The ability of general practitioners to detect mental disorders among primary care patients in a stressful environment: Gaza Strip

Abdel-hamid Afana, Odd Steffen Dalgard, Espen Bjertness and Berthold Grunfeld

Abstract

Background The aim of the present study was to investigate the detection rate by general practitioners (GPs) of mental disorders in a primary health care setting and relating the findings to selected GP characteristics and the patient socio-demographic characteristics.

Methods The patients were assessed with respect to mental disorders by Hopkins Symptom Checklist 25 (HSCL-25), and the GPs were independently asked to fill in the Goldberg checklist II to assess the patient after consultation. The sample consisted of 10 primary health care clinics in the Gaza Strip, which were randomly selected from the five regions that form the Gaza Strip (Northern, Southern region, Gaza City, Middle region, Khan-Younis and Rafah). Thirty-two GPs and 661 patients participated in the study.

Results The study showed that the GPs detected only 11.6 per cent of patients with mental disorders at HSCL-25 score >1.75, and that the GP's assessment was not significantly associated with the HSCL-25 scores. GPs with postgraduate psychiatric training performed better in detecting mental disorders, likewise female GPs and those who were more than 40 years old. The results also revealed that the GPs were more able to detect mental disorders among patients older than 25 years, and in female patients.

Conclusions The GPs' poor detection rate of mental disorders indicates the importance of mental health training for GPs working in primary health care clinics.

Keywords: GPs, detection of mental disorders, primary health care, stressful environment.

Introduction

Studies have shown a high prevalence of mental disorders among patients requesting primary health care (PHC) in different parts of the world, varying from 20 per cent in the developed countries to more than 40 per cent in the developing countries.[1–4] However, the majority of these disorders often pass undetected and remain unrecognized by general practitioners (GPs), and represent hidden mental disorders.[5] In their pioneering work of the 'filters care model', Goldberg and Huxley[6] indicated that around 50 per cent of primary health care patients are correctly diagnosed by the GPs as having psychiatric morbidity and only 12 per cent are referred to mental health services. Studies show that only the most severe mental disorders are well recognized by GPs.[7,8] Leon et al.[9] reported that the patients who were assessed by GPs as mentally ill were significantly impaired. Although those patients often overuse primary health care services,[10,11] they do not receive the proper care and treatment.[9,12] In a Nordic study of GPs' ability to detect mental disorders in primary care setting using a six-point psychiatric severity scale, Munk-Jorgensen et al.[13] found that there were no significant differences between GPs' diagnosis in five Nordic centres. GPs were able to recognize only 44 per cent of the patients who, according to psychiatric interview, were suffering from mental disorders.

Previous studies indicated that some factors might influence detection by GPs of patients with mental disorders, involving characteristics of patients and of the GPs. GPs' ability to detect mental disorders is enhanced by the following patients' factors: unemployment, female sex, middle age, minimal education, and widows and previously married.[10,11,14] The vagueness of patients' reporting of their symptoms, frequency of ill-defined syndromes and patients' tendency to somatize their emotional complaints,[15,16] and or to avoid being labelled as mentally ill[17] might mislead GPs' detection of mental disorders (and proper interventions).

GPs' characteristics that might lead to a low detection rate include their negative attitude, lack of mental health training, and their inability to make an appropriate psychiatric diagnosis.[5,18] In addition, time limitations to assessment of the

Abdel-hamid Afana, Psychotherapist (specialism community mental health)

Gaza Community Mental Health Programme, The Gaza Strip, Gaza City, PO Box 1049, Palestine.

Odd Steffen Dalgard, Professor of Community Psychiatry

Espen Bjertness, Professor of Epidemiology

Berthold Grunfeld, Professor of Psychiatry

Institute of General Practice and Community Medicine, University of Oslo, Oslo, Norway.

Address correspondence to Abdel-hamid Afana.
E-mail: hamid@gcmhp.net

patients because of a long patient daily list may contribute to poor detection rates by GPs.[19] It might be also that the GPs' tendency to see the presenting symptoms as transient and easily treatable leads them to avoid making a psychiatric diagnosis.[11]

The objectives

The objective of the study was to investigate the GPs' detection rate of mental disorders among patients attending PHC clinics in Gaza, and possible associations between detected mental disorders and GPs' and patient's characteristics, such as age, sex, place of living, civic status and (for GPs only) attendance of mental health training courses.

Populations and methods

This study is part of an epidemiological investigation of mental disorders in primary health care in the Gaza Strip. The study was conducted in 10 randomly selected primary health care clinics in the five regions that form the Gaza Strip in both the government and United Nation (UNRWA) primary health care services. The patients were randomly selected from patients consulting GPs for health problems. A total of 670 patients were asked to complete the HSCL-25 questionnaire after consulting the GP, and 661 agreed to participate. For the nine patients who refused to participate in the study, pressure of time was the main reason given. Of the 661 patients who completed the HSCL-25 questionnaire, 112 (17 per cent) were excluded because they did not answer at least 23 items of the questionnaire. All patients aged between 16 and 55 years were invited except those who come for vaccinations, insurance or driver's license examinations, prenatal care, reports, pregnancy problems and/or emergencies. Every second patient in each clinic was approached and invited to participate in the study during the months of June–December 1998. After medical consultation by the GP, both the selected patients and the GPs were asked to complete questionnaires. The patients filled in a 25-item version of the Hopkins Symptoms checklist (HSCL-25), which has been used in a wide range of primary health care settings as a valid and reliable measure of psychiatric symptoms, in particular, screening of anxiety and depression experienced by the patient during the preceding week.[5,20] The Arabic translated version has proven to be reliable and valid in a multicultural context.[21] The cut-off point score of HSCL-25 used in the study was 1.75; patients who scored ≥1.75 were considered as cases with mental disorders.

The GPs assessed the mental health status of the patients using the Goldberg II scale,[22] blind to the patient's HSCL-25 score. The Goldberg II scale is an instrument designed to identify and measure mental disorders in community settings. The severity of mental disorders was rated using a five-category classification: 'no mental disorder' (1); 'mild mental illness but couldn't be discovered clinically' (2); 'mild but clinically significant mental illness' (3); 'moderate mental illness' (4); 'severe mental illness' (5). The GPs also filled in a questionnaire on their sociodemographic status such as age, gender, place of living, civic status, years of experience, and mental health training courses taken after completion of basic medical study. In addition, the GPs were asked about their understanding of the reasons for the patient's visit, using the categories of Goldberg and Blackwell.[22,23] The GPs' assessment of mental disorders using the Goldberg II scale was calculated by summing up items 1 and 2 as no mental disorder (<3 GP –ive), and 3–5 as mental ill-health cases (>3 GP +ve). These ratings where used as the basis for the estimation of the GPs' ability to detect mental disorders as measured by HSCL-25.

Statistical methods

The χ^2 test was used to detect possible differences between groups. Logistic regression analysis was used to analyse associations between patients' and GPs' characteristics and the GPs' detection rate. Level of significance was set to $p < 0.05$ (95 per cent confidence interval (CI)).

Results

Using the cutoff point 1.75, the study showed that the GPs were able to detect as mental disorders 11.6 per cent of the HSCL-25 cases (sensitivity) and as mentally not ill 91.9 per cent of the non HSCL-25 cases (specificity) (Table 1).

When GPs were asked about their general understanding of the reasons for the patients' consultation, 41.8 per cent of the non-GP +ve cases consulted their GPs because of well-defined

Table 1 Mental health problems as assessed by GPs using the Goldberg II scale, by HSCL-25 (values are numbers, with percentages given in parentheses)

HSCL-25	GP detection of cases by Goldberg II		
	≥3 (GP +ve)	<3 (GP –ve)	Total
≥1.75 (HSCL-25 +ve)	46 (11.6)	349 (88.4)	395 (100.0)
<1.75 (HSCL-25 –ve)	12 (8.1)	137 (91.9)	149 (100.0)
Total	58 (10.7)	486 (89.3)	544 (100.0)

HSCL +ve indicates HSCL screening positive (≥1.75). GP +ve indicates mental disorder according to the GP assessment (≥3).

physical illness, whereas only 8.9 per cent of the GP +ve cases came for the same reason. Only 7.9 per cent of the non-GP +ve cases and 60.7 per cent of the GP +ve cases consulted them because of mental health problems.

The study also showed that 28.8 per cent of patients assessed by the GPs as having mental disorders were very well known to their GPs. The study also indicated that 62 per cent of the GPs agreed that psychosocial problems are important to the patient's health status.

The GPs' ability to detect cases in relation to GPs' characteristics

The total agreement between the GPs' assessment and HCSL-25, and the sensitivity of the GPs' assessment in various subgroups are shown in Table 2. Female GPs were more able to detect mental disorders than males, with a sensitivity of 31.6 per

cent compared with 6.6 per cent among males ($p = 0.00$), and a total agreement of 44.4 per cent compared with 30.3 per cent ($p = 0.004$). The study also showed that GPs with postgraduate mental health training were more able to detect mental disorders than those without training ($p = 0.000$), the sensitivity being 29.4 per cent, compared with 6.8 per cent, and the total agreement 42.0 per cent compared with 30.9 per cent. The study also showed that GPs aged 40 years and more are better case detectors than younger GPs ($p = 0.002$). The GPs' place of living had no significance.

The GPs' ability to detect cases in relation to patients' characteristics

The GPs' detection rate was significantly associated with some patients' characteristics (Table 3). GPs were more able to detect female patients than males, with a sensitivity of 15.1 per cent

Table 2 The detection rate of mental health cases (sensitivity) by GPs' characteristics

GP factor	No. of cases detected	Sensitivity (%)	p	Total agreement	p
Age			0.007		0.31
<40 years	13	7.0		31.1	
≥40 years	33	15.7		35.3	
Place of living			0.004		0.09
Refugee camp	1	2.8		25.5	
Village	12	26.7		46.0	
City	32	10.7		32.6	
New areas	1	7.1		27.8	
Sex			0.000		0.004
Male	21	6.6		30.3	
Female	25	31.6		44.4	
Civic status			0.04		0.000
Refugee	24	9.2		27.3	
Original residence	22	16.3		43.3	
Psychiatric training			0.000		0.02
Without training	21	6.8		30.9	
With training	25	29.4		42.0	

Table 3 Patients detected by GPs based on the patients' characteristics

Patient factor	No. of cases detected	Sensitivity (%)	p	Total agreement	p
Place of living			0.09		0.01
Refugee camp	15	8.2		26.7	
Village	13	15.1		42.7	
City	16	17.0		36.6	
New areas	2	6.5		30.2	
Age			0.01		0.03
16–24 years	9	5.8		26.5	
25–34 years	17	16.0		36.7	
≥35 years	20	15.3		38.1	
Civic status			0.002		0.11
Original residence	23	19.3		38.0	
Refugee	23	8.3		31.2	
Sex			0.008		0.4
Male	10	6.4		35.3	
Female	36	15.1		31.8	

compared with 6.4 per cent ($p = 0.008$). However, the total agreement was not statistically significant, 31.8 compared with 35.3 per cent ($p = 0.4$). The study also showed that GPs were more able to detect mental disorders among those aged 25–34 years compared with 16–24 years; the sensitivity was 16 per cent and 5.8 per cent, respectively ($p = 0.01$), and the total agreement was 36.7 per cent compared with 26.5 per cent ($p = 0.03$). The study also showed that the total agreement between the GPs' ability to detect mental disorders among patients living in villages and new areas was better than among people living in camps and new areas, the total agreement being 42.7 per cent compared with 26.7 per cent ($p = 0.01$), and the sensitivity being 15.1 per cent and 17 per cent compared with 8.2 per cent and 6.5 per cent ($p = 0.09$).

To analyse the associations between the detection rate and GPs' characteristics, a logistic regression was performed (Table 4). The analyses showed that the GP's sex (odds ratio (OR) = 3.59; 95 per cent CI 1.25–10.32) and postgraduate training in mental health (OR = 2.82; 95 per cent CI 1.01–7.86) were significantly associated with the GP's detection rate, whereas the association with place of living and civic status was not significant when controlling for other variables.

The association between the GP's detection rate and the patient's characteristics was also investigated in a logistic regression analysis (Table 5). This showed that the patient's sex and age were significantly associated with the GP's ability to detect mental health problems (OR = 2.34; 95 per cent CI 1.12–5.07) and (OR = 0.38; 95 per cent CI 0.16–0.88), respectively, when controlling for the other variables. The study also showed that the patient's civic status was significantly associated with GP detection (OR = 2.63; 95 per cent CI 1.41–4.91).

Discussion

Previous studies have shown that the ability of GPs in diagnosing mental disorders varies widely, and that they tend to under-diagnose and under-report psychiatric morbidity among their patients. The current study indicated that the majority (88.4 per cent) of mental disorders among primary health care patients in the Gaza Strip are hidden and pass undetected by Palestinian primary health care professionals, and only a small proportion (11.6 per cent) are detected. It is remarkable that the percentages of detected cases by GPs is about the same in patients above and

Table 4 The association between GPs' detection of mental health problems and GPs' characteristics

GP characteristics	Number of cases	Crude odds ratio (OR)		Adjusted odds ratio (OR)	
		OR (95% CI)	p	OR (95% CI)	p
Sex			0.00		0.02
Male	21	Ref.		Ref.	
Female	25	6.50 (3.40–12.44)		3.59 (1.25–10.32)	
Civic status			0.04		0.77
Original residence	22	1.91 (1.03–3.56)		1.14 (0.46–2.81)	
Refugees	24	Ref.		Ref.	
Psychiatric course			0.00		0.04
Without course	21	Ref.		Ref.	
With course	25	5.73 (3.01–10.91)		2.81 (1.01–7.85)	

Table 5 Association between GPs' detection of mental health problems and patients' characteristics

Patient characteristics	Number of cases detected	Crude odds ratio (OR)		Adjusted odds ratio (OR)	
		OR (95% CI)	p	OR (95% CI)	p
Sex			0.001		0.02
Female	36	2.61 (1.25–5.45)		2.34 (1.12–5.06)	
Male	10	Ref.		Ref.	
Civic status			0.002		0.08
Original residence	23	Ref.		Ref.	
Refugees	23	2.63 (1.41–4.91)		0.50 (0.22–1.10)	
Age			0.02		0.02
16–24 years	9	0.34 (0.14–0.77)	0.01	0.38 (0.16–0.88)	0.02
25–34 years	17	1.06 (0.52–2.14)	0.87	1.17 (0.56–2.41)	0.68
≥35 years	20	Ref.		Ref.	

below the HSCL-25 cut-off point, which indicates that symptoms as measured by this instrument play a minor role in assessing mental health for the GPs in Gaza.

Although this detection rate is exceptionally low, it is to some extent in agreement with previous studies from other countries; for example, Kessler et al.[24] showed that in Marshfield clinic in United States, the primary care providers, during the 1 month follow-up study, correctly recognized only 20 per cent of patients with psychiatric disorders. Coyne et al.[8] found that GPs were able to detect only 30 per cent of patients with depressive disorders.

The low detection rate revealed by this study is much lower than in the Nordic study, where Munk-Jorgensen et al.[13] found that GPs rated 54 per cent of patients who, according to the PSE interview were definite psychiatric cases, as having no disturbances. It is, however, hard to compare the present study with the Nordic one, because the former used a psychiatric interview for the assessment of mental disorders. A limitation of the study is that psychiatric interview was not conducted for identified mental ill-health cases. This also can make the comparison with other studies difficult as far as they used different assessment methods in addition to the HSCL-25.

The current study also indicated that GPs were most able to identify mental disorders among female patients, and in those who are more than 25 years old. These results are consistent with prior studies, including the Nordic studies.[11,15,22,25] It also showed that the patient's civic status was significantly associated with GP detection: GPs were more able to detect disorders in original residence patients than in refugee ones. The study also indicated that female GPs performed better in detecting mental disorders than did male GPs.

In the Palestinian context there may be several reasons for the low detection of mental health problems by GPs in the Gaza Strip. There is no generally accepted definition of what constitutes a psychiatric case in primary health care settings. Primary health care physicians ignore, or are not familiar with, traditional psychiatric diagnosis criteria such as the Diagnostic and Statistical Manual of Mental Disorders (DSM IV-R) and sometimes apply their own conceptual framework such as 'nervous breakdown', 'nervousness', and others in place of an accepted DSM-IV diagnosis. In this condition, patients may be considered to have mental ill-health symptoms but perhaps not enough to make a psychiatric diagnosis.

The inability of GPs to diagnose mental disorders does not necessarily imply that the GPs are unaware of psychological distress in their patients. The current study indicated that 62 per cent of the GPs agreed that psychosocial problems are important to their patients' health status. They are aware of the possible mental disorders, but may feel that labelling and treatment may do more harm than good, that treatment is not feasible because of time or financial constraints, that patients may resist a psychiatric label and resist treatment recommendations, or that psychiatric disorders are outside the realm of the GP's competence or responsibility. GPs might also think that the distressing

symptoms would remit spontaneously when the patient's environmental constraints improved. However, it is very likely that at least part of the non-recognition is due to a lack of diagnostic vigilance and skills. The study indicated that GPs would perform better when the symptoms of mental disorders are clearer and are not presented in physical symptoms, and that GPs do not recognize psychological symptoms associated with a physical illness unless these symptoms are apparent and clearly verbalized by patients.

It could be, however, that not only lack of competence influences the GPs' ability to detect mental disorders, but it has also to do with both the patients' and the GPs' attitude towards mental health problems. It seems that the patient's cultural background may play a crucial role in presenting mental health sufferings. In the Middle East and African countries, the social stigma attached to mental health problems is high, and this may be why both patients and GPs would be reluctant to reveal such problems.

This study indicated that patients well known to GPs were better assessed by them within their limited time. The average time spent on each patient in PHC is around 5–10 minutes, which makes it difficult to conduct a thorough mental health examination and psychiatric history. The fact that female GPs are better case detectors than males, and that mental disorder among females is more easily detected, might be explained by females GPs being better listeners and more sympathetic to psychological problems than male GPs, and by female patients feeling more open, and more able to express their feelings than male patients.

The study was conducted during a time of high stress because of the generally difficult situation in Gaza, and the stalemate in the Palestinian–Israeli peace negotiations. The failure of 4 years of Oslo Accord to bring tangible results has led to an overwhelming frustration and a state of hopelessness in the Palestinian community. One possible reason for under-detection of mental disorders by GPs could then be that the symptoms were considered as a 'normal' reaction to an exceptional social and political situation, rather than an expression of mental disorders. The particularly low detection rate among refugees supports this hypothesis.

Implications of the study

The results of the study revealed that GPs in the Gaza Strip are poor in assessing mental disorders. This indicates the challenge of integration of mental health into primary health care settings. As a step towards such integration, mental health training for primary health care professionals is crucial. Two main training components have to be highlighted: (1) GPs should have the technical training to identify mental disorders, and training to identify the social and cultural issues germane to mental illness; (2) GPs should be equipped with communication, interview and counselling skills.

References

1 Al-Jade H, Malkawi A. Prevalence, recognition and management of mental disorders in primary health care in Northern Jordan. *Acta Psychiatr Scand* 1997; **96:** 31–35.

2 Barrett JE, Barrett JA, Orman T, Gerber P. The prevalence of psychiatric disorders in a primary care practice. *Arch Gen Psychiatr* 1988; **45:** 1100–1109.

3 Weiller E, Bisserbe J, Maier W, Lecrubier Y. Prevalence and recognition of anxiety syndromes in five European primary health settings: a report from the WHO study on psychological problems in general health care. *Br J Psychiatr* (Suppl. 34) 1998: **173:** 18–23.

4 World Health Organization. *The introduction of a mental health component into primary health care*. Geneva: WHO, 1990.

5 Joukamaa M, Lehtinen V, Karlsson H. The ability of general practitioners to detect mental disorders in primary health care. *Acta Psychiatr Scand* 1995; **91:** 52–56.

6 Goldberg D, Huxley P. *Mental illness in the community*. London: Tavistock, 1980.

7 Kramer T, Garralda P. Psychiatric disorders in adolescents in primary care. *Br J Psychiatr* 1998; **173:** 508–513.

8 Coyne J, Schwenk T, Fechner-Bates S. Non-detection of depression by primary care physicians reconsidered. *Gen Hosp Psychiatr* 1995; **17:** 3–12.

9 Leon A, Portera L, Olfson M, *et al.* False positive results: a challenge for psychiatric screening in primary care. *Am J Psychiatr* 1997; **154:** 1462–1464.

10 Hansson L, Persson K, Borgquist L. Patients with mental illness in primary health care. A long-term follow-up of health care utilization and contact patterns with psychiatric care. *Scand J Prim Hlth Care* 1997; **15:** 129–133.

11 Hansson L, Borgquist L, Netelbladt P, Nordstrom G. The course of psychiatric illness in primary care patients: a 1-year follow up. *Social Psychiatr Psychiatr Epidemiol* 1994; **29:** 1–7.

12 Ormel J, Berink W, Koeter M, *et al.* Recognition, management and outcome of psychological disorders in primary care: a naturalistic follow up study. *Psychol Med* 1990; **20:** 909–923.

13 Munk-Jorgensen P, Bervik P, Dalgard OS, *et al.* Psychiatric morbidity in primary public health care: a multicentre investigation, Part II: Hidden morbidity and choice of treatment. *Acta Psychiatr Scand* 1997; **95:** 6–12.

14 Wittchen H, Boyer P. Screening for anxiety disorders: sensitivity and specific of the anxiety screening. *Br J Psychiatr* (Suppl. 34) 1998; **173:** 10–17.

15 Hamilton J, Campos R, Creed F. Anxiety, depression and management of medically unexplained symptoms in medical clinics. *J R Coll Phys London* 1996; **1**(January–February): 18–20.

16 Portegijs P, van der Horst F, Proot I, *et al.* Somatisation in frequent attenders of general practice. *Social Psychiatr Psychiatr Epidemiol* 1996; **31:** 29–33.

17 Sijuwola OA. Culture, religion, and mental illness in Nigeria. In Ihsan, Al-Issa, ed. *Handbook of culture and mental illness: an international perspective*. Madison, CT: International Universities Press, 1995.

18 Gonzales J, Magruder K, Keith S. Mental disorders in primary care services: an update. *Publ Hlth Rep* 1994; **2**(March–April): 251–258.

19 Froom J, Aoyamma H, Hermoni D, Mino Y, Galambos N. Depressive disorders in three primary care populations: United States, Israel, and Japan. *Family Pract* 1995; **3:** 274–277.

20 Fink P, Jensen J, Borgquist L, *et al.* Psychiatric morbidity in primary public health care: a Nordic multicentre investigation Part 1: method and prevalence of psychiatric morbidity. *Acta Psychiatr Scand* 1995; **92:** 409–418.

21 Lavik NJ, Laake P, Hauff E, Solberg O. The use of self-reports in psychiatric studies of traumatized refugees: validation and analysis of HSCL-25. *Nord J Psychiatr* 1999; **53:** 17–20.

22 Skuse D, Williams P. Screening for psychiatric disorder in general practice. *Psychol Med* 1984; **2:** 365–377.

23 Karlsson H, Lethinen V, Joukamaa M. Are frequent attenders of primary health care distressed? *Scand J Prim Hlth Care* 1995; **13:** 32–35.

24 Kessler L, Cleary P, Burke J. Psychiatric disorders in primary care: results of a follow up study. *Arch Gen Psychiatr* 1985; **42**(June): 583–587.

25 Zintl-Wiegand A, Krumm B, Weyerer S, Dilling H. Psychiatric morbidity and referral rates in general practices: comparison of an industrial town and a rural area in West Germany. *Social Psychiatr Psychiatr Epidemiol* 1988; **23:** 49–56.