Türk Psikiyatri Dergisi 2007; 18(4)
Turkish Journal of Psychiatry

The Association between Disability and Residual Symptoms in Depressive Patients: A 3-Month Follow-Up

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Abstract

Objective: *In this 3-month naturalistic follow-up we aimed to investigate depression treatment outcome and the correlation between improvement of depressive symptoms and level of disability.*

Method: *The study included 104 patients with depression that presented to the Hacettepe Psychiatry Outpatient Clinic. The course was defined operationally using the Hamilton Depression Rating Scale, Hamilton Anxiety Rating Scale, and Structured Clinical Interview for DSM-IV Axis I Disorders. The World Health Organization Disability Assessment Schedule (WHO-DAS II) was administered to determine level of disability. Patients received follow-up assessments using the same instruments 3 months after receiving antidepressant treatment.*

Results: *Follow-up assessments showed that improvement in Hamilton Depression Rating Scale and Hamilton Anxiety Rating Scale total scores was statistically significant, and lower anxiety and depression ratings were correlated with lower disability levels. The patients that had severe depression and anxiety at the beginning of the course had residual depressive symptoms. The results showed that severity of depression was a predictor of residual symptoms in our cohort. Psychological anxiety was the most common residual symptom (consistent with other studies) and the patients with a psychological anxiety score ≥ 2 had higher disability levels ($Z = -3.570$, $P < 0.05$).*

Conclusion: *Severity of depression was a predictor of residual symptoms and partial remission after a depressive episode appeared to be strongly associated with disability. These findings highlight the importance of adequate treatment of depression.*

Key Words: *Depression, anxiety, disability*

INTRODUCTION

Clinical depression is a common mood disorder with a high probability of multiple recurrence; consequently, it's one of the leading causes of disability (Wells et al., 1992). Depression is reported to have a 15%-17% life-long frequency (Angst, 1996; Kessler et al., 1996).

Control and naturalistic follow-up studies indicate that social disabilities caused by depression are frequent and permanent. It is expected that these disabilities would be reduced by adequate treatment; yet, clinical treatment hasn't been satisfactory (Hirschfeld et al., 2000). Outpatient records demonstrate that depression has caused more impairment than chronic physical illnesses such as hypertension, diabetes, and hearth disease (Hays et al., 1995; Wells et al., 1989). A study conducted by Kaplan (1995) reported that patients diagnosed with psychiatric disorders have more social and physical disabilities compared to patients with chronic physical illnesses. Moreover, they delayed performing their daily tasks and mostly spent their days in bed.

Previous studies indicate that 29%-46% of patients with clinical depression only partially remit or never remit with anti-depressant treatment (Fava et al., 1996). Not only patients with partial remission (PR), but also those with complete remission (CR) experience residual symptoms (Nierenberg et al., 1999). Despite progress in the treatment of depression, the rate of recovery from depression is below expectations.

Even mild residual symptoms cause disability. There is a linear relationship between the severity of residual symptoms and disability; more severe residual symptoms indicate greater disability (Mintz et al., 1992; Judd et al.,

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2000). Impaired social functionality affects an individual's marriage, family, and work. This impairment persists even after symptomatic remission and negatively affects prognosis if not treated (Hirschfeld et al., 2000).

A 6-month naturalistic follow-up study conducted by Agosti (1999) suggested that overall social functioning of patients that participated in a depression treatment program at the National Institute of Mental Health (U.S.A) and that met categorically defined criteria for recovery was more impaired than a normal community sample. Moreover, remitted patients manifested more psychiatric symptoms compared to a normal community sample. These patients experienced mild impairment in social functioning that paralleled residual symptoms. Psychosocial functioning improved in the absence of residual symptoms. A meta-analytic study revealed a linear relationship between residual symptoms and disability. According to that study, even mild residual symptoms caused disability (Mintz, 1992). Residual symptoms are also associated with increases in relapse and poor prognosis. Treatment of residual symptoms is recommended for a better long-term outcome (Menza et al., 2003). Only 6 (12.2 %) of 49 major depressive patients assessed with the Clinical Interview for Depression (CID) (Paykel et al., 1970) were successfully treated with antidepressants and later showed no residual symptoms. The study reported that 73%, 55%, and 40% of non-remitted patients experienced general anxiety (GA), somatic anxiety (SA), and irritability (Fava et al., 1994). In a clinical study investigating the prognosis of depression, of the 119 depressive patients 66 were reassessed after 30 months. Depression became chronic in 9.1% and recurred in 31.8% of reassessed patients. It was reported that 57.6% of the patients recovered and haven't re-experienced depression. The first assessment revealed that the cohort of patients with chronic depression consisted of females older than 30 years of age (Uluşahin and Uluğ, 1994).

The present study aimed to identify residual symptoms and determine the level of improvement of social disability in the third month of treatment by comparing pre-treatment measurements of severity of depression and level of disability to those of the third treatment month. The relationship between residual symptoms and level of disability level was investigated.

METHOD

Sample

The study included 104 randomly selected patients that presented to the Hacettepe University Faculty of Medicine, Psychiatry Outpatient Clinic between October 2002 and May 2004 and were diagnosed with major depression according to DSM-IV criteria. The participants were assessed before psychotherapeutic medication was administered and in the third month of treatment. Participants were required to: be experiencing a new depressive episode; have at least a primary school education; not have a co-morbid psychiatric disorder; not have a chronic physical disease; not have a physical handicap resulting in disability; not use psychotherapeutic drugs regularly; not be mentally retarded.

Process

Demographic data were collected with a questionnaire and the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) was used for diagnostic assessment. The Hamilton Depression Rating Scale (HAM-D-17), which has 17 items, was administered to assess the severity of depression. The severity of comorbid anxiety was assessed with the Hamilton Anxiety Scale (HAM-A). The World Health Organization Disability Assessment Schedule (WHODAS II) was administered for assessing disability. Scales and questionnaires were administered pre-treatment and in the third month of treatment during an interview that lasted 1-1.5 h. Researchers didn't intervene in the treatment plan. Participants were fully informed about the nature of research.

Instruments

Demographic Questionnaire

Data on participant age, gender, level of education, current work status, current marital status, and residential circumstances (living alone or with family, etc.) were collected. In addition, psychiatric disorders and depressive episodes were reported.

Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I)

The SCID-I is a structured clinical interview developed by First et al. (1997) and published by the American Psychiatric Association (APA, 1994). The interview was adapted to the Turkish population by Çorapçıoğlu et al. (1999) who also assessed its reliability and validity.

Hamilton Depression Rating Scale (HAM-D)

The HAM-D was created by Hamilton (1960) after investigating depressive patients and factor analyzing their symptoms. The scale, which was revised by Hamilton in 1967, is widely used for assessing the severity of

Table I. Comparison of the severity of depression, the severity of anxiety, and level of disability between the 1st and 2nd interviews.

	1st Interview		2nd Interview		
	Mean	SD	Mean	SD	t
HAM-D-17 Total score	16.13	4.02	6.25	5.05	17.751*
HAM-A Total score	13.57	5.87	6.09	5.76	10.672*
WHODAS II-1 Understanding and communicating	35.44	17.78	25.26	17.75	4.904*
WHODAS II-2 Getting around	24.67	20.89	14.74	17.08	4.434*
WHODAS II-3 Self-care	21.75	18.95	9.82	13.35	5.808*
WHODAS II-4 Getting along with people	33.5	21.52	19.54	19.60	6.552*
WHODAS II-5 Life activities	41.71	25.71	26.86	23.52	4.750*
WHODAS II-6 Participation in society	39.36	16.90	26.25	17.13	7.439*
WHODAS II Total	34.42	14.95	22.17	15.21	7.764*

*P < 0.05

symptoms in patients already diagnosed with depression. The present study used the 17-item version (HAM-D-17). Items are rated on a Likert scale. Its reliability and validity for the Turkish population were assessed by Akdemir et al. (1996).

Hamilton Anxiety Scale (HAM-A)

The HAM-A is a semi-structured scale designed for assessing the severity of anxiety and the effects of psychotherapeutic drugs on symptoms of anxiety in patients with generalized anxiety disorder (GAD) (Hamilton, 1959). Its validity in the Turkish population was assessed by Yazıcı et al. (1998)

World Health Organization Disability Assessment Schedule (WHO-DAS II)

The WHODAS II was published by WHO (1998) to provide a tool for assessing disturbances in social adjustment and behavior, irrespective of medical diagnosis. The assessment is based on the participant's conditions in the last month of the study. The WHODAS II includes 6 activity domains that are considered equally important across many cultures. These domains are 1) understanding and communicating, 2) getting around, 3) self-care, 4) getting along with people, 5) life activities, 6) participation in society. All answers are scored between 1 and 5. The 36-item version of WHODAS II takes 20 min to complete. The WHODAS II underwent international reliability and validity testing and was assessed in Turkey by 2 trained researchers with a test-retest study in which 30 participants were assessed and then reassessed 15 days later (Ertugrul and Ulug, 2002).

Statistical Analysis

The data were analyzed with SPSS for Windows v.11.5. Paired Student's t-test was conducted for averages taken asynchronously, the independent samples t-test and Mann-Whitney U-test (MWW) were conducted for 2 different group averages. The group with residual symptoms (GWR) and the group in remission (GIR)

Table II. Clinical condition of patients based on total HAM-D scores (2nd interview) and their treatment compliance.

	In remission HAM-D ≤ 7 n (%)	With residual symptoms 7 < HAM-D < 17 n (%)	Symptomatic HAM-D ≥ 17 n (%)
Continuing	38 (76)	15 (65.2)	2 (50)
Lost	12 (24)	8 (34.8)	2 (50)
TOTAL	50 (100)	23 (100)	4 (100)

$X^2 = 0.921$, $P > 0.05$

were compared based on sociodemographic variables by conducting the chi square test (x^2). Pearson's correlation analysis was conducted to reveal the relationship between the severity of depression and reduction of disabilities. Clinical variables and sociodemographic characteristics predicting improvement in disability were assessed using regression analysis. The logistic regression model was used for identifying variables predictive of residual symptoms. Variables were chosen by the retrospective elimination method.

RESULTS

Among the 104 patients, 83 were female and 21 were male (mean age: 31.32 years; SD: 9.92 years). Average age at disease onset was 28.14 years (SD: 9.37 years). In all, 66 patients (63.5%) reported having their first depressive episode, whereas 38 (36.5%) reported suffering from a recurrent depressive episode (≥ 1). A significant relationship ($P < 0.05$) was found between the mean severity of depression, and the severity of anxiety and the level of disability (Table 1). A positive significant relationship ($r^2 = 0.24$, $P < 0.01$) was found between the differences of total scores of the HAM-D-17 (hdt1-hdt2) administered during the first interview and the differences of total scores of the WHODAS II (dast1-dast2) administered during the second interview. Milder depression indicated better functioning (Figure I). The correlation between level of disability in the 6 activity domains assessed by WHODAS II and improvement of symptoms was examined. Positive significant relationships were found between the improvement of depressive symptoms, and WHODAS II-1 score related to understanding and communicating ($r^2 = 0.21$, $P < 0.01$), DAS 3 score related to self-care ($r^2 = 0.14$, $P < 0.01$), WHODAS II-4 score related to getting along with people ($r^2 = 0.11$, $P < 0.01$), WHODAS II-5 score related to life activities ($r^2 = 0.1$, $P < 0.01$), and WHODAS II-6 score related to participation in society ($r^2 = 0.14$, $P < 0.01$). WHODAS II-2 score related to getting around was not related to improvement of depressive symptoms ($r^2 = 0.04$, $P > 0.01$).

Sociodemographic variables, like age, gender, level of education, current work status, and current marital status, and clinical variables, such as onset of disorder, having a first depressive episode or experiencing recurrent episodes, initial level of depression and anxiety, etc., were not predictive of a reduction in disability.

Participants were divided into 3 groups during the third month interview according to severity of depression: in remission, residual symptoms, and still experiencing syndromal depression. The cutoff for defining remission was a HAM-D-17 total score of 7-10 (Nierenberg and DeCecco, 2001). Participants scoring < 8 were considered to be in remission. In many studies a HAM-D-17 total score > 16 is considered indicative of syndromal depression (O'Leary et al., 2000). According to these definitions, 50 patients (64.94%) in the present study were in remission, 23 (29.87%) had residual symptoms (HAM-D-17 total score between 8 and 16), and 4 participants (5.9%) were still symptomatic during the second interview (Table II). GWR and GIR were compared according to clinical variables and treatment compliance.

Mean age of GWR was 30.96 years (SD: 10.03 years) and GIR was 32.56 years (SD: 10.04 years). There wasn't a significant relationship between the mean ages of the 2 groups ($Z = –0.725$, $P = 0.468$). The 2 groups didn't differ with regard to gender (Fisher's exact chi square test, $P > 0.05$), marital status ($X^2 = 0.021$, $P = 0.884$), level of education ($X^2 = 0.055$, $P = 0.814$), or work status ($X^2 = 0.458$, $P = 0.499$). The 2 groups were compared regarding the initial severity of depression and anxiety. The GWR had more severe initial depression and anxi-

Table III. Both groups' 6 WHODAS II domain scores and total WHODAS II mean scores compared to the severity of depression and the severity of anxiety during the 1st and 2nd interviews.

	Group with Residual Symptoms		Group in Remission		
	Mean	SD	Mean	SD	Z
WHODAS II-1	31.88	18.82	20.08	14.3	–2.375*
WHODAS II-2	20.43	17.51	9.9	12.05	–2.646*
WHODAS II-3	14.14	13.08	5.37	7.68	–2.927*
WHODAS II-4	25.43	18.76	13.4	14.37	–2.795*
WHODAS II-5	34.78	23.31	21	21.72	–2.740*
WHODAS II-6	33.97	13.43	20.37	14.9	–3.516*
WHODAS II-T	29.53	13.13	16.37	11.4	–3.748*
HAM-D-17 1st interview total score	17.35	3.366	14.94	3.661	–2.252*
HAM-A 1st interview total score	15.22	5.559	11.92	5.379	–2.303*
HAM-D-17 2nd interview total score	10.65	2.551	3.22	2.279	–6.853*
HAM-A 2nd interview total score	10.09	3.988	3.02	2.325	–6.185*

*P < 0.05

ety. The 2 groups' HAM-D-17 and HAM-A total scores recorded during the second interview were compared and they differed significantly in terms of severity of depression and anxiety. Total WHODAS II scores and 6 different WHODAS II (second interview) sub-scores of the GWR and GIR were compared, and the results indicated a significant difference. The GWR had greater disability levels (Table III).

The researchers in the present study did not intervene in the treatment plan of any of the patients. Doctors providing the medical treatment administered selective serotonin reuptake inhibitors (SSRIs) to 82 (78.7%) of the 104 patients; the remaining 22 (21.3%) patients were treated with other anti-depressants. In total, 77 patients were interviewed a second time; 50 (64.94%) were in remission, 23 (29.87%) had residual symptoms, and 4 (5.19%) were symptomatic. It was observed that 38 (76%) of the 50 patients in remission continued to take their medication and 12 (24%) stopped taking their medication. Of the 23 patients with residual symptoms, 15 (65.2%) patients continued to take their medication and 8 (34.8%) of them stopped. A significant relationship was not found between these 2 groups regarding drug compliance (Table II). Moreover, patients who were and were not interviewed a second time were compared based on sociodemographic characteristics and clinical variables. The mean age of the group that was interviewed a second time was 31.94 years (SD: 10.08 years) and the mean age of the group that wasn't was 29.56 years (SD: 9.43 years). A significant relationship was not found between the mean ages of the 2 groups (Z = –1.121, P = 0.262). Furthermore, a significant relationship between these 2 groups regarding gender (X^2 = 0.744, P = 0.388), marital status (X^2 = 0.193, P = 0.661), level of education (X^2 = 0.007, P = 0.934), and work status (X^2 = 1.467, P = 0.226) was not found. The mean total HAM-D-17 score of the group that was interviewed a second time was 15.97 (SD: 3.86), whereas it was 16.59 (SD: 4.49) for the group that wasn't; the difference was not signifi-

Table IV. Logistic regression analysis for predicting the risk of residual symptoms.

	B	Standard Error	P	Odds Rate	Confidence Interval Lower Limit	Upper Limit
Education	–0.088	0.609	0.886	0.916	0.278	3.021
Onset age	0.007	0.036	0.847	1.007	0.938	1.081
Work status	0.439	0.557	0.431	1.551	0.520	4.621
Life standards	–0.481	0.474	0.310	0.618	0.244	1.565
Experienced depressive episodes	0.616	0.570	0.280	1.851	0.605	5.662
Initial severity of depression	0.196	0.088	0.025*	1.217	1.025	1.445
Constant	–4.025	1.471	0.006			

CI: 95% (odds rate confidence interval)

cant. The mean total HAM-A score of the group that was interviewed a second time was 13.31 (SD: 5.74) versus 14.30 (SD: 6.28) for the group that wasn't; the difference was not significant. A significant difference was not found (t = 0.748, P = 0.456).

Variables predictive of residual symptoms were explored as well. Sociodemographic variables, such as age, gender, level of education level, current work status, and current marital status, were not predictive of residual symptoms. Clinical variables, like onset of disorder, first depressive episode or recurrent episodes, initial level of depression and anxiety, etc., were explored as well and initial level of depression was found to be a predictor of residual symptoms (B = 0.196, P = 0.025, CI 95%, odds ratio = 1.217) (Table IV).

The present study assessed residual symptoms according to total score as well as according to points earned on each individual item. Common residual symptoms and their relationship to disability were assessed. Symptoms with a score ≥ 2 didn't improve and these were considered to be residual symptoms. The most common symptom was psychological anxiety (17.3%), followed by loss of interest in activities, hobbies, or work (16.3%), insomnia (13.5%), depressed mood (13.5%), and feelings of guilt (10.06%). Patients that scored ≥ 2 on psychological anxiety (Z = –3.570, P < 0.05), loss of interest in activities, hobbies, or work (Z = –4.06, P < 0.05), insomnia (Z = –2.074, P < 0.05), depressed mood (Z = –2.88, P < 0.05), and feelings of guilt (Z =–3.626, P < 0.05) had higher disability scores (Table V).

DISCUSSION

The present study investigated the process and outcome of depression in a population of depressive patients during a 3-month period. Additionally, the relationship between improvement of depressive symptoms and improvement in the level of disability was explored.

Improvement of depressive symptoms was assessed with 2 different methods. Firstly, the patients were separated into 2 groups based on their total HAM-D-17 scores obtained during the second interview: GIR (total HAM-D-17 score ≤ 7) and GWR (total HAM-D-17 score 8-16). Sociodemographic and clinical characteristics of GWR and GIR were explored because they could have affected the treatment plan. No significant sociodemographic difference was found between GIR and GWR after performing the chi-square test. No predictive variable was found by performing logistic regression analysis. The severity of depression, which is a clinical characteristic, was predictive of residual symptoms. No significant difference was found between the sociodemographic and clinical characteristics of GIR and GWR. A follow-up study conducted by Nierenberg et al. (1999) revealed that variables, such as age, gender, marital status, and work status, and the number of experienced episodes didn't predict residual symptoms. However, many other studies, and the present study as well, indicated that the severity of initial depressive symptoms predicted residual symptoms. A 2-year follow-up study conducted by Ramano et al. (1995) reported that patients with more severe depressive symptoms had delayed remission. Another study conducted by Paykel et al. (1995) reported that

Table V. The relationship between disability and severity of common residual symptoms

	Mean Total Scores of DAS in the 2nd interview	Z
Score of depressed mood (HAM-D-17, 1st item)		
≥ 2	56.08	
< 2	35.85	–2.88*
Score of feelings of guilt (HAM-D-17, 2 nd item)		
≥ 2	48.21	
< 2	38.08	–1.143*
Score of insomnia (HAM-D-17, 4th item)		
≥ 2	50.21	
< 2	36.51	–2.074*
Score of loss of interest in activities (HAM-D-17, 7th item)		
≥ 2	58.44	
< 2	33.49	–4.060*
Score of psychological anxiety (HAM-D-17, 10 th item)		
≥ 2	55.47	
< 2	33.97	–3.570*

*p<0.05

patients with more severe depression were more prone to have residual symptoms. In the light of the literature, we stress the importance of informing patients with severe depressive symptoms about psychopharmacological treatment. Healthcare professionals should monitor depressive patients and make sure that their treatment duration is adequate.

In the present study, if a patient scored > 2 on one HAM-D-17 item, he/she was considered to have a residual symptom. Accordingly, the present study found that psychological anxiety (10th item) was the most common residual symptom out of 17 items. Previous studies have reported that anxiety was comorbid with major depression and is experienced in partial remission (Menza et al., 2003; Paykel, 1998, Nierenberg et al., 1999). Moreover, insomnia (4th item), depressed mood (1st item), loss of interest in activities, hobbies, or work (7th item), and feelings of guilt (2nd item) frequently scored > 2. It is well known that depressive symptoms, such as loss of interest in activities or work, hinder psychosocial and professional functioning. Participants who scored higher on each of these items also had higher scores on disability compared to low scorers (Table V). This result indicated that even a single depressive symptom affects functioning. The results of studies investigating residual symptoms in depression are inconclusive; when are these symptoms clinically relevant or irrelevant? The level of depressive symptoms that is considered causative of disability is not clear. A study conducted by Fava et al. (1982) reported that the normal control group's mean HAM-D-17 score was 6. This indicates that no one may be symptom-free. Many studies highlighted the presence of disability in the presence of residual symptoms. The present study compared the means of total WHODAS II scores (2nd interview) of the GWR with GIR. Consistent with previous study results (Mintz et al., 1992) GWR had more disabilities. GWR and GIR were assessed in the 6 domains of WHODAS II. The results indicated that GWR had a higher level of overall disability after comparing the mean level of disability scores (2nd interview) and the difference was significant for each domain. There was a positive significant relationship between the improvement of symptoms (assessed with the HAM-D-17) and

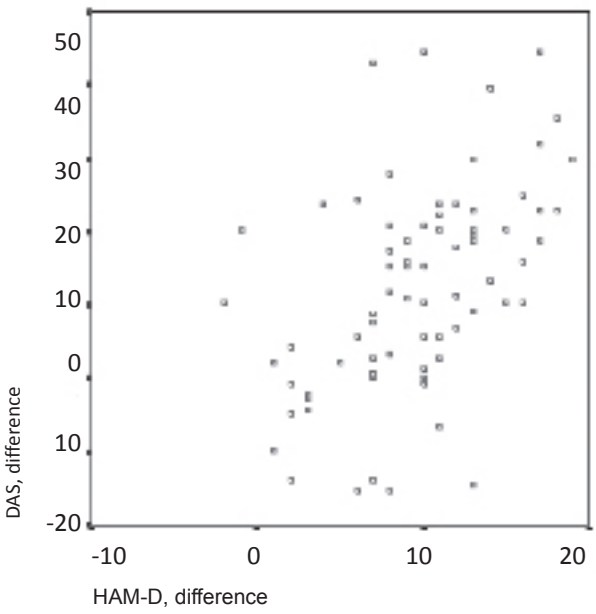

Figure 1. The relationship between improvement in depressive symptoms and improvement in disability.
$r^2 = 0.24$, $P < 0.01$

the improvement of disability. Similar results have been reported by many studies (Judd et al., 2000; Mintz et al., 1992).

In all, 27 (26%) patients of 104 were not interviewed a second time. There is no information about these patients' depressive symptoms and level of disability. Participant dropout is common in follow-up studies. A 2-year follow up study conducted by Pintor et al. reported that 47.8% of participants dropped out of the study and no sociodemographic and clinical difference was found between those that dropped out and those that didn't. Another 18-month follow-up study lost 15 participants out of 100 for several reasons (O'Leary et al., 2000). The present study is also limited by the reduction in the sample population due to dropouts.

The present study's sample included patients with mild and intermediate depression monitored via an outpatient clinic. Use of the depression rating scale enabled precise assessment of mild depression. The HAM-D-17 doesn't take into account neurovegetative symptoms such as hypersomnia, hyperphagia, weight gain, etc. Accordingly, patients diagnosed with depression based on SCID-I criteria had low HAM-D-17 scores and consequently were not assessed for symptoms such as hypersomnia, hyperphagia, etc. Furthermore, improvement of these symptoms can't be measured with the HAM-D-17. The HAM-D-17 is considered an insufficient sale for assessing adverse neurovegetative symptoms by other studies as well (Nierenberg and DeCecco, 2001).

Another important unknown is if disability becomes permanent with time. Since depression is an episodic disease, it would cause less disability compared to a progressive diseases. This subject has been investigated in some follow-up studies. According to the results of the Medical Outcome Study (Wells et al., 1992), 40% of patients with major depression and dysthymia still suffered from depressive disorder at the end of a 2-year period. Although depressive patients were less disabled at the end of 2 years, they were as disabled as patients with a chronic physical disease. When patients with residual symptoms were explored, it was reported that they were almost as disabled as they were during a depressive episode. Even though the symptoms appeared to be temporary, patients with residual symptoms were the same or worse compared to patients with physical disabilities.

Results indicating that residual symptoms are related to relapse are frequent. Since the present study was only a 3-month follow-up, the relapse rate of patients with residual symptoms is not known. If patients are not fully remitted, they are at risk of morbidity and mortality. It's known that antidepressant agents protect patients from undesirable results. A clinician should keep patients on treatment until they are fully remitted, not partially remitted (Bakish, 2001). The definition of remission is controversial though, yet a minimum of 6 months in remission is accepted to be the cutoff point (Frank et al., 1991). A study conducted by Judd et al. (1997) suggested that patients with subsyndromal depression were not functional and had a lifelong risk of suicide (with attempts) compared to the normal group.

Since the present study was a 3-month follow-up it investigated remission rates, although it didn't explore the relationship between relapse and residual symptoms. Studies investigating the above-mentioned subject explored remission starting from the sixth week (Bakish, 2001). A study conducted by Q'leary et al. (2000) reported that 85% of the patients entered remission during the first 3 months and that the remission rate declined throughout the study due to relapses.

In conclusion, the literature suggests residual symptoms are related to high relapse rates and severe social disability. In accordance with the literature the present study highlighted the importance of adequate treatment of depression. Since residual symptoms cause many disabilities, attentive assessment of symptoms and adequate antidepressant therapy is recommended.

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