

Review

Primary care psychiatry: pertinent Arabian perspectives

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الطب النفسي وخدمات الرعاية الصحية الأولية – أبعاد عربية

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الخلاصة: هناك دلائل قوية على وجود عدد غير قليل من الحالات المرضية النفسية بين مرضى الرعاية الصحية الأولية، وهي تتمثل بصفة أساسية في شكل القلق والاضطرابات الاكتئابية. ومن الضروري اتباع أسلوب حذر وحاسم يراعي الخلفية الحضارية لهذا الأمر ومصداقية ومعدلية وسائل وأدوات التقصي، وذلك لاكتشاف مثل هذه الحالات المرضية، إذ تمر معظم الحالات المرضية النفسية بين مرضى الرعاية الصحية الأولية دون اكتشاف من قبل ممارسي خدمات الرعاية الصحية الأولية. وهذا من شأنه أن يؤدي حتماً لإجراء فحوصات طبية لا لزوم لها، وإعطاء أدوية بغير ضرورة مع استمرار معاناة المرضى. وفي معظم الحالات، فإن الإمبراضية المشتركة والشكاوى العضوية التي يأتي بها المريض إلى الطبيب، تسهم بشكل كبير في عدم القدرة على تحديد الاضطرابات النفسية. وللتعامل مع هذه المشكلة الخاصة بالأمراض النفسية الخافية على الطبيب، فإن هناك حاجة لإعداد برامج تعليمية وتدريبية، تكون مصممة بعناية شديدة، لتتناول جوانب الضعف الخاصة، والاحتياجات المطلوبة، لأطباء خدمات الرعاية الصحية الأولية في هذا المجال.

ABSTRACT There is substantive evidence of significant psychiatric morbidity among primary care patients, mainly in the form of anxiety and depressive disorders. A careful critical approach is essential for ensuring the cultural relevance, validity and reliability of the psychiatric screening instruments used to identify such morbidity. Most psychiatric morbidity among primary care patients passes undetected by the primary care practitioners. This will inevitably lead to unnecessary investigation and medication and the continuation of suffering for patients. Comorbidity and physical presentation in most instances contribute significantly to failure to detect psychiatric disorders. To deal with this problem of hidden psychiatric morbidity, carefully designed educational and training programmes need to be tailored to address the particular weaknesses and needs of primary care doctors.

Psychiatrie dans les soins primaires : perspectives pertinentes pour les pays arabes

RÉSUMÉ De nombreux éléments attestent l'existence d'une morbidité psychiatrique importante chez les patients des soins primaires, principalement sous la forme d'anxiété et de troubles dépressifs. Une approche critique rigoureuse est indispensable pour garantir la pertinence culturelle, la validité et la fiabilité des instruments de dépistage psychiatrique utilisés pour identifier cette morbidité. La plus grande partie de la morbidité psychiatrique chez les patients des soins de santé primaires n'est pas décelée par les praticiens des soins de santé primaires, ce qui entraîne inévitablement des examens et des traitements inutiles et la persistance de la souffrance du patient. Une comorbidité et la symptomatologie dans la plupart des cas contribuent de manière significative à la difficulté de dépister les troubles psychiatriques. Afin de s'attaquer à ce problème de la morbidité psychiatrique cachée, des programmes d'éducation et de formation doivent être conçus avec soin de façon à aborder les faiblesses et les besoins particuliers des médecins des soins de santé primaires.

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Introduction

Only half a century ago or so, psychiatric services were mostly confined to asylums. Seclusion and physical restraint constituted the main methods of treatment. A step forward occurred when asylums gradually evolved into mental hospitals, including both locked and unlocked wards. The concept of the "therapeutic community" gradually permeated into hospitals, allowing for more freedom of movement, group meetings and interaction with other patients and staff. The main objective was to create a healthy psychosocial environment conducive to positive therapeutic outcomes. Day hospitals, facilities in which chronic psychiatric patients spend the whole day and return to their homes late in the afternoon, were also established. Most hospitals provide coach transportation for the morning and afternoon journeys. This was considered a stage in rehabilitating chronically ill patients.

Liaison services between mental and local general hospitals developed and were firmly maintained over the years. Psychiatrists were consulted about patients in general hospitals, particularly those admitted after an overdose or other suicide attempts; physicians from general hospitals used to attend physically ill patients in mental hospitals. Gradually, many mental hospitals became bases for psychiatric community services in their catchment areas. Psychiatric outpatient clinics outside the mental hospitals were offered as part of the community services.

From about the early 1960s a revolutionary development occurred in psychiatric services. This was the beginning of the era of establishing psychiatric departments in general hospitals. This was the time when psychiatry started to be accepted as an integral discipline of medicine, rather

than a detached, queer phenomenon. The marriage between psychiatry and general medicine was facilitated by the introduction of electroconvulsive therapy in the 1940s, and more dramatically by the development of psychopharmacological agents since the late 1950s and early 1960s. The outcome was historical in nature, leading to a revival of hope for patients afflicted with horrible and mysterious illnesses. These developments dissolved most, though not all, the barriers between psychiatrists and other medical and paramedical staff [1].

Recently, more courageous moves were introduced to provide high quality psychiatric services. This was part of the trend towards moving psychiatric care away from institutions into the wider community and as close to the home as possible (World Health Organization Regional Office for Europe, unpublished report, 1980). Nowadays, psychiatrists are moving out to work directly with family practitioners in primary health care (PHC) settings.

Concepts of psychiatric caseness and psychiatric measurement in primary care patients

The notion of mental disorder may differ widely between cultures [2]. Psychiatric scales devised to assess the clinical characteristics of mental disorders have been universally used with little consideration of how they relate to accepted definitions of the disorder. The scales are often used on the assumption that all measure the same construct. The item analysis of a number of the most widely used depression scales reveals a variation in the area of psychopathology [3].

Psychiatric screening in the PHC setting is unique because of the suspicion that

some psychiatric disturbances are the result of transient distress rather than psychiatric illness [4]. This confirms the need for a multi-axial evaluation (Lobo A. et al., unpublished report, 1986). Some scales such as the General Health Questionnaire (GHQ) detect current emotional disturbances but can miss chronic illness [5]. It should be determined whether only current disturbances are to be estimated or whether the aim is to identify all types of psychiatric disorder, in which case a different type of screening instrument would be indicated [6].

Comorbidity of physical and psychiatric illness complicates the criteria of "case-ness" (that which constitutes a psychiatric case) in PHC. There is a group of easily identifiable disorders that fit the known psychiatric classification systems, but there are also disorders that cannot be so easily identified [7–9]. Patients with such disorders usually present with definite symptoms, often mixed anxiety and depressive symptoms with some functional impairment.

In choosing a screening scale for PHC, the reliability of the positive predictive value of the psychiatric instrument should be taken into consideration. Psychiatric case-ness should not be determined by clinical judgement alone but by using standardized procedures linked to operational criteria [10]. The ICD-10 PHC classification can aid in setting realistic criteria for caseness in PHC [11].

Prevalence and nature of psychiatric morbidity in the primary health care setting

A number of psychiatric epidemiological studies in PHC settings have been carried out since the late 1950s. One of the early

studies reported that individual general practitioners regarded 26%–27% of their patients as psychiatrically ill [12]. A pioneering study by Shepherd et al. established that most of variation between studies for estimates of prevalence was related to the characteristics of the doctor rather than different rates of psychiatric morbidity [13]. Around 30% of patients would probably meet the criteria for a psychiatric illness if seen by a psychiatrist [14]. A further survey of psychiatric morbidity in general practice and in the community have confirmed the overall magnitude of this problem [15]. The World Health Organization collaborative study on psychological problems in 14 countries, using a 2-stage case identification methodology in a huge sample (25 916 adults for the first stage and 5438 for the second) indicated that well-defined psychiatric morbidity was frequent in all the general health-care settings examined (median 24.0%). The commonest problems identified were depression, anxiety, alcohol misuse, somatoform disorder and neurasthenia [16,17]. A primary care survey in Nigeria estimated the prevalence of psychiatric morbidity at 21.3%. Depressive neurosis (51.7%) and anxiety neurosis (36.3%) were the most common disorders [18]. A Greek study using the 28-item General Health Questionnaire claimed an estimated 32% probable prevalence of mental health problems among their primary care sample [19]. Another primary care study using the Chinese version of the Beck Inventory indicated a prevalence of 19.6% for major depression in a sample of Chinese Americans [20].

Epidemiological studies in primary care settings have not been limited to major psychiatric disorders e.g. affective and neurotic disorders, less-common disorders were also investigated by some researchers. Personality disorders in primary care settings

also proved highly prevalent, and may represent a significant burden on patient, families and health services, and probably society as a whole in the case of antisocial personality disorders [21]. Prolonged fatigue is a persistent diagnosis in primary care settings and it has been suggested that psychiatric classification systems may be improved by treating prolonged fatigue and psychological distress as independent disorders [22]. Chronic fatigue syndrome diagnosed according to the 1988 Centers for Disease Control criteria is estimated to be rare (3%) and atypical [23]. The authors of this study reported that generally patients mentioned fatigue if asked, but pain, insomnia and worries were the most troublesome symptoms. Eagles et al. found high levels of seasonal affective disorder among primary care patients during January [24]. The limitations of the study included the criteria for diagnostic assessment of the disorder.

The volume of literature on primary care psychiatry in the Arabic-speaking countries is quite scanty, especially when compared to the wide spectrum of such studies done in the rest of the world. A significant proportion of studies from Arabic speaking countries in PHC psychiatry has been published in local journals. This may explain the limited amount of pertinent work which can be retrieved electronically. A major problem of the estimates of psychiatric morbidity in the Arab world is the choice of research methodology. Most psychiatric screening instruments were developed in countries outside the Arab world. In other words, there is a scarcity of published literature on Arabic psychiatric screening instruments with established validity and reliability which are applicable in the primary care setting.

The use of psychiatric screening scales in a language and culture other than that for

which it was designed and developed may create considerable problems because of the influence of translation and other socio-cultural factors. Some workers prefer to design new, culture-specific instruments [25,26]. Ideally, a screening scale should be developed in the cultural setting in which it is to be used. It would, however, be irrational to ignore well-established instruments developed in other cultures since many phenomena and concepts are common between cultures. A critical, careful approach is, therefore, vital when translating, modifying and validating psychiatric instruments before they are used across cultures [27].

Screening of representative samples of PHC patients in Saudi Arabia and the United Arab Emirates revealed psychiatric morbidity of 26.0% and 27.6% respectively [28,29]. The Saudi Arabian study, using the Hospital Anxiety and Depression (HAD) scale [30], showed the prevalence of depression to be 17% and prevalence of anxiety 16%, and the total morbidity for depression, anxiety or both was 26%. The United Arab Emirates study, using the Clinical Interview Schedule (CIS), identified the 3 commonest diagnoses as neurotic depression (55.0%), mixed anxiety and depressive disorder (13.3%) and anxiety states (11.7%) [29]. A primary health care study carried out in northern Jordan using an Arabic translated version of the 28-item General Health Questionnaire (GHQ-28) estimated the prevalence of psychiatric morbidity as 61%. The highest prevalence rates were found in females ≥ 40 years, in uneducated and highly educated groups, in unemployed people, and in patients who were perceived to have fair or poor physical health [31]. A Bahraini study in a PHC setting estimated the prevalence of psychiatric morbidity, using the GHQ, as 45.1% (cut-off ≥ 5) and 27.1% (cut-off ≥ 9). Us-

ing the HAD scale, the prevalence was 44.4% (cut-off ≥ 8) and 23.6% (cut-off ≥ 11). Morbidity was commonest in women aged 50–55 years, in divorcees or widows, and in less-educated patients [32].

In conclusion, epidemiological studies done in various parts of the world and using diverse methods and psychiatric instruments have furnished evidence of significant psychiatric morbidity (13%–60%) among the PHC population. Studies done in the Arabic-speaking countries show a generally similar prevalence for psychiatric morbidity.

Psychiatric disorders were mainly affective in nature, in the form of anxiety and/or depressive disorder. Other psychiatric disorders were also identified but at lower prevalence rates. Although depressive disorders are common and are associated with considerable functional and medical morbidity in older primary care patients, there is evidence that many of those with clinically significant depressive symptoms do not meet the criteria for diagnostic categories. This was designated subsyndromal depression of older primary care patients [33]. Snaith also highlighted the concept of mild depression and the importance of differentiating between such things as grief at loss, poor self-esteem and demoralization and genuine depressive illness i.e. melancholic or severe biogenic depressive illness. Snaith proposed that anhedonia (loss of pleasure and enjoyment), if persistent and not adequately accounted for by the circumstances was the nearest guide to biogenic depressive disorder, a state which has a high chance of improvement with anti-depressant drug treatment [34]. A World Health Organization primary care collaborative study also confirmed the significant occurrence of subthreshold psychiatric conditions, which do not meet the formal diagnostic criteria of mental disorder in spite of the presence

of significant psychiatric symptoms and functional impairment [16].

Somatization and somatized mental disorder among primary care patients

High rates of medically unexplained symptoms have been observed in many non-western countries and in ethnic minorities of industrialized countries. e.g. the observations of Sethi et al. in India [35]. However, there is evidence that such symptoms are also a common problem in western societies [36]. The word somatization is used in addition to unexplained symptoms to indicate that the physical disease by itself does not account for the symptoms and the clinical presentation, e.g. prolonged, exaggerated severity. Such poorly defined terms will inevitably lead to further complication of an already difficult area of clinical medicine. The term somatization denotes, in general, the experience and communication of psychological distress in the form of physical symptoms. Vague terms are sometimes used as synonyms of somatization, e.g. hypochondriacal, psychogenic or functional.

The clinical presentation of somatization varies widely. The association between somatization and organic illness is well established. Bridges and Goldberg claim that 70% of somatizers suffer from organic illness [36]. The association between somatization symptoms and a diagnosable, formal psychiatric disorder is fairly common, generally with depressive and anxiety disorders. On the other hand, comorbidity of somatization symptoms and formal psychiatric illness is not an uncommon presentation among primary care patients. The complexity of such clinical presentations may be further enhanced by additional co-

morbidity with personality disorder or unadaptive personality traits. Such difficult clinical presentations may lead to undue suffering and confusion of management unless a precise and meaningful diagnosis is reached and a clear and rational strategy drawn up for short-term and long-term management. Educating the patient about his condition, with emphasis on the personality aspects, should be a central component of management.

Somatization disorder as a formal diagnostic entity meeting the diagnostic criteria of the ICD-10 or DSM-IV is not common among primary care patients. A primary care Nigerian study demonstrated that only 1.1% of the sample fulfilled the DSM-III-R criteria for somatization disorder but 4.7% met the criteria for somatoform pain disorder and 10.8% met the criteria for undifferentiated somatoform disorder [37].

A study among a sample of primary care patients was carried out in the United Arab Emirates [38] using the Arabic version of the 12-item General Health Questionnaire (GHQ-12), the Clinical Interview Schedule (CIS), an enquiry schedule and operational definitions for somatized mental disorder [36] and psychologized mental disorder [39]. The estimated prevalence rate of somatized mental disorder was 12%, constituting 48% of the psychiatric patients identified; the rate for psychologized mental disorder was 12%. Education level was significantly lower in the somatized mental disorder group. Headache, backache, and abdominal pain were the most commonly presented somatic symptoms. The symptoms pursued a chronic and persistent course and most patients experienced multiple symptoms. The most common ICD-10 psychiatric diagnoses in both groups were mixed anxiety and depressive disorder, generalized anxiety disorder, and mood and adjustment disorders.

Recurrent depressive disorder and dysthymia were significantly more prevalent in the psychologized mental disorder group. The severity of psychiatric illness was greater among psychologizers than the somatizers of mental disorder. It is essential to note that although the Al-Ain study discloses many aspects of the phenomenon in Arab culture, it was restricted to somatized mental disorders, therefore caution is necessary on trying to compare the results with other forms of the broad phenomena of somatization.

It is obvious that the concept of somatization involves many clinical presentations, therefore it is crucial that in individual patients the precise nature of somatization should be identified before embarking on long-term management. The causes of somatization are still obscure and there are many hypotheses in the literature. The etiology is probably multifactorial—it can hardly be explained in terms of a single cause. More rigorous research is needed to shed light on this fairly common clinical presentation.

Missed (undetected) psychiatric morbidity among primary care patients

Recognition of psychiatric disorders is often difficult in primary health care settings owing to the complexities resulting from the comorbidity of physical and psychiatric illness. Personality disorders or maladaptive personality traits in addition to comorbidity of physical and/or psychiatric disorders may lead to a more complex clinical presentation which could easily be missed by a PHC practitioner who does not have a strong background of psychiatric clinical knowledge and experience.

In many situations, the ambiguous interaction between physical illness and the accompanying psychiatric symptoms make it difficult to identify which is primary and which is secondary. Anxiety and depressive symptoms commonly accompany physical disease and consequently they are either missed or their contribution to the patients' sufferings is underestimated. Bridges and Goldberg demonstrated that psychiatric illness occurs in a quarter to a third of all new episodes of illness seen in primary care settings. Most of these illnesses occur either in conjunction with known physical disease or as a "somatized" presentation of what is basically a psychiatric disorder [36].

Undetected psychiatric morbidity among PHC patients commonly leads to unnecessary investigation, medication and possibly hospitalization, as well as the continued suffering of the patient. This will inevitably lead to impaired family, occupational and social functioning. Among primary care patients, many with personality disorders, especially borderline types, tend to be demanding, manipulative and non-compliant. They find ways to be referred for unnecessary tests; they attend more frequently, and sometimes unjustifiably, as emergencies. This makes it crucial for primary care medical staff to be equipped with the necessary skills for detecting and managing these often difficult patients, as well as having a good grasp of basic psychiatric knowledge and skills [40,41].

Identifying and managing those with psychiatric morbidity, including personality disorders, among primary care patients is a serious problem which requires adequate intervention and collaboration. A lot of resources can be wasted as a result of undetected psychiatric morbidity. There is no single ideal model for addressing this problem. Various psychiatric training schemes

have been tested in different parts of the world, but it is crucial to assess the strengths and weaknesses of PHC practitioners before designing a training scheme for them. For any training scheme to be effective it should address 2 main points: detection and management, and identifying weaknesses. The role of psychiatric screening instruments used in clinical settings to alert doctors to psychiatric disorders needs careful and critical enquiry [42].

Experience in Saudi Arabia and the United Arab Emirates indicates that short, intensive, psychiatric courses administered at relatively long intervals are ineffective; continuity of rehabilitation programmes is essential and regular psychiatric clinics should be involved in those carried out in primary care settings. These programmes could be integrated into continuing medical education. In conclusion, it is clear that each group of primary care practitioners would need a programme tailored to their specific requirements.

Conclusions and recommendations

Worldwide epidemiological studies have produced solid evidence of significant psychiatric morbidity, mainly affective in nature, among PHC patients. Undetected psychiatric morbidity is a serious health problem at PHC level, often leading to a waste of resources. More work is needed to improve the psychiatric knowledge and skills of primary care doctors to reduce the rate of undetected psychiatric morbidity among their patients. In addition, the concept of personality and personality disorder should be fully understood by PHC medical and paramedical staff to enable them to address difficult clinical situations related to maladaptive personality traits. To this end,

the notion of comorbidity between physical illness, mental illness and personality characteristics should routinely be taken into account in the assessment of patients in primary care, as well as in other clinical settings.

More research focussing on issues relating to primary care psychiatry is crucial to improve the quality of services in this initial platform of the hierarchy of clinical medicine. There are many areas needing investigation and clarification so that policies can be agreed by primary care staff, psychiatrists and other health care authorities.

For carrying out clinically relevant psychiatric research in a PHC setting, culture-oriented, valid and reliable psychiatric instruments should be administered. The impact of using psychiatric instruments in a language and culture different from where they were developed should be fully

comprehended by researchers, and precautions taken to counteract potential errors. There is a consensus that the application of current classification systems is not suitable for patients. Perhaps in each research project involving identification of psychiatric cases in primary care settings, a realistic and meaningful definition of caseness, taking into account the sociocultural background and other relevant factors should be drawn up precisely.

Clinicians in PHC and other non-psychiatric settings should be alert to the possibility and the impact of undetected psychiatric morbidity. Rather than setting up barriers between physical, psychological and social health problems, a holistic approach in dealing with patients' conditions should be a core item in the training of medical students, doctors, nurses and paramedical staff.

References

1. El-Rufaie OE. Training general practitioners to deal with psychiatric disorders within the primary health care setting. *Emirates medical journal*, 1991, 9:128–30.
2. Carstairs GM, Kapur RL. *The great universe of Kota. Stress, change and mental disorder in an Indian village*. London, Hogarth Press, 1976.
3. Snaith PR. What do depression rating scales measure? *British journal of psychiatry*, 1993, 163:293–8.
4. Lloyd GG, Cawley RH. Distress or illness? A study of psychological symptoms after myocardial infarction. *British journal of psychiatry*, 1983, 142:120–5.
5. Goldberg D. *Detecting psychiatric illness by questionnaire*. Oxford, Oxford University Press, 1972 (Maudsley Monograph 22).
6. Hobbs P, Ballinger CB, Smith AH. Factor analysis and validation of the general health questionnaire in women: a general practice survey. *British journal of psychiatry*, 1983, 142:257–64.
7. Goldberg D, Huxley P. *Mental illness in the community*. London, Tavistock Publications, 1980.
8. Barrett JF et al. The prevalence of psychiatric disorders in a primary care practice. *Archives of general psychiatry*, 1988, 45:1100–9.
9. Goldberg DP. The concept of a psychiatric case in general practice. *Social psychiatry and psychiatric epidemiology*, 1978, 17:61–5.
10. Thompson C. *The instruments of psychiatric research*. Chichester, United Kingdom, John Wiley & Sons, 1989.

11. *The ICD-10 classification of mental and behavioural disorders. Clinical descriptions and diagnostic guidelines.* Geneva, World Health Organization, 1992.
12. Royal College of General Practitioners Research Committee. The continuing observation and recording of morbidity. *Journal of the Royal College of General Practitioners*, 1958, 1:107.
13. Shepherd M et al., eds. *Psychiatric illness in general practice.* London, Oxford University Press, 1966.
14. Dean C. Psychiatry in general practice. In: Forrest AD, Kendell RE, Zealley AK, eds. *Companion to psychiatric studies*, 4th ed. Edinburgh, Churchill Livingstone, 1988:634–47.
15. Goldberg D, Kay C, Thompson L. Psychiatric morbidity in general practice and the community. *Psychological medicine*, 1976, 6(4):565–9.
16. Sartorius N et al. An international study of psychological problems in primary care. Preliminary report from the World Health Organization collaborative project on psychological problems in general health care. *Archives of general psychiatry*, 1993, 50(10):819–24.
17. Sartorius N et al. Depression comorbid with anxiety: results from the WHO study on psychological disorders in primary health care. *British journal of psychiatry*, 1996, 168(30):38–43.
18. Abiodun OA. A study of mental morbidity among primary care patients in Nigeria. *Comprehensive psychiatry*, 1993, 34(1): 10–3.
19. Androutopoulou C et al. Psychological problems in Christian and Moslem primary care patients in Greece. *International journal of psychiatry in medicine*, 2002, 32(3):285–94.
20. Yeung A et al. Use of the Chinese version of the Beck Depression Inventory for screening depression in primary care. *Journal of nervous and mental disease*, 2002, 190(2):94–9.
21. Moran P et al. The prevalence of personality disorder among UK primary care attenders. *Acta psychiatrica scandinavica*, 2000, 102(1):52–7.
22. Hickie I et al. The temporal stability and co-morbidity of prolonged fatigue: a longitudinal study in primary care. *Psychological medicine*, 1999, 29(4):855–61.
23. Lee S et al. Psychiatric morbidity and illness experience in primary care patients with chronic fatigue in Hong Kong. *American journal of psychiatry*, 2000, 157(3):380–4.
24. Eagles JM et al. Seasonal affective disorder among primary care consultants in January: prevalence and month by month consultation patterns. *Journal of affective disorders*, 1998, 49(1):1–8.
25. Carstairs GM. Measuring psychiatric morbidity in a south Indian population. *Bulletin of the British Psychological Society*, 1975, 28:95–101.
26. Verma SK, Wig NN. Standardization of a neuroticism questionnaire in Hindi. *Indian journal of psychiatry*, 1977, 19:67–72.
27. El-Rufaie OE, Daradkeh TK. Psychiatric screening in primary health care: transcultural application of psychiatric instruments. *Primary care psychiatry*, 1997, 3:37–43.
28. El-Rufaie OE, Albar AA, Al-Dabal BK. Identifying anxiety and depressive disorders among primary care patients: a pilot study. *Acta psychiatrica scandinavica*, 1988, 77(3):280–2.
29. El-Rufaie OE, Absood GH. Minor psychiatric morbidity in primary health care: prevalence, nature and severity. *International journal of social psychiatry*, 1993, 39(3):159–66.

30. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. *Acta psychiatrica scandinavica*, 1983, 67(6):361-70.
31. Al-Jaddou H, Malkawi A. Prevalence, recognition and management of mental disorders in primary health care in Northern Jordan. *Acta psychiatrica scandinavica*, 1997, 96(1):31-5.
32. Al-Haddad MK et al. Psychiatric morbidity in primary care. *Eastern Mediterranean health journal*, 1999, 5(1):21-6.
33. Lyness JM et al. The importance of subsyndromal depression in older primary care patients: prevalence and associated functional disability. *Journal of the American Geriatrics Society*, 1999, 47(6):647-52.
34. Snaith RP. The concepts of mild depression. *British journal of psychiatry*, 1987, 150:387-93.
35. Sethi BB, Nathawat SS, Gupta SC. Depression in India. *Journal of social psychology*, 1973, 91(1):3-13.
36. Bridges KW, Goldberg DP. Somatic presentation of DSM III psychiatric disorders in primary care. *Journal of psychosomatic research*, 1985, 29(6):563-9.
37. Gureje O, Obikoya B. Somatization in primary care: pattern and correlates in a clinic in Nigeria. *Acta psychiatrica scandinavica*, 1992, 86(3):223-7.
38. El-Rufaie OE et al. Somatised mental disorder among primary care Arab patients. I: Prevalence and clinical and sociodemographic characteristics. *Journal of psychosomatic research*, 1999, 46(6):549-55.
39. Bridges K et al. Determinants of somatization in primary care. *Psychological medicine*, 1991, 21(2):473-83.
40. El-Rufaie OE, Daradkeh TK. Detection of anxiety and depression in primary health care: assessment by primary health care physician versus assessment by psychiatrist. *Primary care psychiatry*, 1996, 2:189-93.
41. El-Rufaie EF et al. Personality profile among primary care patients: experimenting with the IPDE ICD-10. *Acta psychiatrica scandinavica*, 2002, 105(1):37-41.
42. El-Rufaie OE, Absood G, Abou-Saleh MT. The primary care anxiety and depression (PCAD) scale: a culture oriented screening scale. *Acta psychiatrica scandinavica*, 1997, 95(2):119-24.