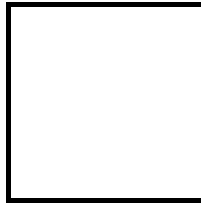


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Prevalence and recognition of depressive disorder at a primary health care centre in Pakistan

Mubbashar**

NR Koirala*
MH

FA Minhas***
ZI Mirza****

ABSTRACT

The aim of the study was to determine the prevalence and recognition of depressive disorder at a primary health care centre in Pakistan. A purposive sample of four hundred consecutive adult primary health care attenders was screened using GHQ-12. In the second-stage a total of 271 subjects (256 High scorers and 15 Low scorers on GHQ-12) were assessed using ICD-10, DCR as a diagnostic instrument. The prevalence rate of depression using ICD-10 DCR was 22.25%. The corresponding rate for the Primary Health Care Physician was 11.43%, suggesting that Primary Care Physicians recognised depression in almost 58.49% of the patients who fulfill the ICD-10 DCR for depressive disorder. In primary care, depression constitutes major health problem. Despite this fact, Primary Health Care Physicians do not recognise a substantial proportion of this disorder.

Keywords: *International Classification of Diseases-10th Version (ICD-10); Diagnostic Criteria for Research (DCR); General Health Questionnaire (GHQ-12); Primary Care Physician (PHCP); Depressive disorder.*

INTRODUCTION

Depressive illness is one of the commonest clinical illnesses amongst the primary health care attenders (World Bank, 1993). Surveys have shown that one in ten attending patients can be diagnosed as

suffering from depression and one in twenty would meet criteria for major depressive disorder (Blacker and Clare, 1987; Van Markwijk *et al*, 1994). According to World Health Organization, over 100 million persons in the world suffer from depression and

* Assistant Lecturer, Department of psychiatry, Institute of Medicine, TU Teaching Hospital, Kathmandu, Nepal.

** Professor, Institute of Psychiatry, Rawalpindi Medical College, Rawalpindi, Pakistan.

*** Associate Professor, Institute of Psychiatry, Rawalpindi Medical College, Rawalpindi, Pakistan.

**** Clinical Psychologist, Institute of Psychiatry, Rawalpindi Medical College, Rawalpindi, Pakistan.

perhaps three times that many are affected by them (Sartorius *et al*, 1983; Wright, 1994).

Depressive illness seen in primary health care is not tribal or transitory and about half of the patients with disorders are unable to continue their lives (Eisenburg, 1992; Rice and Miller, 1995). It is potentially life threatening as most of the suicides in both developed and developing countries each year are due to depression (Wright, 1993), and is also associated with increased service utilization, medication use, suicide attempts and time lost from work (Johnson *et al*, 1992). The World Bank's 1993 World Development Report estimates that depression ranks fifth in illness burden in women and seventh in men in the developing countries surveyed, and in aggregate, it constitutes 17.3% of the total percentage of Disability Adjusted Life year (World Bank, 1993).

Though now can be treated effectively it is clear that many sufferers do not receive the treatment that they desperately need because of the poor recognition of their problem and poor management. The recognition and diagnosis of depression is important, as it is treatable disease and most depressive patients can be fully and effectively managed in the primary care setting. However, it goes often unrecognized and untreated (Blanchard *et al*, 1994; Glasser and Sterns, 1994; Pearse and Neary, 1994) causing a major drain on resources, dissatisfaction in people seeking help and in health care workers. They satisfy all the criteria that make the condition a major public health problem (Sartorius, 1978, Burvill, 1990).

Despite the magnitude of the problem, community-based studies for prevalence and recognition of depressive illness in Pakistan, where the bulk of population is living in rural areas have been few (Akhund *et al*, 1987; Mubbashar, 1991). This study was undertaken with the aim of assessing the prevalence and recognition of depression in the primary care attenders in Pakistan. A rural subdistrict, Taxilla, 33 kilometers North East of Rawalpindi was selected for the study. The subdistrict (Tehsil) occupies an area of six square kilometers, and has a population of 14,767 males and 13,989 females. A typical family is large (5 to 15 members) with an extended joint family system. The literacy rate of males is 26% and of females only 8 per cent. There are two Basic Health Units, one Rural Health centre, and one Tehsil (Sub-district) Headquarters Hospital with 3 and 10 doctors respectively. Most of the families in Taxila depend on subsistence farming, supported by earning of one or more of the adult male family members working in private business, a government institution or casual labour in the city. They tend to have many children, but education can only be afforded by a few who are well off.

METHODOLOGY

The study used a two-stage design. In the first stage, primary care attenders were screened for mental disorder. Based on the results of the screen, a stratified sample was selected for the second stage. This involved the collection of presenting complaints and a diagnostic interview to identify those patients with depressive disorders.

The study sample consisted of 400 consecutive adult primary health care attenders in the Tehsil headquarters Hospital, Taxila. Attenders aged below 18 years, who were unable to communicate (eg. stuporous, comatose, and deaf and dumb), and those with severe debilitating physical illness were excluded from the study. Each individual entered the study only once and was not included the second time if he/she attended the facility for a subsequent consultation or follow-up during the study period, which extended for 04 months from March to June of 1997.

In the **first stage**, a trained researcher took informed consent and administered a socio-demographic performa. This was used to collect information on age, genders, address, marital status, level of education, occupation and monthly household income in rupees. The researcher read out the 12-item version of the General Health questionnaire to each successive attender in privacy. This process continued until a maximum of 20 consecutive attenders had been screened each day. The GHQ-12 is a screening instrument with established validity and reliability in many cultures (Goldberg and Williams, 1988). It was chosen because it is brief and can easily be read out to illiterate respondents. It has been validated in a rural primary care setting in Pakistan (Minhas and Mubbashar, 1996), where it has a sensitivity of 93% and specificity of 88% at a threshold of 1/2.

For the **second stage** of the study, a stratified sample of all high scorers and 10%

of low scorers on the GHQ-12, was selected. The primary care physician recorded the presenting complaints and their diagnosis. After the completion with the primary care physician, the patient was interviewed in privacy by a second researcher who administered the ICD-10 Diagnostic Criteria for Research (WHO, 1993) for depressive episode. The ICD-10 Diagnostic Criteria have been field tested in many cultures worldwide. A diagnostic hierarchy was used to avoid dual diagnosis. Both the primary care physician and the second researcher were blind to the results of the GHQ-12.

Data was double entered into a personal computer, and analysed using SPSS for windows 6.0.

RESULTS

A. Socio-demographic variables

It took a total of 23 visits (two visits per week) to complete the screening of 400 subjects. The full quota of 20 screens was not completed on every visit, because on some days there were fewer than 20 patients attending the clinic. This yielded 256 high scorers, of whom 178 were females and 78 males (table I). The high scorers, along with 15 randomly selected low scorers (11 females and four males), were approached for the clinical assessment by the primary health care physicians and for ICD-10 interview. No patient refused to complete the GHQ-12 and no patient refused or was excluded from completing the second stage of the study (table II).

The age structure of the sample of 271 patients (table III) shows a male-female

ratio of 1:2.3. It shows a higher primary health care attendance for the age group 36-45 years (24.72%) when both sexes are taken together. Overall 67.4% (183) patients were from the age group 26-55 years, of whom 20.29% of the females were from the age group 36-45 years and 8.85% (24) males from the age group 26-35. The table also shows a steady decline in health care attendance with the increase of age after 55 years for both sexes, which is more significant for females.

Overall 54.24% (147) of the attenders were married, 22.87% (62) were single (unmarried), 8.11% (22) were widow/ widower, 7.38% (10) were divorced and the same were separated and 15.86% (43) males and 41.32% (112) females with a total of 57.19% patients were illiterate (had no formal education). The number of patients with education above high school level was insignificant ie. only one male (table IV).

Table I: Subjects completing GHQ-12 (N=400)

Scorers	Male		Female		Total	
	Total	As % of total	Total	As % of total	Total	As % of total
High scorers	78	19.5	178	44.5	256	64.0
Low scorers	38	9.5	106	26.5	144	36.0
Total	116	29	284	71	400	100

Table II: Subjects completing second stage of the study (N=271)

ICD-10	Male		Female		Total	
	Total	As % of total	Total	As % of total	Total	As % of total
Total	82	30.25	189	69.74	271	99.99

Table III: Distribution by age and sex (N=271)

Age (Years)	Male		Female		Total	
	Total	As % of total	Total	As % of total	Total	As % of total
18-25	18	6.64	30	11.07	48	17.71
26-35	24	8.85	36	13.28	60	22.14
36-45	12	4.42	55	20.29	67	24.72
46-55	14	5.16	42	15.49	56	20.66
56-65	8	2.95	16	5.90	24	8.85
Above 65	6	2.21	10	3.69	16	5.90
Total	82	30.25	189	69.74	271	99.99

Table IV: Distribution by marital status (N=271)

Marital Status	Male		Female		Total	
	Total	As % of total	Total	As % of total	Total	As % of total
Married	46	16.97	101	37.26	147	54.24
Divorced	4	1.47	16	5.90	20	7.38
Separated	6	2.21	14	5.16	20	7.38

Widow/Widower	4	1.47	18	6.64	22	8.11
Unmarried	22	8.11	40	14.76	62	22.87
Total	82	30.25	189	69.74	271	99.98

B. Identification of depressive illness by primary health care physicians

Table V shows that amongst the 271 primary health care attenders, primary health care physicians diagnosed depression in only 11.43% (31) patients, of whom 2.95% (8) were males and 8.48% (23) were females. Eighty-eight point five six per cent (240) of patients received diagnosis other than depression.

C. Identification of depressive illness by investigator using ICD-10 DCR

Diagnosis of depressive episode was made in 53 of the second sample (49 of the high scorers and four low scorers). After weighing back, this corresponds

with a prevalence of depressive episode in primary care attenders of 22.25%. The prevalence in women was 16.25% (38 of whom were 35 high scorers and 3 low scorers) and in men 6% (15 of whom were 14 high scorers and 1 low scorer). Among those given a diagnosis of depressive episode, 10 (7 females and 3 males) patients were classified as severely depressed, 25 (18 females and 7 males) were moderately depressed and 18 (13 females and 5 males) were categorized as mildly depressed (table VI).

Table V: Detection of depressive illness by primary health care physician (N=271)

Diagnosis	Sex				Total	
	Male		Female		Total	As % of total
	Total	As % of total	Total	As % of total		
Depressive illness	8	2.95	23	8.48	31	11.43
Other diagnoses (inclusive of other psychiatric disorders)	74	27.25	166	61.25	240	88.56
Total	82	30.25	189	69.74	271	99.99

Table VI: Depressive illness diagnosed by researcher using ICD-10 diagnostic criteria for research (ICD-10 DCR) (N=53)

Diagnosis	Sex				Total	
	Male		Female		Total	As % of total
	Total	As % of total	Total	As % of total		
Severe	3	1.10	7	2.58	10	3.69

Moderate	7	2.58	18	6.64	25	9.22
Mild	5	1.84	13	4.79	18	6.64
Total	15 (14+1)	5.53	38 (35+3)	14.02	53 (49+4)	22.25

DISCUSSION

The results of this study confirm the high prevalence of depressive illness (22%) among primary care attenders in rural health care setting as previously reported by Minnhas *et al* (1995), Parker (1993), Shrestha (1992), and Sen and Williams (1987).

The current study shows that primary care physicians identified depression in 11.43% of the subjects. When this figure was compared to that of recognition by ICD-10 RDC, primary care physicians recognised depression in almost 58.49% of the patients who fulfill the ICD-10 Diagnostic Criteria for Research for depressive episode. A large number (41.51%) of cases of depressive episodes, which PHC physicians did not identify, received the diagnosis of physical illness like, acid peptic disorders, generalised weakness, headache, arthritis, angina pectoris, COAD, etc. These findings are in agreement with the view that primary care physician under-diagnose the psychiatric disorders with the degree of variance between 50-80% (Marks *et al*, 1979; Goldberg and Huxley, 1980; Wright *et al*, 1989; Cleary *et al*, 1990; Ormel *et al*, 1991; Boardman *et al*, 1992; Pearse and Neaary, 1994; Higgans, 1994, Chadda and Shome, 1996). However, in contrast to the finding of this study, Regmi (1995) in his epidemiological study of psychiatric morbidity in primary care setting in Pakistan has

reported a 100% identification of cases of depressive illness by PHC physicians in an area with Community Mental Health Programme in comparison to 0% in an area without Community Mental Health Programme. A higher identification rate has also been reported by Blacker and Thomas (1988). This study does not confirm these findings in either ways.

This study found a high agreement to the view expressed by Ormel *et al*, (1991) and Higgans *et al*, (1994) that primary care physicians identify moderate and severe cases of depression more accurately than milder cases of depression and when depression presents more with psychological (78.57 vs. 21.42%), affective (79.92% vs. 23.07%) and psychomotor (54.54% vs. 45.45%) rather than somatic (20.62% vs. 79.37%). Many factors maybe responsible for these reported differences in recognition of depressive illness by PHC physicians. Some of them which deserve to be mentioned are lack in training and skills to deal with particular mental health problems, lack of time proper diagnosis and treatment, feeling of the doctor that complaints will remit on their own (Schulberg and Burns, 1988), these major factors among doctors might lead to underdiagnosis or miss to identify the psychological problems (Sartorius *et al*, 1990). The other factors eg., characteristics

of health delivery system, heavy workload on the doctor and the setting in which the consultation has taken place (environment) and collusive phenomenon between patient and the doctor are also responsible for misidentification of psychological problems presented by the patients. Moreover, the earlier preoccupation of the doctor with overall rates for mental illness in primary health care greatly influences the doctor's ability to detect mental disorders. The doctor having more interests and concern for the patient, having greater experience in psychiatry and those who have more experience, were more likely to diagnose psychiatric disorders. These reported differences maybe related to cultural factors as well, as in certain culture depression has been reported less prevalent than in others (Marsella, 1980; Jelik, 1982). Goldberg (1990) in the article "Reasons for misdiagnosis" has shown that higher identification rates were related to various other causes. Moreover, up to half of the patients presenting with unexplained bodily symptoms have underlying anxiety or depressive disorders, which may pass unrecognised by the primary care physicians or general practitioners (Mayou, 1989; Heaton, 1992; Creed, 1992). Comorbidity of physical and mental disorders is frequent in primary care settings. Similarly, chronic conditions and painful conditions, which are usually accompanied by a depressive syndrome, usually go unnoticed (Kisely and Goldberg, 1993). In addition to the above mentioned factors, different methodologies, screening or diagnostic tools and operational criteria used may also be

responsible for these reported differences. Because this study does not examine the effect of these phenomena on overall rate of identification of depressive illness by primary care physicians, the author feels difficulty in explaining these differences precisely and would suggest to carry out a carefully designed study in the future to examine these phenomena in detail.

CONCLUSIONS AND RECOMMENDATION

It can thus be concluded that depressive illness in primary care setting in Pakistan, although most common, is usually present with unexplained physical complaints and often go unrecognised and get treatment of physical illness by primary care physicians. Therefore, it is recommended that efforts be made for the provision of continual in-service training programmes for the primary care physicians in mental health. Implementation of Community Mental Health Programme and improved teaching in undergraduate training should be aimed. Studies like these also help to develop indigenous training materials and would also help the health managers and planners in implementing effective programmes.

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