

Section 1

Assessment, Prevalence, and Treatment Outcomes

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The Nature of Depression

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Introduction

Sadness and despair are common experiences for many people, historically based descriptions reflecting the cultural context. Historical accounts indicate that the cause of severe mood disturbance was attributable to a physical illness for which the sufferer bore no responsibility. Symptoms of severe mood disturbance or melancholia included extreme sadness, an inability to function, and the frequent presence of delusions (Daly, 2007). Melancholia was thought to be caused by an imbalance of the 'bodily humours' (Daly, 2007; Akiskal & Akiskal, 2007). Conversely, accounts of less severe mood problems implied that the sufferer was ultimately responsible. In early Christian monastic settings a constellation of undesirable feelings and behaviours that interfered with devotional duties was known as the 'sin' of acedia (Jackson, 1981). This state was attributed to laziness or a 'lack of care' and was characterized by apathy, loss of hope, drowsiness, and a desire to flee the monastery (LaMothe, 2007). However, acedia was not considered equivalent to normal sadness, since the fourth-century monk John Cassian described it as a 'dangerous foe' that was 'akin to sadness' (Daly, 2007, p. 34). These historical descriptions of the 'symptoms' of melancholia and acedia loosely correspond to those of major depression as defined in modern diagnostic systems, which will be discussed in the next section.

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Diagnosing Major Depressive Disorder

Major depression is a common but clinically heterogeneous disorder that is frequently comorbid with others. Current diagnostic methods rely on identifying constellations of psychological and behavioural symptoms through structured clinical interviews (see chapter 2 for a detailed account of assessment measures and processes). Major depressive disorder (MDD) is diagnosed according to either the current (fifth) edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V; APA, 2013) or the World Health Organization's International Classification of Diseases (ICD-10; WHO, 1993). Because major depression is a highly recurrent disorder (Boland & Keller, 2008), both systems operationalize it in terms of the occurrence of a single 'depressive episode' (WHO, 1992), also known as a 'major depressive episode' (MDE) (APA, 2013). The diagnostic criteria for a depressive episode are similar in both systems. Both DSM-V and ICD-10 define recurrent depression as the occurrence of two or more episodes that are separated by at least two months during which the criteria for a depressive episode are not met (APA, 2013; WHO, 1993). In DSM-V the term 'major depressive disorder' (MDD) is used to denote the occurrence of one or more major depressive episodes.

Major depression is a clinically heterogeneous disorder (Rush, 2007). The diagnostic criteria are designed to account for such heterogeneity, which means that depressed individuals with markedly divergent symptoms are assigned to the same diagnostic category (APA, 2013; Krueger, Watson, & Barlow, 2005). For example, two individuals diagnosed with a major depressive episode may both experience depressed mood and concentration difficulties. However, one of them may have the accompanying symptoms of significant weight loss and insomnia, while the other may experience significant weight gain and hypersomnia. These differences may be important for the selection of appropriate treatment, and prognosis (APA, 2013; WHO, 1992; Rush, 2007), and therefore DSM-V enables the specification of depressive subtypes and of episode severity (APA, 2013).

Diagnostic Criteria for Major Depressive Disorder

The diagnosis of a major depressive episode requires that at least five of the symptoms listed in Table 1.1 are met for a period of at least two weeks. Importantly, one of the symptoms must be either a depressed mood or a loss

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Table 1.1 Summary of DSM-V criteria for an episode of major depression.

1	depressed mood most of the time
2	loss of interest/pleasure in everyday activities
3	weight loss or weight gain, often accompanied by a reduced or increased appetite
4	sleep difficulties: sleeping too much or minimally
5	psychomotor agitation or retardation
6	tiredness, feeling fatigued, lacking energy
7	feelings of worthlessness or guilt
8	poor concentration, difficulty in making decisions
9	frequent thoughts of death, including thoughts and plans of suicide or suicide attempts

of pleasure/interest in everyday activities. It is also necessary that the symptoms reach clinically significant levels, which typically compromise occupational and social functioning.

A closer inspection of the nine main symptoms of depression in Table 1.1 shows that individuals meeting diagnostic criteria for a depressive episode may have minimal overlapping symptoms. Nevertheless, researchers and clinicians have observed what appears to be relatively consistent constellations of depressive symptoms that may respond differently to treatment (Rush, 2007). Consequently, successive revisions of the DSM since version III have included specifiers that enable potentially important clinical characteristics of episodes to be recorded (APA, 2013). These episode specifiers relate to symptom severity, remission status, chronicity, and symptomatic features that may denote depressive subtypes.

The Epidemiology of Major Depression

Surveys of the prevalence of psychiatric disorders have been undertaken since the Second World War. However, estimates of prevalence varied widely, due to differences in methodology. Early estimates of the prevalence of MDD were derived from screening instruments that were not fit for purpose (Kessler et al., 2007). There were two main problems; (1) the screening instruments were prone to poor specificity or sensitivity (or both), which undermined confidence in the resultant prevalence estimates; and (2) the use of different instruments between surveys hindered the interpretation

of results. This has become less of an issue since the World Health Organization commissioned the Composite International Diagnostic Interview (CIDI) in the 1980s (Kessler & Ustun, 2004) in order to compare psychiatric prevalence rates between countries according to standardized criteria (Kessler et al., 2007). The CIDI was based on the Diagnostic Interview Schedule (Robins, Helzer, Croughan, & Ratcliff, 1981) and was designed to be administered by lay interviewers. It was also designed to support psychiatric diagnoses according to both ICD and DSM criteria. However, the original version of the CIDI was not designed to capture detailed demographic and clinical data. This meant that countries could only be broadly compared, in terms of overall prevalence rates (Kessler & Ustun, 2004).

The CIDI (version 3) was designed for the World Mental Health Survey Initiative (WMHS) (Kessler, 1999) for the purpose of facilitating the acquisition and comparison of psychiatric epidemiological data within the participating countries (Kessler & Ustun, 2004). In addition to enabling the quantification of lifetime and 12-month diagnoses according to both DSM-IV and ICD-10 criteria, the CIDI-3 also includes items that assess severity, demographic, quality-of-life, and disability data (Kessler & Ustun, 2004). Unlike previous versions, the CIDI-3 included interview probe questions that increase the reliability of autobiographical recall. The methodological rigour used to produce different translations of the CIDI-3 has led to its being described as 'state of the art' for comparing epidemiological findings across participating WMHS countries (Alonso & Lepine, 2007). Two large-scale surveys within the WMHS framework have specifically examined the epidemiology of MDD. These are the European Study of the Epidemiology of Mental Disorders (ESEMeD) (Alonso et al., 2002) and the American National Comorbidity Survey Replication Study (NCS-R) (Kessler et al., 2003).

Overall prevalence rates

The NCS-R and ESEMeD surveys estimated that the 12-month prevalence of MDD according to DSM-IV criteria is 6.6 per cent in American adults and 4.1 per cent in European adults (Alonso et al., 2004; Kessler et al., 2003). In absolute terms, these results indicate that at least 13.1 million US adults experienced a major depressive episode in the preceding year (Kessler et al., 2003). In terms of lifetime rates, 16.2 per cent of Americans and 13.4 per cent of Europeans will experience at least one depressive episode.

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In terms of DSM-IV symptomatology, the NCS-R results estimated that 10 per cent of the people identified within the 12-month prevalence time frame were mild, 39 per cent moderate, 38 per cent severe, and 13 per cent very severe according to the Quick Inventory of Depressive Symptomatology Self-Report (QIDS-SR) (Rush et al., 2003; Kessler et al., 2003). Thus, 51 per cent of people were classified as having severe or very severe clinical symptoms in the NCS-R sample, underscoring the significance of major depression as a major public health issue.

Prevalence rates by age and country

The ESEMeD study found that the 12-month prevalence for any psychiatric disorder is highest in the 18- to 24-year age group and lowest for individuals over 65 (Alonso & Lepine, 2007). Comparable results for the prevalence of MDE were found in the NCS-R, where 12-month and lifetime rates in the youngest cohort (18 to 29 years) were significantly higher than in those over 60 years (Kessler et al., 2003). However, the differences between age cohorts may be a function of hierarchical exclusion rules, which typically prohibit a diagnosis of MDE when there is physical comorbidity. The lower 12-month prevalence rate for older cohorts in the NCS-R may be artefactual, as higher levels of physical comorbidity in older adults may have precluded the diagnosis of a depressive episode (Kessler et al., 2010). To investigate this possibility, Kessler et al. (2010) re-analysed the WMHS data by omitting the hierarchical and organic exclusion rules that allowed depression comorbid with a physical disorder to be included. The results indicated that higher rates of physical comorbidity were not responsible for the lower rates of depression typically observed in older cohorts in developed countries (Kessler et al., 2010). An analysis across all the developed countries within the WMHS showed that the 12-month MDE prevalence was significantly lower for the oldest cohort than for the youngest cohort (Kessler et al., 2010). However, episode duration may increase with age. In developed countries, the mean episode in the youngest cohort lasted 25 weeks, by comparison to 31 weeks in the oldest cohort (Kessler et al., 2010).

Gender and prevalence of MDD

One of the most consistent epidemiological findings concerning MDD is that female prevalence rates are typically twice those registered in males

(Boughton & Street, 2007). Both the ESEMeD and the NCS-R study found that 12-month and lifetime MDD prevalence rates for females were approximately twice those for males. Higher female prevalence is known to emerge in adolescence and to continue into adulthood (Boughton & Street, 2007), although no significant gender differences have been found in terms of recurrence or chronicity (Kessler, McGonagle, Swartz, Blazer, & Nelson, 1993). However, the results of the United Kingdom's National Survey of Psychiatric Morbidity (NSPB) (Bebbington et al., 2003) have shown that the preponderance of female depression disappears after the age of 55, when there is a reduction in the prevalence of female depression. Boughton and Street (2007) reviewed numerous non-biological theories that have been proposed to explain the higher rates of depression seen in females. Some theories venture that higher levels of neuroticism or dependency in females increase the risk for depression, while others attribute differences to social restrictions imposed by the female role. Alternatively, the construct of major depression may itself be biased towards identifying disorder in females (Boughton & Street, 2007).

Many factors are likely to contribute to gender differences in the prevalence of depression, and there is increasing evidence that gender differences concerning emotional regulation are a key factor (Nolen-Hoeksema, 2012). Emotional regulation refers to activities that enable the individual to modify the nature of an emotional response (e.g. distraction: Nolen-Hoeksema, 2012). However, while females have been shown to employ a wider range of emotional regulatory behaviours than men (Tamres, Janicki, & Helgeson, 2002), it has been proposed that their greater tendency to ruminate on the causes and meaning of negative emotions places a higher proportion of them at risk of developing depression (Nolen-Hoeksema, 2012). Evidence that greater rumination in females may explain their higher risk for MDD has been provided in studies that show rumination to be predictive of higher depression scores (Nolen-Hoeksema, 2000; Nolen-Hoeksema & Aldao, 2011; Nolen-Hoeksema, McBride, & Larson, 1997).

Comorbidity

Major depressive disorder is highly comorbid with psychological (Rush et al., 2005) and somatic disorders (Schmitz, Wang, Malla, & Lesage, 2007). In the NCS-R study, 64 per cent of the 12-month MDD cases also met diagnostic criteria for another DSM-IV 12-month disorder (Kessler et al., 2003). However, while MDD was highly comorbid with other

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psychological disorders, it only preceded other 12-month disorders in 12.6 per cent of cases (Kessler et al., 2003). MDD is often comorbid with physical disorders ranging from 5 per cent to 10 per cent in primary-care settings, and from 8 per cent to 15 per cent in medical inpatient settings (Schmitz et al., 2007). Comorbid depression is associated with greater levels of disability and poorer prognosis for both psychological and physical disorders (Rush et al., 2005; Schmitz et al., 2007).

Where depression is comorbid with a physical disorder, the greatest impairments are found in those who experience chronic physical problems. The Canadian Community & Health Survey (Schmitz et al., 2007) revealed that the prevalence of functional disability in the two weeks prior to interview was significantly higher in respondents with chronic physical disorders and comorbid MDD (46 per cent) than in those with only chronic physical disorders (21 per cent) or only MDD (27.8 per cent). One of the most striking findings about the effect of comorbid depression and physical illness concerns cardiac mortality. In patients hospitalized for myocardial infarction, Lesperance, Frasure-Smith, Talajic, and Bourassa (2002) found a direct dose–response relationship between depressive symptomatology on the Beck Depression Inventory (BDI) (Beck, Steer, & Brown, 1996) and the risk of cardiac mortality during a 5-year follow-up. Notably, the mortality rate in patients who scored 19 or more on the BDI was significantly higher than in those who scored less than 19 on the BDI – after controlling for cardiac disease severity (Lesperance et al., 2002). These results suggest that comorbid depression is associated with increased mortality during recovery from myocardial infarction.

Where another psychological disorder is comorbid with MDD, episodes of illness are typically more severe and last longer (Rush et al., 2005). As described earlier, there is evidence that comorbid dysthymia increases the duration of depressive episodes (Spijker et al., 2002). However, results from the naturalistic CDS study also indicated that comorbid panic (Coryell et al., 1988) or alcohol abuse (Mueller et al., 1994) reduce the likelihood of recovery from an MDE. Coryell et al. (1988) found that comorbid panic and MDD predicted significantly lower levels of recovery than non-comorbid cases (75 per cent versus 86 per cent respectively) over two years, while Mueller et al. (1994) found that comorbid alcoholism reduced the likelihood of recovery by 50 per cent over an observation period of ten years. However, neither of these two studies controlled for treatment differences in their analyses; but they provide evidence that comorbidity serves to increase episode duration and

suggests that treatment efficacy will be lower in patients with comorbid conditions.

The moderating effect of comorbidity on treatment outcome has received relatively little attention (Carter et al., 2012; Hamilton & Dobson, 2002). However, there is consistent evidence that elevated anxiety symptomatology during an episode predicts poorer response to medication (Carter et al., 2012) and a lower probability of successful outcome following psychotherapy (Hamilton & Dobson, 2002). Given that anxiety disorders are highly comorbid with MDD – for example, 57 per cent of the 12-month MDD cases met diagnostic criteria for at least one comorbid DSM-IV anxiety disorder (Kessler et al., 2003) – they are likely to be an important moderator of treatment outcome in MDD.

Finally, many previously remitted Axis 1 disorders have not been identified as a risk factor for the development of a major depressive episode with the exception of early-onset simple phobia and panic (Kessler & Wang, 2008). However, generalized anxiety disorder (GAD) has been identified as presenting the highest risk for the development of subsequent comorbid depression (Kessler & Wang, 2008). The high levels of comorbidity between depression and anxiety disorders have been argued to be an artefact of changes in the diagnostic criteria for successive versions of the DSM, which have allowed an increasing number of diagnoses to be made for the same individual (Kessler & Wang, 2008). There have been suggestions that cases of comorbid anxiety and depression may stem from a common pathological process, and that the separation of the disorders from DSM-III onwards has produced an artificial distinction for these patients (Frances et al., 1992). However, future research on the validity of differentiating between the two disorders is still required (Kessler & Wang, 2008).

Course

Depression, once thought to be an acute and self-limiting disorder, is frequently a recurrent and chronic condition. For ethical reasons, few naturalistic studies of the duration of untreated major depressive episodes have been conducted. However, prospective data suggest that the majority of cases remit within one year and that the duration of episodes is longer in more severe cases. Prospective population-based estimates for the duration of depressive episodes obtained in the Netherlands Mental Health Survey and Incidence Study (NEMESIS) (Spijker et al., 2002) are

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intriguing. Among 250 respondents who experienced a new episode defined according to DSM-III-R criteria, the proportions recovered were 50 per cent at three months, 76 per cent at 12 months, and 80 per cent at 21 months. Spijker et al. (2002) reported that higher severity or comorbid dysthymia predicted longer episodes, while recurrent depression predicted shorter episodes. Posternak et al. (2006) found similar results for a sample of 130 non-chronically depressed patients who experienced a new episode over 15 years within the National Institute of Mental Health's Collaborative Program on the Psychobiology of Depression study (CDS) (Katz, Secunda, Hirschfeld, & Koslow, 1979). Among 84 individuals who did not receive any form of pharmacological treatment for a new MDE diagnosed according to the research diagnostic criteria (RDC) (Spitzer, Endicott, & Robins, 1978), the proportions recovered, defined as no or minimal symptoms over eight consecutive weeks, were 38 per cent at three months, 70 per cent at 12 months, and 75 per cent at two years (Posternak et al., 2006).

The NEMESIS results presented above do not account for treatment status. However, Spijker et al. (2002) found no significant difference in mean episode duration between those who did (67 per cent) and those who did not receive treatment (33 per cent). To explain this finding, Spijker et al. (2002) suggested that treatment seekers were more likely to be severely depressed and would thus have experienced longer episodes, had they not received treatment. The results of both the CDS and the NCS-R study appear to support this explanation. First, non-treatment seekers in the CDS achieved remission more rapidly than the sample as a whole, which implies that they had a better prognosis (Posternak et al., 2006). Secondly, higher severity in the NCS-R was predictive of longer episode duration (mild duration = 13.8 weeks; very severe duration = 23.1 weeks: Kessler et al., 2003). While it is possible that more severely depressed individuals were more likely to seek treatment and thus biased the results of the studies presented here, the overall results suggest that between 30 per cent and 50 per cent of cases will remit after three months and that even more cases will further remit by 12 months.

Recurrence of depressive episodes

The onset of a first major depressive episode often follows distressing life events, but the onset of subsequent episodes is less likely to be preceded by an obvious stressor (APA, 2000). The prospective CDS study (Katz et al., 1979) has provided important information concerning the

naturalistic course of depression over two decades. The results indicate that recurrence is very common in patients who seek treatment for MDD, and that the interval between episodes typically decreases with the increasing number of episodes. An important factor that may serve to both reduce the time to recurrence and increase the frequency of episodes is the persistence of residual depressive symptomatology during recovery. The experience of three or more major depressive episodes significantly increases the risk of recurrence.

The CDS results (Katz et al., 1979) showed that 22 per cent in a sample of 141 non-dysthymic patients experienced recurrence within the first year following recovery (Keller, Lavori, Lewis, & Klerman, 1983). The risk of recurrence was highest immediately after the establishment of recovery, but diminished consistently during follow-up (Keller et al., 1983). Over the longer term, recurrence rates at five, ten, fifteen, and twenty years in the CDS were 60 per cent, 75 per cent, 87 per cent, and 91 per cent respectively (Boland & Keller, 2008). An important finding was that the occurrence of three or more previous episodes predicted a significantly increased risk of recurrence, which was estimated to go up by 16 per cent after each episode (Solomon et al., 2000). In addition, while individuals did not demonstrate consistent time patterns between episodes, the overall results showed that the time between episodes decreased as the number of episodes increased. For example, the median time to recurrence following a first episode was 150 weeks, whereas it was 57 weeks following a fifth episode (Solomon et al., 2000). A consistent finding was that the rate and timing of new episodes were associated with the level of residual symptoms in recovered patients. Full recovery led to fewer recurrent episodes; this situation was less frequent than recovery with residual symptoms. For example, recurrence rates in asymptomatic and symptomatic but recovered patients were 66 per cent and 87 per cent respectively; the mean time to recurrence for these groups were 180 and 33 weeks respectively (Boland & Keller, 2008).

The burden of major depressive disorder

One of the most distressing aspects of mood disorders is the strong association with suicidal behaviour. Beautrais et al. (1996) reported that, while 90 per cent of the patients hospitalized for attempted suicide had a psychiatric disorder, mood disorders accounted for 80 per cent of the attributable risk for serious suicide attempts – which themselves strongly predict completed suicide (Yoshimasu, Kiyohara, & Miyashita, 2008). While it has been

recommended that suicide prevention strategies should not focus solely on depression (Fleischmann, Bertolote, Belfer, & Beautrais, 2005), MDD itself is likely to be a major predictor of suicide, as it accounted for approximately 28 per cent of the attributable risk for suicide within the ESEMeD study (Bernal et al., 2007). It is estimated that up to 15 per cent of severe MDD cases will die by suicide (APA, 2000). In addition to suicide, MDD is known to increase the risk of physical morbidity. For example, MDD has been shown to predict higher pain and mortality in medical inpatients (Herrmann et al., 1998) and an increased likelihood of both admission to, and mortality in, nursing homes (Onder et al., 2007). In addition to poorer prognoses for cardiac patients with comorbid depression, MDD is itself a risk factor for the development of cardiac problems (Frasure-Smith & Lesperance, 2005).

MDD is also a risk factor for a range of maladaptive behaviours. NCS-R data revealed that 45 per cent of American respondents meeting DSM-IV diagnostic criteria for substance use disorders in the previous 12 months also reported antecedent symptoms meeting criteria for a MDE (Kessler et al., 2003). This implies that depressive symptoms led to substance abuse in such cases. However, it cannot be ruled out that common factors lead to both disorders, as the association between depression and substance abuse is complicated by the interaction between multiple factors (Swendsen & Merikangas, 2000). When the onset of MDD occurs in adolescence, it is associated with an increased risk of poor educational attainment, teenage pregnancy, and impaired future marital relationships (Kessler & Wang, 2008). Within marital relationships, MDD is significantly associated with an increased risk of divorce due to impaired problem solving and communication (Davila, Stroud, & Starr, 2008). Moreover, where one partner has recovered from a depressive episode, the marital relationship may remain at risk, as spousal negativity towards MDD has been shown to predict future episodes (Davila et al., 2008).

MDD is costly to the wider economy. Major depression impairs work performance to a greater degree than arthritis, asthma, migraine, irritable bowel syndrome, and hypertension (Kessler et al., 2008). Unsurprisingly, the economic impact of depression increases with increasing severity, which leads to poorer work performance, increased risk of unemployment, and greater need for treatment (Birnbaum et al., 2010). The cost of treating MDD within the United Kingdom's National Health Service in 1991 was estimated at £417 million. However, the overall economic cost due to absence from work and premature mortality was far higher, of nearly

£3 billion (Churchill et al., 2001). The importance of depression as a personal and economic burden is reflected in the World Health Organization's projection that its contribution to the global burden of disease will rise, moving depression from fourth place in 2001 to second place by 2020; only ischemic heart disease will rank above it. In developed countries depression is projected to be the major burden of disease by 2020 (WHO, 2001). Thus the identification and effective treatment of MDD is an increasingly pressing public health concern (WHO, 2001; WHO, 2008).

Treatment seeking

Despite the high personal and economic costs associated with MDD, depressed individuals frequently delay seeking treatment and, when they do, the recognition of depression is limited. The NCS-R provided data concerning the proportion of individuals with lifetime MDD who sought professional treatment (Wang et al., 2005). Treatment was defined in the NCS-R as any form of professional healing contact – which meant that psychologists, counsellors, spiritual advisors, and herbalists were included along with conventional medical professionals (Wang et al., 2005). The NCS-R results showed that the vast majority (88 per cent) of those with lifetime MDD sought some form of treatment for depressive symptoms. Several factors consistently predicted the probability of initial treatment contact. Females and younger cohorts were more likely to seek treatment than males and older cohorts respectively. However, those of younger age at first onset were less likely to seek treatment than those of older age at first onset. While 37 per cent reported seeking initial treatment in the year following their first depressive episode, treatment seeking was typically delayed, as the median delay was eight years (Wang et al., 2005). Older cohort age and younger age at first onset predicted the longest delays in seeking initial treatment contact. Wang and Kessler (2005) suggested that the delays and the lower treatment-seeking rates associated with early age of first onset cases may have been due to poorer recognition of MDD symptoms in minors.

The results reported by Wang et al. (2005) were limited in that their analyses were unable to identify the proportions of those who actually received treatment. The World Health Organization's Collaborative Study on Psychological Problems in General Health Care (CSPP) (Sartorius et al., 1993) was specifically designed to investigate the detection and treatment of psychological disorders in primary-care settings. The longitudinal CSPP study employed ICD-10 criteria to diagnose psychiatric disorders in a total

sample of 26,422 adult patients across 15 sites worldwide. The CSPP results suggest that the identification of MDD is typically low in primary-care settings, as only 15 per cent of those meeting ICD-10 criteria for major depression were correctly diagnosed. Of the remaining depressed individuals, 54 per cent were identified as being psychiatric cases, while 31 per cent received no diagnosis (Lecrubier, 2007). The CSPP results also showed that patients in the youngest cohort were significantly less likely to be diagnosed with major depression than those in older cohorts. For example, only 43 per cent of 18- to 24-year-olds were correctly diagnosed with MDD, by comparison to 59 per cent of 25- to 44-year-olds ($p < .05$; Lecrubier, 2007). The lower rate for the youngest cohort may have arisen because physicians are sometimes unwilling to diagnose a chronic mental disorder such as MDD in younger patients (Lecrubier, 2007). Finally, the CSPP results suggested that, even where correctly diagnosed, patients typically received inadequate treatment for depression from primary-care physicians. However, treatment adequacy in the CSPP was assessed only in terms of whether patients received psychotropic medication (Lecrubier, 2007).

Data from the NCS-R (Kessler et al., 2003) enabled an assessment of the adequacy of both pharmacological and psychological treatments for MDD. Minimal treatment adequacy for MDD in the NCS-R was defined as consisting of either (1) four or more outpatient visits with a physician for pharmacological treatment over 30 days or more; or (2) eight or more outpatient visits with any specialist provider of psychotherapy, each lasting for 30 minutes or more (Kessler et al., 2003). The NCS-R results showed that 57 per cent of the 12-month MDD cases sought help for emotional problems in the 12 months prior to interview. Of these, 90 per cent were treated in healthcare settings and 55 per cent of this sample were treated in specialist mental health settings (Kessler et al., 2003). The highest rate of minimally adequate treatment (64 per cent) was found in specialist mental health settings, where interventions were provided by psychiatrists, psychologists, counsellors, or social workers (Kessler et al., 2003). The rate of minimally adequate treatment in general medical settings was 41 per cent where treatments were provided by primary-care physicians, other medical specialists, or non-specialist nurses (Kessler et al., 2003). Increasing severity according to the QIDS-SR (Rush et al., 2003) and an increasing number of comorbid DSM-IV disorders both significantly predicted treatment seeking and treatment adequacy (Kessler et al., 2003). Finally, the NCS-R results revealed that, of the entire sample that met DSM-IV diagnostic criteria for MDD, only 21.7 per cent received adequate treatment (Kessler et al., 2003).

Conclusion

Major depressive disorder is a highly comorbid and recurrent disorder that affects twice as many females as males. Approximately 5 per cent of adults in developed countries will meet diagnostic criteria for major depression each year, and at least 10 per cent will experience at least one episode in their lifetime. MDD is a major risk factor for suicide and for a range of physical and behavioural sequelae that place a great burden on individuals and on the wider economy. The burden associated with MDD appears to be increasing in developed countries, as younger cohorts demonstrate both the highest 12-month prevalence rates and most severe episodes. The effective treatment of MDD is a pressing public health concern, as highlighted by the World Health Organization's prediction that it will become the major disease burden in developed countries by 2020. The heavy personal, social, and economic burdens associated with major depression demand that effective treatments be available.

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