

Psychiatric patients' awareness of their illnesses and medications

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ABSTRACT

الأهداف : لتقييم وعي وإدراك المرضى النفسيين السعوديين بالأمراض التي يعانون منها والأدوية المستخدمة لعلاج تلك الأمراض في مدينة الأمير سلطان الطبية العسكرية (PSMMC).

الطريقة : أجريت الدراسة المقطعية في عيادات المرضى الخارجيين من PSMMC، الرياض، المملكة العربية السعودية من يناير إلى ديسمبر 2012م. وشملت الدراسة 647 مريضاً يخضعون للعلاج لأمراضهم النفسية. وأجريت مقابلات مع المرضى باستخدام استبيان.

النتائج : كانت غالبية المشاركين في الدراسة البحثية من البالغين 555 (86.6%) ويتمتعون بقدر كافي من الوعي والإدراك بتشخيص الأمراض التي يعانون منها (58.2%)، ولكن كانت ضئيلة مقارنة مع المجموعات الأخرى. سجلت مجموعة البالغين والتي تشكل غالبية 301 (87.2%) من المعدلات مجموعة الأشخاص الأصغر سناً فيما يتعلق بالمعرفة بالأدوية الطبية (55.8%). ولم يكن هناك ارتباط هام بين الجنس مع التشخيص $p=0.058$ والأدوية $p=0.094$. وفي مجال التعليم، فإن معظم المرضى كانوا من أميين، يليهم خريجي المدارس الثانوية ثم خريجي المدارس الابتدائية والمتوسطة ثم الجامعة. لم يكن لدى فئة الأميين وخريجي المدارس الابتدائية أي المام بالتشخيص والأدوية في حين أظهر المستوى العالي من التعليم معرفة أفضل بالتشخيص والأدوية مع أهمية كبيرة ($p<0.000$). أظهرت مدة المرض بأن الغالبية لديهم وعي وإدراك بالفترات الطويلة من المرض كما أظهرت أوقات التنويم في المستشفى أهمية كبيرة ($p<0.000$) لكلا من مستويات الوعي والإدراك بالتشخيص والأدوية كما أظهرت الأمراض التي يعاني منها المرضى أهمية كبيرة ($p=0.000$ و $p<0.002$) ولكل من مستويات الوعي والإدراك بالأمراض.

الخاتمة : على الرغم من شيوع ظاهرة عدم الوعي والإدراك بتشخيص وعلاج الأمراض، إلا أن هذه الدراسة قد أثبتت بأن غالبية المشاركين في الدراسة لديهم وعي والممام بتشخيص الأمراض والأدوية. أخفق أقل من نصف عدد المرضى في تحديد الأمراض التي يعانون منها أو الأدوية المصروفة وهذا يمكن نسبته إلى محدودية المعلومات المقدمة.

Objective: To assess awareness of Saudi psychiatric patients of their illnesses and medications at Prince Sultan Military Medical City (PSMMC).

Methods: A cross sectional study was conducted at the outpatients clinics of PSMMC, Riyadh, Kingdom of Saudi Arabia from January to December 2012. The

study included 647 patients undergoing treatment for their psychiatric illnesses. The patients were interviewed using a structured questionnaire.

Results: Most of the adult patients 555 (86.6%) had enough awareness of their diagnosis (58.2%); however, it was insignificant compared with other groups. The adult group ($n=301$, 87.2%) had more medication knowledge than the younger group (55.8%). Gender association with diagnosis ($p\geq 0.058$) and medications ($p\geq 0.094$) was not quite significant. In education, most of the patients were illiterate, next were secondary school, elementary graduates, intermediate, and university graduated. Most of illiterate and elementary graduates were unaware of both diagnosis and medications, while higher education reflected better diagnosis and medications knowledge, with extreme significance ($p<0.000$). Illness duration showed a majority in awareness for those with longer periods of illness. Admission times reflected extreme significance ($p<0.000$) of both levels of awareness. Patient illnesses also showed extreme significance ($p=0.000$ and $p=0.002$) of both awareness levels.

Conclusion: Although lack of awareness is common, in this study most patients were aware of their diagnosis and medications. Less than half of the patients could neither specify their illnesses nor their medications, which could be attributed to the limited information provided.

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Patient satisfaction as a quality improvement tool for health care providers has been established very well. To achieve this, early recovery patients need to be aware of their problems, for example why they have been visiting the outpatients clinics of the hospital, and the reason for investigations being conducted, which is equally important for patients attending the psychiatric clinics. The patient's awareness of their illness is inadequate even under normal circumstances, and much is needed to be learned regarding the psychiatric patients for a positive outcome. Even in developed countries with high gross domestic products (GDPs) and high literacy rates, patients are not fully aware of their illnesses and medications.¹ It is essential that patients realize how early detection and treatment can help in preventing problems and aid in proper and early recovery.¹

The mental powers are a centrally motivated design of collective capabilities endowing an individual with decisions that lead him to act independently and keep him aware of critical situations like one's health and provision of treatment. Previous works showed that it was common in approximately 20-30% of psychiatric cases to admit their incapability to know their illness and treatment, while a majority could know treatment decisions.² Hallucinations and delusions are the positive signs and symptoms; unusual thought content, conceptual disorganization are the negative ones; while the stronger predictors for incapacity in acute and cognitive dysfunction in chronic patients are the severity of symptoms, involuntary admission, lack of insight, and treatment refusal.^{2,3} It is the treating physician who shows the first screening levels to identify the patient's healthcare situation, revealing the ability in evaluating relevant information concerning communication and intelligence.^{2,3} Some studies were conducted among the geriatric population to evaluate the status and awareness of home medication review services.⁴ The clinician must ensure that the patient has been informed of the informations relevant to that choice, the risk, benefits, and prognosis both with and without treatment, as well as alternative treatments and their associated risks and benefits. The physician should verify that free decisions were taken by the patient, and that he had not been forced or threatened in his preferences.² It has been reported recently that mental capacity legitimate definitions were viewed more specifically in the boundaries of decision-making, instead of the global all-embracing conditions. Also, issues of decision-making capacity could not be decided by the diagnostic categories (namely, schizophrenia, Alzheimer's disease,

depression, and so forth). Rrelevant consideration of the special functional abilities for understanding and practical reasoning as examples of mental capacity are free from most diagnostic and descriptive categories.⁵ This implies with particular decisions, which are always to be connected with capacity consideration in situations of treatment⁶ and voluntary hospitalization consent.⁷ Psycho education is an important part of managing psychiatric patients, which has a profound effect on the compliance of patients regarding their medications and follow-up. However, there is limited data on this aspect, especially in Saudi psychiatric patients. The present study aims to determine the level of awareness of psychiatric patients of their illness and medications besides determining if there are any associations with a variety of different demographic factors, such as gender, age, education level, and other dependent factors, such as the number of visits and admissions, as well as the diagnosis of the illness.

Methods. This is a cross-sectional study of 647 patients visiting the outpatients clinics of Prince Sultan Military Medical City (PSMMC) in Riyadh, Kingdom of Saudi Arabia from January to December 2012. The patients were interviewed using a semi structured interview questionnaire (**Appendix 1**) which is composed of 2 parts and has been designed and tested by the specialist consultants in the Psychiatry Department. Part one was composed of queries that assess the patient's information regarding awareness on his illness and the medications prescribed. The second part reflects the demographic data. The questionnaires were filled out by the clinicians. The Research Ethics Committee has approved this study. Voluntary consent was obtained from the patient or their relatives accompanying them for participation in the study. The study included all patients who visited the Psychiatric Clinics of Prince Sultan Military Medical City and those who submitted their voluntary consent by self or their relatives who were accompanying them for participation in the study.

Statistical analysis. The Statistical Package for Social Sciences version 20 (IBM corp, Armonk, NY, USA) was used for the analysis of collected data.

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Descriptive statistics and Chi-square tests were used to find the relationship among the different groups to assess the association between the independent and the dependent study variables. A p -value <0.05 was considered statistically significant.

Results. Table 1 summarizes the demographic data of 647 patients undergoing treatment for psychiatric illnesses.

According to age ranges, it appeared that only the adult group had sufficient awareness of diagnosis (58.2%) with insignificant level ($p=3.408$, $p=0.182$). Both children (55.8%) and adults (54.2%) were having better awareness of medications than the elderly (46.5%), but the levels were insignificant ($p=1.031$, $p=0.597$) (Table 2).

Table 3 summarizes the gender-based awareness of the diagnosis and drug therapy among groups of Saudis.

Table 1 - Demographic characteristics of 647 patients undergoing treatment for psychiatric illnesses.*

Variable name	Frequency (%)
<i>Age (n=641)</i>	
<20	43 (6.7)
21 - 60	555 (86.6)
≥61	43 (6.7)
<i>Gender (n=641)</i>	
Male	307 (47.9)
Female	334 (52.1)
<i>Educational level (n=647)</i>	
Elementary	117 (18.1)
Intermediate	90 (13.9)
Secondary	141 (21.8)
University	89 (13.8)
Uneducated	192 (29.7)
Unknown	17 (2.6)

*6 patients are missing due to incomplete study data

Table 2 - Awareness of the diagnosis and drug therapy among age groups of Saudis.*

Age group	Aware n (%)	Unaware n (%)	χ^2	P-value
<i>Knowledge of diagnosis (n=641)</i>				
≤20	21 (48.8)	22 (51.2)	3.408	0.182
21-60	323 (58.2)	232 (41.8)		
61+	20 (46.5)	23 (53.5)		
<i>Knowledge of medications (n=641)</i>				
≤20	24 (55.8)	19 (44.2)	1.031	0.597
21-60	301 (54.2)	254 (45.8)		
61+	20 (46.5)	23 (53.5)		

*6 patients are missing due to incomplete study data

Knowledge of diagnosis were not quite significant ($\chi^2: 2.737$, $p=0.058$). Knowledge of drug therapy showed that males and females were also aware of their drug therapy, but the levels were not quite significant ($\chi^2: 1.950$, $p\geq 0.094$).

According to the educational groups, the intermediate, secondary, university and the unknown, were aware of diagnosis, while elementary and uneducated were unaware but, the association test showed extreme significance level ($\chi^2: 30.763$, $p=0.000$). For drug therapy, the same groups, the intermediate, secondary, university and the unknown, were aware of diagnosis, and the elementary and uneducated were also unaware, with an association test showing extreme significance ($\chi^2: 74.658$, $p=0.000$). Patients showed better significance values of drug therapy than diagnosis values (Table 4).

Table 5 summarizes the awareness of the diagnosis and drug therapy among groups according to illness

Table 3 - Gender-based awareness of the diagnosis and drug therapy among groups of Saudis.*

Gender-based awareness	Aware n (%)	Unaware n (%)	χ^2	P-value
<i>Knowledge of diagnosis (n=639)</i>				
Male	163 (53.3)	143 (46.7)	2.737	0.058
Female	199 (59.8)	134 (40.2)		
<i>Knowledge of drug therapy (n=639)</i>				
Male	174 (56.9)	132 (43.1)	1.950	0.094
Female	171 (51.4)	162 (48.6)		

*8 patients are missing due to incomplete study data

Table 4 - Awareness of the diagnosis and drug therapy among Saudis group in relation to education level.*

Education level	Aware n (%)	Unaware n (%)	χ^2	P-value
<i>Knowledge of diagnosis (n=646)</i>				
Elementary	49 (41.9)	68 (58.1)	30.763	0.000
Intermediate	54 (59.6)	36 (40.4)		
Secondary	93 (66.0)	48 (34.0)		
University	63 (68.4)	27 (31.6)		
Uneducated	94 (49.0)	98 (51.0)		
Unknown	13 (76.5)	4 (23.5)		
<i>Knowledge of drug therapy (n=646)</i>				
Elementary	46 (39.3)	71 (60.7)	74.658	0.000
Intermediate	50 (55.6)	40 (44.4)		
Secondary	99 (70.7)	41 (29.3)		
University	71 (79.2)	19 (20.8)		
Uneducated	70 (36.6)	121 (63.4)		
Unknown	12 (70.6)	5 (29.4)		

*1 patient is missing due to incomplete study data

Table 5 - Awareness of the diagnosis and drug therapy among groups of Saudis according to illness duration.

Illness duration	Aware n (%)	Unaware n (%)	χ^2	P-value
<i>Knowledge of diagnosis (n=642)</i>				
≤1	3 (37.5)	5 (62.5)	7.497	≥0.058*
2-5	45 (50.6)	44 (49.4)		
6-10	70 (49.6)	71 (50.4)		
≥11	361 (60.3)	280 (39.7)		
<i>Knowledge of drug therapy (n=641)</i>				
≤1	4 (50.0)	4 (50.0)	1.470	≥0.689*
2-5	46 (52.3)	42 (47.7)		
6-10	71 (50.0)	71 (50.0)		
11+	224 (55.6)	179 (44.4)		

*not significant, *6 patients are missing due to incomplete study data

duration. The 2-5 years group and ≥11 years group were aware of the diagnosis, while ≤1 year group and 6-10 years group were not aware ($p \geq 0.058$). For drug therapy, the both groups was equally aware/unaware and the association test was not significant ($p \geq 0.689$) (Table 5).

Table 6 shows the level of awareness about the diagnosis and drug therapy among groups of Saudis according to admission counts. The association tests of drug therapy awareness were extremely significant ($p=0.000$).

In the patient illness categories, the knowledge of diagnosis was 56.4% (361/64) and the knowledge of drug therapy was 61.5% (8/31), which were extremely significant ($p=0.000$ and $p=0.002$). Significance values showed that patients had better knowledge of diagnosis ($\chi^2=85.846$) compare with the knowledge of drug therapy group ($\chi^2=74.684$).

Discussion. The approach of using a semi-constructed interview and an appropriate sample of patients who visited the outpatients clinics of PSMCMC was used and followed more frequently by several institutions in their studies.² For the 3 age groups, and according to the declared first “knowledge of diagnosis” level of awareness, it appeared that only the active adults group, who was numerically a majority had sufficient awareness. Differences in levels of awareness were not significant. With respect to the second “knowledge of drug therapy” level of awareness, it is interesting to note that although the young adolescent group had a level of awareness higher than that of the active adults group. In general, although differences between age groups were not significant according to the significance values, their awareness of diagnosis was better than that of drug therapy awareness. Previous studies⁷ reported that

Table 6 - Level of awareness about the diagnosis and drug therapy among groups of Saudis according to admission counts.

Admissions	Aware n (%)	Unaware n (%)	χ^2	P-value
<i>Knowledge of diagnosis</i>				
One time	31 (53.4)	27 (46.6)	30.763	0.000
2 times	11 (61.1)	7 (38.9)		
3 times	5 (55.6)	4 (44.4)		
4 times	3 (60.0)	2 (40.0)		
5 times	1 (33.3)	2 (66.7)		
6 times	3 (100.0)	0 (0.00)		
None	11 (61.1)	7 (38.9)		
<i>Knowledge of drug therapy</i>				
One time	36 (61.0)	23 (39.0)	74.658	0.000
2 times	13 (72.2)	5 (27.8)		
3 times	7 (77.8)	2 (22.2)		
4 times	3 (60.0)	2 (40.0)		
5 times	1 (33.3)	2 (66.7)		
6 times	3 (100.0)	0 (0.0)		
None	12 (66.7)	6 (33.3)		

those under the age of 21 years needed guidance rather than retribution from the courts; hence, children and adolescents were presumed incompetent. The study by Candia and Barba² reported that high proportions of the patients were unable to name their illnesses, but in this current study this ratio is even higher for both levels of knowledge.²

For the gender-based “knowledge of diagnosis” parameter, most females had relatively more awareness than males, although the difference between them was not quite significant. For the “knowledge of drug therapy” parameter, the reverse was found, where males were a majority and had relatively more awareness of their drug therapy than females but the levels were not quite significant. Gender-wise, patient awareness of their diagnosis was better than that of the drug therapy, according to the significance levels values. For the association of gender with other illness awareness, treatment and control in the community have previously been covered.⁸ The “knowledge of diagnosis” parameter reflected awareness to be educationally dependent in a directly proportional relationship with the educational level grade (secondary to post graduate), and an inversely proportional one in counts, showing extremely significant differences. As expected, groups with lower levels of education (illiterate and elementary) had weaker awareness levels of diagnosis. A similar situation was observed in the “knowledge of drug therapy” parameter, which also showed that awareness was educationally dependent with a directly proportional relationship through educational level

grades (secondary to post graduate) and an inversely proportional relationship in counts showing extremely significant differences. As expected, groups of lower levels of education (illiterate and elementary) had even weaker awareness levels of medication than diagnosis. Previous reviews were completed in conducting research that associates literacy with health status and outcome to determine the relationship between literacy and the cost of health care.⁹ Patients appeared to be more aware of their medications than diagnosis, based on significance values. Some studies were conducted in this field to evaluate the status and awareness of home medication review services.⁴ It is understandable to note that the illiterate and elementary school graduates who received the poorest levels of education were also unaware of the knowledge of diagnosis and medications, although they formed the most groups. Other studies reported that even in rich countries, patients might have been unaware of their illnesses.^{10,11,9}

With the exception of the group of patients with illness duration for one year or less, who were expected to have less knowledge on both diagnosis and medications, most of those with longer periods of experiencing their illnesses seem to have a fair awareness of both, though these levels were not quite significant.¹² Patients appeared to be more aware of their diagnosis than medications, based on significance values, which is similar to previous studies.^{13,14}

With the exception of the patients' group of "5 times" admissions, all other groups showed consistency in awareness associated with the "knowledge of diagnosis" parameter. Differences in levels of these associations were extremely significant.¹⁵ Similar admission time associations were observed in relation to knowledge of medications with extremely significant levels of awareness.¹⁶ Patients appeared to be more aware on their diagnosis than medications, based on significance values.¹⁷

For patient illness categories, the 2 parameters of "diagnosis and medication" knowledge reflected that most were aware of both with extremely significant levels. Significance values showed that these groups of patients had better knowledge of diagnosis than drug therapy, and similar works had reviewed these aspects.^{8,17}

Limitations of the study. Time is crucial for the primary researcher who has to start analysis with the collected questionnaires to present the research and for the patient or his companion who answered the queries presented to him by the clinician who interviewed him, using a semi structured interview questionnaire (Appendix 1). The information regarding the patient's awareness concerning their illnesses and the medications prescribed to them could pose difficulties in providing

accurate and suitable answers. The patient's awareness of their illnesses and the medications is subject to recall bias, we did not verify whether the information provided is accurate or not.

In conclusion, although lack of awareness is common, in this study most of the patients were aware of their diagnosis and medications. Less than half of the patients could neither specify their illnesses nor their medications, which could be attributed to the limited information provided. Further studies are demanded to verify this situation.

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Appendix 1 - A semi-structured interview questionnaire.

Dear Colleagues:

Can you kindly ask your patients at the end of each visit the following questions?

1. Do you know your diagnosis? or the name of your illness? Yes No
2. Do you know the cause of your illness? Yes No
3. Have you had any test s done in the hospital? Yes No
4. D o you know the number of medicines prescribed to you? Yes No
5. Do you know their names? Yes No
6. Do you know how these medicines will help you? Yes No
7. Do you smoke? Yes No
8. Do you know your medication(s) name(s)? Yes No
9. Do you know that smoking is bad for health? Yes No
10. Have the doctors / nurses informed you about your illness? Yes No
11. Do you understand your test results ? Yes No
12. Has the doctor or nurse explained your test results to you? Yes No

Then complete the following:

File No: _____ Gender: Male Female
 Age: _____ Residence: Rural Urban
 Total Income: _____
 Educational Level: _____ Date of first visit: _____
 The total number of visits: _____
 Duration of illness: _____
 Number of admissions: _____

Diagnosis (as it is in the file):

1. _____
2. _____
3. _____

(This is for research purpose)

Thank you for your time and cooperation

DR. IBRAHIM AL FRAIH
Resident
DR. MOHAMED AL JAFFAR
S. Resident

DR. ABDULLAH AL HATHLOUL
Consultant