

# Phenomenology, Psychosocial Correlates, and Treatment Seeking in Major Depression and Dysthymia of Adolescence

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## ABSTRACT

**Objective:** To compare phenomenology, psychosocial correlates, and treatment seeking in *DSM-III-R* major depression and dysthymia among adolescents diagnosed as cases in a community-based study. **Method:** A self-report questionnaire, including psychosocial data, life events, eating behaviors, depressive symptoms, substance use, pathological behaviors, and family and school functioning was administered to a nonselected sample ( $N = 3,287$ , 93.2% of targeted population) of adolescents aged 11 to 20 years from several Haute-Marne communities in France in 1988–1989. Subgroups of subjects ( $n = 205$ , 84.7% of eligible subjects) were interviewed with a structured diagnostic schedule, and adolescents with major depression ( $n = 49$ ), dysthymia ( $n = 21$ ) and controls ( $n = 135$ ) were compared. **Results:** Nearly 30% of controls had at least one current symptom of depression. Patterns of affective symptoms were similar in major depression and dysthymia, but significant differences emerged in comorbid conditions (more anxiety disorders, suicidal behaviors, and alcohol intoxications associated with major depression) and stressor at onset (more severe in major depression). Experiences of loss during the prior 12 months were associated with both forms of affective disorder, while poor family relationships were specific correlates of dysthymia. In contrast, peer relationships and pathological behaviors did not differ between depressed subjects and controls. Although psychosocial functioning was significantly impaired in both groups of depressed adolescents, treatment seeking was limited to 34.7% for major depressive subjects and 23.8% for dysthymic subjects. **Conclusion:** The results provide evidence that major depression and dysthymia in adolescence are equally severe but may have distinct patterns in associated factors. Despite free access to health care, the rate of treatment seeking for mood disorders in France is similar to that reported in U.S. studies. *J. Am. Acad. Child Adolesc. Psychiatry*, 2001, 40(9):1070–1078. **Key Words:** major depression, dysthymic disorder, adolescence, phenomenology, treatment seeking.

The study of affective disorders in adolescence is of critical psychiatric importance. In adolescents, major depression and dysthymic disorder are frequent, recurrent, and often familial disorders that tend to continue into adulthood. They are frequently associated with other psychiat-

ric conditions, poor psychosocial and academic outcome, and increased risk of substance abuse, bipolar disorder, and suicide (for review, see Birmaher et al., 1996). Population studies of adolescents have reported lifetime prevalence of major depression ranging from 0.4% to 8.3% (Birmaher et al., 1996; Garrison et al., 1997) and point prevalence of dysthymic disorder from 1.6% to 8% (Garrison et al., 1997; Kashani et al., 1987; Lewinsohn et al., 1994). In adolescents, the female-male ratio for affective disorders is approximately 2:1, paralleling the ratio reported in adults (Fleming and Offord, 1990; Lewinsohn et al., 1994). The majority of youths with clinical depression are not seen by health professionals (Burns, 1991; Costello et al., 1993). Research suggests that prevention of adolescent affective disorders is possible when populations at elevated risk are targeted for psychosocial interventions: promising results have been obtained in programs developed for children of depressed

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parents (Beardslee et al., 1992) and for adolescents with subclinical depressive symptomatology (Clarke et al., 1995). Numerous factors are associated with the onset, duration, and recurrence of juvenile depression, including demographic factors, phenomenology of symptoms, comorbid conditions, family factors, psychosocial factors, and stressful life events (for review, see Birmaher et al., 1996; Hoberman et al., 1996; Moreau, 1996). The links between adolescent depression and substance use have been emphasized by several authors (Desimone et al., 1994; Rao et al., 2000; Whitmore et al., 1997). Most of these findings are from studies conducted in U.S. sites and in populations under treatment for major depression (Roberts et al., 1995). It is therefore important to examine the phenomenology and psychosocial correlates of major depression and dysthymia in adolescents from the community in non-U.S. sites. In particular, it is worth exploring the crucial question as to whether the rate of identification and treatment of affective disorders in adolescents is higher in European countries that have free access to psychiatric care. We describe results from an epidemiological study conducted in secondary schools of a geographical district in France. The aims of the study were to compare the phenomenology and psychosocial correlates of *DSM-III-R* major depression and dysthymia among adolescents diagnosed as cases in a community-based study. We focused particularly on associated diagnostic and behavioral features, environmental factors, psychosocial impairment, and treatment seeking, according to diagnostic subgroups.

## METHOD

The study followed a two-stage design: a self-report questionnaire was first administered to a large, unselected school population; then, after subjects were designated into subgroups (based on responses to the initial questionnaire), individual clinical interviews were conducted. The entire procedure took place during two academic years (1988–1990).

### Stage I: Whole Population Survey

Under the George Pompidou Group of the Council of Europe, the INSERM (U 472) conducted an epidemiological survey of a representative sample of school attendees (Ledoux et al., 1991). All students ( $N = 3,527$ ) from 153 classes that were randomly selected in the junior high schools, high schools, and vocational schools of the Chaumont and Langres districts in the department of Haute-Marne in France were asked to participate in the study. Each student filled out a self-report questionnaire, including 280 multiple-choice questions on demographic and social status, education, somatic and mental health symptoms (emotional and behavioral problems, suicidal thoughts, eating and sleep problems), substance use (tobacco, alcohol, illicit drugs), aspects of daily life (leisure, sexual relationships), help-seeking behavior, prescriptions of psychotropic drugs, life events, and quality of

family relationships (for details, see Gasquet et al., 1997). Depressive symptoms were assessed on the Kandel Depressive Mood Inventory (Kandel and Davies, 1982), translated and validated in French (Gasquet, 1996). In the selected classes, 3,311 students aged 11 to 20 years (i.e., 93.9% of the total population) participated in the survey. The reason for nonparticipation was either refusal by the student or his family or absence from school the day the study took place. The students filled out the questionnaire during a regular classroom period under the supervision of a school nurse. Completion time was 1 to 2 hours, depending on the student's academic level. Anonymous questionnaires were sealed and sent to the INSERM (U 472). Data from sociodemographic questions (sex, date, and place of birth) were kept on a nominative list by the school nurses and used to select subjects for stage II interviews. A total of 3,287 questionnaires (93.2% of targeted population) were considered valid for analysis.

### Stage II: Clinical Interviews

Based on answers to the self-report questionnaire, three groups of subjects were selected for stage II clinical examination. Group 1 ( $n = 59$ ) consisted of students with eating disorder symptoms. Group 2 ( $n = 62$ ) included students with total score of 17 or 18 (maximum score = 18) on the Kandel Depressive Mood Inventory and those hospitalized for suicide attempt during the previous 12 months. Group 3 ( $n = 121$ ) was a control group, randomly selected from students who did not fulfill criteria for either group 1 or group 2 but were matched to each subject from both groups for age, sex, and school level. For logistic and financial reasons, we chose not to interview students enrolled in rural schools (which were too far from the two main towns of the district) and students in the final grade of schooling at stage I (grade 9 in junior high school, grade 12 in high school or vocational school), who had left school by the time stage II was undertaken.

Semistructured clinical interviews (lasting 1–1½ hours) were conducted at school by seven psychiatrists and one clinical psychologist, with French versions of the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Epidemiologic version (K-SADS-E) (Chambers et al., 1985), the Children's Global Assessment Scale (CGAS) (Shaffer et al., 1983), and sections developed by the investigators on psychosocial adaptation, puberty, and treatment seeking. All clinicians had been trained to use these instruments and were blind to students' screening status. Interrater reliability for *DSM-III-R* diagnoses, assessed by exchanging records between pairs of clinicians, was satisfactory ( $\kappa = 0.73$  for major depression and 0.76 for dysthymia). In addition, each student completed a brief self-report questionnaire with information regarding school, health, substance use, and a list of life events during the prior 12 months.

Among subjects selected for clinical evaluation, 76%, 87%, and 91% could be interviewed for groups 1, 2, and 3, respectively (participation rates not statistically different between groups). Nonparticipants included 15 students who had left school, 4 who refused the interview, and 14 who were sick or absent for other reasons for at least two consecutive appointments. Absenteeism did not differ between groups, and responses on various items of the initial questionnaire (on school, somatic problems, conduct problems, family relationships, etc.) did not differentiate subjects who were interviewed from those who were not.

From the 209 adolescents interviewed, 205 (84.7% of subjects eligible for stage II) provided valid data. According to lifetime diagnosis of mood disorder, three groups were considered: subjects with major depression ( $n = 49$ ), subjects with dysthymia and without major depression ( $n = 21$ ), and subjects with no mood disorder ( $n = 135$ ). Results on subjects with eating disorders have been published elsewhere (Flament et al., 1995).

## Statistical Analysis

A priori hypotheses were the following: (1) phenomenology of symptoms and comorbidity differ between major depression and dysthymia; (2) both disorders have similar morbidity; and (3) treatment seeking is low for both.

Subjects with major depression, dysthymia, or no mood disorder were compared with the SAS package. Depending on the type of variable examined, we considered either groups with lifetime diagnoses (e.g., for phenomenology, comorbidity) or groups with current diagnoses (e.g., for CGAS, events within the past 12 months). Qualitative variables were compared with the  $\chi^2$  test, with and without the Yates corrections, or Fisher exact test, as required by the size of expected frequencies. For quantitative data, intergroup comparisons were performed with the Student *t* test. Since the three groups did not differ in age, sex, and socioeconomic status (Table 1), those variables were not entered in the analyses. For variables in which one or both depressed groups differed from controls, we looked within the depressed groups (one or both groups combined, as appropriate) for the effects of single versus multiple episodes, duration of the disorder, double depression, and comorbidity.

All tests were two-tailed, with a *p* value less than .05 considered significant.

## RESULTS

### Sociodemographic Characteristics of Subjects

Respondents were aged 13 to 21 years, and more than 95% had started puberty; 70% lived with both natural parents. There was an overrepresentation of girls (female-

**TABLE 1**  
Sociodemographic Characteristics of Adolescents With Major Depression, Dysthymia, and Controls

	Major Depression <sup>a</sup> ( <i>n</i> = 49)	Dysthymia <sup>b</sup> ( <i>n</i> = 21)	Control <sup>c</sup> ( <i>n</i> = 135)
Sex			
Female ( <i>n</i> )	38	18	101
Male ( <i>n</i> )	11	3	34
Age (years)			
Mean $\pm$ SD	17.6 $\pm$ 1.6	17.5 $\pm$ 1.8	17.2 $\pm$ 1.9
Range	13–21	13–20	13–21
Socioeconomic status (%)			
Low	28.6	26.3	27.1
Medium/high	71.4	73.7	72.9
School level (%)			
High school <sup>d</sup>	46.9	66.6	46.2
Junior high school <sup>e</sup>	18.4	14.3	27.6
Vocational school	34.7	19.0	26.1

<sup>a</sup> Forty-one past episode(s), 8 current episode, 11 double depression (major depression superimposed on dysthymia [Keller and Shapiro, 1982]).

<sup>b</sup> One past episode, 20 current episode.

<sup>c</sup> No lifetime diagnosis of mood disorder.

<sup>d</sup> Grades 10–12.

<sup>e</sup> Grades 6–9.

male ratio = 4:1) because of sampling design. Table 1 shows sociodemographic characteristics of subjects with lifetime diagnosis of depression or no mood disorder. Eleven subjects (16% of those with mood disorder) had double depression, as defined by Keller and Shapiro (1982); they were included in the major depression group. Fourteen subjects (29%) in the major depression group had had more than one lifetime major depressive episode (12 [25%] had had two; 2 [4%] had had three).

### Phenomenology of Depressive Symptoms

Mean ages at onset of major depression (mean  $\pm$  SD = 14.8  $\pm$  2.4 years) and dysthymia (13.8  $\pm$  3.1 years) were similar ( $t$  = 1.29,  $p$  = .1). Mean duration of current major depressive episode was 5.9 months (range, 3 weeks to 21 months), and mean duration of current dysthymia was close to 3 years (range, 1–10 years) ( $t$  = 6.07,  $p$  = .006).

The frequency of all depressive symptoms was higher ( $p$  < .01) in subjects with lifetime diagnoses of either major depression or dysthymia than in controls (e.g., depressed mood: 96% in major depression, 100% in dysthymia, 43% in controls; loss of weight/appetite: 37%, 19%, 9%, respectively; increase in weight/appetite: 37%, 38%, 19%; insomnia: 90%, 67%, 15%; anhedonia: 90%, 76%, 27%; lack of energy: 90%, 62%, 24%; feelings of worthlessness: 78%, 57%, 18%; social withdrawal: 71%, 62%, 17%; suicidal thoughts: 45%, 43%, 13%). Subjects with major depression and those with dysthymia differed only in frequency of insomnia ( $p$  = .034), lack of energy ( $p$  = .01), and the number of symptoms reported (9.6  $\pm$  1.9 versus 8.1  $\pm$  1.9, respectively,  $t$  = 2.46,  $p$  = .016). Similarly, the number of symptoms reported was greater in subjects with mood disorders than in controls (2.66  $\pm$  3.2). However, the rate of depressive symptoms was high in controls, with more than 50% having at least one lifetime symptom and 30% at least one current symptom.

### Lifetime Prevalence of Comorbid Psychiatric Disorders and Pathological Behaviors

Most anxiety disorders and bulimia nervosa tended to be more frequent in subjects with affective disorders than in controls (Table 2). Generalized anxiety disorder was significantly more frequent in both forms of affective disorders ( $p$  < .001), while separation anxiety disorder and phobic disorder were associated with major depression ( $p$  < .001). Only two adolescents (one with major depression, one with dysthymia) had histories of manic episodes and were diagnosed with bipolar disorder.

**TABLE 2**  
Lifetime Comorbid Psychiatric Disorders and Pathological Behaviors in Adolescents With Mood Disorders and Controls

Diagnosis	Major Depression ( <i>n</i> = 49)		Dysthymia <sup>a</sup> ( <i>n</i> = 21)		Control <sup>b</sup> ( <i>n</i> = 135)		<i>p</i> <sup>c</sup>	<i>p</i>	<i>p</i>
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	MD/DD <sup>d</sup>	MD/C <sup>e</sup>	DD/C <sup>f</sup>
Comorbid psychiatric diagnosis									
Separation anxiety disorder	13	(26.5)	3	(14.3)	5	(3.7)	.36	.001	.077
Panic disorder	1	(2.0)	1	(5.0)	1	(0.8)	.50	.47	.25
Phobic disorder	15	(30.6)	3	(15.0)	10	(7.5)	.18	.001	.38
Obsessive-compulsive disorder	2	(4.1)	2	(9.5)	3	(2.2)	.58	.61	.13
Generalized anxiety disorder	10	(20.8)	5	(23.8)	6	(4.5)	.76	.001	.001
Bulimia nervosa	5	(10.2)	2	(9.5)	4	(3.0)	1.0	.06	.19
Manic episode	1	(2.0)	1	(4.8)	0	(0)	.51	.27	.14
Pathological behaviors									
Suicide attempt	11	(22.5)	2	(9.5)	4	(3.1)	.32	.001	.20
Alcohol use (several times/week)	3	(6.1)	1	(4.8)	5	(3.7)	1.0	.58	.44
Drunkenness (≥3 times/year)	10	(20.4)	2	(9.5)	12	(8.9)	.32	.04	1.0
Lifetime illicit drug use <sup>g</sup>	13	(27.7)	2	(9.5)	20	(15.1)	.12	.08	.74
Stealing	4	(8.2)	3	(14.3)	11	(8.2)	.42	1.0	.40
Forgery	6	(12.2)	3	(14.3)	14	(10.5)	1.0	.73	.70
Running away	1	(2.0)	1	(4.8)	6	(4.5)	.513	.68	1.0
School suspension	4	(8.2)	1	(4.8)	2	(1.5)	1.0	.05	.36
School truancy	6	(12.2)	3	(14.3)	8	(6.0)	1.0	.21	.17
Rule violation	11	(22.5)	2	(9.5)	7	(5.2)	.317	.001	.35
Pathological lying	5	(10.4)	4	(19.1)	6	(4.5)	.44	.16	.03
Vandalism	2	(4.1)	0		5	(3.7)	1.0	1.0	1.0
Cruelty to persons	2	(4.1)	0		3	(2.3)	1.0	.612	1.0
Cruelty to animals	0		0		1	(0.8)	—	1.0	1.0
Arrests or delinquency	1	(2.0)	0		4	(3.0)	1.0	1.0	1.0

<sup>a</sup> Dysthymic subjects with no history of major depression.

<sup>b</sup> Controls with no lifetime diagnosis of mood disorder.

<sup>c</sup> *p* generated by  $\chi^2$  analysis or Fisher exact test (two-tailed) when  $\chi^2$  was not a valid test.

<sup>d</sup> Major depression versus dysthymia.

<sup>e</sup> Major depression versus control.

<sup>f</sup> Dysthymia versus control.

<sup>g</sup> Illicit drug use = lifetime use (at least once) of cannabis, inhalants, cocaine, opioids, hallucinogens, or amphetamines.

In subjects with major depression, the frequency of suicide attempts and alcohol intoxication was higher than in controls ( $p < .001$  and  $p = .04$ , respectively), and the frequency of illicit drug use tended to be higher ( $p = .08$ ). Other pathological behaviors, including stealing, forgery, running away from home, school truancy, acts of cruelty, vandalism, and other delinquency, were associated with neither major depression nor dysthymia. Only school suspension ( $p < .05$ ) and chronic violation of rules at home or at school ( $p < .001$ ) appeared significantly associated with major depression and pathological lying with dysthymic disorder ( $p = .03$ ).

Compared with subjects who had a single mood disorder, those with double depression had higher rates ( $p < .05$ ) of suicide attempts (46%) and pathological behaviors (rule violation 46%, pathological lying 40%). Comorbidity with anxiety disorders did not affect frequency of

pathological behaviors. Relative to subjects with single episodes of major depression, those with recurrent episodes had higher rates of separation anxiety disorder (50% versus 18%,  $p = .03$ ) and generalized anxiety disorder (39% versus 15%,  $p = .11$ ).

#### Stressors and Life Events

The K-SADS-E interview records frequency and severity of psychosocial stressors at the onset of depression. If both lifetime major depression and dysthymia were frequently associated with stressors at onset, in major depression the rate (85.7% versus 61.9%, Fisher exact test,  $p = .053$ ) and severity of stressors ( $3.6 \pm 1.47$  versus  $2.72 \pm 1.4$ ,  $t = 2.32$ ,  $p = .023$ ) were greater.

In addition, on self-report of life events during the previous 12 months, personal events (i.e., illness, hospitalization, accident) did not appear to be associated with



current affective disorder, while experiences of loss or threat of loss were significantly more frequent in subjects with major depression (death of a close relative, parental separation, family disruption) and dysthymic disorder (illness, hospitalization, or death of a close relative) (Table 3). There was no age trend in the frequency of life events.

#### Current Psychosocial Functioning

Globally, psychosocial functioning (CGAS score, mean  $\pm$  SD) was similar in subjects with current major depression or dysthymia ( $62 \pm 14.2$  versus  $67 \pm 10.3$ , respectively,  $t = 26$ ,  $p = .35$ ) and significantly impaired compared with controls with no current psychiatric diagnosis ( $84 \pm 11$ ; major depressive versus control subjects,  $t = -5.2$ ,  $p < .0001$ ; dysthymic versus control subjects,  $t = -6.32$ ,  $p < .0001$ ). Among subjects with current dysthymia (but not among those with current major depression), the CGAS score was negatively correlated with duration of the disorder (Pearson  $r = -0.74$ ,  $p = .006$ ).

There were no significant differences between depressed subjects and controls regarding academic performance

(Table 3), but subjects with major depression reported school difficulties related to their mood disorder more frequently than did subjects with dysthymia (57.1% versus 14.3%, respectively,  $\chi^2 = 10.9$ ,  $p = .001$ ). The dysthymic subjects had poor family relationships (with mother, father, and siblings) more frequently than controls, and they were less active in sports (Table 3).

#### Treatment Seeking

Only 34.7% of subjects with major depression and 23.8% of those with dysthymia had received medical attention for their mood disorder. Only 16% of the subjects with major depression and 5% of the dysthymic subjects had ever had contact with a psychiatrist (Table 4); on most treatment modalities, the major depressive subjects differed from controls, whereas the dysthymic subjects did not. Notably, many adolescents with major depression had been given sedative drugs.

There was no difference in the frequency of any treatment received according to number of major depressive episodes or diagnosis of double versus single depression.

**TABLE 3**  
Twelve-Month Life Events and Psychosocial Difficulties in Adolescents With Mood Disorders and Controls

	Current MD <sup>a</sup> ( <i>n</i> = 8)		Current DD <sup>b</sup> ( <i>n</i> = 20)		Control (C) <sup>c</sup> ( <i>n</i> = 109)		<i>p</i> <sup>d</sup>	<i>p</i>	<i>p</i>
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	MD/DD	MD/C	DD/C
Past 12 month life events									
Personal illness/hospitalization	1	(12.5)	1	(5.3)	10	(9.6)	.41	.50	.68
Accident	3	(37.5)	6	(30.0)	22	(20.6)	1.0	.37	.38
Parent professional change	1	(12.5)	3	(15.8)	9	(8.3)	1.0	.52	.39
Illness of close relative	3	(37.5)	8	(42.1)	20	(18.4)	1.0	.19	.03
Hospitalization of close relative	2	(25.0)	13	(68.4)	31	(29.8)	.09	1.0	.003
Death of close relative	4	(57.1)	7	(36.8)	16	(15.4)	.41	.02	.05
Parental separation	2	(25.0)	1	(5.3)	1	(0.9)	.20	.01	.28
Moving	2	(25.0)	1	(5.6)	10	(9.4)	.22	.20	1.0
Change in family composition	5	(62.5)	4	(21.1)	14	(13.0)	.07	.003	.47
Psychosocial difficulties									
Repeating a grade	2	(25.0)	4	(20.0)	9	(8.3)	1.0	.17	.12
Poor academic performance	3	(37.5)	7	(35.0)	20	(18.4)	1.0	.19	.13
Negative views/school work	1	(12.5)	6	(30.0)	15	(13.8)	.63	1.0	.10
No sport activity	6	(75.0)	16	(80.0)	55	(50.5)	1.0	.28	.016
Problems with leisure time	3	(37.5)	6	(30.0)	13	(12.0)	1.0	.08	.08
No best friend	2	(25.0)	2	(10.0)	10	(9.3)	.55	.19	1.0
Poor relationships with peers	2	(25.0)	5	(25.0)	24	(22.2)	1.0	1.0	.78
Poor relationships with siblings	2	(28.6)	8	(47.1)	10	(10.4)	.65	.19	.001
Poor relationship with mother	2	(25.0)	9	(45.0)	17	(15.9)	.42	.62	.006
Poor relationship with father	4	(57.1)	12	(66.7)	32	(30.5)	.67	.21	.006
Problems with parents	3	(37.5)	10	(50.0)	12	(11.0)	.69	.07	.001

<sup>a</sup> Major depression.

<sup>b</sup> Dysthymic disorder.

<sup>c</sup> Controls with no current psychiatric diagnosis.

<sup>d</sup> *p* generated by  $\chi^2$  analysis or Fisher exact test (two-tailed) when  $\chi^2$  was not a valid test.

**TABLE 4**  
Lifetime Treatment for Psychological Problems in Adolescents With Mood Disorders and Controls

	Major Depression ( <i>n</i> = 49)		Dysthymia ( <i>n</i> = 21)		Control <sup>a</sup> ( <i>n</i> = 135)		<i>p</i> <sup>b</sup>	<i>p</i>	<i>p</i>
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	MD/DD <sup>c</sup>	MD/C <sup>d</sup>	DD/C <sup>e</sup>
With a general practitioner	15	(30.6)	4	(19)	20	(14.8)	.32	.02	.74
With a psychiatrist	8	(16.3)	1	(4.8)	3	(2.2)	.26	.001	.44
Psychotherapy	3	(6.1)	1	(4.8)	2	(1.5)	1.0	.12	.35
Hospitalization	5	(10.2)	1	(4.8)	2	(1.5)	.66	.02	.36
Sedative drugs	19	(38.8)	3	(14.3)	23	(17.0)	.04	.002	1.0
Antidepressive drugs	3	(6.1)	0	(0)	0	(0)	.55	.02	—
Other psychotropic drugs	1	(2.0)	1	(4.8)	1	(0.7)	.51	.46	.25

<sup>a</sup> Controls with no lifetime diagnosis of mood disorder.

<sup>b</sup> *p* generated by  $\chi^2$  analysis or Fisher exact test (two-tailed) when  $\chi^2$  was not a valid test.

<sup>c</sup> Major depression versus dysthymia.

<sup>d</sup> Major depression versus control.

<sup>e</sup> Dysthymia versus control.

Depressed subjects with a history of suicide attempts (*n* = 19), compared with those without (*n* = 54), had more outpatient psychiatric visits (38% versus 7%, *p* = .008) and tended to have been hospitalized more frequently for psychological problems (23% versus 5%, *p* = .073) and to have received antidepressant treatment more often (15% versus 2%, *p* = .086).

## DISCUSSION

### Methodology and Study Limitations

Prior to discussing results, some limitations of this study should be mentioned. First, the study design did not permit an estimate of the prevalence of affective disorders in adolescents. Individuals who received diagnoses of major depression or dysthymia at stage II appeared to be distributed across all three groups at stage I, because high scores on the Kandel Depressive Mood Inventory identify subjects with current depressive symptoms but do not screen for all current (and a fortiori past) cases of mood disorders. Furthermore, many adolescent girls (*n* = 14) reporting eating disorder symptoms at stage I had diagnoses of affective disorder at stage II. This may explain our elevated female-male ratio and the relatively high frequency of depressed girls suffering from bulimia nervosa. Second, subjects with current and past depression were often combined for comparisons with other groups. Third, the study used a lifetime diagnostic instrument, leading to frequent retrospective diagnoses. This is a strong limitation, as a retrospective approach usually underestimates many factors. Fourth, the list of life events assessed was limited (not including, notably, his-

tory of sexual abuse or physical neglect). Finally, due to confidentiality and feasibility issues, parents were not interviewed about their children.

### Phenomenology of Symptoms

Major depression and dysthymic disorder have very close symptomatology. This is not surprising as they share common diagnostic criteria in current psychiatric classifications. However, our investigation included numerous variables (i.e., pathological behaviors) which are not clinical criteria of either major depression or dysthymia. Only a few clinical variables were significantly associated with one specific form of affective disorder: insomnia, lack of energy, suicide attempt, school suspension, and disobedience were associated with major depression, and duration of illness was associated with dysthymia. Although the association of suicidal behavior with major depression and duration of illness with dysthymia are expected, the finding that depressed individuals reported frequent disobedience is more surprising. Kovacs et al. (1994) found disobedience to be frequent in dysthymic disorder. Our rate (30%) of dysthymic individuals, who had a comorbid diagnosis of major depression resulting in a so-called "double depression," is lower than the rate (nearly 70%) reported in two previous studies (Ferro et al., 1994; Kovacs et al., 1994) but higher than that (17%) in the most recent report (Goodman et al., 2000).

Our results also highlight the frequency of symptoms of affective disorders and feelings belonging to the depressive spectrum in normal adolescents (30%). These findings are similar to those previously reported (McClure et al., 1997; Roberts et al., 1995). Horwath et al. (1992)

estimated that 50% of adults with depressive symptoms are at risk of developing major depression. It can reasonably be assumed that adolescents carry a similar risk. This is important because of the unfortunate prevailing belief that depression during adolescence is normal and does not need to be treated.

### Comorbidity

In adolescents with depressive disorders, comorbidity with anxiety disorders was high, especially with generalized anxiety disorder, phobic disorder, and separation anxiety disorder. This finding supports previous studies, in both clinical (e.g., Biederman et al., 1995; Ryan et al., 1987) and community samples (e.g., Angold and Costello, 1993; Kovacs et al., 1994; Lewinsohn et al., 1995; Rhode et al., 1991). We cannot exclude that comorbidity of major depression with bulimia nervosa could be partly explained by the study design (which overselected for stage II subjects with eating problems). Nevertheless, although few epidemiological studies on affective disorders in adolescents include systematic search for eating disorders, increasing evidence of a relationship between major depression and eating disorders exists in clinical samples (Lilenfeld et al., 1998). Unlike in previous U.S. studies, especially those conducted in urban sites (Angold and Costello, 1993; Birmaher et al., 1996; Rey, 1994), we found few individuals with conduct disorder among adolescents with affective disorders. Two hypotheses may explain this finding: first, this comorbidity is more frequent in boys than in girls (Lewinsohn et al., 1995; Rey, 1994), and our female-male ratio is high; second, urbanization was low in the districts where the survey was conducted. Adolescents with major depression reported more episodes of alcohol intoxication and tended to use illicit drugs more frequently than controls. These data are consistent with previous research showing a link between depression and substance use among adolescents (Galaif et al., 1998). However, cross-sectional data does not permit the assessment of the temporal relationship between the two.

### Psychosocial Functioning

Our results show that psychosocial functioning is significantly impaired in both major depression and dysthymic disorder. While impairment has been widely documented in adolescent major depression (i.e., Puig-Antich et al., 1993), to our knowledge few studies have focused on psychosocial consequences of adolescent dys-

thymia (Goodman et al., 2000; Hoberman et al., 1996; Olsson et al., 1999). Several reports have suggested that adolescents with two or more depressive episodes have poorer functioning than those with a single episode (Rao et al., 1995; Warner et al., 1995). In this study, the duration of dysthymic disorder negatively correlated with psychosocial functioning. Similarly, in a study by Olsson et al. (1999), adolescents with long-lasting depressive symptoms had more limited social interaction, and in the study by Goodman et al. (2000), subjects with double depression were more impaired than those with a single diagnosis. These findings emphasize the need for early diagnosis and treatment of adolescent dysthymia, before it becomes chronic or major depression develops (Kovacs et al., 1994). This is additionally supported by the findings in a long-term outcome study by Klein et al. (1997): compared with subjects with history of major depression or nonaffective disorder in adolescence, those with a history of dysthymia had the poorest outcome as adults.

### Environmental and Family Factors

Along with other reports on factors associated with onset and duration of major depression and dysthymia, our results suggest that stressful life events and family dysfunction play an important role in affective disorders of adolescence (Birmaher et al., 1996; Goodyer et al., 1997). However, our findings also suggest that major depression and dysthymic disorder in adolescents may be linked to distinct patterns of associated factors, with regard to experiences of loss and family climate. This last point was recently reported by Olsson et al. (1999) in a case-control study, but it was not supported by Goodman et al. (2000). Additional discussion on the subject is outside of the scope of this study but would deserve specific research.

### Treatment Seeking

Psychosocial factors associated with help seeking among adolescents reporting depressive feelings (stage I of the study) have been published elsewhere: girls, older adolescents, adolescents with parents living apart, adolescents with health worries, adolescents with suicidal ideation, and adolescents frequently absent from school all sought help more often than others (Gasquet et al., 1997). However, at stage II of the study, our results confirm the low rate of adolescents with mood disorders who benefit from specific care for their disorder. The U.S. studies have emphasized the limitation to help seeking due to socioeconomic factors (Newacheck, 1989; Saunders et al.,

1994). However, in France, where the health care system covers nearly all adolescents and provides free access to medical care, we found the same level of untreated adolescents with affective disorders (nearly 70%) as in the U.S. studies (79% and 82% according to Lewinsohn et al. [1994] and Keller et al. [1991], respectively). Our results are also surprising if we take into account the fact that 80% of all adolescents had outpatient visits with general practitioners during the previous year (Gasquet et al., 1997). We can therefore hypothesize that there are other factors which may explain that major depression and dysthymia are underdiagnosed and undertreated in adolescents. Regarding the health system in France, these factors might be the following: (1) low sensitivity of general practitioners to mental disorders, at least in adolescents; (2) reluctance of parents to encourage professional help seeking or of family physicians to refer to a psychiatrist; (3) lack of training in adolescent psychopathology; (4) poor knowledge of evidence-based treatment for depression in this age group, leading to inadequate prescriptions; (5) the possibility of stigma associated with mental illness. However, it is likely that other factors also contribute to a low level of mental health care among adolescents, including youth attitudes toward help sources and the nature of depressive symptomatology (Hoberman et al., 1996). It is interesting to note that depressed subjects who had attempted suicide had received more psychiatric outpatient treatment than those who had not attempted suicide. Although we have no way of knowing whether treatment was directly related to suicide attempt, it seems likely that suicidality might have brought these youngsters to the attention of medical authorities.

#### Clinical Implications

Together with other recent reports, the results presented provide strong evidence that major depression and dysthymia are underdiagnosed and undertreated in adolescence, although their consequences on psychosocial functioning are severe. Our results also suggest that major depression and dysthymia, although they share similar clinical features, may have distinct patterns of associated factors. There is some evidence that duration of illness affects psychosocial consequences in adolescents with mood disorders, which emphasizes the need for early identification and effective treatment. Despite free access to health care in France, the rate of treatment seeking for mood disorder is similar to that reported in U.S. sites, suggesting that factors other than socioeconomic variables are involved.

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