Mental Health Services Received by Depressed Persons Who Visited General Practitioners and Family Doctors

JianLi Wang, M.D., Ph.D.
Donald B. Langille, M.D., M.H.Sc.
Scott B. Patten, M.D., Ph.D.

Objectives: **This study estimated the rates of mental health service provision and of specialist referral in primary care in Canada and investigated factors associated with receiving mental health services and with referral to mental health specialists among persons who reported major depressive episodes.** *Methods:* **Data from the 1998–1999 Canadian National Population Health Survey were used. The 608 respondents who reported having major depressive episodes in the 12 months preceding the survey and who reported contacting a general practitioner or family doctor during that time were included in the study. The rates of provision of mental health services by general practitioners and family doctors and of referral to mental health specialists were calculated. Demographic, socioeconomic, and clinical characteristics associated with receiving mental health services and with referral to specialists were investigated.** *Results:* **Among the 608 respondents who had contacted general practitioners or family doctors for any reason, 153 had contacted them for emotional or mental problems. Of this subgroup of 153, 64.5 percent received mental health services either from these practitioners or by referral to specialists, and 26 percent were referred to mental health specialists. Depressed respondents who reported having talked to a general practitioner or family doctor about mental health problems, who reported impairment, and whose depressive symptoms had lasted eight or more weeks were more likely to have received mental health services. Respondents aged 12 to 24 years were more likely to be referred to mental health specialists.** *Conclusions:* **Impairment associated with depression and chronicity of depressive symptoms appear to be the primary determinants of the decisions made by general practitioners and family doctors about providing mental health services. Patients' willingness to consult with general practitioners or family doctors for mental health problems may also be a key factor, both for effective management of depression in primary care settings and for referral to mental health specialists. (*Psychiatric Services* 54:878–883, 2003)**

Major depression is prevalent in primary care settings. Most patients with depression who seek treatment are initially seen by general practitioners or family doctors (1–4). Integration of mental health care into the primary care system has been widely advocated (5–7) for improving care. Previous studies suggest that clinicians in primary care settings often underdiagnose depression (8–10). In one study of patients whose psychiatric symptoms were recognized, 88 percent were not referred to a mental health specialist (11). The referral process from general practitioners to mental health specialists has been viewed as the "least permeable filter" separating specialists from the population (12). However, no existing criteria define the appropriate level of referral. It is important to investigate factors related to primary care physicians' provision of mental health services and to their patterns of referral to specialists. Such information is pivotal for determining optimal referral patterns, planning physical and mental health services, and effectively allocating human and financial resources (13,14).

Many factors may be associated with receiving mental health services and referral to a specialist, including doctor-patient relationship, societal stigma, and level of knowledge of mental disorders among primary care physicians (15,16). Previous studies have shown the importance of insurance coverage (17–20). In Canada, mental health services, including hospital and physician services, are cov-

Dr. Wang is assistant professor and Dr. Patten is associate professor in the departments of psychiatry and community health sciences of the faculty of medicine at the University of Calgary in Alberta, Canada. Dr. Langille is associate professor in the department of community health and epidemiology of the faculty of medicine at Dalhousie University in Halifax, Nova Scotia, Canada. Send correspondence to Dr. Wang at Department of Psychiatry, Peter Lougheed Centre, 3500 26th Avenue N.E., Calgary, Alberta, Canada T1Y 6J4 (e-mail, jianli.wang@calgaryhealthregion.ca).

York, Springer, 1998

10. Stockdill J: Definition of Psychosocial Rehabilitation: Technical Assistance Transmittal, no 1. Rockville, Md, National Institute of Mental Health, Office of State and Community Liaison to State Mental Health Directors, 1985
11. Mengel MH, Marcus DB, Dunkle RE: "What will happen to my child when I'm gone?" A support and education group for aging parents as caregivers. Gerontologist 36:816–820, 1996
12. Smith GC, Hatfield A, Miller D: Future planning by older mothers of adults with serious mental illness. Psychiatric Services 55:1162–1166, 2000
13. Andersen RM: Revisiting the behavioral model in accessing medical care: does it matter? Journal of Health and Social Behavior 36:1–10, 1995
14. Andersen R, Newman JF: Societal and individual determinants of medical care utilization in the United States. Milbank Quarterly 51:95–124, 1973
15. Calsyn RJ, Winter MA: Predicting four types of service needs in older adults. Evaluation and Program Planning 24:157–166, 2001
16. Mitchell J, Krout JA: Discretion and service use among older adults: the behavioral model revisited. Gerontologist 38:159–168, 1998
17. Bass DM, Noelker LS: The influence of family caregivers on elders' use of in-home services: an expanded conceptual framework. Journal of Health and Social Behavior 28:184–196, 1987
18. Smith GC: Aging families of adults with mental retardation: patterns and correlates of service use, need, and knowledge. American Journal on Mental Retardation 102: 13–26, 1997
19. Patrick JH, Pruchno RA: Mothers' perceptions of service use and unmet service needs for their adult offspring with chronic mental illness. Psychiatric Annals 26:757–765, 1996
20. Hoyert DL, Seltzer MM: Factors related to the well-being and life activities of family caregivers. Family Relations 41:74–81, 1992
21. Smith GC, Tobin SS, Fullmer EM: Elderly mothers caring at home for offspring with mental retardation: a model of permanency planning. American Journal on Mental Retardation 99:487–499, 1995
22. Moos RH, Moos BS: Family Environment Scale Manual, 2nd ed. Palo Alto, Calif, Consulting Psychologists Press, 1986
23. Katz MM, Lyerly SB: Methods for measuring adjustment and social behavior in the community: 1. rationale, description, discriminative validity, and scale development. Psychological Reports 13:503–535, 1963
24. Zarit SH, Zarit JM: The memory and behavior problem checklist and the burden interview. Technical Report. University Park, Pennsylvania, School of Human Development and Family Studies, Pennsylvania State University, 1983
25. Regier DA, Narrow WE, Rupp A, et al: The epidemiology of mental disorder treatment need: community estimates of "medical necessity," in Unmet Need in Psychiatry: Problems, Resources, Responses. Edited by Gavins A, Henderson, S. Cambridge, England, Cambridge University Press, 2000
26. Heller T, Factor A: Aging family caregivers: support resources and changes in burden and placement desire. American Journal on Mental Retardation 98:417–426, 1993
27. Lefly HP: Family Caregiving in Mental Illness. Thousand Oaks, Calif, Sage, 1996
28. Bebbington P: The need for psychiatric treatment in the general population, in Unmet Need in Psychiatry: Problems, Resources, Responses. Edited by Gavins A, Henderson S. Cambridge, England, Cambridge University Press, 2000
29. Kasper JD, Steinwachs DM, Skinner EA: Family perspectives on the service needs of people with serious and persistent mental illness: II. needs for assistance and needs that go unmet. Innovations and Research 1:21–33, 1992
30. Kilian R, Lindenbach I, Lobig U, et al: Self-perceived social integration and the use of day centers of persons with severe and persistent schizophrenia living in the community: a qualitative analysis. Social Psychiatry and Psychiatric Epidemiology 36:454–552, 2001
31. Seltzer GB, Essex EL: Service needs of persons with mental retardation and other developmental disabilities, in Living in the Community With Disability: Service Needs, Use, and Systems, Edited by Allen S, Mor V. New York, Springer, 1998
32. Albert M, Becker T, McCrone P, et al: Social networks and mental health service utilization: a literature review. International Journal of Social Psychiatry 44:248–266, 1998
33. Engelhardt J, Brubaker TH, Lutzer V: Older caregivers of adults with mental retardation: service utilization. Mental Retardation 26:191–195, 1988
34. Thorncroft G, Johnson S, Leese M, et al: The unmet needs of people suffering from schizophrenia, in Unmet Need in Psychiatry: Problems, Resources, Responses. Edited by Andrews G, Henderson S. Cambridge, England, Cambridge University Press, 2000

Submissions Invited for Multimedia Reviews Column

In September 2002 *Psychiatric Services* launched Multimedia Reviews, a quarterly column focusing on innovative applications of multimedia technologies and programs in clinical, education, and research settings. The column's editor is Ian E. Alger, M.D., clinical professor of psychiatry at New York–Presbyterian Hospital of Weill Medical College of Cornell University in New York City.

Traditional audiovisual programs are being joined with rapidly evolving virtual-reality computer programs and with digital video technologies, which bring leading-edge concepts and applications to education, research, and clinical practice in exciting and challenging ways. For the column, Dr. Alger welcomes reviews of teaching, training, and therapy programs presented on film, video, audio, virtual reality, and combinations of these media. Reviews should be no more than 1,600 words and should be submitted directly to Dr. Alger.

For more information about the column or to propose a submission, please contact Dr. Alger by e-mail at ianalger@aol.com or by mail at 500 East 77th Street, Suite 132, New York, New York 10162.

Table 1

Weighted proportions of individuals with major depressive episodes who visited a psychiatrist or a psychologist, by the reasons for visiting a general practitioner or family doctor

Visited a general practitioner or family doctor	Psychiatrist			Psychologist			Either		
	%	95% CI	z[a]	%	95% CI	z[a]	%	95% CI	z[a]
For any reason (N=608)	17.1	12.9–21.3	1.10*	9.1	6.0–12.2	.60*	24.8	19.9–29.6	.24*
For an emotional or mental health problem (N=153)	22.4	14.0–30.8		7.5	3.0–12.0		26.0	17.2–34.9	

[a] The z scores indicate that having seen a mental health specialist did not depend on the reasons for having visited a general practitioner or family doctor.
*p<.05

who had received and had not received mental health services were compared in demographic, socioeconomic, and clinical characteristics. Receiving mental health services was defined as having visited a psychiatrist or psychologist, having been treated with antidepressants by general practitioners and family doctors, or both. Because antidepressants can be prescribed only by physicians, respondents who were using antidepressants but had not visited a psychiatrist were assumed to have been treated with antidepressants by general practitioners and family doctors.

The analytic procedures used in the second analysis were repeated in the third. Respondents who had visited a psychiatrist or psychologist, termed referrals, were compared with respondents who had not visited a psychiatrist or psychologist, termed nonreferrals, in demographic, socioeconomic, and clinical characteristics. Only respondents who had visited general practitioners and family doctors for emotional or mental health problems were in the denominator of the referral rate estimates, thus excluding "bypassers."

The NPHS employed a complex multistage sampling design. To account for the sampling and design effects, sampling weights were used to calculate accurate estimates, and a bootstrap technique was used to generate accurate variance estimates and 95 percent confidence intervals. These analyses were conducted with bootstrap sampling weights provided by Statistics Canada (33). The proportions and the 95 percent confidence intervals in the first analysis of the study reported here were calculated with the master file data and Statistics Canada's bootstrap macros. The differences between proportions for our study were determined by z tests based on the bootstrap coefficients of variations (33). The second and third analyses in our study were conducted with STATA 6.0 (34). The Pearson chi square statistic, converted into an F statistic, was used to determine whether the proportions were significantly different. The association between a variable and receiving mental health services or referrals was determined in the form of an odds ratio. The 95 percent confidence interval (CI) associated with the odds ratio was calculated with the STATA bootstrap command "bs 'commands', 'exp_list'" (34).

Results

In the 1998–1999 NPHS, 668 respondents (weighted percent=4.5) reported having a major depressive episode in the preceding 12 months. Among these, 608 (90.4 percent) had visited a general practitioner or family doctor, but only 153 (22.1 percent) reported that the visits were specifically for mental problems. Among respondents who had contacted general practitioners and family doctors for any reason, 250 respondents (40.6 percent) reported having received mental health services, which included being treated with antidepressants by any physician or seeing a psychiatrist or psychologist. Of those who had contacted general practitioners or family doctors for mental problems, 93 (64.5 percent) reported having received mental health services.

Table 1 shows the proportions who visited a psychiatrist or psychologist among those who reported contacts with general practitioners and family doctors for any reason and for reasons of mental or emotional health. Only 26 percent of the respondents who had contacted general practitioners and family doctors for reasons of mental or emotional health were referred to specialists. The z scores indicated that having seen a mental health specialist did not depend on the reasons for having visited a general practitioner or family doctor.

As shown in Table 2, respondents who were more likely to receive mental health services had visited general practitioners and family doctors for mental or emotional health, had severe impairment, had had depressive symptoms that had lasted eight weeks or longer, and had low family income. The association between income and receiving mental health services (odds ratio [OR]=1.79, CI=1.09 to 2.95) diminished when the effect of chronicity of depression was controlled for (OR=1.49, CI=.88 to 2.51). Receiving mental health services did not depend on gender, age, marital status, urbanicity, or having long-term medical illnesses.

The demographic, socioeconomic, and clinical characteristics of respondents who were and were not referred to a mental health specialist are presented in Table 3. The results showed that respondents who were younger than 25 were more likely to be referred. Other factors were not associated with being referred.

Discussion

This study showed that, among respondents who reported major depressive episodes, 90.4 percent had contacted general practitioners or family doctors in the 12 months before the interview. This finding highlights the importance of primary care

ered under a single-payer, universal-access (publicly funded) system (21). However, the Canadian system may control costs by restricting access, thus decreasing service provision.

Several studies have investigated factors associated with mental health services provided by primary care physcians and with referrals they have made to mental health specialists. Men and persons who were younger than 45 years of age, were single, or had psychotic disorders have been found more likely to be referred (15,22). A recent study found that being referred to a psychiatrist or psychologist did not depend on patients' age or marital status but that persons in urban areas had a higher chance of being referred (23). Samples in these studies included respondents with various psychiatric symptoms; therefore, the findings may not be applicable to persons with major depression.

This study examined individuals who had reported major depressive episodes and who had contacted general practitioners and family doctors in the past 12 months. We estimated the rates of mental health service provision and of referral to a mental health specialist in primary care settings and compared the differences in demographic and other characteristics between individuals who had received and who had not received mental health services and between individuals who had received and who had not received a referral to a mental health specialist.

Methods

Data from the 1998–1999 National Population Health Survey (NPHS) (24) were used. The NPHS household component is a national health survey carried out by Statistics Canada. This component targets household residents in all Canadian provinces, excluding Indian reserves, military bases, the Yukon and Northwest Territories, and some remote areas in Quebec and Ontario, as well as residents of long-term institutions (25,26). The survey uses multistaged sampling procedures. In the 1998–1999 NPHS, 17,244 respondents were interviewed. Informed consent was obtained by Statistics Canada interviewers.

The NPHS data are in the public domain, with certain confidential data suppressed or removed. To access the confidential data, the master file data kept at Statistics Canada are used through remote-access data-analysis procedures. The results from the analyses go through rigorous security checks before they are released to researchers. Part of the study reported here used master file data; only persons who had had a major depressive episode and had contacted a general practitioner or family doctor in the past 12 months were included (N=608).

In the NPHS, major depressive episodes were measured by the Composite International Diagnostic Interview—Short Form for Major Depression (CIDI-SFMD), derived from the full version of the CIDI and validated by Kessler and colleagues (27). A probability rating of .9 on the CIDI-SFMD represents the presence of five of eight different depressive symptoms in the same two-week period in the preceding 12 months. One must be either depressed mood or loss of interest, as consistent with *DSM-IV* criterion A for major depressive episode (28). To be consistent with *DSM-IV*, a major depressive episode was defined in the study reported here as a probability rating of .9 or higher on the CIDI-SFMD.

The NPHS respondents were asked, "In the past 12 months, how many times have you seen or talked on the telephone with a family doctor or general practitioner about your physical, emotional, or mental health?" An answer of "one or more times" was defined in the study reported here as indicating contact with a general practitioner or family doctor. Respondents in the NPHS were also asked if they had seen or talked to a health professional specifically about emotional or mental health problems in the preceding 12 months. "Health professional" in the NPHS included a general practitioner or family doctor, psychiatrist, psychologist, nurse, social worker, or counselor. In the study reported here, the term "mental health specialist" was used instead and included psychiatrists and psychologists. Additionally, the NPHS respondents were asked, "In the past month, did you take antidepressants?" In the study reported here, taking antidepressants was included as part of the definition of "receiving mental health services."

Demographic and socioeconomic data included in our study were gender; age, classified as 12 to 24 years, 25 to 54 years, and 55 years or older; marital status; income adequacy, classified as low family income and middle or high family income; and urbanicity, referring to living in a rural or urban area. In the NPHS, income adequacy was determined by total family income and the number of individuals living in a household. Clinical variables in our study included having one or more long-term medical conditions, such as heart disease, hypertension, and asthma; impairment; and chronicity of depression. The NPHS adopted a question about impairment from the U.S. National Comorbidity Survey (29): "How much do these experiences (depressive symptoms) usually interfere with your life or activities?" Responses were a lot, some, a little, and not at all. To be consistent with studies using the National Comorbidity Survey data (30,31), the answer "a lot" was defined in the study reported here as severe impairment, and other answers to this question were classified as mild or no impairment. The duration of depressive symptoms had two categories, using the median value for the respondents with major depressive episodes: two to seven weeks and eight weeks or longer. The NPHS question about duration had an upper limit of 52 weeks, and some depressive episodes last longer than this. However, a study using the NPHS data indicated that the duration of depressive episodes reflected in the NPHS was comparable with durations reported in other community-based studies (32).

We conducted three separate analyses. In the first analysis, the proportions of respondents who were seeing a psychiatrist, a psychologist, and either of them were calculated separately: first for respondents who had visited general practitioners and family doctors for any reason, and second for respondents who had seen general practitioners and family doctors about emotional or mental problems.

In the second analysis, respondents

Table 3

Characteristics of survey respondents who visited general practitioners and family doctors for mental health problems, by whether or not they were referred to a psychiatrist or psychologist

Characteristic	Referred[a] (N=42)		Not referred[a] (N=111)	
	N	%	N	%
Gender				
Men	11	32.5	21	67.5
Women	31	24.3	90	75.7
Age (years)[b]				
12–24	8	42.9	16	57.1
25–54	33	26.3	78	73.7
55 or older	1	17		
Marital status				
Married or living together	16	21.4	55	78.6
Single	16	36.0	23	64.0
Divorced, separated, or widowed	10	22.3	33	77.7
Family income				
Low	9	23.7	29	76.3
Middle or high	30	27.9	72	72.1
Urbanicity				
Living in a rural area	8	36.4	22	63.6
Living in an urban area	30	28.0	68	72.0
Long-term medical illness				
Yes	36	29.0	86	71.0
No	6	13.6	25	86.4
Impairment status				
Severe	16	26.4	31	73.6
Mild or none	25	26.9	74	73.1
Duration of depressive symptoms (weeks)				
Two to seven	10	30.0	41	70.0
Eight or longer	31	18.8	67	81.2

[a] The percentages were weighted.

[b] Significant difference between age groups, F=3.86, df=2, 277, p=.03. Only one respondent in the age category 55 or older was referred; therefore, the weighted percentage in this age category is not presented.

made by general practitioners and family doctors about providing services. These findings have intervention implications. If successful and effective patient education and antistigma programs can be established, patients with major depression may be more willing to disclose their depressive symptoms to general practitioners and family doctors. As a result, these patients may be more likely to receive appropriate mental health services.

Being referred to a mental health specialist was not related to impairment or to the duration of depressive symptoms. The proportion of respondents with depressive symptoms lasting eight weeks or longer was higher among the referrals than among the nonreferrals, but this difference was not statistically significant. There are several possible explanations. An important factor in the mental health referral process is the doctor-patient relationship (15). Other important factors include the availability of specialized mental health professionals in a specific region, patients' fear of being stigmatized, the organization of the primary care delivery system (16,37), poor communication between general practitioners and specialists, and cumbersome intake procedures in mental health services (40). From the NPHS perspective, some of the nonsignificant results could be due to the relatively small number of respondents who had visited general practitioners and family doctors for mental or emotional health problems (N=153). Some individuals with chronic depression and severe impairment may have refused participation or may have been institutionalized at the time of interviews and may therefore not have been included in the NPHS. Consistent with previous studies, we found that younger people were more likely to be referred to mental health specialists (15,22).

A little more than 40 percent of patients who had contacted general practitioners and family doctors for any reason had received mental health services, indicating that these physicians appear to have recognized a large proportion of individuals with depression and provided mental health services by either prescribing antidepressants or referring patients to a specialist. There is evidence that primary care clinicians are sensitive to meaningful clinical cues such as family history and previous treatments in diagnosing depression (41). However, their diagnoses, as well as related referrals, may be affected by many factors, as discussed earlier. This particular finding was like those of previous studies in which a significant proportion of persons with mental disorders were recognized and treated by general practitioners and family doctors (12,15,42). However, there is room for improvement. Only a small proportion of those with a major depressive episode were referred to mental health professionals. Some with chronic depression and severe impairment were not referred, and a significant proportion did not receive any mental health services.

Conclusions

To improve the effectiveness of depression management in primary care settings, the education of persons who visit general practitioners and family doctors and a public campaign against stigmatizing depression may be necessary. Such strategies may increase patients' awareness of depressive symptoms and the disclosure of these symptoms to primary care clinicians, leading to more effective depression management in primary care settings and optimal referrals to mental health specialists, as evidenced by the results of this study. The NPHS was a general health survey and relied on self-reported information. Thus, the findings of this study were vulnerable to reporting bias. Well-designed studies using large samples are needed to fur-

and the unique opportunities that primary care physicians have for detecting and managing individuals with major depressive episodes. However, only about 22 percent of the contacts with the general practitioners and family doctors were related to mental or emotional health problems, and only about 26 percent of individuals who made these contacts were referred to a psychiatrist or psychologist. These findings are consistent with those of previous studies (23,35,36), indicating that a low referral rate is common in primary care settings. People with depression may not disclose their psychological symptoms to general practitioners and family doctors, which presents difficulties for detection of major depression by primary care physicians, a group that often has limited time and often focuses on acute physical illnesses (37). The proportion of the respondents who had contacted a general practitioner or family doctor for mental health problems in the NPHS (24) (22.1 percent) was higher than that reported in the Epidemiological Catchment Area study (38) (12.5 percent of those with affective disorders) and than that reported in the National Comorbidity Survey (39) (10.3 percent of those with major depression). The discrepancies may be partially due to the times at which the studies were conducted and to the different health care systems.

In the study reported here, 40 percent of patients who had consulted general practitioners and family doctors for any reason and 64.5 percent of those who had visited general practitioners and family doctors about mental or emotional health problems had received mental health services in the preceding year.

These estimates have limitations and should therefore be interpreted with caution. The NPHS was a general health survey and relied on self-reported information; therefore, the findings of this study were vulnerable to reporting bias. Mental health services in this study were defined as having visited a psychiatrist or psychologist, having been treated with antidepressants by general practitioners and family doctors, or both. Visits to general practitioners and family doctors were measured in the preceding 12 months, but antidepressant use referred to the month before the interview. For some respondents who reported a major depressive episode, primary care physicians might have decided to provide psychotherapy and counseling or education instead of prescribing antidepressants (21). Unfortunately, the NPHS did not collect information on psychotherapy and counseling or education. Therefore, the proportion in this study who had received mental health services may have been underestimated.

The study showed that receiving mental health services did not depend on respondents' demographic or socioeconomic characteristics but rather on whether they had approached general practitioners and family doctors for reasons related to mental or emotional health and also on the nature of their clinical presentation. Although income adequacy was associated with receiving mental health services in the crude analysis, the results indicated that this association was due to the confounding effect of chronicity of depression. Clinical presentation—as represented by the last three categories of characteristics in Table 2—appears to be an important determinant of decisions

Table 2

Characteristics of 608 survey respondents who reported major depressive episodes, by whether or not they received mental health services[a]

Characteristic	Received mental health services[b] (N=250)		Did not receive mental health services[b] (N=358)				
	N	%	N	%	F	df	p
Gender							ns
Men	69	34.7	108	65.3			
Women	181	43.3	250	56.7			
Age (years)[b]							ns
12–24	35	30.3	75	69.7			
25–54	172	45.1	221	54.9			
55 or older	43	38.9	62	61.1			
Marital status							ns
Married or living together	111	39.1	156	60.9			
Single	68	36.7	110	63.3			
Divorced, separated, or widowed	71	49.1	92	50.9			
Family income					5.27	1, 566	.02
Low	72	50.4	79	49.6			
Middle or high	160	36.2	256	63.8			
Urbanicity							ns
Living in a rural area	46	36.9	71	63.1			
Living in an urban area	153	42.7	208	57.3			
Long-term medical illness							ns
Yes	208	41.8	293	58.2			
No	42	35.4	64	64.5			
Visited GP or FD for mental or emotional problem[c]					29.18	1, 606	<.005
Yes	92	64.3	59	35.7			
No	157	33.1	299	66.9			
Impairment status					7.09	1, 578	.008
Severe	84	53.2	75	46.8			
Mild or none	158	36.8	262	63.2			
Duration of depressive symptoms (weeks)					21.3	1, 595	<.005
Two to seven	81	27.9	180	72.1			
Eight or longer	164	51.8	171	48.2			

[a] Receiving mental health services was defined as having visited a psychiatrist or psychologist, having been treated with antidepressants by general practitioners or family doctors, or both.
[b] The percentages were weighted.
[c] GP=general practitioner; FD=family doctor