

Psychiatric co-morbidity in primary care and hospital referrals, Saudi Arabia

N.A. Qureshi,¹ T.A. Al-Habeeb,² Y.S. Al-Ghamdy,³ M.E.M.A. Magzoub⁴ and H.T. van der Molen⁵

المرضاة المشتركة النفسية البدنية في مراكز الرعاية الأولية وفي مستشفيات الإحالة في المملكة العربية السعودية

نسيم أنجر قريشي، وطارق علي الحبيب، ياسر سعيد الغامدي، وعبي الدين محمد علي المحذوب، وهنك فنذر مولين

خلاصة: تمت مقارنة الحالات المرضية النفسية والبدنية بين المرضى الذين أحيلوا من مراكز الرعاية الصحية الأولية ومن المستشفيات العامة في منطقة القصيم. وقد تم اختيار عشوائي لـ 540 من حالات الإحالات النفسية كان 138 منها محوّلاً من المستشفيات العامة و402 منها محوّلاً من مراكز الرعاية الصحية الأولية. وقد تم قبول 15 من المحوّلين من المستشفيات العامة في حين لم يقبل أحد من مراكز الرعاية الصحية الأولية. وقد كان الأطباء النفسيون أمثل إلى تشخيص القلق المختلط بالاكتئاب، والاضطرابات الجسدية الشكل والخرف والاضطرابات العاطفية والقلق، أكثر من تشخيصات الأطباء السريريين، والممارسين العاميين. أما الأطباء السريريون فكانوا أمثل من الممارسين العاميين لتشخيص الدّهانات الحادة والاضطرابات الجسدية الشكل. وقد لوحظت أمراض جسدية في 38.4% من إحالات المستشفيات العامة و 17.2% من إحالات مراكز الرعاية الصحية الأولية. وهكذا فإن نمط إحالات الأمراض المشتركة يدل على الحاجة إلى توفير خدمات الصحة النفسية في كل من مراكز الرعاية الصحية الأولية والمستشفيات العامة.

ABSTRACT Psychiatric and physical morbidities among patients referred from primary health care (PHC) centres and general hospitals (GH) in Al-Qassim region were compared. Thus, 540 psychiatric referrals (GH = 138; PHC = 402) were selected randomly. Fifteen GH patients but no PHC patients were referred for admission. Psychiatrists made more diagnoses of dementia, affective and anxiety disorders, mixed anxiety-depression and somatoform disorders than clinicians and general practitioners (GPs). Clinicians made significantly more diagnoses of acute psychoses and somatoform disorders than GPs. Physical morbidity was noted in 38.4% and 17.2% of GH and PHC referrals respectively.

Comorbidité psychiatrique chez des cas adressés en orientation-recours par des centres de soins de santé primaires et des hôpitaux en Arabie saoudite

RESUME Les affections physiques et psychiatriques dans les cas adressés en orientation-recours par les centres de soins de santé primaires (SSP) et les hôpitaux généraux (HG) dans la Région d'Al-Qassim ont été comparées. Cinq cent quarante (540) cas psychiatriques adressés en orientation-recours (HG = 138; SSP = 402) ont été sélectionnés au hasard. Quinze patients HG - mais aucun patient SSP - ont été adressés en orientation-recours pour admission. Les psychiatres ont établi davantage de diagnostics de démence, de troubles affectifs et anxieux, de trouble mixte anxiété-dépression et de troubles somatoformes que les cliniciens et les généralistes. Les cliniciens ont posé davantage de diagnostics de psychoses aiguës et de troubles somatoformes que les généralistes. Une affection physique a été notée chez plus de 38,4 % et 17,2 % des cas d'orientation-recours des hôpitaux généraux et des SSP, respectivement.

¹Buraidah Mental Health Hospital, Buraidah, Saudi Arabia.

²Division of Psychiatry, King Khalid University Hospital, Riyadh, Saudi Arabia.

³Director-General of Health Affairs, Al-Qassim Region, Saudi Arabia.

⁴Department of Community Health, College of Applied Medical Sciences, Riyadh, Saudi Arabia.

⁵Department of Psychology, Erasmus University, Rotterdam, The Netherlands.

Introduction

The co-occurrence of psychiatric and physical disorders reported among primary care and hospital patients has implications that are etiological, diagnostic, therapeutic, prognostic, economic, planning and research [1-7]. In the context of psychiatric co-morbidity among primary care and hospital patients, a variety of psychiatric disorders are reported to co-exist with cardiovascular, gastrointestinal, neurological, respiratory and endocrine disorders. The identification of psychiatric disorders and medical illnesses among medical and psychiatric patients is essential for the delivery of integrated treatments in a cost-effective manner. Patients with psychiatric disorders and patients with physical diseases are at higher risk of developing physical diseases [8] and psychiatric disorders [9] respectively, if left untreated. Although this relation is complex, each disorder complicates the other. Chronic co-persistence, for instance, is associated with increased length of stay in the hospital and with psychological, social and physical disability [10,11].

Unlike Western countries where primary health care (PHC) psychiatry and general hospital (GH) psychiatry are fairly well developed, many Arab countries face challenges in developing and delivering mental health services, in particular, at the community level. Although the projected prevalence of psychiatric disorders in PHC centres and GHs in these countries is high (> 60%), there is as yet no adequate provision for delivering mental health services to patients with psychiatric manifestations. Therefore, most patients with identified psychiatric morbidities (47%) are referred to secondary-level care [12]. Nonetheless, approximately 45% of patients are reported to have hidden psychiatric morbidities and are not referred [13].

Psychiatric referrals are important to the study of psychiatric and physical morbidity in PHC centres and GHs. The patients are usually referred by the general practitioners (GPs) and clinicians who evaluate them. Although some of these patients remain psychologically undiagnosed or the diagnoses are not noted in their referral letters, psychiatrists evaluate each patient and make a diagnosis with treatment recommendations. The current study comparatively analysed psychiatric referrals in order to project the pattern of psychiatric co-morbidity identified by psychiatrists, clinicians and GPs.

Methods

The referral system, the random selection of the 540 referral letters and the method of collection of psychiatric diagnoses and treatments recommended by the psychiatrists are described elsewhere [14].

The referral system was introduced to Saudi Arabia in 1989. After its introduction, it was decided that the referral system guidelines were to be strictly followed throughout Saudi Arabia. Nevertheless, many patients still come to psychiatric hospitals for consultation without referral letters. This trend is attributed to four causes.

- Psychiatric facilities and personnel, including psychologically trained doctors and nurses, are not available at PHC centres.
- Psychotropic drugs for filling prescriptions are not available at PHC centres.
- There are no staff trained in psychotherapy or counselling at PHC centres.
- Although contrary to referral system guidelines, hospital administration allows patients without referrals to be evaluated and managed by psychiatric staff.

In our study, 540 referral letters that were randomly collected from January 1999 to January 2000. First, we selected randomly 10 sections of the 30 racks of the psychiatric record centre in which outpatient files were kept. Each section contained approximately 110–125 files. Then, we removed all files (1110) and the files containing referral forms were retained. The appended referral letters in these files were either photocopied or the written information was transferred to standard ministry of health referral forms. Some files had the original referral form plus a duplicate photocopy, which we detached. During the data collection period, the first author also met with patients in outpatient clinics and those files with referral letters were also photocopied. Patient's name was used to ensure that no referral letter was included twice. Both the first diagnosis of and the prescribed treatments for the patient by the psychiatrist were taken from each file and simultaneously noted on the photocopied referral forms.

A standard ministry of health referral letter contains items such as: date, nationality of the patient, name of PHC centre, age, referred speciality and hospital, complaints, duration of complaints, treatments, reason for and type of referral, doctor's name, and diagnosis. The hospital referral forms also contain more or less similar items.

We calculated the frequency distribution of nationality, types of referrals, reasons for referrals and duration of illness. Types of referral were divided into elective (i.e. ordinary) or urgent (i.e. requiring immediate medical/psychiatric help including special treatment for saving life). Because almost all patients were referred, type of referral was not recorded in many letters. Therefore, we considered referrals that did not have "urgent" written or marked on the referral letters as "ordinary". Reasons for

referral were categorized into six types: overall management and care; diagnostic and treatment; evaluation, diagnosis and treatment; investigation, treatment and follow-up; admission; and personal request. Most referrals had overlapping reasons. We categorized duration of illness as either less than 6 months or more than 6 months. We also reviewed each patient's file in order to record diagnoses and drug treatments prescribed by the psychiatrists.

Upon presentation, patients in our study usually followed procedure to diagnosis. Outpatient files were opened for all new patients consulting the Buraidah Mental Health Hospital, whether with or without a referral letter. The psychiatric specialist determined procedure following a circumscribed interview, which guided the psychiatric caseness. After this, the patient was seen by the social worker in order to collect social data. Then the resident doctor conducted both physical and systemic examinations of the patient. Thereafter, the resident doctor consulted with the psychiatrist about the patient in order to plan management including diagnosis, treatment and follow-up. Any diagnostically difficult patients were discussed in the psychiatric consensus meeting at the hospital. As the hospital officially uses the *International classification of mental diseases (ICD-10)*, if the psychiatric specialist had knowledge of DSM-111R and DSM-IV classifications they were used. Under certain circumstances, the clinical psychologist also evaluated some new patients. Generally, we feel that the diagnoses made by the psychiatrists were robustly reliable.

During previous programmes conducted in Al-Qassim region [15,16], some of the GPs and clinicians were trained in clinical psychiatry including a brief discussion on ICD-10. Therefore, diagnostic labelling

of referred patients partially coincided with ICD-10 classifications of mental diseases.

The data were analysed with frequency distributions. In addition, the chi-squared analysis was used for categorical parameters. A *P*-value equal or less than 0.05 was considered significant. We used *SPSS 7.5* for data analysis.

Results

More non-Saudis were referred for psychiatric management from GHs than from PHC centres ($\chi^2_1 = 14.339$, $P < 0.001$) (Table 1). A statistically significant proportion of patients with urgent psychiatric problems came from GH referrals whereas more PHC patients were referred on an elective basis ($\chi^2_1 = 58.524$, $P < 0.001$). Overall management and care and evaluation, diagnosis and treatment were significant reasons noted in referrals from primary care. On the other hand, diagnosis, treatment, psychological investigation and overall follow-up were significant reasons in GH referrals ($\chi^2_3 = 53.612$, $P < 0.001$). Admission as a reason was noted in 15 GH referrals (10.9%). One patient from primary health care (0.2%) was referred on per-

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Table 1 Socioclinical features of referred patients

Socioclinical feature	GH (n = 138)		PHC centre (n = 402)		χ^2	df	P-value
	No.	%	No.	%			
<i>Nationality</i>							
Saudi	113	81.9	380	94.5	14.339	2	< 0.001
Non-Saudi	12	8.7	8	2.0			
Unrecorded	13	9.4	14	3.5			
<i>Type of referral</i>							
Elective	106	76.8	392	97.5	58.524	1	< 0.001
Urgent	32	23.2	10	2.5			
<i>Reason for referral</i>							
Overall management	24	17.4	126	31.3	53.612	3	< 0.001
Diagnosis and treatment	21	15.2	15	3.7			
Evaluation, diagnosis and treatment	48	34.8	228	56.7			
Investigation, treatment and follow-up	26	18.8	28	7.0			
Admission	15	10.9	0	–			
Personal request	0	–	1	0.2			
Unrecorded	4	2.9	4	1.0			
<i>Duration of illness (months)</i>							
<6	40	29.0	114	28.3	1.431	2	0.232
>6	48	34.8	101	25.1			
Unrecorded	50	36.2	187	46.6			

GH = general hospital.

PHC = primary health care.

Table 2 Psychiatric diagnoses by GH and PHC referrals

Diagnosis	GH referrals (n = 138)				PHC referrals (n = 402)			
	Psychiatrist diagnosis ^a		Doctor diagnosis ^{a,b}		Psychiatrist diagnosis ^c		GP diagnosis ^{b,c}	
	No.	%	No.	%	No.	%	No.	%
Dementia	13	9.4	2	1.4	20	5.0	4	1.0
Schizophrenic disorder	25	18.1	21	15.2	62	15.4	19	4.7
Acute psychosis	7	5.1	7	5.1	8	2	6	1.5
Mood disorders	34	24.6	23	16.7	118	29.4	66	16.4
Anxiety disorders	19	13.8	18	13.0	70	17.4	47	11.7
Anxiety–depression	7	5.1	6	4.3	26	6.5	9	2.2
Somatoform disorders	14	10.2	11	8.0	22	5.2	7	1.7
Seizure disorders	6	4.3	5	3.6	18	4.5	15	3.7
Childhood disorders	1	0.7	0	–	30	7.5	17	4.2
Psychosomatic disorders	0	–	4	2.9	13	3.2	3	0.7
Miscellaneous	8	5.9	19	13.8	14	3.5	29	7.2
Diagnoses missing	4	2.9	22	15.9	1	0.2	180	44.8

^a Psychiatrists made more diagnoses of dementia and affective disorders than GH doctors but the difference was not statistically significant ($\chi^2 = 12.798$, $P > 0.05$).

^b GH clinicians made more diagnoses of acute psychosis, schizophrenic disorders, anxiety–depression and somatoform disorders than GPs ($\chi^2 = 18.885$, $P < 0.01$).

^c Psychiatrists made more diagnoses of dementia, schizophrenic disorders, mood disorders, anxiety disorders, anxiety–depression and somatoform disorders than GPs ($\chi^2 = 33.674$, $P < 0.001$).

GH = general hospital.

PHC = primary health care.

GP = general practitioner.

sonal request. Duration of illness when arbitrarily divided into two categories, i.e. less than or more than 6 months, did not differentiate between the two sources of referrals ($\chi^2_1 = 1.431$, $P = 0.232$). However, when we divided duration into three categories, i.e. 3 months or less, 4–6 months or more than 6 months, a statistically significant proportion of patients whose illness was of less than 3 months duration were referred from GHs ($\chi^2_2 = 15.926$, $P < 0.001$).

Psychiatrists and GH clinicians did not note diagnoses in 4 of 138 (2.9%) and 22 of 138 (15.9%) referrals respectively (Ta-

ble 2). Among PHC referrals, psychiatrists and GPs did not note diagnoses in 1 of 402 (0.2%) and 180 of 402 (44.8%) referrals respectively. The pattern of psychiatric diagnosis by referral indicated that GH clinicians made more diagnoses of acute psychotic disorders, schizophrenic disorders, mixed anxiety–depression and somatoform disorders than GPs ($\chi^2_3 = 18.885$, $P < 0.01$). Although statistically insignificant, psychiatrists made more diagnoses of dementia and affective disorders than clinicians ($\chi^2_3 = 12.798$, $P > 0.05$). Psychiatrists made significantly more diagnoses of dementia, schizophrenic disorders, mood

disorders, anxiety disorders, mixed anxiety–depression and somatoform disorders than GPs ($\chi^2_8 = 33.674$, $P < 0.001$).

Among GH referrals, psychiatrists diagnosed only 1 case with a childhood disorder (0.7%), whereas GH clinicians did not note any childhood problems. As regards psychosomatic disorders, psychiatrists made no diagnosis of such problems but GH clinicians noted these disorders in 4 referral letters (2.9%). Among PHC referrals, psychiatrists diagnosed childhood and psychosomatic disorders in 30 (7.5%) and 13 (3.2%) referred patients respectively, whereas GPs noted these respectively in 17 (4.2%) and 3 (0.7%) referred patients.

The diagnoses of physical disorders (122 of 540 patients, 22.6%) were noted in 53 GH referrals (38.4%) and in only 69 PHC referrals (17.2%) (Table 3). Hypertension was more common among PHC referrals, whereas diabetes mellitus, gastrointestinal disorders and respiratory disorders were more common among GH referrals.

Discussion

This study comparatively analysed socio-clinical parameters and patterns of psychiatric and physical morbidity noted in psychiatric referrals from PHC centres and GHs. Although most of the referred patients from both GHs and PHC centres were Saudis, among non-Saudis surprisingly more were referred from GHs than from PHC centres. Most of these non-Saudi patients were suffering from acute behavioural changes upon receiving bad news from home or from tremendous collective stresses associated with psychiatric morbidity [17,18]. A carefully designed study to assess the psychological and physical health of the expatriate community in Saudi Arabia might be useful. With the rapid establishment of private medical services,

Table 3 Physical diagnoses for GH and PHC referrals

Diagnoses	GH (n = 138)		PHC (n = 402)	
	No.	%	No.	%
Diabetes mellitus	10	7.3	15	3.7
Hypertension	2	1.4	15	3.7
Gastrointestinal disorder	12	8.7	4	1.0
Neurological disease	10	7.3	23	5.7
Respiratory disease	7	5.1	3	0.7
Miscellaneous	12	8.7	9	2.2
Total	53	38.4	69	17.2

GH = general hospital.

PHC = primary health care.

non-Saudis have restricted access to medical services in public GHs and PHC centres. However, they do have relatively good access to emergency medical services in those settings. Similarly, non-Saudis have full access to psychiatric services available in psychiatric hospitals and to psychiatric clinics based in GHs as private psychiatric services are not yet fully developed in Saudi Arabia.

We found that the more serious referrals were more commonly GH referrals than PHC referrals. Furthermore, most acute referrals (27 of 88, 36.7% versus 50 of 215, 23.3%) ($P < 0.001$) were from GHs, which also referred 10.9% of patients for admission purposes. This might suggest that GHs rather than PHC centres deal with more acute or serious psychiatric conditions, i.e. acute organic/functional psychotic conditions, acute depressive and anxiety disorders, grief reactions and adjustment disorders. The severity of psychiatric disorders has been reported to be high among inpatient admissions in other reports

[19]. In contrast, primary care referrals categorized as urgent did not in fact differ in severity of illness from those with ordinary referral [20]. Because of this, we emphasize that all GHs should develop psychiatric consultation liaison services. PHC also needs a step-wise approach for the establishment of mental health centres in order to provide proper mental health services to patients.

More than one reason or overlapping reasons for referring patients were given for most referrals from both PHC centres and GHs. Reasons included evaluation, investigation, diagnosis, treatment and follow-up because no mental health delivery systems are available at PHC centres or in most GHs. This differs from our previous research in which we found distinct but not overlapping reasons among non-psychiatric referral [21].

Personal requests for psychiatric referral in this study (0.2%) were very low compared with our previous study (4.9%) [21]. This could be attributed to the social stigma attached to psychiatric disorders, speciality and hospitals [15]. The clinical relevance of this might be that in the absence of psychologically trained staff in the hospitals and primary care, psychiatric patients are referred for multiple reasons. This necessitates the assessing mental health professionals performing comprehensive evaluation including diagnostic formulation, treatment plan and follow-up care for each referred patient.

As in other research [22], we found that acute organic brain conditions, acute psychoses, schizophrenic disorders and somatoform disorders were more common among GH referrals than among PHC referrals. Furthermore, consistent with another study of psychiatric morbidity among GH inpatients [23], affective and anxiety disorders and somatoform disorders fol-

lowed by dementia were the most common disorders found among GH referred patients. According to some researchers, these diagnoses determine referrals to psychiatric hospitals [24]. In contrast, affective disorders, anxiety disorders, schizophrenic disorders and mixed anxiety-depression followed by somatoform disorders were the common psychopathologies found among PHC referrals. Hence, psychiatric diagnoses by referrals from primary care and hospitals were primarily in agreement. More or less similar patterns of psychiatric disorders in primary care have been reported in other studies [25]. Furthermore, despite somatization being the most common psychiatric phenomenon in primary care, GP recognition rate of somatoform disorders has previously been found to be low [26], which is in agreement with our findings. The identification and proper management of psychiatric disorders among GH and PHC patients is important as it prevents the development of physical and psychological disabilities associated with role impairment and reduces the length of hospital stay in a cost-effective way.

Finally, a variety of childhood disorders, including mental subnormality, enuresis and encopresis, speech disorders, nail-biting, school phobia and attention deficit hyperactivity disorders, were exclusively noted among PHC referrals. This finding raises some questions. Are these childhood disorders mostly referred to paediatricians within the GHs themselves? Are these childhood disorders only managed by paediatricians without being referred to psychiatric hospitals? Are GPs forced by way of non-availability of drugs or lack of management skills to refer such patients to psychiatrists? Does the prevalence of these disorders differ between these two sources of referral? By and large, there is no epi-

miological data on childhood psychiatric disorders in Saudi Arabia. Similarly, there are no specific provisions for child psychiatric services in psychiatric hospitals or in general hospitals. Therefore, we suggest that child psychiatric clinics should be opened in psychiatric and general hospitals. Child psychiatry warrants proper planning, development and research in Arab countries such as ours.

Concurrent physical morbidity was more common among GH referrals than among PHC referrals, a finding consistent with another study [22]. Hypertension was more common among PHC referrals, whereas diabetes mellitus, gastrointestinal and respiratory disorders were more common among GH referrals. Unlike our two previous studies of psychiatric inpatients [27] and elderly outpatients [28], this study found a lower rate of physical morbidity (122 of 540 patients, 22.6%). This inconsistency might be attributed both to psychiatric inpatients who tend to have higher rate of physical diseases and age. It has been reported that the prevalence of physical morbidity increases with increasing age [29]. However, the most frequently observed physical diseases in those studies [27,28] were similar to the present study. Notably, diabetes, hypertension and other cardiovascular illnesses were co-morbid with depression [30], which was the most common disorder in the present study.

Although we did not screen outpatient files of these referred patients for noted physical disorders, it has been documented that psychiatrists do not recognize and/or

underdiagnose [29] physical disorders among psychiatric populations [31]. The clinical implication of revealing physical morbidity in psychiatric patients is that psychiatrists should always assess the physical condition of referred patients. Accordingly, a consultation from medical staff should always be sought. We further suggest that establishing a psychiatry-medical unit in a psychiatric hospital will circumvent many of the problems faced while coordinating medical-liaison services. It should be noted that the presence of physical illnesses, such as circulatory and respiratory conditions, among elderly psychiatric inpatients with dementia is associated with increased mortality [6]. Overall, psychiatric patients with physical co-morbidity certainly require higher medical care in a proper setting. This could be offered by a multidisciplinary team of professionals which includes medical and psychiatric consultants.

In light of the findings of our study and other reviewed studies, we suggest that GH and PHC psychiatry should be further developed in Saudi Arabia.

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