Depression: counting the costs*

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The Merck Essay Prize was inaugurated in 1993. All trainee psychiatrists (senior house officers, registrars or senior registrars) in the United Kingdom and Republic of Ireland were eligible to submit an essay on the topic: 'Depression: Counting the Costs'. The winning essay by Dr Peter Haddad is printed here. The runners-up in joint second place were Dr J. Bray, Lecturer, University of Leicester (Leicester General Hospital) and Dr R. Bullock, Senior Registrar, St Mary Abbots Hospital, London.

Depressive illness is the commonest form of mental disorder in the community. Its effects are far-reaching and include psychological suffering and social disruption for affected individuals and their families, increased mortality, and direct and indirect financial costs for society. Only about half of all cases of depression are recognised by doctors and not all of these receive effective treatment. The costs of depression could be reduced if detection and treatment were improved. Addressing this is a major challenge for psychiatric services.

Depressive illness is the commonest form of mental disorder in the community and in general and psychiatric practice. Precise estimates of prevalence depend on the diagnostic criteria used and the population studied. In the community the point prevalence of DSM-III major depressive episode is in the range of 2–4% (Weissman *et al*, 1988). With regard to life-time risks, Hagnell *et al* (1982) suggested that every second woman and every fourth man will experience an episode of depression, of such a degree that medical care is indicated, at least once in their lives. The costs of depressive illness can be considered in terms of who pays them and the form they take.

Costs to the individual

Psychological suffering

By its very nature, depression causes mental suffering. The individual becomes morbidly sad, loses the ability to enjoy life and to appreciate things that previously gave pleasure. Depressive cognitions result in everything being seen in a negative light. The individual may become preoccupied with unreasonable guilt and self-blame. Anxiety, irritability and panic attacks are common. Memory and decision-making often become impaired. In severe depression, hallucinations and delusions can appear and typically these are extremely distressing. Hallucinatory voices often repeatedly criticise the sufferer or urge him to commit suicide. The content of delusions usually relates to poverty, guilt, hypochondriasis or nihilism.

Sufferers may find that relatives and friends do not appreciate their distress and this can exacerbate their sense of isolation. Matters are not helped by the fact that lay people often use the term 'depression' to describe a normal emotional state, an alternative to 'feeling down' or 'fed up'. As a result the sufferer may be given useless advice along the lines of 'pull yourself together'.

Somatic discomfort

In depressive illness, biological functions can become disturbed with the individual developing insomnia, restlessness, lethargy, impotence, anorexia, weight loss and vague aches and pains. These symptoms can be additionally distressing if the individual wrongly attributes them to physical ill health, something that is not unusual given the cognitive distortions of depression.

Social consequences

Depression can lead to impaired social functioning in normal roles (e.g. employment, leisure activities, interpersonal relationships and sexuality) and activities of daily living (e.g. feeding, cooking, dressing, bathing, continence). For example, interpersonal relationships may become characterised by poor communication, increased dependency and increased interpersonal friction, while employment may be characterised by decreased job satisfaction, decreased efficiency and increased absence through sickness. The net result is a further reduction in quality of life for the depressed individual.

There are several ways in which depression leads to functional impairment. The most obvious is the direct effect of the debilitating psychic

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and somatic symptoms of depression. Other pathways include depression reducing an individual's motivation to cooperate with rehabilitation; pharmacological treatment of depression producing physical side effects; depression increasing the likelihood of events that can precipitate disability (e.g. accidents or the development of alcohol misuse); and the maladaptive effect of depression on chronic medical illness.

The last pathway is particularly important as depression and chronic illness frequently coexist. In such cases depression can hinder rehabilitation from the medical illness. Several mechanisms explain this effect. First, depression often leads to amplification of somatic symptoms of the medical illness leading to additional functional disability. Second, depression can decrease patients' motivation to comply with treatment for their medical illness. Finally, it has been suggested that depression may exacerbate medical conditions by direct physiological mechanisms.

Inability to cope with work may lead to temporary or permanent sick leave with consequent financial hardship. A depressive illness occurring at a key time in an individual's life, for example while studying at university or at a pivotal point in a relationship or a career, may result in lost personal opportunities that are impossible to regain. Unfortunately, even after recovery, depressed patients may have their social opportunities limited due to the prejudice of others.

Increased rate of accidents and self-harm

Deliberate self-harm is strongly associated with depressive illness. Among women deliberate self-harm is the most frequent reason for admission to a medical ward and among men it is second only to ischaemic heart disease. Depressive disorders are an important contributor to accidents at home, at work and on the roads. This relationship remains after allowing for cases of deliberate self-harm and suicide that have been misdiagnosed as accidents, i.e. there is an increase in genuine accidents which reflects the impaired performance of the depressed individual.

Increased rate of alcohol misuse

Some depressed individuals drink alcohol excessively in an attempt to lift their mood, control anxiety or cope with depressive thoughts. This only compounds the problems that they face – in its own right alcohol misuse results in psychological, physical and social harm.

Increased mortality

Depressive illness is associated with increased mortality. This is due primarily to suicide, but also to an increased death rate from accidents, self-neglect and 'natural causes'.

Approximately 50% of all suicides are committed by people suffering from depression (Rhimer *et al*, 1990). In the United Kingdom the official suicide rate (approximately 10 per 100,000 per year) is in the lower range of those reported in Western countries, but still accounts for 1% of all deaths. Official statistics underestimate true suicide rates as they depend on strict legal criteria, for example in England and Wales the Registrar-General's estimates depend on coroners' verdicts. True suicide rates are probably between 30% and 100% higher than official figures. Of people who have suffered from a severe depressive disorder at any time between 11% and 17% will eventually commit suicide (Pitts & Winokur, 1964).

Suicide apart, depression can lead to death by way of psychomotor retardation and self-neglect. Individuals may become dehydrated, malnourished and increasingly susceptible to intercurrent infections particularly bronchopneumonia. This is especially true for the elderly.

Several studies have shown that depression is linked to increased mortality from medical conditions including diseases of the nervous, respiratory and circulatory systems. The association is not fully understood, may not necessarily be causal, but psychosomatic theories linking depression to the causation and aggravation of physical illness are one possibility.

Costs to the family

Psychological distress

Witnessing a family member suffering from depression is upsetting for relatives. Their distress will be particularly marked if they inappropriately blame themselves for causing the illness. Such thoughts are not uncommon; the often unclear nature of psychiatric aetiology can act as a vacuum into which relatives project their own non-scientific theories of causation. A further source of stress for family members is the patient's impaired social functioning. In a study assessing the impact of depression on patients' significant others, Coyne *et al* (1987) reported that the significant others experienced fatigue, hopelessness, lack of interest in social activities and feeling burdened by their depressed relative. Forty per cent reported distress that merited psychological intervention.

Few studies have assessed the effect of suicide on surviving family members. Despite this, bereavement following suicide is widely regarded as more devastating than that following other kinds of loss. In terms of factors believed to influence the outcome of grief, those bereaved by suicide are a vulnerable population; the death is unexpected, it is likely to have been preceded by

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a stressful period due to mental illness, and cultural taboos on suicide are likely to inhibit expressions of grief, lead to additional stresses for the bereaved and may reduce the available social support from relatives, neighbours and the community. As well as causing depression, bereavement by suicide may predispose relatives to recurrent behavioural and relationship disturbances, although much depends on the individual circumstances.

Social consequences

A patient with a depressive disorder may be unable to work, resulting in financial hardship for the family. Financial difficulties will be exacerbated if the patient's partner has to take time off work to act as an informal carer. Role changes within the home may result in parents spending less time with their children, who in turn may have to take increased responsibility for household tasks. Death of a parent by suicide means that the family structure and roles within it are permanently altered. Sometimes a couple will be unable to adapt to the pressures that a depressive illness places on their relationship and may separate, leaving children to be brought up by a single parent. Relatives also have to contend with the stigma that surrounds mental illness.

Forensic aspects

Occasionally a depressive illness appears to be a causal factor in a crime. A minority of women shop-lifters suffer from depression. Although the crime itself may not be serious, the negative publicity of a court case may have far-reaching social repercussions for the individual and his or her family. In a minority of cases of wife-battering, the perpetrator is violent only when suffering from depression.

Occasionally depressive illness leads to homicide. In these cases the depressed person usually has delusions, for example that the world is too dreadful a place to live in; he may then kill his spouse or children to save them from the torment of life. Altruistic killing is often followed by the killer committing suicide and is well recognised in association with post natal depression. Occasionally a person with a depressive illness kills someone as a result of a persecutory delusion, for example that the victim is responsible for the patient's misery. Although rare, such cases are a tragedy; not only is a life lost, but on recovery the mentally ill individual must come to terms with his offence and the social and legal consequences.

Long-term psychological effect on children

Childhood deprivation of maternal affection has been suggested to predispose to difficulties in forming relationships in adult life as well as to psychiatric disorders including neurosis, depression, and alcoholism. If correct, this hypothesis represents a mechanism by which a depressive illness in a mother could exert a long-term effect on the psychological wellbeing of her children. The illness could deprive the children of maternal affection in several ways; it could lead to marital separation, suicide, long-term in-patient care or, if chronic, the symptoms themselves could prevent the mother forming a satisfactory emotional relationship with her children.

Costs to society

In calculating the economic cost of an illness to society, one must consider both the cost of treatment (direct costs) and the cost due to lost productivity of people who are ill or die of the illness (indirect costs). Examples of direct costs include expenditure on staff wages (doctors, nurses, occupational therapists etc), investigations, drugs and the running costs of hospitals and other medical centres. In depression indirect costs are accrued by sick leave leading to time off work; suicide, equivalent to the permanent loss of an individual from the work force; the impaired performance of depressed individuals at work, reasons include decreased job satisfaction, poor memory and concentration and impaired interpersonal relationships in the work place; and relatives taking time off work to act as informal carers.

A full assessment of the economic cost of depression should also take account of somatisation – a common presentation of depression in general practice and hospitals. Failure to recognise such patients results in unnecessary consultations, investigations and treatment. Apart from the financial cost (Shaw & Creed, 1991), patients are at risk of medical complications from inappropriate interventions while their depression remains untreated.

Stoudemire *et al* (1986) produced the following estimates for the annual cost of depression in the United States: (a) total treatment costs – $2.1 billion; (b) lost productivity through sick leave – $10.0 billion; and (c) lost productivity through suicide – $4.2 billion. These costs sum to a total of $16.3 billion per year. These estimates are based primarily on economic figures for 1980 and so ignore inflation. Furthermore, like most similar analyses, this study provides a minimum estimate of financial costs due to conservative statistical and methodological assumptions. For example, the indirect costs consider only lost productivity due to sick leave and suicide,

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ignoring the impaired performance of depressed individuals at work.

Conclusions and ways forward

Not all depressive episodes cause the full range of costs discussed here; many are relatively mild and self limiting. Nevertheless, at a public health level, depression is a major problem causing incalculable suffering to patients and their families and placing an immense economic burden on society. To a large extent these costs are avoidable; effective treatments exist for depression, yet only about half of all sufferers receive help (Goldberg & Huxley, 1980). The key to increasing this proportion, and thereby reducing costs, is to educate the public and health care professionals about depression.

Some depressed individuals do not seek medical help because they fail to appreciate that they are ill or because the stigma of mental illness prevents them. Others visit their general practitioner, but emphasise somatic symptoms rather than their mood, leading to the diagnosis being missed. Common misconceptions, particularly that antidepressant are addictive, contribute to poor compliance with treatment – a major cause of initial treatment failure as well as relapse and recurrence. Increasing public awareness about the nature, extent and treatability of depression would counter these problems.

Even if a patient attends a doctor, depression is often misdiagnosed (Goldberg & Huxley, 1980) or inadequately treated. This is particularly relevant to general practitioners (GPs) who treat the majority of cases of depression. Improving their skills could reduce morbidity and mortality and evidence supports this. An educational programme for GPs on the Island of Gotland (Rutz *et al*, 1992) resulted in more appropriate prescribing of psychotropic drugs, a reduction in the frequency of sick leave and in-patient care for depression, and a fall in the suicide rate. A cost-benefit analysis assessing direct and indirect costs of depression v. the costs of the programme showed a saving of about $26 million over the first three years. Furthermore, these statistics fail to capture savings which cannot be measured in monetary terms, for example less psychological distress to the sufferer and his family.

In 1992 the Defeat Depression campaign was launched by the Royal College of Psychiatrists in association with the Royal College of General Practitioners. It aims to reduce the costs of depression by employing the strategies discussed here, i.e. educating the public, doctors and other health care professionals. The potential benefits are enormous.

Other avenues for reducing the impact of depression include ensuring that comprehensive services are available for treatment at both the hospital and community level, and continuing research into the development of more effective pharmacological and psychosocial forms of treatments.

References

COYNE, J.C., KESSLER, R.C., TAL, M. *et al* (1987) Living with a depressed person. *Journal of Consulting and Clinical Psychology*, **55**, 347–352.

GOLDBERG, D. & HUXLEY, P. (1980) *Mental Illness in the Community: the pathway to psychiatric care*. London: Tavistock.

HAGNELL, O., LANKE, J., RORSMAN, B. & OJESLO, L. (1982) Are we entering an age of melancholy? Depressive illnesses in a prospective epidemiological study over 25 years, the Lundby study, Sweden. *Psychological Medicine*, **12**, 279–285.

PITTS, F.N. & WINOKUN, G. (1964) Affective disorders III: diagnostic correlates and incidence of suicide. *Journal of Nervous and Mental Disease*, **139**, 176–181.

RHIMER, Z., BARSI, J., VEG, K. & KATONA, C.L.E. (1990) Suicide rates in Hungary correlate negatively with reported rates of depression. *Journal of Affective Disorders*, **20**, 87–91.

RUTZ, W., CARLSSON, P., VON KNORRING, L. & WALINDER, J. (1992) Cost-benefit analysis of an educational program for general practitioners by the Swedish Committee for the Prevention and Treatment of Depression. *Acta Psychiatrica Scandinavica*, **85**, 457–464.

SHAW, J. & CREED, F. (1991) The cost of somatisation. *Journal of Psychosomatic Research*, **35**, 307–312.

STOUDEMIRE, A., FRANK, R., HEDEMARK, N., KAMLET, M. & BALZER, D. (1986) The economic burden of depression. *General Hospital Psychiatry*, **8**, 387–394.

WEISSMAN, M.M., LEAF, P.J., TISCHLER, G.L., BLAZER, D.G. *et al* (1988) Affective disorders in five United States communities. *Psychological Medicine*, **18**, 141–153.

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