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Out-of-Pocket Expenditure for Depression Among Patients Attending Private Community Psychiatric Clinics in Pakistan

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Abstract

Background: Depression is a serious public health problem in Pakistan because of the disabilities it causes and the cost burden for the family. About 6% of the Pakistani population suffers from this illness and approximately 50% of those affected seek treatment. The health budget of the country is very low, average per capita income is US$ 430 and 35% of the population falls below the poverty line. It follows that depression puts a heavy economic burden on its sufferers.

Aim: The aim of this study was to estimate the economic burden on patients suffering from depression who were attending community psychiatry clinics.

Methods: This is a prevalence-based analysis of mental health care expenditure in a sample of 200 patients with an ICD-X diagnosis of depression. The patients attended four private community clinics, run on a once-a-week basis, with all care paid for by the patients out of pocket. A questionnaire was designed with a view to gathering information on out-of-pocket treatment and travel expenditures. The data was subjected to SPSS analysis.

Results: Among the subjects enrolled in the study (n=200), 85% were spending over Rs. 3,133 (US $ 51.40) per month as general expenses on health. Sixty-five percent of the subjects were earning below Rs. 5,000 (US $ 86.00). The majority used the public bus for transportation, costing the family Rs. 83 (US $ 1.40) per trip. Laboratory investigation costs were negligible as there is a lesser emphasis on lab tests in psychiatry.

Discussion: The high cost of depression keeps a vast majority of the population away from ongoing treatment, which contributes to the misery of the illness and the associated loss of productivity. The national budget is very low, the average income for the majority is far from satisfactory, and though partial support from charitable organizations, public sector hospitals, insurance cover and medical facilities is available, the majority of needs are unmet. It is essential to increase the health budget and enhance efforts toward preventive strategies. Further research on health economics is needed along with an appropriate government database.

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Background

Today nearly 450 million people suffer from mental and behavioral disorders. Mental health problems represent five of the ten leading causes of disability worldwide, amounting to 12% of the total global burden of disease.[1] The finding that mental disorders comprise a significant burden of disease in the developing world has been replicated many times. Surveys of community samples show that prevalence rates of mental disorders generally range from about 10% to 25%. Among samples of primary care patients the prevalence rates appear to be higher, tending towards 15-30%, with a number of surveys showing rates of 45% or more. A WHO international study found that about 25% of all attendees in primary care settings were suffering from some form of mental disorder, mostly depression and anxiety.[2] The WHO study also demonstrated that mental disorders were associated with substantial levels of disability,[3] a finding that agrees with Western research[3] and is supported by studies from India[4,5] and Africa.[6,7]

Mental and behavioral disorders have a large impact on individuals, families and communities. Individuals suffer the distressing symptoms of disorders. They also suffer because they are unable to participate in work and leisure activities, often as a result of discrimination. They worry about not being able to shoulder their responsibilities towards family and friends, and are fearful of being a burden on others. It is estimated that one in four families has at least one member currently suffering from a mental or behavioral disorder. These families are required not only to provide physical and emotional support, but to bear the negative impact of stigma and discrimination present in all parts of the world. The burden on families ranges from economic difficulties to emotional reactions to the illness, the stress of coping with disturbed behavior, the disruption of household routine and the restriction of social activities. Expenses for the treatment of mental illness often are borne by the family either because insurance is unavailable or because mental disorders are not covered.

In addition to the direct burden, lost opportunities have to be taken into account. Families in which one member is suffering from a mental disorder make a number of

adjustments and compromises that prevent other members of the family from achieving their full potential in work, social relationships and leisure. These are the human aspects of the burden of mental disorders, which are difficult to assess and quantify; they are nevertheless important. Families often have to set aside much of their time to look after the mentally ill relative, and suffer economic and social deprivation because he or she is not fully productive. There is also the constant fear that recurrence of the illness may cause sudden and unexpected disruption of the lives of family members. The impact of mental disorders on communities is large and manifold. There is the cost of providing care, the loss of productivity, and a certain risk of legal problems (including violence), although violence is caused far more often by individuals without mental illness.[8]

Depression is a common and costly mental health problem, seen frequently in general medical settings.[9] Major depressive disorder, diagnosed by structured psychiatric interviews and specific diagnostic criteria, is present in 5-13% of patients seen by primary care physicians.[10,11] The prevalence of this disease in the general population is about 3-5%.[12]

Depressive disorders, when they occur, are under-diagnosed and under-treated. Wells *et al.*[13] have shown that the inadequate diagnosis and treatment of depression are responsible for most of the costs of these disorders. Fifty to sixty percent of patients who present with significant depression are inaccurately diagnosed.[14] Recent data suggest that only one in three people with significant depression seeks specific treatment for this condition.[15] Most do not define themselves as depressed when they see a health care provider. This is in part because they feel hopeless, are unwilling to accept a diagnosis of depressive disorder, and are fearful of stigmatization and the loss of their job. Many physicians are also reluctant to diagnose patients as depressed.[16] Eisenberg,[17] in a recent review, noted that depression is frequently unrecognized by primary care physicians who most often focus their diagnosis and treatment efforts on the patient's accompanying physical symptoms – most commonly fatigue, weight loss, headache, gastrointestinal disorders, pain and sleep disturbances – rather than on the underlying depression. Reiger[15] noted that of the two thirds of depressed patients who did not specifically refer themselves for depression, 80% were seen for other physical complaints, and of these patients, only one in eight was correctly diagnosed by the primary care provider as suffering from a depressive illness. Significant depression often remains undiagnosed for years.[13]

Investigation[18] has shown that depression increases medical utilization for a variety of somatic complaints, the most common being weakness, lethargy, headaches, backaches, insomnia and gastrointestinal disorders. These complaints often produce unnecessary hospitalizations, physician visits, diagnostic tests, and prescriptions for analgesics, anxiolytics, sedatives and gastrointestinal medications. Affected individuals use emergency services three to four times more often and call about health problems and medication changes four to five times more often than their non-depressed counterparts. Untreated or inadequately treated depression increases non-psychiatric health care costs.

Increasingly, there is pressure to refer patients with psychiatric disorders to the lowest level of provider who can address their needs and to treat them in the least restrictive, most cost-sensitive environment. Multiple barriers, which often make no clinical sense, have been created to limit access to psychiatrists and psychiatric inpatient care. The uncoupling of admission and discharge criteria from scientific data, in an attempt to limit costs, places patients and clinicians at significant risk.

Keller *et al.*,[19] in a five-year prospective follow up study of 431 depressed patients, showed that these patients had a high rate of chronicity, with 12% not recovering by the end of five years. Most of the patients who recovered did so in the first six months of the study. These investigators showed that the severity of the patient's initial symptoms predicted recovery, with less impaired patients recovering sooner. They also noted that many of the patients who did not recover continued in a state of chronic dysthymia, and suggested that dysthymia is a significant predictor for the recurrence of major depression.

Fawcett[20] has shown that patients with major affective disorder and concurrent panic attacks are at high risk of suicide. These patients must have access to their physicians and cannot be locked out of stabilizing hospital treatment by arbitrary admission policies. Kupfer *et al.*,[21] in reviewing the National Institute of Mental Health (NIMH) depression study, commented on the chronic course of major depressive illnesses and noted that these conditions had both a high relapse and a high recurrence rate. They felt that the 16 week treatment paradigm for acute major depression is insufficient to maintain long-term recovery and that these patients require skillful, ongoing follow up and active pharmacological treatment.

The concept of ''social capital'' has been given increasing attention by researchers.[22] It is assumed that social capital has a significant role in the production of mental health, since in addition to the family, the wider community is also important to an individual's psychosocial development. Social capital seems to be relevant to the development of human capital measured primarily by health status and educational attainment, which enables an individual to be an economically well functioning and productive member of society.

In developing countries, more descriptive studies are needed on the ''informal'' sector of care (family and traditional healers) and on formal care in the sense of primary care, general hospitalization and specialty psychiatric providers[23]. Research should investigate the payment methods of different providers, the financial incentives inherent to the payment mechanisms and the economic value of the family's contribution to the care of the mentally ill.

Setting

In Pakistan there are a total of 300 psychiatrists. They work either in the private sector, i.e. in individual therapy or on the teaching staffs of private medical institutions, or in the public sector (independent units in general teaching hospitals).[24]

Table 1. Health and Nutrition Expenditure in Pakistan (in billions of Pakistan Rupees*)

	Public Sector Expenditure (Federal Plus Provincial)			Change (%)	As % of GNP
Fiscal Year	Development Expenditure	Current Expenditure	Total Expenditure		
1995-96	5,741	10,614	16,355	35.3	0.7
1996-97	6,485	11,857	18,342	12.2	0.5
1997-98	6,077	13,587	19,644	7.2	0.7
1998-99	5,492	15,316	20,808	5.8	0.9
1999-00	5,887	16,190	22,077	6.8	0.7
2000-01	5,944	18,337	24,281	9.9	0.7

Source: Government of Pakistan, Planning and Development Division, 2002.
* *1 US $ = 58 Pakistan Rupees.*

The private sector works on a fee-for-service basis or through voluntary health insurance. This sector is quite costly. The public sector offers free consultation services but does not provide free medication. Thus the cost of drugs is borne by the patients themselves. There is limited voluntary health insurance coverage, the state does not bear the responsibility for sponsored health care and the health budget is less than 1% of GNP, of which 0.4% is allocated for mental health[25] but this allocation is not implemented as such.

In 1999-2000, the overall expenditure for health services was 0.7% of GNP. This is slightly higher than in the 1996-97 budget when it was 0.5%[26] (**Table 1**). More than 35% of the population is living below the poverty line, so the severity of the predicament is clear. Pakistan has a population of over 140 million, of whom 6% suffer from depression.[24] Fifty percent of the sufferers are undergoing no treatment whatsoever, and for the remaining 50%, the cost burden is probably quite serious. The purpose of this study was to investigate and quantify that burden in a sample of patients suffering from depression attending four community psychiatric units.

Method

A questionnaire was designed to assess the direct cost burden of depression on patients. The questionnaire asked about patients' out-of-pocket expenditure for consultation, drugs, transportation and hospitalization, and about salary loss due to absence from work. As preliminary measures, the proposal for the study was presented to the local ethics committee for approval, and a consent form was prepared for the participants. Along with a mock interview, the questionnaire was tested for reliability and validity. The reliability/validity exercise was done with the help of two psychiatrists and two researchers expert in health economics issues.

The questionnaire and the interview were administered in four private community psychiatric clinics, run on a once-a-week basis and catering to a thickly populated area of Karachi Central. The services provided by these clinics are paid for entirely by the patients, out of pocket. Every fourth patient visiting the clinic on its day of operation was included in the study. The average number of patients seen at each clinic was 20. Five patients were therefore selected from each clinic, totaling 20 patients per week. The study continued for 10 weeks for an overall sample of 200. No patient refused to participate in the study. All had a confirmed ICD-10 diagnosis of depression. Children below the age of 18 and adults over 70 were excluded. The questionnaires were then subjected to SPSS analysis and the following results were obtained.

Results

The monthly health expenditures of the sample (n=200) are presented in **Table 2.** In this group, 85% of the subjects were spending between Rs 2,436 to 4,814 (US$ 42 to US$ 83), 9% were spending below Rs. 2,436 (US$ 42) and 6% were spending over Rs 4,814 (US$ 83) per month as general expenses.

The monthly income in this group is shown in **Table 3.** 65% of the subjects were earning below Rs. 5,000 (US$86), 10% were earning between Rs 5,000 (US$ 86) and Rs 10,000 (US$ 172), and 5% were earning above Rs 10,000 (US$ 172).

The various components of expenditure are presented in **Table 4**. According to the patients, outpatient consultation generally costs around US$ 7 per visit, and the medication around US$ 16 per month. Service fees were around US$ 15 per month. Laboratory investigation costs were minimal, amounting to approximately US$ 4 per month, as there is a lesser emphasis on lab tests in psychiatry. Hospitalization cost around Rs. 6,000 (US$ 103) per year. The majority used the public bus for transportation, costing the family Rs. 83 (US$ 1.40) per trip. Total expenditure over the

Table 2. Monthly Out-of-Pocket Expenditure for Depression in the Study Group in Pakistan Rupees (n = 200 Patients)

Monthly Expenditure	Frequency	Percent
Less than 2,500 (US$* 43)	18	9.00
2,500 to 5,000 (US$ 43 – 86)	170	85.00
More than 5,000 (US$ 86)	12	6.00
Total	200	100

*1 US $ = 58 Pakistan Rupees.

Table 3. Monthly Income in the Study Group in Pakistan Rupees (n = 200 patients)

Monthly Income	Frequency	Percent
Less than 5,000	130	65
5,000 to 10,000	20	10
More than 10,000	10	5
Not Specified	40	20
Total	200	100

Table 4. Breakdown of Out-of-Pocket Expenditure for Depression in the Study Group (n = 200 Patients)

Expenditure	Per Year Expenditure (*Pakistan Rupees*)	Per Month Expenditure (*Pakistan Rupees*)	Per Month Expenditure (US $)*
Outpatient consultation	4,800	400	7
Medication	12,000	1,000	16
Service fees	10,800	900	15
Laboratory	3,000	250	4
Hospitalization	6,000	500	8
Travel Costs	1,000	83	1.4
Total	37,600	3,133	51.4
Mean	800		
Standard Deviation	4,337.12		

*1 US $ = 58 Pakistani Rupees.

course of a year averaged Rs. 3,133 (US$ 51.4) per month.

The patients revealed little information about the money they had borrowed to meet their health care costs. This was a personal matter that the patients avoided discussing, consistently with socio-cultural norms in the community.

The number of days absent from the workplace due to illness ranged from 10 to 30 per year. It is interesting to note that no-one in the study group took zero days off. The amount of salary loss was related to the days of absenteeism, but figures varied widely, making exact information difficult to obtain which constitutes a major limitation of this study.

Discussion

Depression is a serious public health problem in Pakistan, affecting 6% of the population. There are general misconceptions about mental illness and so depression is also ill understood. Those who develop symptoms with sufficient severity resort to alternate practitioners or family doctors. The cost burden of this illness is far from the level of affordability.

The average annual income in Pakistan is around US$ 430. The health budget is less than 1%, of which 0.4% is

supposedly allocated to mental health care, but given that 35% of the population lives below the poverty line the expenditure is inappropriate. Only a small segment of society is privileged enough to afford the costliest treatment. There are limited facilities for insurance; some companies provide medical cover to employees, and the state does not take on an adequate health care burden. The earnings figure of Rs. 5,000/month is only true for select members of society. On their total income, many families cannot afford the cost of care, and government hospitals cater to large segments of the poor but fail to provide appropriate medicines free of charge so that patients have to buy them out of pocket.

The huge burden calculated in this study reflects only a portion of the cost. It also suggests the need to combat depression by raising awareness, improving socioeconomic conditions and providing financial and health care security to individuals. It is important to note that the type of patients generally varies from place to place in terms of their cultural, rural/urban and ethnic backgrounds. The patients in this study group lived in Karachi, a cosmopolitan city where the literacy rate is comparatively high and there is more awareness of mental health problems. The results might be different if the study were conducted in a rural area of Pakistan, especially from the viewpoint of income, expenditure and health seeking strategies. A nation-wide study is of chief importance. It is crucial for the government to consider bearing or sharing the economic burden of depression.

Limitations

- The costs reported in the study do not include those incurred by children, adolescents or the elderly.
- The costs associated with co-morbidity, somatization and undiagnosed depression were not considered, meaning that the costs are likely to be underestimated.
- The amount of salary loss due to absenteeism was undetermined.

Conclusion

This study demonstrates that the cost burden on individual patients exceeds the financial resources available to them. The country needs an effective strategy in order to address the problem.

Possibilities for the Improvement of Mental Health Care Provision and Financing in Pakistan

Adequate and sustained financing is one of the most critical factors in the realization of a viable mental health system. Resources should be allocated specifically to priority underserved and at-risk populations (e.g. individuals with severe mental disorders, children and adolescents, women, the elderly, specific regions and specific income strata). Prepayment systems (e.g., general taxation and social insurance) that include mental health services are one clear way to achieve these objectives. Accountability for existing mental health resources should be a critical component of planning and budgeting. Information systems for monitoring expenditures and services are crucial to ensure equity, effectiveness and efficiency. Funds should be shifted from institutions to community care, and there should be better integration of mental health and primary care. During health service transitions, special funding – sometimes called ''double funding'' or ''parallel funding'' – is needed to ensure that new services are firmly established before existing ones are closed. This approach is often useful during the transition from hospital-based to community-based services. The government, voluntary organizations and international agencies, along with individual pockets, could help improve the existing scenario.

References

1. Broadhead WE. Depressed, disability days, and days lost from work in a prospective epidemiologic survey. *JAMA* 1990; **264**:2524-2528.
2. Ustun TB, Sartorius N. *Mental illness in general health care: an international study*. Chichester: John Wiley & Sons, 1995.
3. Ormel J, VonKorff M, Ustun T, Pini S, Korten A, Oldehinkel T. Common mental disorders and disability across cultures: results from the WHO Collaborative Study on Psychological Problems in General Health Care. *JAMA* 1994; **272**: 1741-1748.
4. Chisholm D. Integration of mental health care in primary care: demonstration cost-outcome study in India and Pakistan. *Br J Psychiatry* 1998; **172**: 533-536.
5. Patel V, Pereira J, Coutinho L, Fernandes R. Poverty, psychological disorder and disability in primary care attenders in Goa, India. *Br J Psychiatry* 2001; **322**: 482-484.
6. Patel V, Abas M, Broadhead J, Tood C, Reeler AP. Depression in developing countries: lessons from Zimbabwe. *Br Med J* 2001; **322**: 482-484.
7. Patel V. Common mental disorders in primary care in Harare, Zimbabwe: associations and risk factors. *Br J Psychiatry* 1997; **171**: 60-64.
8. World Health Organisation. *The World Health Report-Mental Health: New Understanding, New Hope.* Geneva: WHO, 2001.
9. Katon W, Schulberg H. Epidemiology of depression in primary care. *Gen Hosp Psychiatry* 1992; **14**: 237-247.
10. Schulberg HC, Saul M, McClelland M, Ganguli M, Christy W, Frank R. Assessing depression in primary medical and psychiatric practices. *Arch Gen Psychiatry* 1985; **42**: 1164-1170.
11. Coyne JC, Fechner-Bates S, Schwenk TL. Prevalence, nature, and comorbidity of depressive disorders in primary care. *Gen Hosp Psychiatry* 1994; **16**: 267-276.
12. Myers JK. Six-month prevalence of psychiatric disorders in three communities. *Arch Gen Psychiatry* 1984; **41**: 959-970.
13. Wells H. Detection of depressive disorder for patients receiving prepaid or fee-for-service care. *JAMA* 1989; **262**: 3298-3302.
14. Greenberg PE, Stiglin LE, Finkelstein SN, Berndt ER. The economic burden of depression in 1990. *J Clin Psychiatry* 1993; **54**: 405-418.
15. Regier DA: The de facto US mental and addictive disorders service system. epidemiologic catchments area prospective 1-year prevalence rates of disorders and services. *Arch Gen Psychiatry* 1993; **50**: 85-94.
16. US Department of Health and Human Services. *Depression Guideline Panel. Depression in Primary Care: Vol. l. Detection and Diagnosis.* Clinical Practice GuidelineAgency for Health Care Policy and Research Publication 93-0550. Number 5. Rockville, Maryland, 1993, 1-65.
17. Eisenberg L. Treating depression and anxiety in primary care. *New Eng J Med* 1992; **326**: 1080-1084.

18. Verbosky LA, Franco K, Zrull JP. The relationship between depression and length of stay in the general hospital patients. *J Clin Psychiatry* 1993; **54**: 117-181.
19. Keller MB. Time to recovery, chronicity and levels of psychopathology in major depression. A 5-year prospective follow-up of 431 subjects. *Arch Gen Psychiatry* 1992; **49**: 809-816.
20. Fawcett J. Clinical predictors of suicide in patients with major affective disorders: a controlled prospective study. *Am J Psychiatry* 1987; **144**: 34-40.
21. Kupfer DJ. Five-year outcome for maintenance therapies in recurrent depression. *Arch Gen Psychiatry* 1992; **49**: 769-773.
22. Kawachi I, Kenneddy BP, Glass R. Social capital & self rated health: a contextual analysis, *Am J Public Health* 1989; **89**: 1187-1193.
23. Desjarlais R, Eisenberg L, Good B, Kleinman A. *World mental health. problems and priorities in low-income countries*. New York: Oxford University Press, 1996.
24. Gadit A, Khalid N. *State of Mental Health in Pakistan-Education, Service and Research*. Karachi: Corporate Printers, 2002.
25. World Health Organization. *Atlas-country profiles on mental health resources*. Geneve: World Health Organization, 2001.
26. Government of Pakistan. *Economic Survey 2000-2001*. Economic Adviser's Wing, Finance Division, Islamabad, 2001.