

Psychiatric Morbidity, Service Use, and Need for Care in the General Population: Results of the Netherlands Mental Health Survey and Incidence Study

ABSTRACT

Objectives. This study examined the use of primary health care, mental health care, and informal care services, as well as unmet care needs, by individuals with different psychiatric diagnoses.

Methods. Data were derived from the Netherlands Mental Health Survey and Incidence Study and were based on a representative sample ($n = 7147$) of the general population (aged 18–64 years).

Results. In a 12-month period, 33.9% of those with a psychiatric disorder used some form of care; 27.2% used primary care, and 15.3% used mental health care. Patients with mood disorders were the most likely to enlist professional care; those with alcohol- and drug-related disorders were the least likely to do so. Higher educated persons who live alone, single parents, unemployed persons, and disabled persons were more likely to use mental health care. Unmet need for professional help was reported by 16.8% (men 9.9%, women 23.9%) of those with a disorder.

Conclusions. Care use varies widely by diagnostic category. The role of general medical practitioners in treating persons with psychiatric disorders is more limited than was anticipated. Patients in categories associated with extensive use of professional care are more likely to have unmet care needs. (*Am J Public Health*. 2000;90:602–607)

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Current policy debates on the mental health care system focus on cost-effectiveness¹ and concern the issue of overmet and unmet needs. *Overmet need*² refers to a situation in which an individual with a mild disorder could be treated by the primary care sector rather than by a mental health care provider. *Unmet need* refers to a situation in which an individual with a psychological disorder does not receive care. Recent and representative data on the use of services for psychiatric disorders are needed to inform these debates; such data, however, are rare.

A growing number of studies have created a thorough understanding of psychiatric morbidity in the general population.^{3–8} However, comparable research on care use is sparse or fragmentary and fails to provide an adequate picture of the help-seeking behavior of the general population. Many data involve the patients of general practitioners; in most studies, psychological distress, rather than psychiatric disorders, has been detected with screening instruments.^{9,10} Other data are derived from patient registers of mental hospitals or outpatient clinics or from psychiatric case registers.

Doubts exist about the accuracy of clerical processing for patient registers and, hence, about the reliability and validity of the diagnostic data they contain. Psychiatric case registers have a regional design and are not representative of the national population. Moreover, the service use recorded is restricted to a single care sector and to patients who are already receiving care. These registers do not reflect the overall medical and nonmedical care use or the needs of the population.^{11,12}

The comparability of available service use data is limited, if only because widely varied definitions of a *psychiatric case* have been used.^{12–16} Because the literature on diagnosis-specific care use is still inadequate,⁹ to obtain a correct picture of care use in relation to psychiatric morbidity we need to record the total care consumption of a representative group of persons whose psychiatric morbidity has been diagnosed.

In this article we document care use among people with psychiatric disorders, basing our report on data from the Netherlands Mental Health Survey and Incidence Study.³ We address the following questions: (1) What is the probability that people with different psychiatric disorders will enlist the services of specialized mental health care agencies or other providers of medical and nonmedical care? (2) What population categories are more likely than others to turn to care services with their psychological complaints? (3) Are some care needs not being satisfied?

Methods

Sampling

The Netherlands Mental Health Survey and Incidence Study is based on a multistage, stratified, random sample of individuals aged 18 to 64 years from the noninstitutionalized population of the Netherlands.³ A sample of 90 Dutch municipalities was drawn. The sample was stratified on the basis of urbanization and adequate dispersion over the 12 provinces. A sample of private households (addresses) from post office registers was drawn, and the residents were sent a letter of introduction signed by the minister of public health. Shortly thereafter, the interviewers contacted the residents by telephone. They visited households with no telephone or with unlisted numbers, (18%) in person.

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TABLE 1—12-Month Care Use in Relation to Psychological Problems or Alcohol- or Drug-Related Problems, by 12-Month DSM-III-R (Axis I) Diagnoses (Weighted Percentages With Standard Errors [SEs])

	Prevalence of Disorder, % (SE)	Primary Care, % (SE)	Ambulatory Mental Health Care, % (SE)	Residential Mental Health Care, % (SE)	Informal Care, % (SE)	Some Form of Care ^a , % (SE)
Total sample (unweighted n = 7076)		10.7 (0.4)*	6.0 (0.3)*	0.3 (0.1)	4.6 (0.2)*	14.6 (0.4)*
No disorder	76.5 (0.5)	5.7 (0.3)*	3.1 (0.2)*	0.1 (0.0)	2.8 (0.2)*	8.7 (0.4)*
≥1 disorder	23.5 (0.5)	27.2 (1.1)*	15.3 (0.9)*	1.0 (0.2)	10.4 (0.8)*	33.9 (1.2)*
1 disorder only	15.6 (0.4)	18.9 (1.2)*	8.2 (0.8)	0.2 (0.1)	6.8 (0.8)*	23.3 (1.3)*
≥2 disorders	7.7 (0.3)	43.9 (2.1)	29.5 (2.0)	2.8 (0.7)	18.0 (1.7)*	55.5 (2.1)*
Mood disorders	7.6 (0.3)	53.9 (2.1)	34.1 (2.0)	2.0 (0.6)	20.1 (1.7)*	63.8 (2.1)
Anxiety disorders	12.4 (0.4)	31.9 (1.6)	18.4 (1.3)	1.6 (0.4)	13.0 (1.1)*	40.5 (1.7)*
Alcohol abuse or dependence	8.2 (0.3)	12.3 (1.4)*	8.7 (1.2)*	1.2 (0.4)	4.5 (0.9)	17.5 (1.6)*
Drug abuse or dependence	1.3 (0.1)	30.0 (4.9)*	25.6 (4.6)	7.9 (2.9)	13.5 (3.6)*	37.1 (5.2)*
Schizophrenia	0.2 (0.1)	35.7 (13.2)	40.0 (13.5)	7.1 (5.5)	20.0 (11.3)	46.7 (13.6)
Eating disorders	0.4 (0.1)	50.0 (10.1)	34.6 (9.7)	12.0 (6.5)	24.0 (8.7)	64.0 (9.7)

^aSome form of care = care sought from primary, informal, or mental health care services.

*Chi-square test for sex differences ($P < .05$). Significantly higher percentages of women sought help in all categories.

One respondent per household—the member with the most recent birthday—was randomly selected on the condition that he or she was sufficiently fluent in Dutch to be interviewed. Persons who were not available because of circumstances such as hospitalization, travel, or imprisonment were contacted later in the year. If necessary, at least 10 calls or visits were made to an address at different times and days. Respondents received no remuneration, only a token of appreciation.

To optimize response and to compensate for possible seasonal influences, we extended the fieldwork over the period from February through December 1996. No supplemental respondents were drawn from specific demographic groups. A total of 7147 persons were interviewed (response rate of 69.7%).³ Partial nonresponse was negligible because of the computer-controlled interviewing. Of the persons who declined to take part in the full interview, 43.6% furnished key data (age, sex) and completed the 12-item version of the General Health Questionnaire (GHQ-12), a screening examination for current mental distress.¹⁷ The nonrespondents' psychiatric morbidity, estimated by a logistic regression model (GHQ score, sex, age, and urbanicity as the predictors), did not differ significantly from that of the respondents.³

The sample reflected the Dutch population well in terms of sex, civil status, and degree of urbanization.³ Only the group aged 18 to 24 years was significantly underrepresented, and therefore we fully poststratified the data to Central Bureau of Statistics figures.

Psychiatric Assessment

We used the Composite International Diagnostic Interview, Computerized Version

1.1,¹⁸ a fully structured interview that detects Axis I disorders as defined in the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM-III-R)*.¹⁹ World Health Organization field trials have documented acceptable reliability and validity for nearly all diagnoses,^{20–22} with the exception of acute psychotic presentations. Whenever we detected psychotic symptoms, we reinterviewed the individual with the Structured Clinical Interview for DSM-III-R, a reliable and valid instrument for diagnosing schizophrenia.²³

The diagnoses included in the present report were mood disorders (depression, dysthymia, bipolar disorder), anxiety disorders (panic disorder, agoraphobia, social phobia, simple phobia, obsessive-compulsive disorder, generalized anxiety disorder), psychoactive substance use disorders (alcohol or drug abuse and dependence, including sedatives, hypnotics, and anxiolytics), eating disorders (anorexia, bulimia), schizophrenia, and other nonaffective psychotic disorders.

Care Use

The respondents were asked whether and how they sought help for their own psychological or alcohol or drug problems in the past 12 months. The sources of care that could be indicated included primary care (general practitioner, company physician, crisis care, general social work, home care/district nursing), ambulatory mental health care (community mental health care institute; psychiatric outpatient clinic of a psychiatric or general hospital; alcohol and drug counseling center; independent psychiatrist, psychologist, or psychotherapist; psychiatric day care), residential mental health care (psychiatric hospital, inpatient addiction clinic, psy-

chiatric division of a general hospital, sheltered accommodation), and informal care (alternative care provider, traditional healer, self-help group, telephone help line, pastor, imam, physiotherapist/haptonomist).

Need for Care

To register the subjective needs for care, we asked the following question: "In the last 12 months, were there times when you felt you needed professional help for psychological or emotional problems, or problems related to the use of alcohol or drugs, but still didn't go to a doctor or other care provider?"

Analysis

Chi-square tests were performed to determine differences in scores of assessment tests. Logistic regression analyses were used to calculate odds ratios (ORs), which indicate the strength of associations between demographic characteristics and care use. Use of weighted data may cause problems in estimating variances, standard errors, and corresponding tests of significance and confidence intervals. Therefore, standard errors and confidence intervals of odds ratios were calculated with Stata.²⁴ Stata uses the Taylor series linearization method to derive correct standard errors for the coefficients of logistic regression models.

Results

Use of Care by Diagnostic Category

Table 1 shows that nearly 1 in 4 respondents (23.5%) reported having had 1 or more psychiatric disorders in the past year. Of

TABLE 2—12-Month *DSM-III-R* Diagnoses as Predictors for Care Use in the Past 12 Months

	Primary Care		Mental Health Care		Informal Care		Some Form of Care	
	OR ^a	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Major depression	8.33	6.30, 11.03	6.31	4.49, 8.86	3.69	2.51, 5.43	7.67	5.84, 10.08
Dysthymia	2.58	1.60, 4.13	2.30	1.36, 3.90	1.76	1.01, 3.07	3.30	1.98, 5.49
Bipolar disorder	7.17	4.15, 12.40	6.81	3.60, 12.89	3.57	1.61, 7.92	5.34	3.03, 9.43
Panic disorder	4.35	2.70, 7.01	3.63	2.33, 5.65	1.57	NS	5.03	3.26, 7.77
Agoraphobia (without panic)	3.34	2.00, 5.56	2.61	1.30, 5.26	1.93	NS	4.17	2.42, 7.18
Simple phobia	1.11	NS	1.05	NS	1.14	NS	1.26	NS
Social phobia	1.37	NS	1.19	NS	1.49	NS	1.65	1.16, 2.33
Generalized anxiety disorder	4.23	2.14, 8.38	3.34	1.61, 6.91	2.65	1.40, 5.00	4.83	2.40, 9.72
Obsessive-compulsive disorder	4.14	1.73, 9.90	2.91	1.14, 7.38	2.03	NS	5.73	2.10, 15.60
Alcohol abuse	0.89	NS	0.86	NS	0.53	NS	0.95	NS
Alcohol dependence	1.24	NS	1.55	NS	1.53	NS	1.54	NS
Drug abuse	1.17	NS	1.34	NS	0.48	NS	0.82	NS
Drug dependence	1.24	NS	1.81	NS	1.41	NS	1.59	NS
Schizophrenia	2.34	NS	6.97	2.53, 19.22	2.95	NS	2.59	NS
Bulimia nervosa	2.30	NS	2.10	NS	1.87	NS	3.80	1.23, 11.76
Type of prevalence								
No lifetime disorder	1.00	...	1.00	...	1.00	...	1.00	...
Lifetime disorder but not in past 12 months	2.59	2.03, 3.31	4.05	2.94, 5.57	3.06	2.21, 4.24	3.25	2.67, 3.97
Exactly 1 disorder in past 12 months	4.60	3.41, 6.38	3.57	2.37, 5.38	4.25	2.81, 6.44	4.32	3.18, 5.86
≥2 disorders in past 12 months	5.97	3.40, 10.48	6.09	3.19, 11.62	8.05	4.17, 15.51	6.99	3.93, 12.44

Note. Odds ratios controlled for sex, age, and psychiatric comorbidity. OR = odds ratio; CI = confidence interval; NS = not significant. $P < .05$.

^aReference group (odds ratio = 1) comprised the respondents without the disorder mentioned.

these, 33.9% sought some form of professional care. Primary care was sought most frequently—by 27.2% of the respondents. Of these individuals, 22.4% saw a general practitioner. Ambulatory mental health care services were contacted by 15.3% of the respondents, and 1.0% were admitted to a psychiatric hospital. Informal care was received by 10.4%. Among those with psychiatric comorbidity (i.e., 2 or more *DSM-III-R* disorders in the previous 12 months), 55.5% sought help. In all cases in which significant differences in care use were apparent, women had the highest percentages.

Of the individuals with mood disorders, 63.8% received some form of help; 53.9% used primary care, and 34.1% used ambulatory mental health care services. Anxiety disorders were associated with less care consumption: 40.5% of individuals with anxiety disorders visited some form of care (31.9% primary care, 18.4% ambulatory mental health care services). Only 17.5% of the persons with alcohol abuse or dependence had contacts with care providers (12.3% primary care, 8.7% ambulatory mental health care services). Drug abuse and dependence, which was less prevalent than alcohol abuse and dependence, was associated with far higher care consumption levels: 37.1% received some form of help; 30.0% used primary care, and 25.6% used ambulatory mental health care services. Fewer than half (46.7%) of the patients with schizophrenia

visited some care service (35.7% primary care, 40.0% ambulatory mental health care services). Of the persons with eating disorders, 64.0% sought care (mostly primary care).

Table 2 shows the extent to which care use was predicted by the specific psychiatric disorders, with sex, age, and comorbidity controlled for. As indicated by the high odds ratios, individuals with mood disorders, particularly those with major depression or bipolar disorder, were more likely than people with other psychiatric disorders to use all forms of care. Considerable variation was found among the different anxiety disorders. People with agoraphobia, obsessive-compulsive disorder, panic disorder, or generalized anxiety disorder were more likely to seek care than those with simple phobia or social phobia. Alcohol-related problems and drug-related problems did not predict use of care. Schizophrenia was a strong predictor of use of mental health care (OR = 6.97; 95% confidence interval [CI] = 2.53, 19.22).

Comorbid psychiatric disorders entailed a sharply higher probability of care consumption, with odds ratios varying from 5.97 for primary care to 8.05 for informal care. People who had a lifetime history of psychiatric disorders but who had been disorder-free in the past 12 months still had an increased probability of using some form of care, in particular, mental health care (OR = 4.05; 95% CI = 2.94, 5.57).

Demographic Correlates

Table 3 shows the outcomes of the multivariate logistic regression analyses (controlled for sex, age, and all *DSM-III-R* disorders) with demographic characteristics as predictors for care use in the various sectors. Compared with the odds ratios presented in Table 2, the odds ratios for the multivariate logistic regression analyses are relatively low.

Overall, women used more care than did men (18.5% vs 10.8%; OR = 1.63; 95% CI = 1.38, 1.91) but not significantly more mental health care. Women used more informal care (6.4% vs 2.8%) and primary care (13.7% vs 7.8%) than did men.

Age was not a predictor of mental health care use, and it was a poor predictor for primary care and informal care sectors. Only those aged 35 to 44 years used more care than the reference group (those aged 18–24 years).

Three indicators of socioeconomic status were reported: highest educational attainment, income, and occupational status of the respondents.³ Educational attainment proved a determinant of only mental health care use (0–11 years, 4.3%; ≥16 years, 7.0%). Income was not a predictor of primary care or informal care use. More middle-income people did tend to use mental health care (OR = 1.38; 95% CI = 1.05, 1.83). Occupational status showed that, compared with employed persons, unemployed or disabled persons had the highest use of all forms

TABLE 3—Demographic Characteristics as Predictors for Care Use in the Past 12 Months

	Primary Care		Mental Health Care		Informal Care		Some Form of Care	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Sex								
Male	1.00	...	1.00	...	1.00	...	1.00	...
Female	1.59	1.32, 1.91	1.22	NS	2.06	1.59, 2.67	1.63	1.38, 1.91
Age, y								
18–24	1.00	...	1.00	...	1.00	...	1.00	...
25–34	1.33	NS	1.28	NS	1.64	NS	1.34	NS
35–44	1.57	1.08, 2.29	1.51	NS	2.08	1.21, 3.57	1.66	1.21, 2.29
45–54	1.46	NS	1.15	NS	1.63	NS	1.42	1.02, 1.99
55–64	1.16	NS	0.72	NS	1.40	NS	1.09	NS
Education, y								
0–11	1.00	...	1.00	...	1.00	...	1.00	...
12	1.04	NS	1.67	1.21, 2.29	1.04	NS	1.09	NS
13–15	0.85	NS	2.00	1.22, 3.25	1.50	NS	1.27	NS
≥16	0.93	NS	2.39	1.72, 33.15	1.40	1.01, 1.94	1.14	NS
Income								
Lowest 25%	1.00	...	1.00	...	1.00	...	1.00	...
Next 50%	1.12	NS	1.38	1.05, 1.83	1.10	NS	1.09	NS
Top 25%	0.93	NS	1.35	NS	1.12	NS	1.05	NS
Urbanicity								
Rural	1.00	...	1.00	...	1.00	...	1.00	...
Urban	1.41	1.07, 1.86	1.17	NS	1.34	NS	1.41	1.11, 1.78
Household composition								
Lives with parent(s)	0.51	0.29, 0.87	1.04	NS	0.65	NS	0.61	0.39, 0.97
Lives alone	1.24	NS	2.60	2.01, 3.36	2.12	1.61, 2.79	1.71	1.42, 2.07
Single parent	1.70	1.20, 2.42	1.94	1.26, 2.98	2.49	1.66, 3.73	2.14	1.56, 2.92
Lives with partner (with or without children)	1.00	...	1.00	...	1.00	...	1.00	...
Lives with other(s)	1.14	NS	1.51	NS	1.20	NS	1.09	NS
Occupational status								
Employed	1.00	...	1.00	...	1.00	...	1.00	...
Homemaker	1.05	NS	0.81	NS	0.79	NS	0.87	NS
Student	0.56	0.34, 0.92	0.75	NS	0.56	NS	0.61	0.40, 0.94
Unemployed or disabled	1.72	1.23, 2.40	1.95	1.33, 2.84	2.42	1.64, 3.58	1.94	1.47, 2.57
Retired/others	1.07	NS	1.85	1.21, 2.85	1.53	NS	1.18	NS

Note. Odds ratios controlled for sex, age, and DSM-III-R diagnoses. OR = odds ratio; CI = confidence interval; NS = not significant. $P < .05$.

of care (12.8% vs 28.5%) (OR = 1.94; 95% CI = 1.47, 2.57).

Persons who lived alone were the most likely to use mental health care (11.7%; OR = 2.60; 95% CI = 2.01, 3.36), closely followed by single parents (13.0%; OR = 1.94; 95% CI = 1.26, 2.98). These 2 categories also predicted use of primary care and informal care (persons who lived alone, 14.0%; single parents, 24.4%).

People living in rural areas (the 20% of the Netherlands with the lowest address density of the surrounding area as classified by the Central Bureau of Statistics) had a lower rate of primary care use (rural, 7.4%; urban, 11.4%; OR = 1.41; 95% CI = 1.07, 1.86).

Unmet Needs

Women expressed unmet care needs more often than did men (23.9% for women with 1 or more psychiatric diagnoses, 9.9% for men) (Table 4). A notably high percent-

age of the individuals with mood disorders (33.5% women, 19.4% men), compared with individuals with disorders in the other diagnostic categories, expressed unmet care needs. The rate was similarly high among those with comorbid disorders (34.7% women, 18.9% men).

Logistic regression analyses (with sex, age, and diagnostic categories held constant) found that neither age, education, nor income showed differences in unmet needs. Greater care needs were expressed in urban than in rural areas (OR = 1.52; 95% CI = 1.11, 2.10). For household composition, persons who lived alone, single parents, and persons living with someone other than a partner were more likely to express unmet care needs than persons living with a partner (ORs = 1.87, 1.99, and 3.42, respectively). Greater care needs also were recorded for the unemployed and the disability claimants, compared with persons who had paid employment (OR = 2.04; 95% CI = 1.48, 2.96).

Discussion

The current findings are limited in several respects. First, they exclude people living outside the sampling frame (i.e., the homeless, chronic patients in institutional settings, and migrants not sufficiently fluent in Dutch). Although it may be hypothesized that patterns of use of care are different in these categories, their size is relatively small, and overall population estimates will not diverge considerably. Second, the findings rely on 12-month recall. Third, diagnostic assessment was limited to DSM-III-R Axis I disorders.

Within the contexts of these limitations, the results suggest that only a minority (33.9%) of all the people with 1 or more psychiatric disorders come into contact with some form of professional care in a 1-year period. Moreover, only 55.5% of those with comorbid psychiatric disorders contacted a care provider. We found sizable differences in care use among the DSM diagnostic groups. Similarly wide variations were apparent for the different service sectors.

TABLE 4—Unmet Care Needs in the Past 12 Months by *DSM-III-R* Disorder and Sex (Weighted %)

	Male	Female	Total
≥1 disorder	9.9	23.9	16.8*
1 disorder only	6.9	16.4	11.0*
≥2 disorders	18.9	34.7	28.6*
Mood disorders	19.4	33.5	28.2*
Anxiety disorders	16.5	24.2	21.6*
Alcohol abuse or dependence	5.4	21.3	8.1*
Drug abuse or dependence	14.8	21.1	17.0
Schizophrenia	21.3	22.1	21.7

Note. *Chi-square test for sex differences: $P < .01$.

Our findings diverge considerably from care use figures previously calculated from a combination of several databases. Verhaak et al.¹⁴ concluded that 86% of all people with psychological complaints go to their general practitioner. Our study, which confined itself to psychiatric disorders and excluded ill-defined psychological symptoms, showed that general practitioners play a much more limited role. A study in Britain also found that about one third (35%) of the people with nonpsychotic disorders saw their general practitioner within 1 year for psychological reasons.²⁵

From an international comparison with studies that have measured psychiatric morbidity and help seeking in a similar fashion, we may conclude that care use by people with psychiatric disorders is noticeably higher in the Netherlands.²⁶ The low financial thresholds in that country, with its system of universal coverage, is probably one reason for this. Use of any form of services by respondents with 1 disorder in the past 12 months was 23.3% in the Netherlands; 17.8% in Ontario, Canada²⁷; and 18.8% in the United States.^{27,28} Use of any form of services by respondents with 2 or more disorders in the past 12 months was 55.5% in the Netherlands, 39.4% in Ontario, and 33.9% in the United States.

Our results suggest social differences in seeking treatment. Women were more likely to use all types of care, indicating sex differences in health perception and appreciation and in availability and attainment of care.²⁹ Educational level showed reverse findings: the higher the level, the higher the mental health care use, and the lower the level, the higher the primary care use. People in vulnerable socioeconomic situations—those living alone, single parents, the unemployed, and disability claimants—had much higher use rates for all forms of care. This finding is consistent with findings from numerous previous studies.^{25,30-32}

Among the total population, 6% visited ambulatory mental health care services, of

whom 2.4% (3.1% of 76.5% [Table 1]) did not fulfill the *DSM-III-R* criteria. One might conclude that the mental health care sector is indeed dealing with overmet needs (i.e., too many—40%—mild cases that could better be treated in primary care). However, alternative hypotheses may be put forward.

First, we excluded *DSM-III-R* Axis II disorders, and persons with these disorders constitute a substantial part of the mental health care population. Second, the *DSM* diagnostic labels provide insufficient clinically relevant information about a patient's personal history, circumstances, and limitations. The missing link between diagnosis and need is functioning.^{33,34} Problems in functioning make people seek treatment even when their symptoms do not fulfill diagnostic criteria. Depressive and anxiety symptoms and comorbidity are the most debilitating problems^{35,36} and, as our results show, give rise to the highest probability of seeking professional help. Even when subthreshold psychiatric problems are at stake, a general practitioner or mental health care provider can make a well-founded decision for enrollment by considering the patient's past, present, and future functioning.

The two thirds of the sample who had a *DSM-III-R* disorder but did not seek any form of help may be considered a category with unmet needs for mental health care. Stigma is still associated with mental illness, and people are often reluctant to discuss psychiatric problems or seek treatment for them. However, additional hypotheses can be formulated to show that not every person with a *DSM* disorder requires the services of a mental health specialist.

Again, the severity of functional limitations associated with psychiatric symptoms determines whether help is sought. Particularly in nonchronic psychiatric disturbance, people usually successfully cope with their symptoms and functional disabilities with support from their nonprofessional social

network. Moreover, it may be hypothesized that the *DSM-III-R* criteria for alcohol abuse and dependence are invalid, because they inadequately refer to pathological conditions. However, our findings also may be interpreted as an indication that in the Netherlands and other Western countries excessive use of alcohol is tolerated to a great extent. It often takes a long time before the social environment reacts negatively to alcohol problems such that the person concerned must acknowledge that he or she is socially disabled and in need of help. Finally, it may be hypothesized that in primary care and mental health care, the treatment programs and protocols for depressive and anxiety disorders are more sophisticated than they are for substance use disorders. In particular, people with dual diagnoses (comorbid psychiatric and substance use disorders) are considered to have a lower probability of favorable treatment outcome. In this category of patients, the criteria for enrollment in mental health care are probably stricter than the criteria for patients with "pure" psychiatric disorders.

Remarkably, 5 of 6 people who qualified for a *DSM-III-R* diagnosis did not seek help from (or were not referred to) any specialized mental health care agency in the preceding year. We may assume that help is needed or advisable for a yet-undetermined proportion of this group based on our finding that 16.8% (23.9% women, 9.9% men) of the subjects reported an unmet need for professional help. These unmet needs differed substantially by diagnosis. Those diagnoses with a high probability of treatment contact—mood and anxiety disorders—were also associated with high percentages of unmet need.

Irrespective of the diagnosis, at least 1 out of every 5 women with a disorder reported a need. Thus, especially for women, a discrepancy may exist between the forms and standards of treatment assumed by the mental health care sector to be adequate and patients' explicitly and implicitly acknowledged health needs and needs for optimal social and personal functioning. Along with psychiatric treatment, people with psychiatric disorders need care and support—such as housing, social support, financial security, and better working conditions—that often is not available in the specialized mental health care sector.^{12,37} Future research should address a range of needs and indicators that encompasses more than just the medical or the psychological. □

Contributors

R. V. Bijl conceived the study and wrote the paper. Both authors analyzed and interpreted the data and approved the final version of the paper.

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References

- Knapp M, ed. *The Economic Evaluation of Mental Health Care*. Aldershot, England: Arena; 1995.
- Lin E, Goering PN, Lesage A, Streiner DL. Epidemiologic assessment of overmet need in mental health care. *Soc Psychiatry Psychiatr Epidemiol*. 1997;32:355–362.
- Bijl RV, van Zessen G, Ravelli A, de Rijk C, Langendoen Y. The Netherlands Mental Health Survey and Incidence Study (NEMESIS): objectives and design. *Soc Psychiatry Psychiatr Epidemiol*. 1998;33:581–586.
- Bijl RV, van Zessen G, Ravelli A. Prevalence of psychiatric disorder in the general population: results of the Netherlands Mental Health Survey and Incidence Study (NEMESIS). *Soc Psychiatry Psychiatr Epidemiol*. 1998;33:587–595.
- Regier DA, Narrow WE, Rae DS, Manderscheid RW, Locke BZ, Goodwin FK. The de facto US mental and addictive disorders service system: Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services. *Arch Gen Psychiatry*. 1993;50:85–94.
- Kessler RC, McGonagle KA, Zhao S, et al. Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: results from the National Comorbidity Survey. *Arch Gen Psychiatry*. 1994;51:8–19.
- Boyle MH, Offord DR, Campbell D, et al. Mental health supplement to the Ontario Health Survey: methodology. *Can J Psychiatry*. 1996;41:549–558.
- Meltzer H, Gill B, Petticrew M, Hinds K. *The Prevalence of Psychiatric Morbidity Among Adults Living in Private Households*. London, England: Her Majesty's Stationery Office; 1995. OPCS Surveys of Psychiatric Morbidity in Great Britain Report 1.
- Horwitz AV. Seeking and receiving mental health care. *Curr Opin Psychiatry*. 1996;9:158–161.
- Ormel J, VonKorff M, Ustun TB, Pini S, Korten A, Oldehinkel T. Common mental disorders and disability across cultures: results from the WHO Collaborative Study on Psychological Problems in General Health Care. *JAMA*. 1994;272:1741–1748.
- ten Horn GHMM, Giel R, Gulbinat WH, Henderson JH. *Psychiatric Case Registers in Public Health: A Worldwide Inventory 1960–1985*. Amsterdam, the Netherlands: Elsevier; 1986.
- Thornicroft G, Brewin CR, Wing J, eds. *Measuring Mental Health Needs*. London, England: Gaskell; 1992.
- Sytema S. *Patterns of Mental Health Care*. Groningen, the Netherlands: Drukkerij Van Denderen; 1994.
- Verhaak P, Bijl RV, van den Berg Jeths A, Harteloh PPM. Mental illness. In: Ruwaard D, Kramers PGN, eds. *Public Health Status and Forecasts* [in Dutch]. The Hague, the Netherlands: Sdu Uitgeverij; 1993:166–175.
- Goldberg D, Huxley P. *Common Mental Disorders: A Bio-Social Model*. London, England: Tavistock; 1992.
- Commander MJ, Sashi Dharan SP, Odell SM, Surtees PG. Access to mental health care in an inner-city health district, I: pathways into and within specialist psychiatric services. *Br J Psychiatry*. 1997;170:312–316.
- Goldberg DP, Williams P. *A Users Guide to the General Health Questionnaire*. Windsor, England: Nelson; 1988.
- World Health Organization. *Composite International Diagnostic Interview (CIDI), Version 1.0*. Geneva, Switzerland: World Health Organization; 1990.
- Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised*. Washington, DC: American Psychiatric Association; 1987.
- Wittchen H-U. Reliability and validity studies of the WHO-Composite International Diagnostic Interview (CIDI): a critical review. *J Psychiatr Res*. 1994;28:57–84.
- Robins LN, Wing J, Wittchen H-U, et al. The Composite International Diagnostic Interview: an epidemiologic instrument suitable for use in conjunction with different diagnostic systems and in different cultures. *Arch Gen Psychiatry*. 1988;45:1069–1077.
- Wittchen H-U, Robins LN, Cottler LB, Sartorius N, Burke JD, Regier DA, and participants in the Multicentre WHO/ADAMHA Field Trials. Cross-cultural feasibility, reliability and sources of variance in the Composite International Diagnostic Interview (CIDI). *Br J Psychiatry*. 1991;159:645–653.
- Spitzer RL, Williams JBW, Gibbon M, First MB. The Structured Clinical Interview for DSM-III-R (SCID), I: history, rationale, and description. *Arch Gen Psychiatry*. 1992;49:624–629.
- Stata Statistical Software* [computer program]. Release 5.0. College Station, Tex: Stata Corp; 1997.
- Meltzer H, Gill B, Petticrew M, Hinds K. *Physical Complaints, Service Use and Treatment of Adults With Psychiatric Disorders*. London, England: Her Majesty's Stationery Office; 1995. OPCS Surveys of Psychiatric Morbidity in Great Britain Report 2.
- Alegria M, Kessler R, Bijl R, et al. Comparing mental health service use data across countries. In: Andrews G, Henderson S, eds. *Unmet Need in Psychiatry*. Cambridge, England: Cambridge University Press; 1999:45–57.
- Kessler RC, Frank RG, Edlund M, Katz SJ, Lin E, Leaf P. Differences in the use of psychiatric outpatient services between the United States and Ontario. *N Engl J Med*. 1997;336:551–557.
- Kessler RC, Zhao S, Katz SJ, et al. Past-year use of outpatient services for psychiatric problems in the National Comorbidity Survey. *Am J Psychiatry*. 1999;156:115–123.
- Rhodes A, Goering P. Gender differences in the use of outpatient mental health services. *J Ment Health Adm*. 1994;21:338–346.
- Lin E, Goering P, Offord DR, Campbell D, Boyle MH. The use of mental health services in Ontario: epidemiologic findings. *Can J Psychiatry*. 1996;41:572–577.
- Crow MR, Smith HL, McNamee AH, Piland NF. Considerations in predicting mental health care use: implications for managed care plans. *J Ment Health Adm*. 1994;21:5–23.
- Olfson M, Klerman GL. Depressive symptoms and mental health service utilization in a community sample. *Soc Psychiatry Psychiatr Epidemiol*. 1992;27:161–167.
- Regier DA, Kaelber CT, Rae DS, et al. Limitations of diagnostic criteria and assessment instruments for mental disorders. *Arch Gen Psychiatry*. 1998;55:109–115.
- Ustun TB, Chatterji S, Rehm J. Limitations of diagnostic paradigm: it doesn't explain "need." *Arch Gen Psychiatry*. 1998;55:1145–1146.
- Bijl RV, Ravelli A. Current and residual functional disability associated with psychopathology: results of the Netherlands Mental Health Survey and Incidence Study. *Psychol Med*. In press.
- Hays RD, Wells KB, Sherbourne CD, Rogers W, Spritzer K. Functioning and well-being outcomes of patients with depression compared with chronic general medical illnesses. *Arch Gen Psychiatry*. 1995;52:11–19.
- Ciarlo JA, Tweed DL, Shern DL, Kirkpatrick LA, Sachs-Ericsson N. Validation of indirect methods to estimate need for mental health services. *Eval Program Plann*. 1992;15:115–131.