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Editorial

The World Bank *World Development Report 1993: Investing in Health*

Reveals the burden of common mental disorders, but ignores its implications

ILONA BLUE and TRUDY HARPHAM

The annual *World Development Report* which the World Bank produces has for the first time focused upon health issues. Central to its 1993 report *Investing in Health* was an analysis of the "global burden of disease", addressing both mortality and morbidity. Previous attempts to prioritise health problems on a worldwide scale have focused on mortality, so common mental disorders have not appeared to be significant. The method of measuring the burden of disease described here has highlighted neuropsychiatric disorders, particularly depression, which accounts for around 30% of neuropsychiatric disorders. Neuropsychiatric diseases account for 5.7% of the total burden of disease for women in the developing world, and rank fifth in this respect. In the rest of the world, they account for 13.3% of the total burden of disease for women, and rank third. Prioritising health interventions is crucial given the scarce resources available. Sufficient evidence now exists to warrant greater emphasis on common mental disorders.

Basic themes

Each year the World Bank's influential *World Development Report* (WDR) takes a particular theme pertinent to development issues. Many people know of the report through its *World Development Indicators* annex, which provides up-to-date information on, for example, gross domestic product, infant mortality rates, balance of payments, and so on, for low and middle income countries.

The *World Development Report 1993: Investing in Health* (World Bank, 1993) has received considerable attention from health professionals. The main points that have been extracted from the report are:

(a) an emphasis on the economic aspects of health
(b) the suggestion to look beyond the health sector for the answers to many of the problems of disease
(c) the promotion of disability-adjusted life years and the 'global burden of disease' (GBD) as a means for quantifying the impact different diseases have on different age groups in different countries
(d) the identification of certain challenges for the future: HIV, malaria, child mortality, fertility rates, and ageing populations
(e) the recommendation to create a cost-effective national public health package and a national clinical services package.

How mental health fits in

Since mental health in general, and the common mental disorders of depression and anxiety in particular, are considered by many to be of a low priority, it was not expected that common mental disorders would receive a high profile in this report. A thorough search through the report reveals little direct mention of the common mental disorders in the text. However, their importance in terms of the burden of disease they cause is made plain in the tables contained within the appendices, and is commented on in the follow-up papers (Murray, 1994; Murray & Lopez, 1994; Murray *et al*, 1994).

There are several reasons why depression and anxiety have not been given priority in the text of the report. One is the general stigma associated with mental problems, particularly in the developing world where there are superstitions associated with mental problems.

Unfortunately there has been a lack of research into the economics of psychiatry. Until there is sufficient information on what cost-effective interventions are available for the improved detection and treatment of common mental problems, it is hard to envisage a time when they will be given priority in national health services. Mental disorders require the knowledge and skills of a variety of professionals, including psychiatrists, social workers, health workers, anthropologists and epidemiologists. The multidisciplinary nature of mental health creates a field that is both interesting and full of debate, but hard to coordinate.

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The problem of somatisation ensures that many common mental disorders go undetected and result in repeat appointments dealing with superficial physical symptoms, without consideration of the psychological aspects of the patient's problem. Not only does this result in considerable misallocation of resources, but it obscures the true levels of mental disorders within a community.

Finally, depression and anxiety cause little direct mortality (other than through suicide), although the morbidity attributable to mental problems is considerable. The calculations of the GBD in the WDR represent the first attempt to quantify the morbidity caused by diseases in different age groups in various regions of the world.

Before we consider the implications of the positioning of neuropsychiatric diseases in the league table of diseases, we present a brief outline of the method employed in the report in the calculation of the GBD.

Global burden of disease

The GBD combines the loss of healthy life from premature death in 1990 with the loss of healthy life from disability. It is measured in units of disability-adjusted life years (DALYs). Several general concepts are important in the calculation of DALYs. These are: (a) that any health outcome representing a loss of welfare should be included in an indicator of health status; (b) that the individual's characteristics considered in the calculations should be restricted to age and sex; (c) that like health outcomes should be treated as like; and (d) that time is the unit of measure (Murray, 1994).

There was much discussion about the various choices before the calculations were entered into. Since the publication of the 1993 WDR, sensitivity analyses have been carried out, and in summary it was stated that "... we are reassured that specific value choices matter much less than the epidemiological details for any particular condition" (Murray *et al*, 1994).

The methods employed are not ideal. Much of the data used in the calculation of the GBD are of poor quality, resulting in even poorer quality aggregate data, or else are based on the estimates of expert committees. However, the construction of the tables on the GBD does provide a starting point for discussion and a basis from which improvements can be made. Further papers by the authors of the 1993 WDR (Murray, 1994; Murray & Lopez, 1994; Murray *et al*, 1994) emphasise that an informed estimate, even if based on many assumptions, leading to explicit valuation, is preferable to no formal estimate (and ultimately implicit valuation forming the basis of decision-making).

Important features of the analysis

The data in the tables of the WDR are presented in such a way that the only valid comparisons to be made of the absolute numbers are between different health events and not between different geographical areas. The only DALY rates considered are for each region by age and sex, not for individual diseases. Since depression and anxiety are mainly a problem in adults, and women suffer from these disorders at approximately double the rate of men, only one of the tables will be looked at in detail. Rather than contemplate the absolute numbers used in the tables, it would seem more appropriate to analyse the proportion of the burden of disease that can be attributed to both neuropsychiatric diseases and depressive disorders.

Table 1 demonstrates that, within the non-communicable diseases in women in the developing world, neuropsychiatric diseases, at 15% of the total, create the second largest burden of disease, after cardiovascular diseases. The corresponding figure for women in the rest of the world (although it is the third largest burden of disease for non-communicable diseases after cardiovascular and malignant neoplasms) is close to 17%. For the world as a whole the figure is 15.3%.

Table 2 shows the breakdown of neuropsychiatric diseases in women so that the importance of depressive disorders can be established. This reveals that depressive disorders account for between 24% (developed world) and 31% (developing world) of the total burden of disease in women created by neuropsychiatric diseases. This implies that depressive disorders are responsible for almost 2% of the overall burden of disease in women of the developing world, and over 3% in the rest of the world.

From the distribution of the disease burden in the young adult (15–44 years) population in developing countries, considering the ten main causes, depressive disorders score very highly indeed, falling fifth for women (after maternal causes, sexually transmitted diseases, tuberculosis, and HIV) and seventh for men. Depressive disorders are not in the top ten for either men or women over 45 years old. It is a problem of young adults, those belonging to the most economically productive age group.

In terms of rates of DALYs lost by region, sub-Saharan Africa (574 DALYs lost per 1000 population) suffers the worst, followed by India (344 per 1000 population). Mortality creates most of the variation, rather than morbidity. What is now needed

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Table 1
Burden of disease in women by cause, 1990 (100 000 DALYs lost)

Disease or injury	Developing world	Formerly socialist and established market economies	World
Communicable, maternal and perinatal (total)	3108.2	74.5	3182.7
Non-communicable (total)	2234.5	538.3	2772.8
malignant neoplasms	234.7	115.5	350.1
diabetes mellitus	35.5	9.5	45.0
nutritional and endocrine	262.1	13.7	275.8
neuropsychiatric[1]	*335.3*	*91.3*	*426.6*
sense organ	42.2	0.9	43.1
cardiovascular	532.9	180.3	713.2
respiratory	196.3	22.6	218.9
digestive	177.8	23.2	201.0
genito-urinary	69.5	10.0	79.5
musculoskeletal	90.2	35.8	126.1
congenital abnormalities	178.4	18.6	197.0
oral health	56.0	14.6	70.6
Injuries (total)	480.8	53.1	533.9
Total	5823.4	665.9	6489.4

Source: Table B2 from *The World Bank World Development Report 1993: Investing in Health.*
1. See breakdown in Table 2.

Table 2
Breakdown of the burden of disease for neuropsychiatric disorders in women, 1990 (100 000s of DALYs lost)

	Developing world	Formerly socialist and established market economies	World
Neuropsychiatric	335.3	91.3	426.6
depressive disorders	*104.8*	*22.1*	*127.0*
bipolar affective disorder	5.2	1.0	6.2
psychoses	31.6	4.1	35.7
epilepsy	37.4	5.4	42.9
alcohol dependence	10.9	6.1	17.0
Alzheimer's and other dementias	44.5	31.9	76.4
Parkinson's disease	3.4	2.7	6.2
multiple sclerosis	5.9	1.7	7.6
drug dependence	8.7	4.5	13.3
post-traumatic stress disorder	25.5	7.2	32.7

Source: Table B2 from *The World Bank World Development Report 1993: Investing in Health.*

is an analysis of the impact of various diseases in different age groups for specific countries. Some countries intend to commence national GBD studies, for example Mexico, South Africa and Turkey. Murray & Lopez (1994) list several recommendations for future work in this area. Many of these are of relevance to common mental disorders:

(a) more detailed disaggregations are needed for some diseases (e.g. neuropsychiatric disorders, a heterogeneous group with a large share of the total burden)
(b) conditions which are estimated to create many DALYs and which are the most uncertain should be the focus of further epidemiological research
(c) there is a need for better quantification of the cost-effectiveness of health interventions that prevent disability
(d) methods to adjust for comorbidity should be developed
(e) partitioning the burden of disease by risk factor as well as by disease is recommended.

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Conclusions

Although there has been debate about the accuracy of the data presented in the WDR, they do provide an estimate of the impact of various health events on society. From an analysis of the GBD figures for 1990, it seems clear that the impact of depressive disorders on populations is considerable. This is both in terms of loss of production and costs to health services. Research into more cost-effective alternative interventions is a priority. The fact that mental health received so little attention in the text of the report is surprising considering the position of neuropsychiatric diseases in the GBD tables. The text only focuses on those diseases for which there are known cost-effective interventions (costing less than US$100 per DALY saved). It is stated that depressive disorders "can be partially controlled with moderately cost-effective interventions; $250 to $999 per DALY saved (there are few or no interventions in the range of $100 to $250 per DALY saved)". However, having identified certain diseases (e.g. depressive disorders) that place a heavy burden on society, but for which no low-cost interventions (less than $100 per DALY saved) exist, it is equally important to stress the need for research into alternative interventions.

Abas *et al* (1994) provide one example of a potentially cost-effective intervention to improve the detection and treatment of depression at the primary care level in Harare, Zimbabwe, using an algorithm to diagnose probable depression, followed by a seven-step management plan. They stress the need for community involvement in both identifying local problems and priorities and in devising solutions. Further similar studies are required, although simultaneous evaluation is vital to provide information on the long-term economic and health status implications of any intervention.

Prioritising health interventions and creating essential and notably cost-effective packages for national governments is crucial given the scarce resources available. Sufficient evidence (some of which came from the WDR itself) now exists to warrant a greater emphasis being placed on common mental disorders.

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