

# Psychiatric morbidity in primary care

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## المراضة النفسية في مستوى الرعاية الأولية

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خلاصة: تم تقدير مدى انتشار المراضة النفسية المستترة باستعمال الاستبيان الصحي العام ومقياس المستشفيات للقلق والاكتئاب. فقد اختبر عشوائياً عدد مجموعه 149 مريضاً بحرينياً تبلغ أعمارهم ستة عشر عاماً فأكثر، من بين الموهدين على مراكز الرعاية الصحية الأولية لمعالجة علل غير نفسية. وقد وجد أن معدل انتشار المراضة النفسية باستعمال الاستبيان الصحي العام يبلغ 45.1% (الحد الفاصل  $\leq 5$ ) و 27.1% (الحد الفاصل  $\leq 9$ ). ومع استعمال مقياس القلق والاكتئاب، وجد أن معدل الانتشار كان 44.4% (الحد الفاصل  $\leq 8$ ) و 23.6% (الحد الفاصل  $\leq 11$ ). وكانت المراضة النفسية أكثر انتشاراً بين النساء البالغات من العمر 50-55 سنة، وذلك بين المطلقات والأرامل والمريضات الأقل تعليماً. وخلاصة القول أن كلتا هاتين الوسيلتين يمكن أن تستعملتا في تشخيص المرض النفسي.

**ABSTRACT** The prevalence of hidden psychiatric morbidity was assessed using the General Health Questionnaire (GHQ) and Hospital Anxiety Depression Scale (HAD). A total of 149 Bahraini patients aged  $\geq 16$  years were selected randomly from those attending primary health care centres for problems other than psychiatric illness. The prevalence of psychiatric morbidity using GHQ was 45.1% (cut-off  $\geq 5$ ) and 27.1% (cut-off  $\geq 9$ ). Using the HAD scale, the prevalence was 44.4% (cut-off  $\geq 8$ ) and 23.6% (cut-off  $\geq 11$ ). Psychiatric morbidity was more common in women aged 50-55 years, in divorcees or widows and in lesser educated patients. Either instrument could be used to diagnose psychiatric illness.

## La morbidité psychiatrique dans les centres de soins primaires

**RESUME** La prévalence de la morbidité psychiatrique non diagnostiquée a fait l'objet d'une évaluation à l'aide du Questionnaire général sur la Santé (GHQ) et de l'échelle HAD pour l'anxiété et la dépression. Au total, 149 patients Bahreïnites âgés de 16 ans et plus ont été choisis au hasard parmi ceux consultant dans les centres de soins de santé primaires pour des problèmes autres que des maladies psychiatriques. La prévalence de la morbidité psychiatrique en utilisant le GHQ était de 45,1% (seuil  $\geq 5$ ) et de 27,1% (seuil  $\geq 9$ ). En utilisant l'échelle HAD, la prévalence était de 44,4% (seuil  $\geq 8$ ) et de 23,6% (seuil  $\geq 11$ ). La morbidité psychiatrique était plus fréquente chez les femmes âgées de 50-55 ans, les divorcées ou les veuves ainsi que chez les personnes dont le niveau d'instruction était moins élevé. L'un ou l'autre de ces instruments pourrait servir à diagnostiquer les maladies psychiatriques.

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## Introduction

Psychological disorders are among the most common reasons for seeking consultation in general practice [1]. It is estimated that nearly 77% of all psychiatric consultations are actually carried out by primary care physicians [2]. It has also been found that general practitioners with a positive attitude to mental health spend more time on their consultations [3].

The somatic symptoms which accompany psychiatric disorders often make a psychiatric diagnosis difficult [4]. Doctors differ in their perception of what constitutes a psychiatric illness; however, this can be overcome by the use of self-reporting questionnaires, such as the General Health Questionnaire (GHQ) and the Hospital Anxiety Depression Scale (HAD), which can raise the sensitivity from 50% to 95% [5].

The GHQ, version 28 has been widely used to assess psychiatric morbidity in patients attending primary health care centres. The usefulness of this questionnaire is best illustrated in the studies of Goldberg and Bridges, who have demonstrated that general practitioners using the GHQ were better able to recognize hidden psychiatric morbidity in their patients [6, 7]. Reports on the GHQ and HAD scale, both in Europe and the Arab world, have shown that their sensitivity and specificity are greater than 85% [5, 7, 8, 9]. It has also been shown that the specificity of the GHQ increases when the cut-off point is raised from level 5 to level 9 [9].

Estimates of the prevalence of psychiatric disorders in general practice worldwide range from 25% to 75% [9-11]. The prevalence of psychiatric disorders among general hospital outpatients in Bahrain has been reported to be 19.4% [12]. No similar studies have been conducted in primary health

care. Hence, we aimed to assess psychiatric morbidity in Bahraini patients attending primary health care centres. Both the GHQ and HAD scale were used and the validity and reliability of the HAD scale against the GHQ was tested.

## Subjects and methods

The study was conducted in late 1997 at two primary health care centres (Naim Health Centre and Kuwait Health Centre). Both health centres were the same size and class: class A covers a catchment area of about 35 000 people and has support facilities such as laboratory, X-ray, maternal and child health and dental services.

The GHQ, version 28 and HAD scale were used to estimate the psychiatric morbidity in Bahraini patients attending the centres. A score of  $\geq 5$  was considered as positive with the GHQ. A higher cut-off point of 9 was used to increase the specificity of the GHQ to 95%. Positive scoring of 8 to 10 on the HAD scale was considered to indicate the possible presence of psychiatric morbidity, and a score of  $\geq 11$  was considered probable presence, which increased the specificity of the HAD instrument.

The GHQ, version 28 self-administered screening test and the HAD scale were given to every fifth adult ( $\geq 16$  years) Bahraini patient attending the two health centres. All the patients were asked to tick or cross the answers with the help of secondary school students, who were trained to help them complete the questionnaires. Nobody was allowed to accompany the patients during the interview.

The data were analysed using *dBase* and *SPSS* software programs. Specificity and reliability for both the GHQ and HAD were calculated at two points each: 5 and 9, and 8 and 11 respectively. The total agreement be-

tween the two instruments was measured by the Kappa test. Age, sex, marital status, work and education level were also studied.

## Results

A total of 149 patients were interviewed but 5 failed to complete the questionnaire; a response rate of 96.5% ( $n = 144$ ). The ages of the study group ranged from 16 years to 78 years, with a mean age of  $32.2 \pm 13.5$  years; 54.9% ( $n = 79$ ) were female (mean age  $35.1 \pm 14.7$  years) and 45.1% ( $n = 65$ ) were males (mean age  $28.7 \pm 10.9$  years).

When a cut-off point of 5 for the GHQ was used, psychiatric morbidity was estimated to be 45.1% ( $n = 65$ ). This decreased to 27.1% when a cut-off point of 9 was used. When the HAD scale was used, 20.8% of the patients showed a possible presence of psychiatric morbidity (8 up to or equal to 10) and 23.6% showed a probable presence ( $\geq 11$ ). The total of possible and probable presence was 44.4% ( $n = 64$ ). The female to male ratio of those with psychiatric disorders was 1.7:1 at both cut-off points in the two instruments.

The sensitivity of HAD to GHQ at the low cut-off point was 69.23% at a specificity of 75.95%. The positive predictive value for the low cut-off point was 70.31% and the negative predictive value was 75%. The sensitivity of HAD to GHQ at the high cut-off point was 61.54% at a specificity of 90.48%. The positive predictive value for the high cut-off point was 70.59% and the negative predictive value was 86.36%. The interrater reliability was measured by the Kappa coefficient and was found to be 0.4525 and 0.5421 for the low and high cut-off points respectively.

There were more non-workers in the study than workers. There were also more

non-workers than workers at all cut-off points in the two instruments as shown in Table 1, which was statistically significant.

Although only four people included in the study were divorced, 50% of them displayed psychiatric morbidity at all cut-off points (Table 1). People who were illiterate and/or had completed the primary level of education showed the highest psychiatric morbidity (Table 1). Psychiatric morbidity was higher among those under 30 years as shown in Table 2 but 100% of the females between 50 years and 59 years suffered from psychiatric disorders at cut-off point 5 of the GHQ. None of the participants in the study admitted having a psychiatric illness.

## Discussion

The prevalence of psychiatric disorders was 45.1% when the cut-off point of 5 in the GHQ was used. This is similar to the results published by Boardman who found a prevalence rate of 42.9% [13]. A prevalence of 23% in males and 30.4% in females was found when the cut-off point of  $\geq 9$  was used. This is similar to the results of Wright and Perini, who found a prevalence of 25% in males and 29% in females [10]. Goldberg and Bridges, and Wright and Perini advised that the cut-off point should be raised from 5 to 9 for the GHQ in order to increase the specificity [8,10].

In our study, psychiatric morbidity was found to be more common in females, a finding which is generally accepted. Also, more females attend the health centres in the mornings than males, as males are at work and our study was conducted among morning attendees.

Most women in Bahrain at around the age of 50 years are looking after their extended families, which may consist of grand-

**Table 1 Sociodemographic data of the patients diagnosed with psychiatric morbidity using the General Health Questionnaire (GHQ) and Hospital Anxiety Depression (HAD) scale**

Variable	GHQ				HAD			
	Cut-off point 5		Cut-off point 9		Cut-off point 8		Cut-off point 11	
	No.	%	No.	%	No.	%	No.	%
<i>Employment</i>								
Worker (n = 63)	23	36.5	14	22.2	19	30.2	9	14.3
Non-worker (n = 81)	42	51.9	25	30.9	45	55.6	25	30.9
$\chi^2$	2.78		0.94		8.26		4.528	
P-value	0.0965		0.333		0.004		0.033	
<i>Marital status</i>								
Single (n = 53)	27	50.9	19	35.8	29	54.7	13	24.5
Married (n = 84)	34	40.5	18	21.4	32	38.1	18	21.4
Divorced (n = 4)	2	50.0	2	50.0	2	50.0	2	50.0
Widowed (n = 3)	2	66.7	0	0	1	33.3	1	33.3
$\chi^2$	NV		NV		NV		NV	
P-value	NV		NV		NV		NV	
<i>Education</i>								
Illiterate (n = 28)	14	50.0	6	21.4	12	42.9	8	28.6
Primary (n = 12)	8	66.7	6	50.0	7	58.3	6	50.0
Elementary (n = 20)	7	35.0	4	40.0	9	45.0	5	25.0
Secondary (n = 57)	23	40.4	15	26.3	29	50.9	13	22.8
Higher (n = 27)	13	48.1	8	29.6	7	25.9	2	7.4
$\chi^2$	3.9695		4.25836		5.6758		8.9874	
P-value	0.41		0.372		0.2249		0.0614	
Total (n = 144)	65	45.1	39	27.1	64	44.4	34	23.6

NV = not valid

**Table 2 Distribution of the results of both instruments by age group**

Instrument	Age (years)						Total (n = 144)
	< 30 (n = 78)		30-60 (n = 58)		> 60 (n = 8)		
	No.	%	No.	%	No.	%	
GHQ 5	37	56.9	23	35.4	5	7.7	65
GHQ 9	25	64.1	12	30.8	2	5.1	39
HAD 9	34	53.1	24	37.5	6	9.4	64
HAD 11	16	47.1	15	44.1	3	8.8	34

parents and also children of their siblings. The demands of care-giving may put women under greater stress, which in turn may lead to the increase in psychiatric illness.

Non-workers appear to be at a higher risk of psychiatric illness than people who worked. In addition, psychiatric morbidity was more common in those of a low educa-

tional level, perhaps because of their inability to express their feelings and because they have fewer strategies to help them cope with their problems.

The results of this study suggest that the GHQ and HAD scale are simple to use in primary health care and may help physicians in their assessment of patients with somatic symptoms which do not conform to any recognizable clinical pattern or for frequent attendees. These tools may help uncover hidden psychiatric illness, particularly in patients with chronic somatic disease.

## Conclusion

Our study found that psychiatric morbidity in primary health care occurred more com-

monly in females aged 50–59 years, the unemployed, those of a low educational level and divorcees or widows.

The high prevalence of psychiatric morbidity in general practice necessitates the use of an easy tool for screening and identifying cases of hidden psychiatric morbidity, especially in the busy primary health care setting. The GHQ or HAD scale are such a tool and their use is strongly recommended. The high specificity and sensitivity of both tests will provide physicians with acceptable and accurate results

One of the roles of doctors is to identify psychiatric illness. In order to do so, they should be empathetic and seek to clarify the complaints of patients. They should also have an interest in psychiatry and improve their knowledge and ability in this field.

## References

1. Sharp DJ. Classification of psychosocial disturbance in general practice. *Journal of the Royal College of General Practitioners*, 1989, 39:356–8.
2. Baughman OL. Rapid diagnosis and treatment of anxiety and depression in primary care: the somatizing patient. *Journal of family practice*, 1994, 39:373–8.
3. Wilson A. Consultation length in general practice: a review. *British journal of general practice*, 1991, 41:119–22.
4. Goldberg D, Huxley P. *Mental illness in the community — The pathway to psychiatric care*, 1st ed. New York, Tavistock Publications, 1980.
5. Wilkinson MJB, Barczak P. Psychiatric screening in general practice. *Postgraduate update*, 1989:1117–22.
6. Goldberg D. *Manual of the general health questionnaire*. Windsor, England, National Foundation for Educational Research, 1978.
7. Wilkinson MJB, Barczak P. Psychiatric screening in general practice: comparison of the general health questionnaire and the hospital anxiety depression scale. *Journal of the Royal College of General Practitioners*, 1988, 38:311–3.
8. Goldberg D, Bridges K. Screening for psychiatric illness in general practice: the general practitioner versus the screening questionnaire. *Journal of the Royal College of General Practitioners*, 1987, 37:15–8.
9. El-Rufaie OEFA, Absood G. Validity study of the Hospital Anxiety and Depression scale among a group of Saudi patients.

- British journal of psychiatry*, 1987, 151:687-8.
10. Wright AF, Perini AF. Hidden psychiatric illness: use of the GHQ in general practice. *Journal of the Royal College of General Practitioners*, 1987, 37:164-7.
  11. Snaith P. Measuring anxiety and depression. *Practitioner*, 1993, 237:554-7.
  12. Al-Haddad MK, Kamei CA, Horn D. Aspects of somatization in Bahraini patients, 1983-1987. *Bahrain medical bulletin*, 1991, 13(1):25-9.
  13. Boardman AP. The General Health Questionnaire and the detection of emotional disorder by general practitioners. *Journal of psychiatry*, 1987, 151:373-81.

Great attention needs to be paid to the growing needs of populations in the area of mental health. Neuropsychiatric conditions are among the leading causes of disability and burden. Psychiatric disorders are frequently a considerable drain on health resources as a consequence of being misunderstood, misdiagnosed or improperly treated. With proper budgetary planning and allocation of resources, introducing an effective mental health programme into primary health care can reduce overall health costs. Mental health care, unlike many other areas of health, does not generally demand costly technology; rather, it requires the sensitive deployment of personnel who have been properly trained in the use of relatively inexpensive drugs and psychological support skills on an outpatient basis.

Source: The World Health Report, 1999. Making a Difference. *World Health Organization, Geneva, 1999. Page 16.*