The Economic and Social Burden of Depression

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Depressive disorders are a major public health problem. They occur frequently and produce severe suffering for those affected and for their families. They are ubiquitous and appear at all ages. The consequences of depressive disorders in terms of excessive mortality, disability, and secondary morbidity are grave. There are indications that the frequency of depressive disorders will increase in the years to come, for a variety of reasons, including demographic changes, extended life expectancy of people suffering from chronic physical disorders, and iatrogenic causes. The essential criterion for designating a condition as a major public health problem—that there should be an effective intervention that will diminish or eliminate the problem—has now also been met. Recent years have seen the development of a variety of new treatments that can be applied even in situations where highly specialized mental health staff are scarce. These developments make training in the use of new treatment methods of proven value and their wide application a public health priority and an ethical obligation. The presentation will discuss these issues on the basis of accumulated evidence and experience.

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In order to be considered of public health importance, a condition must meet certain criteria. These include frequency, severity (in terms of suffering and incapacity), temporal trends (stability or growth), and the existence of effective interventions that are acceptable to the patient and to the community.[1] Depressive disorders occur frequently, are ubiquitous, and appear at all ages. They are associated with severe suffering for the patients and their families, and their consequences in terms of excessive mortality, disability, and secondary morbidity are grave. There are also indications that the frequency of depressive disorders will increase in the years to come for a variety of reasons, including demographic changes, extended life expectancy among those suffering from chronic physical disorders, and iatrogenic causes. Finally, the essential criterion for designating a condition as a public health problem—that there should be an effective intervention that will diminish or eliminate the problem—has now been met. Recent years have seen the development of a variety of new effective treatments. Training in the use of these new treatment methods is vitally important, and their wide application is a public health priority. This review will consider each of these 4 criteria—frequency, severity, treatment options, and trends of prevalence—on the basis of accumulated evidence and experience worldwide.

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FREQUENCY OF DEPRESSION

Depressive disorders have a prevalence of approximately 3% in the general population. This increases to around 10% among people who contact their general health services for any reason. Table 1 shows the results of a recent study involving more than 25,000 people who attended general health care services in 15 different centers worldwide. The proportion of patients who were actually suffering from depressive disorders when they contacted the general health service was high (mean value of 10.4%). However, there was a wide span, ranging from approximately 30% in Santiago, Chile, to as low as 2.6% in Japan.[2] This variation seems to be in contrast to epidemiologic studies showing that the frequency of depressive disorders is similar throughout the world. It should, however, be remembered that the proportion of those with a disorder who contact health services depends on many factors, including the perception of the service by the population and the availability of alternative services.

The prevalence of depressive disorders is known to increase considerably among those who have chronic physical illnesses. Thus, at least 20% of patients with chronic conditions, such as cardiovascular disease[3] or diabetes,[4] suffer from depressive disorders, although only a very small proportion are ever recognized as such.

These figures refer to the frequency of depressive disorders defined by the *International Classification of Diseases* (ICD-10) and the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) criteria. There are,

however, depressive disorders that do not fully satisfy these criteria (i.e., "subthreshold" disorders). The prevalence of these subthreshold disorders in general health care is estimated to be approximately 3% to 9%.[5] The consequences of these disorders (e.g., in terms of suicidal tendencies and disability) can be grave, and public health program provisions should be made to provide help to people with these disorders. This is of particular significance, for example, in the elderly in whom epidemiologic studies have shown that the prevalence of depressive disorders, as defined in DSM-IV or ICD-10, is lower than in the general population,[6] whereas clinicians know from general experience that depressive disorders benefiting from antidepressant treatment are common in this population.

SEVERITY OF DEPRESSION AND ITS CONSEQUENCES

The second criterion for public health importance is severity. This can be measured by indirect means, e.g., by the frequency of suicide or of disruption in the patient's social environment, or by direct means, such as the cost of treatment for depressive disorders. The suffering associated with depressive disorders can also be measured, for example, in terms of the subjective reports of the patient or by observations of the patient's behavior. Finally, it is also possible to measure to what extent depression that accompanies and complicates physical illness extends the duration and worsens the prognosis of the illness.

Suicide is estimated to account for approximately 0.9% of all deaths. Around 1000 people kill themselves each day worldwide and more than 30,000 kill themselves each year in the United States alone. To put this in perspective, the total number of deaths from suicide is the same as the total number of deaths from malaria worldwide.

Depression is probably the most important risk factor for suicide; two thirds of all suicides are committed by people suffering from depressive disorders. Around 21% of patients with recurrent depressive disorders will attempt suicide and, unfortunately, many will die. Other forms of depressive disorder, such as dysthymia, are associated with only a slightly lower risk of attempted suicide (18%), whereas approximately 11% of patients with mixed anxiety depression disorder, a condition in which the depressive symptoms are not sufficiently distinct to rate a specific diagnosis of depression, will also attempt suicide.

Depressive disorders cause more disability than most chronic physical disorders, with the possible exception of myocardial infarction. Thus, more patients with depression experience disability, and that disability is more severe than that caused, for example, by diabetes or osteoarthritis. The World Health Organization (WHO) Collaborative Study found that primary care attendees with depressive disorder (ICD-10) had experienced a mean of 8 days of disability in the previous month compared with only 2 days in those without a psychiatric illness.[7] Similarly, the DEPRES II study, which involved 1884 patients who had suffered from depression and who had consulted a health care professional about their symptoms in the previous 6 months, found that a mean of 30 days of normal activity and 20 days of paid employment had been lost due to depression during those 6 months.[8] The aspects of normal activity that were affected included the ability to sleep naturally, marriage and personal relationships, relationships with own children, general health, the ability to work, the ability to maintain friendships, optimism about the future, and the ability to lead a normal life.

Table 1. Prevalence of Depressive Disorders (ICD-10) Among People Contacting General Health Services in 15 Centers Worldwide[a]

Place	Prevalence (%)
Santiago, Chile	29.5
Manchester, United Kingdom	16.9
Groningen, The Netherlands	15.9
Rio, Brazil	15.8
Paris, France	13.7
Ankara, Turkey	11.6
Mainz, Germany	11.2
Bangalore, India	9.1
Athens, Greece	6.4
Seattle, United States	6.3
Berlin, Germany	6.1
Verona, Italy	4.7
Ibadan, Nigeria	4.2
Shanghai, China	4.0
Nagasaki, Japan	2.6
Mean worldwide prevalence	**10.4**

[a]Data from Murray and Lopez.[2]

The WHO and the World Bank have calculated how many years of life will be lost due to disability related to depression.[9] Table 2 shows an estimate per year for the established market economies (i.e., Europe and the United States), Africa, and Latin America, in each of which between 1 and 1.5 million years are lost per year due to depressive illness.[9] Taking the world as a whole, the disability associated with depressive illness results in the loss of almost 13 million years of life each year. This can easily be translated in terms of economic loss and human loss and suffering.

Comorbidity

It is also important to remember that, as well as having a high comorbidity with other psychiatric disorders, depressive disorders frequently occur comorbidly with physical conditions. Evidence suggests that many depressed patients have a concomitant physical condition such as arthritis, hypertension, backache, diabetes, and heart problems.[10] This results in a worse prognosis for both the depression and the physical illness. Unfortunately, both the physician and the patient frequently prefer to focus on treating the physical condition while, in the meantime, the depressive disorder is prolonging and complicating the

Table 2. Loss of Years of Life Due to Depressive Illness (1990)[a]

Area	Number of Disability-Adjusted Life Years Lost Per Year
Established market economies	1,428,000
Africa	1,122,000
Latin America	1,222,000
Total worldwide	**12,697,000**

[a]Data from Murray et al.[9]

course of the physical illness and is continuing to worsen the quality of life of the patient.

Impact on Family Life

There is one other important factor that is being increasingly recognized: the tremendous impact that depression, particularly in women in whom chronic depression is quite common, will have on the life of the family. The family in which one or more members have depression will suffer in a variety of ways not only because of the disease, but also because of disharmony in marriage, increased likelihood of divorce, and the disruption of the family's other social roles, e.g., the transmission of culture, rearing of children, and support to family members in trouble.

TREATMENT OPTIONS

The third criterion of public health importance is the existence of effective interventions that are acceptable to the patient and to the community. Great strides have been made in recent years, so that not only does our knowledge of risk factors for depressive disorders allow a limitation of their impact, but we can also provide psychotherapeutic and psychopharmacologic treatments that are effective in a significant proportion of cases. The fact that currently existing treatments are both acceptable to the patient and affordable makes it imperative to use them and increases the urgency for public health intervention on a major scale to counter depression.

Unfortunately, despite the fact that effective and acceptable treatments are available, very few patients actually receive these treatments.[11–14] First, at least half of all those who are depressed do not seek any medical help. In many societies, suffering in silence may be considered normal or patients may be embarrassed to discuss their symptoms with a physician. Sometimes the population is not aware that effective treatment exists. Second, of those who do contact the health services, half remain unrecognized. This problem is not just confined to countries where training in psychiatry is deficient, but is true throughout the world. Third, even among those who are recognized as suffering from a depressive disorder, half are not given any treatment but are simply placed on a "waiting and watching" schedule. Finally, less than half of those who are recognized and given drug treatment receive antidepressant medication. The remainder receive a variety of prescriptions, most frequently tranquilizers, tonics, and vitamins. Subtherapeutic dosing of antidepressants is also a problem, especially with the tricyclic antidepressants; evidence suggests that more than half the prescriptions for this class of drug are for subtherapeutic doses.

There are a number of reasons for this situation. The main one is probably ignorance, on the part of both the physician and the patient who fail to recognize the condition. Another very important reason in many countries is poverty; this is often not simply because of a lack of finances to buy medication or see a physician but also, in some cases, because patients cannot afford to pay for transport to the physician or to take time off work and lose earnings. Stigma is another reason for low treatment rates, with people feeling uncomfortable or embarrassed about going to a psychiatrist. The organization of health services also contributes to this situation: most psychiatrists and mental health services are situated in towns, leaving patients in rural areas far away from such services. Finally, if antidepressant treatment fails due, for example, to subtherapeutic dosing, then the patient is unlikely to return for further treatment and may discourage others suffering from a similar condition from seeking treatment.

TEMPORAL TRENDS

The fourth criterion for public health importance is the temporal stability or growth of a condition. In the instance of depression, evidence suggests that the future will see a significant increase in the number of people with depressive disorders. Demographic changes, for example, will mean that more people survive to an age of higher risk for depression. Moreover, people who have depression or chronic medical conditions today have a heightened life expectancy, and therefore the number of people at high risk is increased.

Other factors include iatrogeny; for example, there are a large number of women who take hormonal contraceptives that may be increasing their risk for depression. There is some evidence that the incidence of depressive disorders is on the increase, which can be reflected in recent reports that depression is appearing at an earlier age than previously, which is usually a sign of increasing frequency of a disease. It is uncertain whether the increasing number of stressful situations and other risk factors will result in a higher incidence of depression but, in all likelihood, it might. In addition, a significant proportion of other mental disorders (e.g., certain somatoform disorders) are now being recognized as depressive disorders and benefit from antidepressant treatment.

CONCLUSION

In summary, depressive disorders satisfy all the criteria necessary to consider a condition as being of major public

health importance: they are frequent, they cause significant suffering and incapacity, effective and acceptable interventions are available to treat them, and their prevalence is likely to rise.

It is therefore essential that public health authorities take resolute action now to deal with this urgent problem without delay. Among the priorities for public health action should be the conveyance of knowledge about depression to everyone concerned: the patients, their family, primary care workers, psychiatrists, and decision makers. Access to treatment should be improved wherever possible by placing it in primary care and by educating those who are closest to the patient. Provisions should also be made to reduce the stigma related to the illness and to cope with disability produced by depressive disorders (e.g., through appropriate legislation). Assistance to families to help them bear the burden of the disease should also be among the measures given priority. Such assistance will not only help the patient, but also make it possible for the family as a whole to continue its functions, which are of such importance for society as a whole.

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