Prevalence of Psychiatric Disorders in an Academic Primary Care Department in Riyadh

E. A. M. Al-Fares, S. A. Al-Shammari, A. M. Y. Al-Hamad


A pilot study was conducted on 114 patients to estimate the prevalence of psychiatric disorders in an academic primary care centre in Riyadh during May/June 1988. The patients were asked to fill the General Health Questionnaire GHQ-28 and were assessed by a general practitioner (GP). One-third of the patients were interviewed and assessed by a psychiatrist using a systematic random sampling.

The prevalence of psychiatric disorders was calculated using two methods. In the first method the GP’s assessment was compared with that of the psychiatrist and the estimated prevalence was found to be 47%. The second method was conducted by comparing the GHQ and Psychiatrist assessment and the prevalence was 46%. The repeatability of the results of both methods was reassuring and may indicate their reliability. The prevalence rate was compared with that reported in other studies from different parts of the world. Some speculations on the variation of results are presented. We believe that the second method is more practical and can be used widely in primary care settings without the need for considering the inter-GP variations.

Primary care physicians deal with a large proportion of psychiatric disorders and psychological components of organic ailments. The spectrum of psychiatric morbidity in the community is quite different from that seen in hospitals. Compared with hospitals, neurotic disorders such as anxiety and mild forms of depression constitute a much larger proportion of psychiatric morbidity in general practice. Schizophrenia and other major functional psychoses, severe mental retardation and narcotic addiction form the bulk of cases treated in hospitals. The nature of these cases
probably leads to their direct presentation to psychiatric services.

On the other hand patients with less severe illnesses and who continue to maintain their social roles are usually dealt with by primary care physicians. This is the group usually missed or diagnosed late, and hence, not managed properly constituting a great burden on the health system expenditure.\textsuperscript{1-4,5,15} We feel that they need to be studied to develop better means and strategies for diagnosis and management.\textsuperscript{16}

The development of the General Health Questionnaire (GHQ) by Goldberg in 1972 has been a significant advance in psychiatric epidemiology. It is a self-administered screening questionnaire designed to identify non-psychotic psychiatric disturbances. The wording and scoring distinguish between chronic stable complaints and recent exacerbations. An item is only counted as being present if the patient considers that its presence represents a departure from the usual self.\textsuperscript{1,4,15,17} There are different versions of the questionnaire (GHQ-60; GHQ-30; GHQ-28; GHQ-12) depending on the number of the items. Wright & Perini suggested that the GHQ is simple to use in general practice in the UK.\textsuperscript{4} The questionnaire may have a value in assisting a doctor to identify psychiatric illnesses in his patients so that appropriate treatment may be given.

We are unaware of any study about the prevalence of minor psychiatric disorders in primary care in Saudi Arabia.

**Objective of the Study**

It was intended to assess the prevalence of minor psychiatric disorders (MPD) among patients attending a primary care centre in Riyadh; and also obtain some descriptive sociodemographic data on the relevant patients.

**Subjects and Methods**

The study was carried out in the primary care centre, King Abdulaziz Hospital in Malaz (in the centre of Riyadh). The study population included patients of either sex over 12 years of age attending the clinic of one general practitioner (GP) during the month of Shawwal 1408 which coincided with May/June 1988. Only one GP was involved to avoid inter-observer variations.

Two of the GP sessions per week were selected for the practical convenience of the psychiatrist. A total of 114 patients were given the GHQ-28 version while waiting to be seen by the GP and it took no more than 5-10 min to be completed. Patients who were illiterate or who experienced difficulty in completing the questionnaire were interviewed and helped by a trained nurse.

The GP rated the psychiatric severity of each patient according to the following 5-point scale.

- 0 = No psychiatric disturbance detected.
- 1 = Mild subclinical psychiatric disturbance.
- 2 = Clinically significant (mild) psychiatric disturbance.
- 3 = Clinically significant (moderate) psychiatric disturbance.
- 4 = Clinically significant (marked) psychiatric disturbance.

Categories 2, 3 and 4 were considered as possible cases.

The same severity rating scale was also part of the clinical interview schedule (CIS) and was filled by the psychiatrist at the end of the session with each patient. Although this is a subjective assessment, it had been used in many studies.\textsuperscript{1,5,10} Goldberg used a similar 6-point scale. Scores of 0 and 1 indicate normal or subclinical disturbance and scores of 2, 3 and 4 indicate emotional disturbance or psychiatric illness.

Every third patient was selected by systematic sampling with a random start, to be interviewed by the psychiatrist using the CIS. The GP interviewed 114 patients while the psychiatrist interviewed 38 (one-third) patients. The psychiatrist was kept blind of all particulars about the patients to guarantee lack of bias.

For the present study, the instruments CIS and GHQ-28 were translated into the Arabic language by two Arab psychiatrists (KKUH). The reliability of the Arabic version was checked by translation back into English by another psychiatrist who was blind of the original version and found to be in close agreement.

**Table 1**

<table>
<thead>
<tr>
<th>Sociodemographic characteristics of the 114 studied patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristic</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>&lt;15</td>
</tr>
<tr>
<td>15-</td>
</tr>
<tr>
<td>25-</td>
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<tr>
<td>35-</td>
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<tr>
<td>45-</td>
</tr>
<tr>
<td>&gt;55</td>
</tr>
<tr>
<td>Nationality</td>
</tr>
<tr>
<td>Saudi</td>
</tr>
<tr>
<td>Non-Saudi</td>
</tr>
<tr>
<td>Marital status</td>
</tr>
<tr>
<td>Married</td>
</tr>
<tr>
<td>Single</td>
</tr>
<tr>
<td>Divorced</td>
</tr>
<tr>
<td>Widow</td>
</tr>
</tbody>
</table>

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Table 2

Assessment of primary care physician and psychiatrist of the severity of psychiatric illness

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Primary care physician assessment</th>
<th>Patients seen by psychiatrist</th>
<th>No. of cases diagnosed by psychiatrist</th>
<th>Probability of being a case</th>
</tr>
</thead>
<tbody>
<tr>
<td>(0) No psychiatric disturbance detected</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>(1) Mild subclinical</td>
<td>48</td>
<td>12</td>
<td>3</td>
<td>0.25</td>
</tr>
<tr>
<td>(1) Clinically significant mild</td>
<td>38</td>
<td>19</td>
<td>9</td>
<td>0.47</td>
</tr>
<tr>
<td>(3) Clinically significant moderate</td>
<td>22</td>
<td>5</td>
<td>4</td>
<td>0.80</td>
</tr>
<tr>
<td>(4) Clinically significant marked</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>114</td>
<td>38</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

Results

Sociodemographic data

Table 1 shows that the study subjects were relatively young. The mean age and SD were 28.8 and 10.2 years respectively; 95% of the patients lie in the age-group 12-50 years old; 61% were married; 34% were single and only 4.4% were widowed or divorced.

Saudi patients constituted 65% of the total number of patients. It is worth noting that while there may have been slight preponderance of females among Saudis there were far more males than females in the non-Saudi population.

Table 2 explains how the estimated prevalence of minor psychiatric disorders was calculated. Of 48 patients seen by the GP and given the score (0), the psychiatrist examined only 12 and considered three of them as cases. So when the GP rated a patient as:

0 the probability of being a case = 3/12 = 0.25
1 the probability of being a case = 9/19 = 0.47
2 the probability of being a case = 4/5 = 0.80
3 or 4 the probability of being a case = 1/1 = 1.00

So the expected number of cases

= (0.25 × 48) + (0.47 × 38) + (0.80 × 22) + (1 × 4) + (1 × 2)
  = 12 + 17.4 + 17.6 + 4 + 2 = 53.5 = 54.

The second method of estimation

Of all patients who completed the GHQ, 66 were low scorers (scored 4 or less) while 48 patients scored more than 4 (high scorers).

Table 3 discusses only patients seen by the psychiatrist. It shows that of the 18 high scorers on the GHQ 11 (61%) were found to be cases by the CIS; and out of the 20 low scorers on the GHQ 7 (35%) were found to be cases by the CIS. So the expected number of cases among the 114 patients was calculated as follows = total number of high scores × 61% + total number of low scores × 35% = 48 × 61% + 66 × 35% = 29.28 + 23.10 = 52.38 = 52 cases.

The estimated prevalences were therefore:

first method = 52/114 × 100 = 47%

second method = 52/114 × 100 = 46%

Similarly the estimated prevalence for Saudi patients only was calculated and found to be 45%.

Discussion

The preponderance of men in the non-Saudi population can be explained by the fact that most of the non-Saudis (expatriates) who are required for the ambitious development projects in this Kingdom are usually young men unaccompanied by their families. The finding of a higher number of females among Saudis is contrary to the finding of four studies in Saudi Arabia. In all of those studies men seeking psychiatric help outnumbered women. Three studies were conducted in hospitals, while the fourth was in a referral primary care psychiatric clinic. Their results may not reflect the true distribution of psychiatric disorders in the community or in primary care. Saudi women more frequently somatize than men, and hence, probably more cases are usually missed among this
group at the primary care level. They were probably under-represented in the psychiatric settings in the mentioned studies.

The first method of estimating the prevalence is conducted by comparing the rating of the GP with that of the psychiatrist. It considers the psychiatric assessment using the CIS as the standard or criterion against which the GP assessment is compared. The expected number of cases in the sample of this study was found to be 54 representing a prevalence of 47%. This exercise is basically an individual one. In other words, for every primary care physician a trial to adjust his score-rating has to be conducted in the presence of a psychiatrist. In case he intends to repeat the same exercise after a significant period of time the trial should be conducted again as his experience, accuracy of rating and case identification ability may change with time.

However, the second method (which compares the GHQ score with the psychiatrist assessment) requires the presence of a psychiatrist only initially to judge the best cut-off level of probable cases in the GHQ; thereafter the GHQ can be used for screening a large number of patients in primary care clinics. In the present study, the best cut-off score was found to be 4/5 which was consistent with Goldberg’s recommendations for GHQ-28.19

The number of cases estimated was similar by both methods described. The repeatability of the results in both methods was reassuring to us and may indicate their reliability.

Several studies have demonstrated that approximately one-fifth of primary care patients in developing countries have significant psychiatric disorders.1 In a US primary care setting a stratified sample from a total number of 1072 patients who completed the GHQ-30 were interviewed using the schedule for affective disorders and schizophrenia (SADS-L) and the prevalence was estimated to be 27.4%.2 Skuse & Williams found the prevalence in a London general practice to be around 34%. The GHQ-60 and the general practice research unit clinical interview schedule were used in their study.9 The prevalence calculated in the present study, namely 46%, is similar to a Brazilian primary care study.1

In Taiwan, in a study involving home health visits20 the prevalence was 26%; a figure similar to that found in Tarnopolsky et al.’s (1978) London survey.13 The two studies were carried out with the same research strategy and instruments. Similarly, the prevalence rate for the Saudi and non-Saudi population were close in this study. This might imply that neither ethnic nor cultural factors affect the occurrence of minor psychiatric disorders.

Much of the variability of the reported studies can be accounted for by the different methods used; the different definitions and populations and the different thresholds for identifying a case. The variation in prevalence rates reported was even much wider before the development of standardized interview schedules in the 1960s and previously.21

There may be two reasons to account for the high prevalence rate observed in our study compared with the above mentioned studies. First it has been suggested that somatization is more frequently encountered in the Arab population.22 Also many such patients can go undetected clinically and would continue to seek medical advice. Our sample may have been overrepresented by such a group of patients; particularly as our centre is open to most of the population irrespective of place of residence. As the centre is part of a hospital, investigations and referral to specialists are more readily accessible compared to other primary care centres. This might have attracted more somatizers who were not dealt with properly in their nearest health centre.

For the purpose of estimating the prevalence of such disorders we believe that the second method (GHQ and psychiatrist) is more practical and can be used for a given setting without the need for considering the inter-GP variations. Such studies are very important as they will demonstrate the size of the problem and may in turn help in planning for psychiatric services in general practice. Attachment liaison channels or clinics in general practice conducted by both GPs and psychiatrists may provide a good opportunity for clinical satisfaction and education for both partners. It may be a good idea for GPs to use the GHQ or other questionnaires in clinical work to increase their ability to identify psychiatrically disturbed patients.

Acknowledgements
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References