Prevalence of mental illness among Saudi adult primary-care patients in Central Saudi Arabia

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ABSTRACT

Objectives: To determine the prevalence of mental illness morbidity among Saudi adult primary care patients from Al-Kharj, Kingdom of Saudi Arabia.

Methods: This is a cross-sectional epidemiological study of the prevalence of mental illness morbidity in a randomly selected sample of 609 Saudi adult patients, aged from 15 years to 65 years who attended Family and Community Medicine Clinic, Armed Forces Hospital, Al-Kharj, Kingdom of Saudi Arabia, from July 2000 to November 2000. The Rahim Anxiety-Depression Scale was used in the evaluation.

Results: In this study, 609 Saudi patients were screened. Their mean age ± standard deviation was 33.72 ± 13.39. Of these, 46.6% were men and 53.4% were women. The prevalence of the minor mental illness morbidity was 18.2%, (30.5% when the sub-threshold mental illness are included). It was significantly higher in women (22.2%) than men (13.7%) with p-value=0.0073. The prevalence rate was high in the younger age group, (p<0.0001). In patients aged 15 years to 29 years it was 23.2%, and in those aged between 30 years and 44 years it was 17.8%, whereas, in patients aged 45 years to 65 years the prevalence was 7.1%. Also, the rate was high in divorcees (40%) and widows (43.8%). The prevalence rate in patients with diabetes mellitus was 16% (p=0.562), with hypertension, 22.2% (p=0.303), and with bronchial asthma, 28.3% (p=0.008). Multiple logistic regression analysis showed that age, gender and bronchial asthma were associated with mental illness.

Conclusion: Our study shows that one 3rd of primary health care patients have mental illness. Due to the high prevalence of mental illnesses among primary health care clinic attendants and screening for such problems by using Rahim Anxiety-Depression scale could be time consuming, exploring the psychiatric dimension and effect of diseases should be included during any consultation.

Keywords: Mental illness, prevalence, primary health care.

Mental illnesses are a common problem in primary health care (PHC).[1] According to various authors, these disorders account for 24%-36% of all PHC patients.[2-4] Most of these are minor psychiatric disorders, presenting with depression, anxiety or somatization.[5] More than half of those patients presented with somatic rather than psychological complaints.[6] Beside, a pre-existing of a severe or chronic physical ailment constitutes a stressful life-event, which can generate subsequent psychiatric morbidity.[7] It was noted that primary care physicians were not well equipped to deal with such disorders.[8-10] Consequently, they do not detect most of the psychiatric patients in PHC. However, if these disorders are recognized early and treated, their complications such as suicidal thoughts, suicidal

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attempts and psychosis can be prevented.[11] Unnecessary investigation and medicines can be avoided; time and cost can be saved.[1] Studies reporting the extent of mental illness morbidity in PHC in the Kingdom of Saudi Arabia (KSA) are few. Two studies undertaken in Riyadh, KSA showed prevalence rates of 39% and 46%.[12-13] Only 33% of those patients were detected by PHC physicians.[13] Another study undertaken in Al-Khobar, KSA demonstrated that the prevalence of these disorders in adult male PHC patients was 21.3%. Primary health care physicians detected only 7.7% of them.[14]

The objectives of this study are to determine the prevalence rate of mental illness morbidity in adult Saudi patients attending the PHC clinic from Al-Kharj, KSA area.

Method. This is a cross-sectional study. The target population consisted of Saudi adults aged 15 years to 65 years, attending the PHC clinic of Al-Kharj Armed Forces Hospital, KSA for any medical consultation during July 2000 through to November 2000. These clinics serve 100,000 persons, through 4 sessions/day. Two sessions were chosen randomly. The total number of patients attended the PHC clinics in these 2 sessions was 33,845 patients. For each session a list of patients (aged 15 years through to 65 years) was obtained. Systemic random sample was chosen from every list to get the required number, 641 patients.

Screening tool. A structured Arabic questionnaire was composed of 2 sessions, one being socio-demographic and the other based upon the Rahim Anxiety-Depression (RAD) Scale. This scale provided us with a reliable and valid questionnaire.[15] It is a screening for the minor psychiatric morbidity (depression, anxiety, and somitization), and not a diagnostic tool. The cut-off points to achieve the highest sensitivity and specificity for the dichotomous point and weighting were 18/19 and 13.4/13.5. It has a sensitivity of 94% and 84% specificity. The questionnaire was distributed to the target sample in the waiting area and was self-administrated.

Assistants. Two assistants, one male and one female, were trained by the researchers and their preparation assessed before implementation. They were available just to read the questionnaire for those who were illiterate.

Data analysis. The collected data were analyzed by using the Statistical Package of Social Science (SPSS/PC) Release 10.[16] The mean values were compared using the Student t-test. Nominal and ordinal variables tested using the Person Chi-square test for linear association. Multiple logistic regressions was used to assess the relationship between the patients' RAD scores (as qualitative) from the following independents variables; sex, age

groups, marital status, educational level, occupational type, income level, presence of chronic diseases (Diabetes mellitus, hypertension, bronchial asthma). A p-value of 0.05 or less was considered as the statistical level of significance.

Results. Six hundred and nine of the selected 641 Saudi patients participated in the study, 609 answered the questionnaire (95% the response rate). Their mean age ± standard deviation (SD) was 33.72 ± 13.39. Of the total patients, 284 (46.6%) were men and 325 (53.4%) were women. According to the marital status, single patients form 23.3%, monogamous married forms 65%, where polygamous (lives with more than one wife) forms 6.6%. Widow and divorced patients form 2.6% and 1.7% and only 0.5 who not recorded their ages. About 16.1% of the Patients' income exceeded 6000 SR/month. **Table 1** demonstrates the other demographic characters and their association with mental illnesses. This study shows that the prevalence rate of minor mental illness morbidity among Saudi PHC patients was 18.2% (111 of 609 patients), and the sub-threshold was 12.3%. Women have more mental illness morbidity (22.2%) than men (13.7%) with significant p-value =0.0073. No significant difference in marital status (p-value=0.696) despite high prevalence rates in widow (43.8%) and in divorcees (40%). Also, there is no association between mental illness and the income level with p-value=0.690. Patients who have diabetes mellitus were 106 (17.4%), hypertension 81 (13.3%), and bronchial asthma 92 (15.1%) of the sample. **Table 2** demonstrates the prevalence of mental illness morbidity in patients who have a chronic disease namely diabetes mellitus, hypertension or bronchial asthma. The prevalence of mental illnesses was high among the bronchial asthmatic patients (28.3%) with significant difference as comparing with non-asthmatic (p-value=0.008). Where it was 22.2% among those who have hypertension and 16% among diabetic patients, but no significant difference between who have the disease and those who have not. When the multiple logistic regression analysis is applied, (R square= 0.084) we found that 8.4% of the variation in psychiatric morbidity has been explained by gender, age, and the presence of bronchial asthma. It is common in younger age, women, and asthmatic patients. Where marital status, educational level, income, job type, diabetes and hypertension were not in the equation.

Discussion. This cross-sectional study explored the prevalence rate of the minor mental illness morbidity among Saudi patients seeking medical advice in the PHC setting. The researchers used a simple, inexpensive screening instrument in detecting minor psychiatric morbidity non-psychotic mental

Table 1 - The socio-demographic characteristics of the participants and the prevalence rate of mental illnesses.

Demographic Characters	N of patients ‡ (%) (N=609)		N of mental ill patients (PR%)§ (N=111)	
Age*				
15-29 years	285	(46.8)	66	(23.2)
30-44 years[I][I]	180	(29.6)	32	(17.8)
45-59 years	98	(16.1)	6	(6.1)
60-65 years	37	(6.1)	3	(8.1)
Not recorded	9	(1.4)	4	
Education†				
Illiterate	126	(20.7)	20	(15.9)
Elementary	134	(22)	21	(15.7)
Intermediate **	144	(23.7)	33	(22.9)
Secondary	121	(19.9)	20	(16.5)
Institutional	21	(3.4)	5	(23.8)
University	61	(10)	12	(19.7)
Not recorded	2	(0.3)	-	-
Occupation†				
Unemployed	76	(12.5)	17	(22.4)
House-wife	189	(31)	39	(20.6)
Manual	48	(7.9)	2	(4.2)
Military	113	(18.6)	18	(15.9)
Civilian	85	(14)	16	(18.8)
Retired	21	(3.4)	1	(4.8)
Student	69	(11.3)	15	(21.7)
Not recorded	8	(1.3)	3	

N - number, * - P-value <0.0001, † - P-value insignificant,
‡ - patients' numbers attended primary care,
§ - PR prevalence rate of mental illnesses (n/N),
[I][I] - PR in women (24.2%) and men (11.2%) with p-value=0.018,
** - PR in women (35.4%) and men (12.7%) with p-value=0.001

Table 2 - The prevalence of mental illness morbidity in some chronic disorders.

Chronic Disease	*PR of Mental Illnesses	Odds Ratio	Confidence Intervals	p-value
Diabetes Mellitus	16	0.85	0.46-1.54	0.562
Hypertension	22.2	1.55	0.73-2.47	0.303
Bronchial Asthma	28.3	1.98	1.15-3.39	0.008
* - prevalence rate				

disorders.[15] By means of this questionnaire, we measured the frequency as well as the severity (dichotomous and weighted) of the symptoms. This questionnaire has been used in other Arabic countries, Al-Khobar, KSA and Khartoum, Sudan.[14] It was valid and reliable. All the sample participants were Saudi patients. Men were in almost equal proportion to the women in this study. About half

had not proceeded educationally beyond an elementary school education. This could be related to the semi urban and rural area of the study sample. The prevalence of divorcee and widows (4.3%) was similar to that of the Riyadh, KSA study.[13]

The main finding in this study was that the prevalence rate of mental illness morbidity in adults attending PHC was 18.2%. When sub-threshold cases were included, the prevalence increased to 30.5%. This finding is similar to that reported internationally, where they estimated that the prevalence of mental illness morbidity among PHC patients as 20% well defined mental illness, and 40% when sub-threshold mental illnesses are included.[2] This is less than that found in Jordan (61%),[17] in Bahrain was (45.1%)[18] and Riyadh studies (39%-46%).[12,13] In these studies, the authors used the General Health Questionnaire-version 28 (GHQ-28), which has 95% for both sensitivity and specificity. We observed that the studies undertaken in Riyadh and Jeddah, KSA consistent with our findings; namely, the high prevalence of mental illness morbidity in younger women divorcees and widows. We noted that these groups are at risk for mental illness and such patients need more supportive care in the community. There was no difference in the prevalence of these disorders among the monogamous or the polygamous marriages. Asthmatic patients were twice as susceptible to mental illness than those of non-asthmatic. There was no significant difference between diabetic and non-diabetic patients, hypertensive and non-hypertensive patients in their susceptibility to mental illness. This fact may be related to the stress inherent in the asthmatic attacks as compared to diabetes and hypertension. An application of multiple logistic regression analysis showed that marital status, educational level, income, job type, diabetes and hypertension did not contribute to the effect of the age, gender and bronchial asthma on mental illness morbidity. However, age, sex and bronchial asthma account for 8.4% of the variations in these disorders. Therefore, a further study is needed to explore other associated factors that could contribute to such disorders.

About one 3rd of PHC patients have mental illnesses. Patients of younger age, women, divorcees, widows and asthmatic patients are more prone to mental illness. Due to the high prevalence and screening for such problems by using RAD Scale being time consuming, exploring the psychiatric dimension and effect of diseases should be included during any consultation. Consequently, PHC physicians need to be aware of such disorders and know how to deal with them. Establish a health education that influence psychiatric patients' self-reporting could help in the expression of these illnesses.

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