63). Patients who did not have a chronic illness had significantly better adherence to medication (m=6.04; SD=1.63) compared with participants without chronic illnesses.

Conclusion: Low medication adherence is a significant problem for many patients with depression. There are a number of factors that influence adherence, including family support and chronic illnesses. Healthcare providers should provide clear and accurate information about the condition and treatment, involve patients in decision making, address the stigma surrounding mental illness and involve family members in the treatment plan.

Keywords: Depression • Antidepressants Medication • Adherence • Cross-Sectional

Introduction

Depression is a common and debilitating mental health disorder that affects millions of people worldwide [1]. Antidepressant medication is one of the most common treatments for depression, but adherence to antidepressant medication can be a significant challenge for many patients. A systematic review of studies between 2000 and 2017 found that the overall adherence rate to antidepressants was low [2]. The mean adherence rate to antidepressants was 55% [2]. A recent study in Oman reported overall poor levels of adherence among patients with mental health disorders [3].

Poor adherence to medication is a significant clinical issue associated with increases in the risk of illness exacerbation, re-hospitalisation [4], and attempted suicide [5]. Additionally, poor adherence to medication can lead to increased costs associated with medical care, including medication, doctor's visits and hospitalisations, as well as extreme patient behaviour [5]. Finally, poor medication adherence can result in feelings of guilt and frustration, which can further complicate the patient's depression and affect their quality of life and social function [4-7].

Several factors are associated with poor adherence to antidepressant

medication. One factor is a lack of understanding about the disease and the treatment [8]. Some patients with depression may not fully understand the nature of their condition or the importance of taking medication as prescribed, which can reduce motivation to take medication [9]. Patients with depression are also less likely to adhere to their medication due to the side effects [10]. Antidepressant medications can cause a wide range of side effects, including nausea, weight gain and sexual dysfunction [11]. These side effects can be distressing for patients and may lead them to discontinue their medication [12]. Stigma is another barrier to adherence to medication among patients with depression [13]. Many people feel embarrassed or ashamed of their condition and may be reluctant to talk about it or seek help [14]. This makes it difficult for patients to discuss their medication regimen with their healthcare provider or to seek help if they are having trouble adhering to it [15]. Low medication adherence can also be related to the duration of the treatment. Many patients may not feel the benefits of the medication immediately and may become frustrated and lose motivation to continue taking it [16,17]. One study found that patients who have a long-term treatment plan were more likely not to adhere to their medication regimen [18]. Younger patients, patients with comorbidities and patients with lower levels of education were also found to have poor adherence to antidepressant medication [2]. Income situation and aftercare following discharge also affects medication adherence [14,16,17]. Social support was another reason for poor adherence to medication [19].

There is a plethora of studies in developed countries that have explored adherence to antidepressant medication among patients with depression, but there is limited research in Oman. Low medication adherence is a heterogeneous phenomenon and depends on several factors, including the healthcare system, resources and culture [16,20]. In comparison with other developed countries, Oman has a unique cultural and healthcare system; therefore, findings from western countries may not be transferable to Oman. This study aimed to explore the level of adherence to antidepressants medication among patients with depression in Oman.

*Address for Correspondence: Omar Al Omari, College of Nursing, Sultan Qaboos University, Muscat, Sultanate of Oman. E-mail: o.alomari@squ.edu.om

Copyright: ©2023 Al Dameery K. et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Received: 01 February 2023, Manuscript No. CSRP-23-88742; **Editor assigned:** 03 February 2023, Pre QC No. CSRP- 23-88742 (PQ); **Reviewed:** 14 February 2023, QC No. CSRP-23-88742 (Q); **Revised:** 22 February 2023, Manuscript No. CSRP-23-88742 (R); **Published:** 04 March 2023; doi: 10.3371/CSRP.17. S1.100139.

Methods

Study design

A descriptive cross-sectional study was conducted with patients suffering from depression at outpatient clinics in a tertiary hospital in Muscat, Oman, between October 2022 and January 2023. Patients who were diagnosed with depression, older than 18 years and on antidepressant medication for more than six months were invited to take part in this study. Patients with neurological problems based on reports or initial screening were excluded from the study.

The G*Power version 3.1.9.7. software was used with the following parameters to calculate the sample size: 95% confidence level, 5% margin of error, 80% power and medium effect size. A total of 174 participants was sufficient to detect the statistical difference between the independent groups. A convenience sampling technique was used, and 206 participants were recruited.

Data collection

Ethical approval was secured from the Research Ethics Committee of the College of Nursing (CON/DF/2022/1) at Sultan Qaboos University and Sultan Qaboos University hospital (SQU-EC/287/2020). The researchers secured administrative approval from the outpatient units.

Patients in the outpatient clinic at the governmental tertiary hospital were approached and the purpose of the study and potential benefit and risks were explained to them. An information sheet was also provided to the potential participants. Researchers answered their questions and participants were assured that their participation in the survey was entirely voluntary and anonymous. Those who agreed to participate in the study signed a consent form and completed a demographic sheet and the Medication Adherence Rating Scale (MARS).

Measures

Demographics: Sex, age, marital status, with whom they live, any chronic illnesses, level of education and employment status were recorded.

Medication Adherence Rating Scale: Thompson et al. developed the MARS, which is available in both Arabic and English, to assess medication adherence in patients with mental illness. The validity and reliability of the scale have been demonstrated, with an internal consistency of Cronbach's alpha >0.70 for the Arabic version. The survey consists of 10 questions that each have two answers: 'No' (0) and 'Yes' (1). Examples of the questions include 'Do you ever forget to take your medicine?' and 'Are you careless at times about taking your medicine?' The overall adherence score is obtained by totalling the scores of all elements, ranging from 0 (poor adherence) to 10 (excellent adherence). A higher score indicates a higher level of adherence. Permission to use the survey was obtained from the originator.

Data analysis

The data were analysed using the statistical tool SPSS version 24.0 for Windows. Descriptive and inferential statistics were used to describe the sample characteristics and draw conclusions about the difference in the mean between different groups (e.g. gender, level of education, etc.) based on the adherence mean.

Results

A total of 206 participants completed the survey. The average age of participants was 36 years old (SD=14.3), average adherence level was 5.8 (SD=1.7), 52.9% were female (n=109) and 54.4% were married (n=112). More than half of the participants (53.9 %) had a BSc (n=111) and most of them (95%) lived with family (n=204). A total of 69.6% of the participants did not have a chronic illness (n=164), and 53.9% of the participants were employed (n=111). For more details, see Table 1.

Table 1. Sample characteristics

Variable		n	%	M	SD	mdn	range
Age				36		35	19–65
MARS				5.8		6	2–10
Occupation							
	Unemployed	95	46.1				
	Employee	111	53.9				
Sex							
	Female	109	52.9				
	Male	97	47.1				
Marital status							
	Single	94	45.6				
	Married	112	54.4				
Live							
	Family	196	95.1				
	Alone	10	4.9				
Take medication alone							
	No	32	15.5				
	Yes	174	84.5				
Chronic illness							
	No	164	79.6				
	Yes	42	20.4				
Level of education							
	Illiterate	17	8.3				
	Primary	16	7.8				
	Secondary	62	30.1				
	BSc	111	53.9				

An independent t-test was conducted to test the mean differences of medication adherence based on the place of living and whether or not patients had a chronic illness. There was a significant difference in adherence between patients who lived with their families compared with their counterparts who lived alone ($t [204]=2.59, P<0.05$). Patients who lived with their families had higher adherence levels to medication ($m=6.76; SD=2.11$) compared with their counterparts who lived alone ($m=5.75, SD=1.63$). Patients who did not have a chronic illness ($m=6.04; SD=1.63$) had significantly better adherence levels to medication compared with participants without chronic illnesses ($m=5.09, SD=1.83$); ($t [204]=3.28, P<0.05$). A one-way ANOVA was also conducted, and no significant differences were found for adherence level to medication based on the level of education. For more details, see Table 2.

Discussion

The aim of the study was to assess the level of adherence to antidepressant medication in patients with depression. The average level of adherence of the participants in the current study was 5.8 ($Mdn=6$). Similar results were reported in a study among patients with mental health illnesses in Oman [3]. These results support previous research which conducted that found that patients with depression had poor adherence levels to their prescribed treatment regimen [15,21,22]. Poor adherence to medication can be a major barrier to the successful management of depression and can contribute significantly to relapses and overall poor quality of life [23,24]. Healthcare providers and decision makers should give special attention to medication adherence among patients with depression.

One of the key factors that can influence adherence to medication, which has been identified in this study, is living with their family rather than living alone. In this study, patients with depression who lived with family had significant better levels of adherence to medication than those who lived alone. Similar findings have been reported in previous studies [25, 26]. Patients living with their family often have better adherence to medication because of the extra support and encouragement that family members provide [27]. Family members can

also often offer insights or assistance with understanding the importance of taking the necessary medication and can also help with the cost of medication and transportation to the pharmacy, which enables patients to afford the medication and have access to it [28]. Additionally, family members can help set reminders and keep track of medication schedules, which can help patients stay on schedule with medication. Family members can also provide emotional and practical support, which can help with any side effects of the medication, which helps to reduce stress and anxiety, which, in turn, can also have an impact on medication adherence.

Another factor that contributed to adherence in this study was a history of chronic illness; patients without chronic illnesses had better medication adherence levels compared with their counterparts who had a chronic illness. Having a medical disease, such as infectious diseases, digestive issues, genitourinary conditions and cancers, heightens the likelihood of drug-drug interactions and makes taking medication more complicated. Two recent studies proposed that medical comorbidities can reduce the level of adherence [29, 30]. However, Poluzzi, Piccinni found that patients suffering from depression and taking serotonin-specific reuptake inhibitors or serotonin-norepinephrine reuptake inhibitors while suffering from chronic medical diseases showed better adherence [31]. Overall, individuals without chronic illnesses may have better adherence to medication due to a combination of factors, such as reduced complexity and side effects, less frequent dosing, less dependence, reduced cost burden and lower emotional burden. Healthcare providers should explore the relationship between adherence and specific chronic illnesses as the impact might be different.

Although the sociodemographic variables, including age, employment status and marital status, were not significant in this study, those variables have been significantly influential in previous studies. For example, Nwokeji, Bohman found a significant positive association between age and positive adherence to medication among patients with depression. In a separate study, gender and being female was a higher risk for poor adherence compared with male counterparts [32,33]. Low income and unemployment have also been found to be significant predictors for poor adherence [34,35]. There is a need for a larger study to explore whether or

Table 2. Bivariate statistics on level of medication adherence

		<i>M</i>	<i>(SD)</i>	<i>t/f/r</i>	<i>df</i>	<i>P</i>
Employment status				1.539	204	0.125
	Unemployed	6.1	1.6			
	Employee	5.7	1.8			
Sex						
	Female	5.9	1.2	0.383	142.5	0.702
	Male	5.8	2.2			
Marital status						
	Single	5.9	1.9	0.626	204	0.532
	Married	5.8	1.6			
Live						
	Family	6.8	2.1	2.59	204	0.01
	Alone	5.7	1.6			
Take medication alone						
	No	5.9	1.9	0.289	204	0.766
	Yes	5.8	1.7			
Chronic illness						
	No	6	1.6	3.28	204	0.001
	Yes	5.1	1.8			
Level of education						
	Illiterate	17	6.1	0.49	3, 41.1	0.691
	Primary	16	5.7			
	Secondary	62	5.6			
	BSc	111	5.9			
Age				0.131	204	0.06

not these factors are significant predictors among Omani patients with depression.

Several other factors have been identified in previous literature as being associated with better adherence. These factors were not investigated in this study and include clinical characteristics of depression, number of comorbidities, pharmacological factors, attitudes towards antidepressants and genetic factors as common influences [17]. Furthermore, positive attitudes towards antidepressants, prior experiences with antidepressant treatment and indirect exposure to depression or treatment should be investigated [35]. Future studies addressing these factors are required.

Implications

Increasing adherence to medication among patients with depression is crucial for achieving positive treatment outcomes. There are several implications from this study that can be used to improve adherence, and these should be tailored to the individual patient's needs and preferences.

First, patients should be provided with clear and accurate information about their condition and medication. This can be done through patient education programmes, which have been shown to be effective in improving medication adherence. For example, John, Singh found that a patient education programme that included information about depression and its treatment was associated with improvement in medication adherence. Several other interventions were found to be useful, including the follow-up of patients by telephone, provision of a counselling service, reminder application and Motivational Enhancement Therapy for Antidepressants [36-40]. These interventions need to be investigated within Oman to explore its effectiveness in that context.

Another implication of the study is that patients should be involved in the decision-making process of their treatment. This can be done through shared decision making, which is a process where the healthcare provider and patient work together to make treatment decisions. Shared decision making has been shown to be effective in improving medication adherence among patients with depression. Hopwood found that patients who participated in a shared decision-making programme had higher rates of medication adherence [41].

Involving the family members in the treatment plan can be also beneficial. Family members can provide emotional support and encouragement to patients, as well as helping them to stay on track with their medication regimen. They can also provide an additional source of information and support for patients, which can be particularly helpful for patients who may be hesitant to discuss their condition or treatment with their healthcare provider.

Limitations

This study was not without limitations. This study did not distinguish between the different types of depression. Future studies which consider the type of depression is crucial because patients with different types of depression may have different levels of adherence to medication. The nature of the design prevents the researchers from drawing a cause-and-effect relationship; conducting cohort studies would be beneficial to establish a cause-and-effect relationship.

Conclusion

In conclusion, low adherence to medication is a significant problem for many patients with depression. There are a number of reasons for this, which include family support and having a chronic illness. However, it is important to note that adherence to medication is a multifactorial phenomenon, which can be affected by a variety of factors, including the patient's overall health and well-being, personal beliefs and access to healthcare. Healthcare providers should provide clear and accurate information about the condition and treatment, involve patients in decision making, address the stigma surrounding mental illness and involve family members in the treatment plan.

Competing Interests

None.

Funding

This work was supported by the Sultan Qaboos University.

References

1. WHO. "Depression 2023" [cited 2023 21st of January].
2. Bright, T., et al. "A systematic review of access to rehabilitation for people with disabilities in low-and middle-income countries." *Int. j. environ. res. public health* 15.10 (2018): 2165.
3. Maqbali, M.H. Al, et al. "Non-adherence to medications among patients with mental disorders attending tertiary care in Oman." *Int. J. Community Med. Public Health* 9.2 (2022): 642-646.
4. Rohmi, F., et al. "Factors Affecting Medication Adherence Among patient with Schizophrenia: A Literature Review." *medRxiv* (2022): 2022-01.
5. Warriach, Z. I., et al. "Suicidal behavior and medication adherence in schizophrenic patients." *Cureus* 13.1 (2021).
6. Kretchy, I. A., et al. "The association between diabetes-related distress and medication adherence in adult patients with type 2 diabetes mellitus: a cross-sectional study." *J. diabetes res.* (2020).
7. Dou, L., et al. "Factors associated with medication adherence among patients with severe mental disorders in China: a propensity score matching study." *Patient prefer. adherence* (2020): 1329-1339.
8. Velligan, D. I., et al. "Why do psychiatric patients stop antipsychotic medication? A systematic review of reasons for nonadherence to medication in patients with serious mental illness." *Patient prefer. adherence* (2017): 449-468.
9. Woodward, S. C., et al. "The effect of knowledge and expectations on adherence to and persistence with antidepressants." *Patient prefer. adherence* (2016): 761-768.
10. Marasine, N. R., et al. "Self-reported antidepressant drug side effects, medication adherence, and its associated factors among patients diagnosed with depression at the Psychiatric Hospital of Nepal." *Depress. res. treat.* (2020).
11. DiBonaventura, M., et al. "A patient perspective of the impact of medication side effects on adherence: results of a cross-sectional nationwide survey of patients with schizophrenia." *BMC psychiatry* 12 (2012): 1-7.
12. García, S., et al. "Adherence to antipsychotic medication in bipolar disorder and schizophrenic patients: a systematic review." *J. Clin. Psychopharmacol.* 36.4 (2016): 355..
13. Kamaradova, D., et al. "Connection between self-stigma, adherence to treatment, and discontinuation of medication." *Patient prefer. adherence* (2016): 1289-1298.
14. Kirchner, S. K., et al. "Medication adherence in a cross-diagnostic sample of patients from the affective-to-psychotic spectrum: results from the PsyCourse study." *Front. Psychiatry* 12 (2022): 713060.
15. Marasine, N. M., et al. "Factors associated with antidepressant medication non-adherence." *Turk. J. Pharm. Sci.* 18.2 (2021): 242.
16. Deng, M., et al. "Factors influencing medication adherence among patients with severe mental disorders from the perspective of mental health professionals." *BMC Psychiatry* 22.1 (2022): 22.
17. Hung, Ching-I. "Factors predicting adherence to antidepressant treatment." *Curr. Opin. Psychiatry* 27.5 (2014): 344-349.
18. AlHewiti, A. "Adherence to long-term therapies and beliefs about medications." *Int. J. Fam. Med.* 2014 (2014).
19. Magura, S., et al. "Factors associated with medication adherence among psychiatric outpatients at substance abuse risk." *Open Addict. J.* 4 (2011): 58.

20. Consoloni, Julia-Lou, et al. "Trajectories of medication adherence in patients with Bipolar Disorder along 2 years-follow-up." *J. affect. disord.* 282 (2021): 812-819.
21. Ho, Siew Ching, et al. "Clinical and economic impact of non-adherence to antidepressants in major depressive disorder: a systematic review." *J. affect. disord.* 193 (2016): 1-10.
22. Alhalaiqa, F., et al. "Adherence to Antipsychotic Drug Measured by an Arabic Version of Morisky Scale." *Issues ment. health nurs.* 37.12 (2016): 975-982.
23. Schoeler, T., et al. "Poor medication adherence and risk of relapse associated with continued cannabis use in patients with first-episode psychosis: a prospective analysis." *Lancet Psychiatry* 4.8 (2017): 627-633.
24. Alsaqabi, Y. S., et al. "Medication adherence and its association with quality of life among hypertensive patients attending primary health care centers in Saudi Arabia." *Cureus* 12.12 (2020).
25. Coe, A. B., et al. "Medication adherence challenges among patients experiencing homelessness in a behavioral health clinic." *Res. Soc. Adm. Pharm.* 11.3 (2015): e110-e120.
26. Interian, A., et al. "Adaptation of a motivational interviewing intervention to improve antidepressant adherence among Latinos." *Cult. Divers. Ethn. Minor. Psychol.* 16.2 (2010): 215.
27. Olagbemde, O. J., et al. "Family support and medication adherence among adult type 2 diabetes: Any meeting point?." *Ann. Afr. Med.* 20.4 (2021): 282.
28. Manias, E. "Communication relating to family members' involvement and understandings about patients' medication management in hospital." *Health Expect.* 18.5 (2015): 850-866.
29. Lu, C. Y., et al. "New users of antidepressant medications: first episode duration and predictors of discontinuation." *Eur. J. clin. pharmacol.* 68 (2012): 65-71.
30. Cui, Z., et al. "Early discontinuation and suboptimal dosing of duloxetine treatment in patients with major depressive disorder: analysis from a US third-party payer perspective." *J. med. econ.* 15.1 (2012): 134-144.
31. Poluzzi, E., et al. "Trend in SSRI-SNRI antidepressants prescription over a 6-year period and predictors of poor adherence." *Eur. J. clin. pharmacol.* 69 (2013): 2095-2101.
32. Nwokeji, E. D., et al. "Evaluating patient adherence to antidepressant therapy among uninsured working adults diagnosed with major depression: results of the Texas Demonstration to Maintain Independence and Employment study." *Adm. Policy Ment. Health Ment. Health Serv. Res.* 39 (2012): 374-382.
33. Muzina, D. J., et al. "Rate of non-adherence prior to upward dose titration in previously stable antidepressant users." *J. affect. disord.* 130.1-2 (2011): 46-52.
34. Jeon-Slaughter, H. "Economic factors in of patients' nonadherence to antidepressant treatment." *Soc. psychiatry psychiatr. epidemiol.* 47 (2012): 1985-1998.
35. Wheeler, K. J., et al. "Medication adherence part two: Predictors of nonadherence and adherence." *J. Am. Assoc. Nurse Pract.* 26.4 (2014): 225-232.
36. John, A. P., et al. "Impact of an educational module in antidepressant-naive patients prescribed antidepressants for depression: Pilot, proof-of-concept, randomized controlled trial." *Indian J. Psychiatry* 58.4 (2016): 425.
37. Yeung, A. S., et al. "Clinical outcomes in measurement-based treatment (comet): A trial of depression monitoring and feedback to primary care physicians." *Depress. Anxiety* 29.10 (2012): 865-873.
38. Desplenter, F., et al. "Differentiated information on antidepressants at hospital discharge: a hypothesis-generating study." *Int. J. Pharm. Pract.* 21.4 (2013): 252-262.
39. Hammonds, T., et al. "Adherence to antidepressant medications: a randomized controlled trial of medication reminding in college students." *J. Am. Coll. Health* 63.3 (2015): 204-208.
40. Interian, A., et al, Escobar JI. A randomized-controlled trial of an intervention to improve antidepressant adherence among Latinos with depression. *Depress. anxiety.* (2013):688-96.
41. Hopwood, M. "The shared decision-making process in the pharmacological management of depression." *Patient-Patient-Centered Outcomes Res.* 13.1 (2020): 23-30.

How to cite this article: Khlood Al Dameery, Mohammad Qutishat, Rasha Abu-Baker, et al., "Adherence to Antidepressants Medication Among Patients with Depression in Oman: A Cross-Sectional Study". *Clin Schizophr Relat Psychoses* 17S2 (2023) doi: 10.3371/CSRP.17.S1.100139