Social Functioning in Depression: A Review

Robert M. A. Hirschfeld, M.D.; Stuart A. Montgomery, M.D.; Martin B. Keller, M.D.; Siegfried Kasper, M.D.; Alan F. Schatzberg, M.D.; Hans-Jürgen Möller, M.D.; David Healy, F.R.C.Psych.; David Baldwin, M.R.C.Psych.; Mats Humble, M.D.; Marcio Versiani, M.D.; Roger Montenegro, M.D.; and Marc Bourgeois, M.D.

Objective: This article reviews the available data on social functioning in depression and provides clinical guidelines and opinion on this important and expanding field.

Data sources: A MEDLINE search was conducted to identify all English-language articles (1988–1999) using the search terms depression and social functioning, depression and social adjustment, depression and psychosocial functioning, and social functioning and antidepressant. Further articles were obtained from the bibliographies of relevant articles.

Data synthesis: Depressive disorders are frequently associated with significant and pervasive impairments in social functioning, often substantially worse than those experienced by patients with other chronic medical conditions. The enormous personal, social, and economic impact of depression, due in no small part to the associated impairments in social functioning, is often underappreciated. Both pharmacologic and psychotherapeutic approaches can improve social impairments, although there is a lack of extended, randomized controlled trials in this area using consistent assessment criteria.

Conclusion: Despite this lack, it is becoming clear that not all treatments are equally effective in relieving the impaired social functioning associated with depressive disorders. Furthermore, efficacy in relieving the core symptoms of depression does not necessarily guarantee efficacy in relieving impaired social functioning.

(J Clin Psychiatry 2000;61:268-275)

Received Aug. 6, 1999; accepted Jan. 16, 2000. From the Department of Psychiatry & Behavioral Sciences, University of Texas Medical Branch, Galveston, Tex. (Dr. Hirschfeld); the Department of Pharmacology, Imperial College of Science, Technology and Medicine, London, U.K. (Dr. Montgomery); Brown University, Providence, R.I. (Dr. Keller); the Department of General Psychiatry, University of Vienna, Vienna, Austria (Dr. Kasper); the Department of Psychiatry & Behavioral Sciences, Stanford University School of Medicine, Stanford, Calif. (Dr. Schatzberg); the Department of Psychiatry, Ludwig Maximillians University, Munich, Germany (Dr. Möller); the Department of Psychological Medicine, University of Wales College of Medicine, Gwynedd, U.K. (Dr. Healy); the Department of Psychiatry, University of Southampton, Southampton, U.K. (Dr. Baldwin); the Department of Clinical Neuroscience and Family Medicine, Karolinska Institute, Division of Psychiatry, Huddinge, Sweden (Dr. Humble); the Institute of Psychiatry, Federal University, Rio de Janeiro, Brazil (Dr. Versiani); the Institute of Postgraduate and Continuing

Medical Education of APSA, University of Buenos Aires, Buenos Aires, Argentina (Dr. Montenegro); and Bordeaux IPSO, Bordeaux, France (Dr. Bourgeois).

Supported by an unrestricted educational grant from Pharmacia & Upjohn.

Disclosure: Dr. Keller has been a consultant for and/or received honoraria from Pfizer Inc, Bristol-Myers Squibb, Forest Laboratories/Parke Davis, Wyeth-Ayerst Laboratories, Merck, Inc., Janssen, Eli Lilly, Organon, and Pharmacia/Upjohn; has received grant/research support from Wyeth-Ayerst, SmithKline Beecham, Upjohn, Pfizer Inc, Bristol-Myers Squibb, Merck, Inc., Forest Laboratories, Zeneca, and Organon, Inc; and has been on the advisory board for Wyeth-Ayerst, Pfizer Inc, Bristol-Myers Squibb, Eli Lilly, Forest Laboratories/Parke-Davis, Organon, SmithKline Beecham, Merck, Inc., Janssen, Mitsubishi Pharmaceuticals, Zeneca, Scirex, and Otsuka.

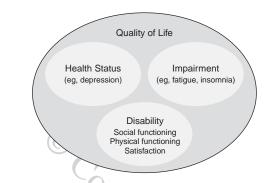
Reprint requests to: Robert M. A. Hirschfeld, M.D., Department of Psychiatry & Behavioral Sciences, The University of Texas Medical Branch, 1.302 Rebecca Sealy Hospital, 301 University Blvd., Galveston, TX 77555-0188.

epression is a widespread and debilitating illness with far reaching personal and economic implications for individuals, their families, and society as a whole. Globally, unipolar depression is responsible for almost 11% of the total years lived with a disability caused by any illness, defined as "any restriction or lack of ability to perform a normal human activity." Bipolar disorder also represents a significant global burden, contributing 3% of the global years lived with a disability.

The impact of depression extends beyond the core symptoms, such as depressed mood and loss of energy, and affects individuals' quality of life, including the ability to function socially, maintain and enjoy relationships and work, and provide for themselves and family financially. Furthermore, the families of depressed patients may themselves be at greater risk for major depressive disorder.^{2,3} The resulting additional stresses on interpersonal relationships may create a vicious circle, contributing to the chronic, recurrent nature of depression. Decreased capacity to work and impaired work productivity as well as increased health care and other social service utilization all contribute to the significant societal burden of depression,^{4–7} with cost estimates in the United States alone reaching \$43.7 billion in 1990.⁸

Quality-of-life issues are gaining increasing importance in relation to the treatment and outcome assessment of a range of medical and psychiatric disorders. A central feature of quality of life is an individual's ability to perform

Figure 1. Concept and Components of Quality of Life^a



^aBased on Murray and Lopez.¹

and fulfill normal social roles, a concept termed *social functioning*. Psychiatric disorders are often strongly associated with impaired social functioning, ^{9,10} and the level of impairment experienced by depressed patients is at least as high as for those with other chronic general medical conditions, such as diabetes and heart disease. ^{9,10} Of considerable concern is the finding that these impairments may persist for years, even after symptom resolution. ^{10–12}

Vigorous treatment for depression in the clinical trial setting has generally been shown to improve the associated impairments in social functioning (e.g., references 13–16). However, symptomatic improvement does not necessarily lead to improved psychosocial functioning, and factors such as compliance with treatment may significantly reduce successful outcome rates outside the clinical trial setting.¹⁷

Despite the pervasive and significant burden imposed by depressive disorders, not only do depressed individuals frequently remain undiagnosed and undertreated, 18,19 but the usual care that patients receive is often insufficient to adequately address either their symptoms or their impaired social functioning.^{20,21} In general, the clinical management of medical conditions has tended to focus largely on clinical signs and symptoms. However, impairment in quality of life (such as an inability to pursue normal social activities), rather than health status itself, is often the deciding factor leading people to seek health care. The aim of this article is to review the assessment and treatment approaches currently available to enable clinicians to provide optimal relief from the impaired social functioning associated with depressive disorders, and to highlight the pressing need for additional research in the field.

A MEDLINE search was conducted to identify all English-language articles (1988–1999) using the search terms depression and social functioning, depression and social adjustment, depression and psychosocial functioning, and social functioning and antidepressant. Further articles were obtained from the bibliographies of relevant articles.

DEFINING SOCIAL FUNCTIONING

Quality of life is a multidimensional concept (Figure 1) encompassing, and fundamentally affected by, the following:

- health status (presence or absence of a disease or disorder and its severity),
- disability (any restriction or lack of ability [resulting from an impairment] to perform a normal human activity),¹ and
- impairment (any loss or abnormality of psychological, physiologic, or anatomical structure or function).¹

Disability can be considered in terms of physical functioning, social functioning, and satisfaction, all of which have an impact on quality of life. Social functioning itself can therefore be considered a key feature of quality of life (see Figure 1). Although no agreement exists on a standard definition of quality of life, most definitions include objective components such as role functioning and environmental conditions, as well as subjective components such as satisfaction.

Although excellent agreement exists on the core symptoms of depression, to date there has been no standardized, widely accepted definition of social functioning. Paykel²² described social functioning as "an individual's ability to function within their usual environment." (pS9) However, some variation exists in the precise domains measured by the currently available rating scales as well as in the terminology, wording, and measurement.²³ In spite of this fact, diagnostic instruments generally include the following as domains of social functioning: occupation, household role, marital functioning, parental role, family/kinship role, social role, leisure/general interest, and self-care.²³

MEASURING SOCIAL FUNCTIONING

A wide range of non-disease-specific quality-of-life scales are available for use in the general medical setting that usually seek to measure subjective perceptions and reactions to health status. A number of scales have also been developed specifically for use with patients with depressive disorders, such as the Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q)²⁴ and the Quality of Life in Depression Scale (QLDS).²⁵ These scales have often been criticized as not being sufficiently focused and overly time-consuming to complete.^{26,27}

Rating scales for the clinical symptoms of depression (e.g., the Hamilton Rating Scale for Depression, the Montgomery-Asberg Depression Rating Scale) rarely contain more than 1 or 2 items that directly examine social functioning variables. Therefore, these scales do not assess the precise effect of antidepressant medications on

social functioning. Specific rating scales have therefore been developed that focus on this aspect of quality of life.

Four scales reported to measure social functioning and that have been used in clinical trials of treatment for depressive disorders are the Social Adjustment Scale Self-Report (SAS-SR),²⁸ the 36-item Short-Form Health Survey (SF-36),²⁹ the Sheehan Disability Scale,³⁰ and the Social Adaptation Self-evaluation Scale (SASS).²⁷ A comparative overview of the content of these 4 scales is presented in Table 1.

The simplest approach to the assessment of social functioning is represented by the Sheehan Disability Scale, which consists of 3 items presented as visual analog scales. Patients are asked to rate themselves on a scale of 1 to 10 for their performance in the domains of work, social and leisure activities, and home life. The SF-36 consists of 36 items and represents a more global assessment covering overall health status, physical functioning, loss of function due to physical or emotional problems, and depressive symptoms. Both scales provide an overall picture of the status of depressed patients rather than a detailed examination of social functioning. The SAS-SR and the SASS have been designed specifically to examine social functioning and broadly examine the same areas (work, family, marital, parental, economic, and social). The SAS-SR also looks at sexual functioning and asks patients to consider their functioning over the previous 2 weeks. The SASS, on the other hand, asks about the patient's current level of functioning. Although they are broadly similar, there are a number of notable differences between the scales; for example, the SASS does not include an objective measure of work performance (e.g., days lost from work),³¹ and only the SF-36 includes sexual functioning as a component of social functioning (see Table 1).

The development and use of rating scales designed to measure the impaired social functioning associated with depressive disorders allows a detailed examination of the global effects of depressive disorders and also permits an examination of potential differential effects between the available antidepressants.

SOCIAL FUNCTIONING AND DEPRESSION

Both symptoms (e.g., changes in sleep and appetite, fatigue, hopelessness) and social functioning (e.g., relationships, work) contribute to the depressive syndrome, a fact reflected in diagnostic guidelines such as DSM-IV.³² Axis IV of DSM-IV outlines the assessment of psychosocial and environmental problems, whereas Axis V examines overall functioning, both psychosocial and occupational. In the case of depression, certain symptoms of the disorder such as loss of self-esteem and loss of interest in activities themselves compromise central components of quality of life and social functioning. Accordingly, distinctions between the symptoms of depression, impaired

Table 1. Comparative Content of 4 Rating Scales Used in the Assessment of Social Functioning in Clinical Trials of Antidepressants^a

Variable	SAS-SR	SASS	SF-36	Sheehan	
No. of items	54	21	41	3	
Time frame	2 weeks	current	4 weeks	4 weeks	
Domain of functioning					
Work	+	+	+	+	
Family	+	+	+	+	
Marital	+	+			
Parental	+	+			
Economic	+	+			
Social	+	+	+	+	
Sexual	+				
Psychiatric symptoms			+		
Physical health			+		
Disability			+		

^aAbbreviations: SASS = Social Adaptation Self-evaluation Scale, SAS-SR = Social Adjustment Scale Self-Report, SF-36 = 36-item Short-Form Health Survey, Sheehan = Sheehan Disablity Scale. A "+" indicates one or more items included; a blank indicates no items included

quality of life, and impaired social functioning are inherently less clear than is the case for other somatic disorders such as rheumatoid arthritis.

Patients with depression may have substantial deficits in social functioning. Weissman et al.³³ showed that acutely depressed women (N = 40) were significantly more impaired in major social roles (work, marital, family) compared with their nondepressed neighbors (N = 40). De Lisio et al.³⁴ examined social functioning in 176 outpatients diagnosed with major depression, bipolar disorder, or dysthymia and also found that disturbances were seen in all areas of functioning, most notably in work and social leisure activities. In a community sample of 4913 subjects, Fredman et al. 35 found that respondents with current major depressive disorder reported significantly poorer intimate relationships and less satisfying social interactions than those with past depression, other current disorders, and no psychiatric disorder. In the largest study of its kind, Wells and coworkers⁹ examined the functioning and well-being of 11,242 outpatients and found that depressed patients experience significant impairments in multiple domains of functioning comparable to, or greater than, those experienced by patients with other chronic medical conditions.

Certain types of depression appear to be particularly associated with poor social functioning. For example, patients with double depression generally appear to have worse social impairment than those with major depression or pure dysthymia. 10,36,37 As part of a 2-year follow-up study, Hays et al. 10 examined baseline social functioning in patients diagnosed with dysthymia (N = 48), double depression (N = 61), or major depression (N = 76). Using the 2 social functioning items of the SF-36, they demonstrated statistically significant baseline differences between patients with major depression and double depression (p < .05). Similarly, Evans et al. 36 looked at 430 patients taking part in DSM-IV field trials and also found

that patients with double depression experienced worse social functioning than those with either dysthymia or episodic major depression. Leader and Klein³⁷ concluded that chronic, low-grade depressive symptoms and acute moderate symptoms have similar effects on social adjustment that are both significant and additive. Leader and Klein compared the overall social functioning of patients diagnosed with pure dysthymia (N = 41), double depression (N = 56), episodic major depression (N = 45), and normal controls (N = 45) using the SAS-SR. Total SAS-SR scores were significantly higher in all patient groups compared with normal controls (p < .05), and scores for patients with double depression were statistically significantly higher than those for patients with either dysthymia or episodic major depression (p < .05).

It is clear that patients with all forms of depression experience pervasive and significant impairments in social functioning. Whether these impairments persist between acute depressive episodes and whether current treatment regimens adequately address these impairments will be the focus of the remainder of this review.

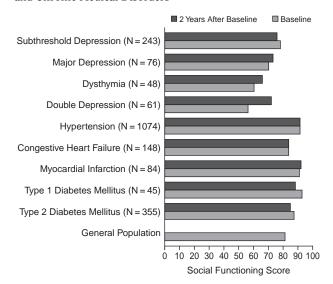
THE COURSE OF SOCIAL FUNCTIONING IN DEPRESSION

Significant life events (births, deaths, marriages), poor social support networks, poor marital relationships, and poor economic status have all been implicated as risk factors for the development, and relapse, of depressive disorders. These findings may be more relevant to those with less severe depression in terms of short-term outcome, although the level of family functioning has been identified as a significant predictor of long-term outcomes for this patient group. 2

Depression is generally a chronic or episodic condition requiring long-term therapy. Therefore, it is valid to ask whether impairments in social functioning persist after resolution of the core depressive symptoms. The persistence of impaired social functioning even after apparent symptom resolution was recognized as early as 1973, when Paykel and Weissman⁴³ demonstrated in a study of depressed women that improvements in social functioning occurred over an 8-month follow-up period, but more slowly than improvements in symptoms, and residual impairments remained. To be included in the maintenance phase of the study, patients had to have exhibited a response (50% or more improvement) to an initial 1-month treatment with amitriptyline.

Mintz et al. 4 reviewed the original data from 10 studies to examine the effects of antidepressants and psychotherapy on the capacity to work. Patients (N = 827) had been treated with an antidepressant, psychotherapy, or placebo, and in most cases work impairment was measured using the functional components of the Social Adjustment Scale (absenteeism, performance adequacy, in-

Figure 2. SF-36 Social Functioning Scores at Baseline and 2 Years After Baseline for Patients With Depressive Disorders and Chronic Medical Disorders^a



^aData from Hays et al. ¹⁰ Abbreviation: SF-36 = 36-item Short-Form Health Survey.

terpersonal conflict). The authors found that for those patients for whom treatment was symptomatically effective, work outcomes were good. However, improvements occurred more slowly than for symptoms, paralleling the findings of Paykel and Weissman⁴³ discussed above.

Tweed⁴⁴ extended the analysis to a large sample of depressed people and used data from the Colorado Social Health Survey (N = 4745) conducted in community-dwelling adults over 18 years of age. Of these, 2687 respondents were assessed as having one or more depressive symptoms and were included in subsequent analyses. The model employed by Tweed confirmed that the social functioning of a community sample of depressed individuals is considerably impaired compared with normal controls and that these impairments persist after symptom resolution.

In a prospective study, where patients were recruited as they sought treatment, Coryell et al. 12 showed that patients with bipolar (N = 148) or unipolar (N = 240) major affective disorder were more likely to report a decline in job status and income by the end of a 5-year follow-up period compared with family members with no history of depression. Even those patients considered to have recovered during the final 2 years of the follow-up phase still experienced severe and widespread psychosocial impairments. Although the results of this study reflect treatment outcomes in a naturalistic setting, treatment regimens were not specified. In fact, a proportion of patients were receiving no antidepressant therapy during the follow-up period.

A 2-year observational follow-up study by Hays and coworkers¹⁰ included more than 2000 adults with depression, diabetes, hypertension, recent myocardial infarction,

		Study Duration,		Mean Social Functioning Score,	
Study Population	Treatment	wk	Rating Scale	Baseline to Endpoint	p Value
Chronic depression	Imipramine (N = 11)	6	SAS-SR	Imipramine: 2.6 to 2.0	<.05 ^b
46	. ,				,
Stewart et al ⁴⁶ Chronic depression		6	SAS-SR		<.01 ^d
	Imipramine $(N = 47)$			Imipramine: 2.2 ^c	
	Placebo $(N = 48)$			Placebo: 2.4 ^c	
Friedman et al ⁴⁷ Dysthymia	Desipramine $(N = 74)$	10	SAS-SR	Responders: 2.4 to 2.0	<.0001 ^d
	•			Nonresponders: 2.6 to 2.4	
Kocsis et al ⁴⁸ Dysthymia	Sertraline $(N = 123)$	12	SAS-SR	Sertraline: 2.28 to 1.91	<.01 ^b
	Imipramine $(N = 122)$			Imipramine: 2.28 to 1.94	
				Placebo: 2.23 to 2.06	
Double depression and	Sertraline $(N = 426)$	12	SAS-SR	Sertraline: 2.61 to 2.12	NS
				Imipramine: 2.58 to 2.15	
		6	SF-36	Fluoxetine: 59.8 to 66.7	NS
3 1	· /			Placebo: 58.1 to 65.1	
	` /	8	SASS		< .05 ^e
- I	` ,				
ansorate,					
0%	1 1110000 (11 -)))			1 1110000. 20.7 10 27.2	
Major depressive	Reboxetine $(N = 63)$	8	SASS	Reboxetine: 27.3 to 35.7	NS
disorder	Fluoxetine $(N = 76)$			Fluoxetine: 27.9 to 35.1	
	Chronic depression Chronic depression Dysthymia Dysthymia Double depression and chronic major depression Major depression; ≥ 60 years of age Major depressive disorder Major depressive	Chronic depression Dysthymia Dysthymia Dysthymia Double depression and chronic major depression Major depression; ≥ 60 years of age Major depressive disorder Major depressive Major depressive	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Study PopulationTreatmentDuration, wkRating ScaleChronic depressionImipramine $(N = 11)$ 6SAS-SRPlacebo $(N = 13)$ Phenelzine $(N = 36)$ 6SAS-SRChronic depressionPhenelzine $(N = 36)$ 6SAS-SRImipramine $(N = 47)$ Placebo $(N = 48)$ 5SAS-SRDysthymiaDesipramine $(N = 123)$ 12SAS-SRDysthymiaSertraline $(N = 123)$ 12SAS-SRImipramine $(N = 123)$ 12SAS-SRPlacebo $(N = 123)$ 12SAS-SRDouble depression and chronic major depressionSertraline $(N = 426)$ 12SAS-SRMajor depression;Fluoxetine $(N = 209)$ Fluoxetine $(N = 261)$ 6SF-36 ≥ 60 years of agePlacebo $(N = 271)$ Reboxetine $(N = 103)$ 8SASSdisorderFluoxetine $(N = 100)$ Placebo $(N = 99)$ 8SASSMajor depressiveReboxetine $(N = 63)$ 8SASS	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

^aAbbreviations: NS = not significant, SASS = Social Adaptation Self-evaluation Scale, SAS-SR = Social Adjustment Scale Self-Report,

and/or congestive heart failure. Although improvements in functional status were observed in the 428 patients with depressive disorder, limitations remained similar to, or worse than, those experienced by patients with other chronic medical conditions (Figure 2). Comparing baseline values, patients with depressive disorders experienced significantly worse social functioning (p < .05)than patients with other conditions, except for those with subthreshold depression compared with patients with congestive heart failure. Two years after baseline, all comparisons between depressive disorders and chronic medical conditions remained statistically significantly different (p < .05), except for subthreshold depression compared with congestive heart failure and type 1 diabetes mellitus. As with the study reported by Coryell and colleagues, 12 no details of the treatments received by depressed patients were reported.

Evidence from both controlled clinical trials and naturalistic follow-up studies has shown that impairments in social functioning are significant, pervasive, and persistent in depressed patients. However, it would appear that although adequate treatments for depressive disorders can reduce associated psychosocial impairment, acceptable outcomes are not yet being achieved in clinical practice.

PHARMACOTHERAPY AND SOCIAL FUNCTIONING

Traditionally, pharmacotherapy for depression aimed to relieve the acute symptoms of depression and restore

euthymia. More recently, restoration of the usual/premorbid level of social functioning has become an increasingly important therapeutic target and an important feature of new antidepressant agents. A number of antidepressants have been studied for their efficacy in social functioning and, although the data are as yet extremely limited, in general have been shown to offer benefits for depressed patients. Table 2 presents the key social functioning data from a number of such studies^{14,16,45–50} that have used the SAS-SR, the SF-36, or the SASS for the assessment of social functioning.

The effect of treatment with the tricyclic antidepressant imipramine has been studied by a number of groups, 4,16,45,46,48 and imipramine has generally been shown to improve social functioning over time in depressed patients. However, in none of the studies reported in Table 2 did the mean SAS-SR total score of patients treated with imipramine reach the previously estimated community norm value of 1.6,33 although these were all acute treatment studies. Whether patients eventually return to community normative levels is a question that will require long-term research. One of the studies⁴⁵ used what could be considered a subtherapeutic dose of imipramine (50 mg/day), and none of the studies assessed social functioning for longer than 3 months. Desipramine has been assessed in a 10-week, open-label study⁴⁷ in which patients who responded to treatment (N = 36) on the basis of traditional symptom rating scales achieved better social functioning by the end of treatment (mean SAS-SR score = 2.0) than those who did not respond (N = 38; mean SAS-SR

SF-36 = 36-item Short-Form Health Survey.

^bActive treatment vs. placebo at endpoint.

^cAt endpoint.

^dResponders vs. nonresponders at endpoint.

^eActive treatment vs. placebo and reboxetine vs. fluoxetine.

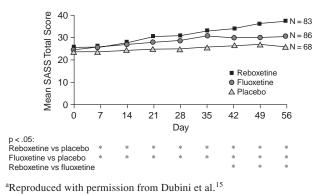
score = 2.4). The difference between responders and non-responders was statistically significant, although again, community norms were not reached. The same group⁵¹ recently reported the results of a continuation study in dysthymic patients in which those who responded to an initial 10 weeks of treatment received a further 6 months of therapy. On the basis of the SAS-SR scores, only 24% of patients achieved a normative level of social functioning at the end of 6 months of therapy even though euthymia was maintained in the majority of patients.

The selective serotonin reuptake inhibitors sertraline and fluoxetine have also been included in clinical studies in which social functioning has been assessed and have also been shown to improve social functioning over time. 16,49 Miller et al. 16 showed that successful treatment with either sertraline or imipramine produced significant improvements in most areas of psychosocial functioning. Furthermore, these improvements appeared as early as week 4 of treatment and represented between 40% and 80% of the total improvement observed. Fluoxetine has been assessed in one study⁴⁹ using the SF-36 scale. Heiligenstein et al.⁴⁹ examined patients aged 60 years and over in a 6-week trial and showed that although significant improvements were found both in mental health and role limitations due to emotional problems, physical functioning, and bodily pain, no significant difference was found between the treatment groups in social functioning. However, it was suggested that a return to social functioning occurs later than would be observed in a 6-week trial.

The most intensive studies of the effect of pharmacotherapy on social functioning are 2 controlled clinical trials 14,15,50 in which the selective norepinephrine reuptake inhibitor (selective NRI) reboxetine was compared with the SSRI fluoxetine and placebo using the SASS to monitor social functioning over time. Both studies were conducted over 8 weeks, and patients were asked to complete the SASS at weekly intervals. The first study^{14,15} included a placebo control, and improvements were seen in both active treatment groups. Statistically significant differences were observed between active treatments and placebo after 1 week (Figure 3). At the last assessment, the mean SASS total score for patients in the reboxetine group had reached "normal" (35 points or above)²⁷; however, this was not so for patients in the fluoxetine or the placebo group (mean SASS total score: reboxetine, 35; fluoxetine, 32; placebo, 27). In the subgroup of patients who achieved symptomatic remission, only those in the placebo group did not achieve community norms by last assessment (mean SASS total score: reboxetine, 42; fluoxetine, 36; placebo, 32). However, statistically significant differences remained between the reboxetine and fluoxetine groups.

A further direct comparison between reboxetine and fluoxetine supports the results of the placebo-controlled study. In this smaller 8-week study,⁵⁰ no statistically significant differences were detected between the reboxetine

Figure 3. Social Adaptation Self-evaluation Scale (SASS) Total Score: Mean Values Over Time in Patients in the Reboxetine, Placebo, and Fluoxetine Groups^a



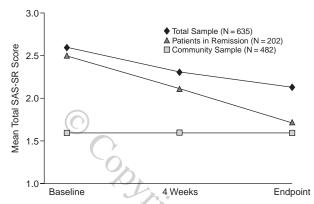
and fluoxetine groups. However, in patients who achieved symptomatic remission, a statistically significant difference in favor of reboxetine was determined. Interestingly, these 2 antidepressants were also assessed using the symptom rating scales; no statistically significant differences were found between antidepressants in either study.

Other antidepressants, such as phenelzine^{13,46} and L-deprenyl,¹³ have also been assessed for their effect on social functioning, and in general appear to improve social functioning over time. Agosti and coworkers¹³ used the Longitudinal Interval Follow-up Evaluation (LIFE)⁵² to assess social functioning in 61 chronically depressed patients treated over 6 weeks with either L-deprenyl, phenelzine, imipramine, or placebo. Antidepressants were superior to placebo in improving work and home functioning, relationships with relatives, sex frequency, and life satisfaction. No comparison of the individual antidepressants was presented.

In general, it would appear that patients who recover symptomatically can be expected to experience a positive change in social functioning. The quality of remission in depression requires consideration of the number and severity of residual symptoms, the level of social functioning, and the adverse effects of treatment. Studies suggest that patients who achieve remission on treatment with antidepressants have substantially improved social functioning, but do not always return to their premorbid levels (Figure 4). 16 However, Dubini et al. 15 found that those patients who achieved symptomatic remission following treatment with either reboxetine or fluoxetine also achieved a normal level of social functioning, although mean SASS total scores for patients in the reboxetine group remained statistically significantly superior to those for patients in the fluoxetine group.

Quality of remission is an important consideration in the treatment of depression, and the possibility of a differential effect between the newer antidepressants raised by the studies reported by Dubini et al.^{14,15} and Massana et

Figure 4. Social Functioning (mean SAS-SR total score) Before, During, and After Treatment With Sertraline or Imipramine^a



^aData from Miller et al. ¹⁶ Abbreviation: SAS-SR = Social Adjustment Scale Self-Report.

al.⁵⁰ warrants further examination. Data over longer time periods (12 weeks or more) are required to draw firm conclusions about the validity of these results. When evaluating the global benefits of any antidepressant, the extent to which it offers improvements in symptomatology, as opposed to a return to euthymia and normal levels of social functioning, is an important consideration. As Kocsis and colleagues⁴⁵ stated: "If antidepressant medication merely reduced depressive symptoms, social impairment might persist and lead to further personal and business failure and to a cycle of demoralization."^(p999)

PSYCHOTHERAPY AND SOCIAL FUNCTIONING

Psychotherapy is an interactive treatment for depression that aims to relieve core symptoms and restore normal social functioning. Some time-limited psychotherapies are recommended by the American Psychiatric Association⁵ and the Depression Guideline Panel.⁵³ Psychotherapy targets 3 main areas: symptoms, social functioning, and personality. A range of psychosocial interventions have been developed and studied to varying degrees. These include interpersonal psychotherapy,⁵⁴ cognitive-behavioral therapy,⁵⁵ and psychoeducation.⁵⁶

The development of interpersonal psychotherapy focused attention on social, interpersonal functioning as an outcome measure in the treatment of depression, and a number of key studies^{11,57–59} have examined its effects. While the benefits of psychotherapy were demonstrated in all these studies, the data appear to suggest that the effects of psychotherapy may be less rapid than those seen with antidepressant therapy. However, this approach remains useful, particularly in patients for whom medication is unsuitable (e.g., during pregnancy, in refractory or noncompliant patients) and as a maintenance therapy. Furthermore, its use in combination with pharmaco-

therapy may promote compliance with treatment and reduce the dropout rate. The effectiveness of certain psychotherapeutic approaches in the treatment of depressive disorders is clear. However, whereas a number of early studies also showed significant benefits in social functioning, more recent studies appear to have neglected this important area of outcome research.

CONCLUSIONS AND RECOMMENDATIONS

Impairments in social functioning associated with depressive disorders are serious and pervasive. They affect not just the individual, but also marriages, families, and work environments. Deficits in social functioning often persist after symptomatic recovery, and, if untreated, such persistent impairments may contribute to a poor prognosis in long-term depressed patients. In clinical practice, an integrated approach is recommended that should include an assessment of social functioning in addition to the standard symptom assessment.

Clinical tools are available that begin to address the problem of impaired social functioning. A number of specific rating scales are available, suitable for use both in clinical trials and for monitoring patients under more standard care. Antidepressants in general appear to relieve the symptoms of impaired social functioning, although recent evidence raises the possibility of differential effects between the antidepressant classes.

Additional research is recommended in a number of areas. These include the time course of impaired social functioning compared with that of depressive symptoms, the efficacy of the various psychotherapeutic approaches currently available in relieving impaired social functioning acutely, the comparative efficacy of individual antidepressants, and long-term efficacy of both psychotherapy and pharmacotherapy in improving social functioning.

Drug names: amitriptyline (Elavil and others), desipramine (Norpramin and others), fluoxetine (Prozac), phenelzine (Nardil), sertraline (Zoloft), reboxetine (Vestra).

REFERENCES

- Murray CJL, Lopez AD. The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability From Disease, Injuries, and Risk Factors in 1990 and Projected to 2020. Boston, Mass: Harvard University Press; 1998
- Weissman MM, Warner V, Wickramaratne P, et al. Offspring of depressed parents: ten years later. Arch Gen Psychiatry 1997;54:932–940
- Warner V, Weissman MM, Mufson L, et al. Grandparents, parents and grandchildren at high risk for depression: a three-generation study. J Am Acad Child Adolesc Psychiatry 1999;38:289–296
- Mintz J, Mintz LL, Arruda MJ, et al. Treatments of depression and the functional capacity to work. Arch Gen Psychiatry 1992;49:761–768
- American Psychiatric Association. Practice Guideline for Major Depressive Disorder in Adults. Am J Psychiatry 1993;150(suppl 4):1–26
- Simon GE, VonKorff M, Barlow W. Health care costs of primary care patients with recognized depression. Arch Gen Psychiatry 1995;52:850–856
- Koenig HG, Kuchibhatla M. Use of health services by hospitalized medically ill depressed elderly patients. Am J Psychiatry 1998;155:871–877

- Greenberg PE, Stiglin LE, Finkelstein SN, et al. Economic burden of depression in 1990. J Clin Psychiatry 1993;54:405–418
- Wells KB, Stewart A, Hays RD, et al. The functioning and well-being of depressed patients: results from the Medical Outcomes Study. JAMA 1989;262:914–919
- Hays RD, Wells KB, Sherbourne DC, et al. Functioning and well-being outcomes of patients with depression compared with chronic general medical illnesses. Arch Gen Psychiatry 1995;52:11–19
- Weissman MM, Klerman GL, Prusoff BA, et al. Depressed outpatients: results one year after treatment with drugs and/or interpersonal psychotherapy. Arch Gen Psychiatry 1981;38:51–55
- Coryell W, Scheftner W, Keller M, et al. The enduring psychosocial consequences of mania and depression. Am J Psychiatry 1993;150:720–727
- Agosti V, Stewart JW, Quitkin FM. Life satisfaction and psychosocial functioning in chronic depression: effect of acute treatment with antidepressants. J Affect Disord 1991;23:35–41
- Dubini A, Bosc M, Polin V. Do noradrenaline and serotonin differentially affect social motivation and behaviour? Eur Neuropsychopharmacol 1997;7(suppl 1):S49–S55
- Dubini A, Bosc M, Polin V. Noradrenaline-selective versus serotoninselective antidepressant therapy: differential effects on social functioning. J Psychopharmacol 1997;11(suppl 4):S17–S23
- Miller IW, Keitner GI, Schatzberg AF, et al. The treatment of chronic depression, part 3: psychosocial functioning before and after treatment with sertraline or imipramine. J Clin Psychiatry 1998;59:608–619
- McCombs JS, Nichol MB, Stimmel GL, et al. The cost of antidepressant drug therapy failure: a study of antidepressant use patterns in a medicaid population. J Clin Psychiatry 1990;51(6, suppl):60–69
- Hirschfeld RM, Keller MB, Panico S, et al. The National Depressive and Manic-Depressive Association consensus statement on the undertreatment of depression. JAMA 1997;277:333–340
- Lecrubier Y, Boyer P, Lépine JP, et al. The identification of psychiatric disorders in primary care. Eur Psychiatry 1996;11(suppl 4):178–179
- Coulehan JL, Schulberg HC, Block MR, et al. Treating depressed primary care patients improves their physical, mental and social functioning. Arch Intern Med 1997;157:1113–1120
- Lépine JP, Gastpar M, Mendlewicz J, et al. Depression in the community; the first pan-European study DEPRES (Depression Research in European Society). Int Clin Psychopharmacol 1997;12:19–29
- Paykel ES. Social functioning and the depressed patient. Int J Psychiatry Clin Pract 1999;3:S9–S11
- Wiersma D. Measuring social disabilities in mental health. Soc Psychiatry Psychiatr Epidemiol 1996;31:101–108
- Endicott J, Nee J, Harrison W, et al. Quality of Life Enjoyment and Satisfaction Questionnaire: a new measure. Psychopharmacol Bull 1993;29: 321–326
- 25. Hunt SM, McKenna SP. The QLDS: a scale for measurement of quality of life in depression. Health Policy 1992;22:307–319
- Weissman MM, Sholomskas D, John K. The assessment of social adjustment: an update. Arch Gen Psychiatry 1981;38:1250–1258
- Bosc M, Dubini A, Polin V. Development and validation of a social functioning scale, the Social Adaptation Self-evaluation Scale. Eur Neuropsychopharmacol 1997;7:S57–S70
- Weissman MM, Bothwell S. Assessment of social adjustment by patient self-report. Arch Gen Psychiatry 1976;33:1111–1115
- Ware JE, Sherbourne C. The MOS 36-item short-form health survey (SF-36), I: conceptual framework and item selection. Med Care 1992;30: 473–483
- Sheehan DV, Harnett-Sheehan K, Raj AB. The measurement of disability. Int Clin Psychopharmacol 1996;11:89–95
- Weissman MM. Beyond symptoms: social functioning and the new antidepressants. J Psychopharmacol 1997;11(suppl 4):S5–S8
- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Washington, DC: American Psychiatric Association; 1994
- Weissman MM, Prusoff BA, Thompson WD, et al. Social adjustment by self-report in a community sample and in psychiatric outpatients. J Nerv Ment Dis 1978;166:317–326
- 34. De Lisio G, Maremmani I, Perugi G, et al. Impairment of work and leisure

- in depressed outpatients: a preliminary communication. J Affect Disord 1986;10:79–84
- Fredman L, Weissman MM, Leaf PJ, et al. Social functioning in community residents with depression and other psychiatric disorders: results of the Newhaven Epidemiologic Catchment Area Study. J Affect Disord 1988;15:103–112
- Evans S, Cloitre M, Kocsis JH, et al. Social-vocational adjustment in unipolar mood disorders: results of the DSM-IV field trial. J Affect Disord 1995;38:73–80
- Leader JB, Klein DN. Social adjustment in dysthymia, double depression and episodic major depression. J Affect Disord 1996;37:91–101
- Paykel ES. Life events, social support and depression. Acta Psychiatr Scand Suppl 1994;377:50–58
- Lara ME, Leader J, Klein DN. The association between social support and course of depression: is it confounded with personality? J Abnorm Psychol 1997;106:478–482
- Andrew B, Hawton K, Fagg J, et al. Do psychosocial factors influence outcome in severely depressed female psychiatric in-patients? Br J Psychiatry 1993;163:747–754
- Paykel ES, Cooper Z, Ramana R, et al. Life events, social support and marital relationships in the outcome of severe depression. Psychol Med 1996;26:121–133
- Keitner GI, Ryan CE, Miller IW, et al. Psychosocial factors and the longterm course of major depression. J Affect Disord 1997;44:57–67
- Paykel ES, Weissman MM. Social adjustment and depression: a longitudinal study. Arch Gen Psychiatry 1973;28:659–663
- Tweed DL. Depression-related impairment: estimating concurrent and lingering effects. Psychol Med 1993;23:373

 –386
- Kocsis JH, Frances AJ, Voss S, et al. Imipramine and social-vocational adjustment in chronic depression. Am J Psychiatry 1988;145:997–999
- Stewart JW, Quitkin FM, McGrath PJ, et al. Social functioning in chronic depression: effect of 6 weeks of antidepressant treatment. Psychiatr Res 1988:25:213–222
- Friedman RA, Markowitz JC, Parides M, et al. Acute response of social functioning in dysthymic patients with desipramine. J Affect Disord 1995; 34:85–88
- 48. Kocsis JH, Zisook S, Davidson J, et al. Double-blind comparison of sertraline, imipramine, and placebo in the treatment of dysthymia: psychosocial outcomes. Am J Psychiatry 1997;154:390–395
- 49. Heiligenstein JH, Ware JE, Beusterien KM, et al. Acute effects of fluoxetine versus placebo on functional health and well-being in late-life depression. Int Psychogeriatr 1995;7:125–137
- Massana J, Möller HJ, Burrows GD, et al. Reboxetine: a double-blind comparison with fluoxetine in major depressive disorder. Int Clin Psychopharmacol 1999;14:73–80
- Friedman RA, Markowitz JC, Parides M, et al. Six months of desipramine for dysthymia: can dysthymic patients achieve normal social functioning? J Affect Disord 1999;54:283–286
- Keller M, Lavori P, Friedman B, et al. The Longitudinal Interval Followup Evaluation: a comprehensive method for assessing outcome in prospective longitudinal studies. Arch Gen Psychiatry 1987;44:540–548
- Cohen LJ, Guthrie SK. Depression in primary care: review of AHCPR guidelines. Ann Pharmacother 1997;31:782–785
- Klerman GL, Weissman MM, Rounsaville BJ, et al. Interpersonal Psychotherapy for Depression. New York, NY: Basic Books; 1984
- Beck AT, Rush AJ, Shaw BF, et al. Cognitive Therapy of Depression. New York, NY: Guilford Press; 1979
- Lewinsohn PM, Antonuccio DA, Steinmetz J, et al. The Coping With Depression Course: A Psychoeducational Intervention for Unipolar Depression. Eugene, Ore: Castalia Press; 1984
- Weissman MM, Klerman GL, Paykel ES, et al. Treatment effects on the social adjustment of depressed patients. Arch Gen Psychiatry 1974;30: 771–778
- Elkin I, Shea MT, Watkins JT, et al. National Institute of Mental Health Treatment of Depression Collaborative Research Program: general effectiveness of treatments. Arch Gen Psychiatry 1989;46:971–982
- Thase ME, Greenhouse JB, Frank E, et al. Treatment of major depression with psychotherapy or psychotherapy-pharmacotherapy combinations. Arch Gen Psychiatry 1997;54:1009–1015