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ORIGINAL PAPER

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Prevalence and risk factors of threshold and sub-threshold psychiatric disorders in primary care

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Abstract *Objective* Prevalence rates of mental health problems in primary care vary according to population and the type of measure used. This study examined the prevalence of a full range of mental health problems, including sub-threshold diagnoses, and the socio-demographic risk factors for psychiatric disorders among a population with low out-of-pocket expenditures for medical care. *Method* Four validated mental health assessment instruments, including the CIDI-SF, were administered to a sample of 976 users of primary care in Israel between the ages of 25–75 in eight clinics throughout the country. Prevalence estimates were obtained for seven psychiatric diagnoses, two "other mental health disorders" (somatization and disordered eating) and five sub-threshold conditions. *Results* The most common types of morbidity were depression and disordered eating (20.6% and 15.0%, respectively), followed by somatization (11.8%) and general anxiety (11.2%). Among respondents, 31.1% had at least one psychiatric diagnosis, 24.3% had 'other mental disorders' and 15.5% had sub-threshold conditions. Panic attack, disordered eating and somatization, as well as a global measure of any psychiatric diagnosis were significantly more prevalent among women than men. Psychiatric diagnoses were also more common among those in the age group 45–64, with less education and insufficient income, the never married and separated/divorced and those not working. No significant differences were found between recent immigrants, veteran immigrants and Israeli-born, between Arab and Jewish Israelis or between secular or religious sectors of the population. *Conclusions* This study establishes the prevalence of the most common disorders in primary care including PTSD, somatization and disordered eating behaviors. The additional of other mental disorders suggests that a more accurate picture of mental disorders in primary care requires an expanded assessment procedure.

Key words depression – anxiety – disordered eating – gender differences – PTSD

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Introduction

It is commonly accepted that many people turn to primary care services when experiencing psychological distress or even clinical levels of psychiatric disorders. A recent analysis indicated that primary care is still a more common site for treatment of mental disorders than any type of psychiatric or mental health service [23].

High use of primary services and high frequency of mental health problems among primary care users are issues particularly relevant for women. Women generally are higher users of services and may use 30–50% more services than men (e.g., [55]). Moreover, several studies have shown that psychological morbidity is greater among women than men users of primary care health services, possibly because women generally experience more depression and anxiety than men, two types of disorders that are extremely prevalent in primary care [2, 50].

Initial studies (e.g., [13, 40]) used assessment of psychiatric disorders by physicians to assess general psychiatric morbidity and produced low estimates (10–27%). When specific diagnoses were assessed, they were generally depression or anxiety, the most

common disorders that appear in the primary care setting [16, 22, 31, 56]. Other studies used screening instruments, such as the GHQ or the Hopkins Symptom Checklist (HSCL), which resulted in inflated rates of psychiatric disorders (e.g., [1, 2, 7, 44]). For this reason, screening instruments alone are not a reliable indicator of prevalence and need to be followed by a diagnostic interview.

Later, two-staged screening procedures were indeed introduced, with a short screening instrument such as the GHQ followed by a structured psychiatric interview such as the SADS or the World Health Organization-developed CIDI—Composite International Diagnostic Interview (e.g., [11, 46]). To streamline assessments, a shorter version of the CIDI was developed especially for use in primary care as a single-stage instrument (CIDI-PHC, Primary Health Care version) and applied in an international study of 15 sites around the world [42, 52].

Another example of a two-staged procedure is the PRIME-MD, which is first given to the patient and then to the physician to fill it out [32, 33, 47]. Using the PRIME-MD, prevalence estimates for psychiatric disorders range from 26% to 60% [3, 4, 15, 28, 33]. Both the CIDI- PHC and the PRIME-MD allow the differentiation between clinical diagnostic states and sub-threshold diagnoses which may account for many, or even the majority of the visits of distressed persons to primary care physicians (e.g., [5, 6, 41].

The present study had two major objectives: (1) to adequately assess mental health morbidity in primary care practice; and (2) to identify the high-risk groups for these disorders. The results of such a study can provide valuable information for health service planners and policy professionals to improve the organization of mental health resources within health maintenance settings.

This study took place in a national sample of Israeli users of primary care clinics. Earlier Israeli primary care studies were limited by the lack of a diagnostic interview or by the assessment of a single diagnosis [17, 44, 45[1], 49]. Conducting such a study in Israel is important because Israelis have very high rates of primary care clinic visits relative to Europe and the US [55] and Israel has a health care system with direct access to specialty psychiatric services without a gatekeeper function and very low out-of-pocket costs [14, 45, 51]. Thus, there is little economic deterrent to limit access to treatment in specialized mental health clinics, which could deflate demand for mental health care within the primary care setting. Furthermore, Israel is a country with a high proportion of immigrants in the population, who are more likely than veteran Israelis to have symptoms of psychological distress and use primary care rather than mental health services for their psychological distress needs [25, 35, 38]. Finally, the chronic stress associated with the ongoing security tensions may also heighten the need for mental health services.

[1]This refers to the Israeli sample in this international study [45].

Methods

Patient population

The study population consisted of primary care patients who, at the time of the study, visited one of eight selected clinics in Israel's largest HMO (Clalit Health Services, which insures 60% of Israelis and is similar to the other HMOs in its patient population characteristics) and had made at least one visit to this clinic during the year prior to the interview. Visits to the clinic were not specifically for mental health problems, but rather for general medical problems and/or check-ups. The sample was between ages 25 and 75. Younger adults were excluded because they usually utilize army medical services and older adults because they generally have higher utilization of medical services due to an increase in somatic problems. Clinics were selected to represent a cross-section of geographic, socio-economic and ethnic diversity including clinics with a high percentage of new immigrants or Israeli Arabs. Within each clinic, the sample was constructed by interviewing consecutive patients who met study criteria (i.e. age group and at least one visit). Respondents were recruited by specially trained interviewers on days when the clinics were working, at different times of the morning, afternoon and evening. The full nature of the study was explained and only those who signed informed consent forms (77% of those eligible) were included in the study. Patients were screened in the clinic and interviewed at home. Interviews were conducted in Hebrew, Russian or Arabic, according to respondents' request. The study protocol and instruments were reviewed and approved by the Medical Director of the HMO and the Medical Directors of the eight selected clinics.

Instruments

Four self-rating mental health assessment instruments, with previously established reliability and validity, were administered to all interviewees:

- The CIDI-SF (short form), a diagnostic instrument developed by WHO specifically for diagnosing mental health problems in epidemiological studies [21]. We used this instrument to obtain clinical diagnoses of depression, generalized anxiety, panic disorder, obsessive compulsive disorder and we used the original CIDI for diagnoses of hypochondriasis, and cognitive impairment [39];
- A 21-item instrument for detecting post-traumatic stress disorder (PTSD Checklist) which included a list of responses that people sometimes have after experiencing stressful or traumatic events. The list of responses included repeated disturbing memories, repeated disturbing dreams, feeling of pressure or distress when something reminds you of a stressful experience, avoiding thinking about or talking about a stressful experience, loss of interest in activities that you used to enjoy, etc. Five response categories included not at all, a little, moderately, quite a bit and extremely [24].
- 12 symptoms of somatization disorder were taken from the Symptom Checklist-90 (SCL-90) questionnaire. They included headaches, faintness, pains in the heart or chest, sore muscles, hot or cold spells, numbness or tingling in parts of your body, lump in your throat, weakness in parts of your body and heavy feelings in your arms or legs, etc. Five response categories were not at all, a little bit, moderately, quite a lot and extremely [8];
- An 8-item questionnaire assessing disordered eating behaviors over a 12 month period included eating unusually large amounts of food within a 2 h period, not being able to stop eating or control amounts of food, vomiting or using laxatives to lose

weight, using diuretics, fasting for 24 h, excessive exercise and severe dieting to avoid gaining weight. All questions were answered with a yes or no. If the interviewee gave a positive response, the follow-up question concerned how often, on average, the behavior occurred: less than 1 day per week, 1 day per week, 2–3 days per week, 4–5 days per week, nearly every day (modified from [48]);

Patients who met the criteria for any of the CIDI and CIDI-SF diagnoses listed above or for PTSD were designated as having a psychiatric diagnosis. Patients with significant symptoms according to the published scoring of each measure on at least one of the two additional mental health assessments not included in the CIDI-SF (somatization, disordered eating) were designated as having "other mental disorders." Patients with clinically significant symptoms that did not meet diagnostic criteria according to the CIDI criteria were considered to have sub-threshold conditions (see Appendix 1 for details of these definitions). Since all mental health assessments referred to the year preceding the interview, we were able to calculate yearly prevalence rates in primary care clinics. Socio-demographic characteristics were assessed using standard questions concerning age, years of education, marital status, religious observance, year of immigration, sufficiency of family income, and work status.

Data analysis

The present study is part of a larger study analyzing the relationship between high use of services and psychopathology in primary care. In order to have approximately half of the patients in the 'high use' category, high users were over-sampled (The status of 'high user' was determined at the time of the screening in the clinic. In each clinic and age group, when the quota of interviewed 'non high users' was reached, only high users were interviewed). Since a relationship between high use and psychopathology was found, data were weighted in order to calculate 'true' prevalence rates. High users were defined as the 25th highest percentiles of the distribution of visits. Thus, all rates were calculated separately for the high users and for the other patients and weighted rates were calculated for the original population where, by definition, there are 25% high users. The calculation of the standard errors of the rates—based on the variance of a proportion in a stratified sample—allowed comparison of these weighted rates.

Initially, demographic variables were assessed for significant bivariate associations with the various categories of psychopathology (crosstab procedure, weighted cases). Those variables with significant associations were entered together into a logistic regression in order to check the association of each variable with the various categories of psychopathology after controlling for the effect of all other variables entered into the model. In order to correct for unequal sampling fractions in high users of services and other patients, the logistic regression analysis was carried out using the SUDAAN program [43]. Two-sided tests of significance were used in all analyses.

Results

Patient characteristics

The main socio-demographic characteristics of the study sample (976 patients) are shown in Table 1. Two-thirds of the sample was comprised of women, all ages were well represented, and the vast majority of patients were married (71%). One-quarter of the sample (26%) reported they do not have sufficient income to cover the costs of daily living (food, housing, transportation, clothing), 30% that they have enough money to partially cover expenses, while 42% reported having sufficient income; 65% of the working age population (69% of the men and 62% of the women) were working either full or part time. The vast majority (93%) were Jewish, 4% were Moslem, and 3% were Christian. Approximately one-third identified themselves as secular (35%), 43.5% as traditional, 17.5% as Orthodox and 4% as ultra-Orthodox. The sample included 41% native-born Israelis (including Israeli Arabs), 47% veteran immigrants who immigrated before 1988 and 12.5% recent immigrants who arrived after 1989, the year that marks the beginning of the mass immigration from the Former Soviet Union. These three demographic variables (religion, level of religious observance, and year of immigration versus Israeli-born), were not found to be related to the psychopathology classification in either bivariate or multivariate analyses, and thus they were not included in the analyses presented here.

Table 1 Socio-demographic characteristics of interviewees

Characteristics	*N*	%
Total	976	100
Sex		
Males	340	34.8
Females	636	65.2
Age (years)		
25–44	299	30.6
45–64	418	42.8
65–75	259	26.5
Education (years)		
0–8	216	22.3
9–12	438	45.3
13^{+}	313	32.4
(missing)	(9)	
Marital status		
Never married	98	10.1
Separated/divorced	86	8.9
Widowed	101	10.4
Married	686	70.6
(missing)	(5)	
Income		
Not sufficient	253	25.9
Partially sufficient	294	30.1
Sufficient	406	41.6
Work status[a]		
Not working	210	35.2
Part time	97	16.3
Full time	289	48.5

[a]Includes only working population (women to age 60, men to age 65)—$N = 596$

Prevalence of psychopathology

Table 2 provides yearly prevalence rates of mental health problems in primary care clinics according to three broad categories of psychopathology plus a summary measure, Any Psychopathology. Thirty one percent had one or more psychiatric diagnoses: the two most prevalent diagnoses were depression and general anxiety: 20.6% and 11.2%, respectively. Twenty-four percent had 'other mental disorders:' of these, 15% were found to have serious eating problems while

Table 2 Yearly prevalence rates[a] of psychopathology among primary care patients by gender

Categories of psychopathology[b]	*N*	Prevalence rates (%)			*P*[c]
		Total (*N* = 976)	Males (*N* = 340)	Females (*N* = 636)	
Any psychopathology	507	51.2	44.9	54.8	0.003
Psychiatric diagnoses	310	31.1	26.0	33.9	0.009
Depression	206	20.6	17.4	22.2	0.064
General anxiety	111	11.2	10.1	11.9	0.373
Panic attack	76	7.4	4.1	9.2	0.001
OCD	41	3.9	5.4	3.2	0.114
Any anxiety[d]	187	18.7	15.5	20.5	0.140
Depression and any Anxiety	98	9.8	9.3	10.1	0.687
PTSD	28	2.8	3.8	2.2	0.183
Hypochondriasis	13	1.3	1.5	1.2	0.778
Cognitive impairment	3	0.4	0.0	0.5	–
Other mental disorders	245	24.3	19.4	27.0	0.006
Disordered eating	150	15.0	11.5	17.0	0.017
Somatization	123	11.8	9.1	13.2	0.041
Sub-threshold conditions	152	15.5	15.4	15.6	0.930
Cognitive impairment	62	6.5	5.1	7.2	0.179
Depression	49	4.8	6.0	4.1	0.189
Panic attack	43	4.4	3.4	5.0	0.216
Hypochondriasis	8	0.8	1.2	0.7	0.404

[a]Rates are weighted for over-sample of high users
[b]Categories are *not* mutually exclusive
[c]Significance of difference in prevalence rates between males and females
[d]General anxiety, panic attack or OCD

11.8% reported severe somatic symptoms. It is important to note that both disordered eating behaviors and somatization were more prevalent among primary care patients than general anxiety (11.2%). Sub-threshold conditions that do not meet standard diagnostic criteria were found in 15.5% of the patients: 6.5% had symptoms of cognitive impairment, 4.8 % had depression symptoms and 4.4% had panic attack symptoms. According to the summary measure (Any Psychopathology), more than half of all clinic patients, 51.2%, had some kind of psychopathology.

Prevalence rates by socio-demographic characteristics

Prevalence rates of diagnoses by gender

Table 2 also shows the yearly prevalence rates of psychiatric diagnoses, other mental health problems and sub-threshold conditions by gender. Significantly more women than men had some detectable type of psychopathology: 54.8% versus 44.9% ($P = 0.003$) and any psychiatric diagnosis (33.9% vs. 26.0%, $P = 0.009$). The gender difference in depression was of borderline significance ($P = 0.064$): 22.2% among females compared to 17.4% among males. Surprisingly, there was no significant difference between women and men regarding general anxiety or PTSD. In contrast, there was a large and very significant gender difference for panic attacks: 9.2% for women compared to 4.1% ($P = 0.005$). Very few cases of diagnosable cognitive impairment were detected.

Women had significantly higher rates of disordered eating behaviors than men; however, slightly more than one out of every 10 men (11.5%) reported serious eating problems. Women also had significantly higher rates of somatization. It is important to note that women had higher rates of both disordered eating behaviors and somatization than general anxiety (17.0%, 13.2%, and 11.9%, respectively), whereas the same differences were not apparent among men (11.5%, 9.1%, and 10.1%). Among the sub-threshold diagnoses, no significant differences with gender were found.

Prevalence rates of diagnoses and disorders by other socio-demographic variables

Table 3 presents the prevalence rates of the summary measure (any psychopathology) and of selected diagnoses and disorders by additional socio-demographic characteristics. Significantly lower rates of any psychopathology were associated with being older (65–75), more educated, married, having sufficient income and working full time. Regarding the most prevalent psychiatric diagnosis, depression, patients who were older, with sufficient income and working full-time were significantly less depressed. Interestingly, there were no significant differences in depression according to marital status and education approached significance ($P = 0.066$). The next most prevalent mental health problem, disordered eating, was less likely to be found among older adults (65–75), and those who are widowed. Socio-demographic differences for general anxiety, panic attack and

Table 3 Yearly prevalence rates[a] of selected diagnoses & disorders by other demographic characteristics

Socio-demographic characteristics	*N*	Any psychopathology	Psychiatric diagnoses			Other Mental Disorders	
			Depression	General anxiety	Panic attack	Disordered eating	Somatization
Total	971[b]	51.3%	20.6%	11.3%	7.4%	15.3%	11.8%
Age (years)							
25–44	298	50.6	21.2	9.0	7.4	20.2	8.7
45–64	415	57.0	23.3	14.1	8.9	17.0	14.6
65–75	258	42.9	15.5	9.5	4.8	6.0	11.0
P[c]		0.000	0.019	0.025	0.075	0.000	0.019
Education (years)							
0–8	214	60.2	24.1	19.9	10.5	12.4	19.5
9–12	437	50.9	21.6	10.9	6.5	16.0	12.3
13+	311	46.0	17.1	6.2	6.7	16.0	5.5
P[c]		0.001	0.066	0.000	0.091	0.358	0.000
Marital status							
Never married	98	63.2	23.2	8.8	9.6	23.2	7.2
Separated/divorced	86	63.6	29.1	18.0	12.6	20.7	20.7
Widowed	101	51.2	19.2	10.0	2.3	9.2	16.9
Married	681	48.2	19.3	10.8	7.2	14.2	10.5
P[c]		0.001	0.093	0.101	0.017	0.004	0.001
Income							
Not sufficient	253	66.3	31.6	21.3	10.9	18.1	24.1
Partially sufficient	294	51.0	20.4	11.0	7.1	17.3	11.0
Sufficient	406	42.7	14.5	5.7	5.4	12.2	5.2
P[c]		0.000	0.000	0.000	0.010	0.026	0.000
Work status[d]							
Total	593	53.7	23.6	12.4	8.0	18.4	12.0
Not working	209	63.6	34.1	16.7	9.3	23.3	20.9
Part time	96	55.5	25.2	19.7	10.2	18.1	12.6
Full time	288	46.7	16.1	7.1	6.4	15.3	5.9
P[c]		0.000	0.000	0.000	0.239	0.038	0.000

[a]Rates are weighted for over-sample of high users
[b]5 patients had missing values and were not included
[c]Significance of difference in prevalence rates between patients with different socio-demographic characteristics
[d]Only for women up to age 60 and men up to age 65

somatization are also presented in Table 3. A higher prevalence rate among those with insufficient income was a consistent finding for these diagnoses and disorders.

Multivariate analyses

A logistic regression analysis for the working age population (i.e., women under 60, men under 65) (Table 4) shows that when all demographic variables were included together as independent variables, sex, age, education, marital status, income sufficiency, and work status all retained their significance, with income the strongest predictor of any psychiatric diagnosis. In the logistic regression run on the entire sample (results available on request), age was also significantly associated with the presence of any psychiatric diagnosis ($P = 0.005$), due to the elevated rates of mental health problems among the middle age group (45–64).

Discussion

The first objective of this analysis was to examine in detail the prevalence of mental health diagnoses in primary care clinics in Israel. The most prevalent DSM diagnoses were depression and general anxiety (20.6% and 11.2%, respectively). This is consistent with findings in other studies conducted in primary care from various countries (e.g., [7, 16, 20, 31, 34, 36, 56]). Any anxiety disorder diagnosis (general anxiety, panic or OCD) was nearly as prevalent (18.7%) as depression. If we look only at the prevalence rate of depression in studies that used the CIDI or derivatives, the rates of depression are much lower (4.5% [10], 4.7% [34], and 4.6% [41]). It is not clear why the rates of depression in our Israeli sample are substantially higher but it is possible that this reflects the ongoing military and economic stress in this country. When the PRIME-MD instrument was used, then there was a much greater variance in prevalence rates (10.4–37%) [3, 15, 27, 33]. This discrepancy in prevalence according to the instruments used is puzzling since the PRIME-MD asks about depression in the past month, while the CIDI assesses life-time prevalence or year-prevalence, which should be greater than one-month prevalence. Katon & Schulberg have suggested that variations in the observed prevalence of depressive disorders in primary care can be partly explained by the use of different scales and cut-off points within the same scales, different types of population surveyed in diverse health care systems, and selection criteria in the samples [18].

Table 4 Socio-demographic predictors of the probability to have any psychiatric diagnosis (logistic regression)

Characteristic (comparison category)	O.R.[a]	95% C.I. of O.R.[b]	*P*
Sex			0.002
Females	1.37	1.027–2.252	0.002
(Males)	1.00		
Age (years)			0.001
45–64	1.44	0.902–1.978	0.001
(25–44)	1		
Education (years)			0.002
9–12	0.74	0.441–1.185	0.016
13+	0.6	0.380–1.140	0
(0–8)	1.00		
Marital status			0.000
Widowed	0.34	0.18–0.63	0.001
Separated/divorced	2.11	1.54–2.89	0.000
Single	1.71	1.28–2.29	0.000
(Married)	1.00		
Income			0.000
Partially sufficient	1.28	0.968–2.295	0.039
Not sufficient	2.43	1.849–4.440	0.000
(Sufficient)	1		
Work status			0.000
Full time	0.49	0.336–0.753	0.000
Part time	0.76	0.510–1.371	0.037
(Not working)	1		

[a]O.R.: odds ratio
[b]95% C.I. of O.R.: 95% confidence interval of odds ratio

Sub-threshold diagnoses were the least prevalent of the diagnostic categories that were assessed (15.5%). Our findings contrast with other studies, which have found sub-threshold diagnoses or mild cases to be more common than psychiatric disorders (e.g., [5, 30, 34]). This may be due to the way that we measured sub-threshold disorders in this study, which for technical reasons did not include general anxiety, OCD or PTSD. However, 'other mental disorders' are even more prevalent than general anxiety in this population (15.0% for disordered eating and 11.8% for somatization). While we did not use full diagnostic instruments for these disorders, their high prevalence suggests that it is important to include them in future diagnostic screening in primary care.

Primary care physicians have noted that detection of eating disorders, specifically anorexia and bulimia, should be of concern in their practice and they should be particularly alert for characteristic symptoms and high risk groups (females, athletes, and diabetics) [9, 53]. In this study, a broader concept of disordered eating was measured, not just anorexia and bulimia. The high rate of disordered eating in our results raises concerns, particularly since high rates were reported among both men and women. The rate reported here is significantly higher than the rates in other studies (e.g., [9]). Our finding is unexpected because the study consists of an adult population and eating problems are generally assumed to be more prevalent among adolescents and young adults (under 25) than among older adults.

The prevalence findings regarding gender differences are both expected and unexpected. It was expected to find more psychopathology among females than males. For example, in Pini et al.'s study in Italy, females with psychopathology outnumbered males by a factor of 3 to 1 in both psychiatric cases and sub-threshold diagnoses [34]. There are, however, two unexpected findings. First, for two-thirds of the specific types of problems (10 out of 15), there are no significant gender differences. Females have higher rates of depression, panic attack, somatization and disordered eating behaviors. This pattern of gender differences is similar to what was found in the study of Linzer et al. (1996) where women in primary care clinics in the eastern U.S were found to have higher rates of mood disorders, anxiety and somatization [28]. The second unexpected finding is that even where there were gender differences, they were considerably smaller than might have been expected, based on studies conducted in primary care and in the community (e.g. [19, 26, 54]). This may be related to the results of Loewenthal (1995) who found a similar prevalence of depression among men as among women in a sample of Jews affiliated to orthodox synagogues in the London area in England. This study seemed to indicate the importance of specific cultural-religious values, in particular "the esteem attached to women's central role in family management" which may in some ways mitigate symptoms of depression [29].

While the positive associations found between detected psychopathology and female gender, low levels of income, education and employment are not surprising, it is interesting that we did not find a higher rate of psychopathology among new immigrants. This may be due to the fact that more than 10 years had elapsed since the major waves of immigration of the late 90s and many immigrants were already settled with steady jobs and adequate income [37]. With regard to age and education, our results are similar to the findings of Al-Jaddou and colleagues [2] who found that the highest rates of psychiatric disorders in primary care in Jordan were among those aged 40 and over, compared to the younger groups, and among the uneducated and unemployed groups. In contrast with other studies (e.g., [11]), we found that those at middle age were more likely to have some type of psychiatric diagnoses than older or younger respondents. The high concentration of morbidity among those with economic hardship is not a surprising finding, as both unemployment and low level of economic resources are commonly found to be related to higher levels of psychiatric morbidity (e.g., [12, 41]).

Israelis, in a similar fashion to people in other Western developed countries, appear likely to continue to use the primary care health care system as a de facto treatment resource for psychiatric disorders, even relatively severe disorders. The patterns and extent of this usage is the focus of a forthcoming analysis of these

data. This study establishes the prevalence of the most common disorders likely to present in primary care. The picture of mental disorders in primary care is more comprehensive due to the inclusion of mental disorders not often assessed (PTSD, somatization and disordered eating behaviors) and suggests the need for a broader assessment of mental health challenges in the primary care system.

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Appendix 1—Procedures for defining sub-threshold diagnoses

For depression, panic disorder and obsessive-compulsive disorder, the CIDI-SF algorithm does not give a precise cut-off point for diagnosis, but the probability to have a diagnosis for the different possible scores. The researchers decided that, for depression, a score of 4–7 (probability of 81–91%) would define a diagnosis and a score of 3 (probability of 55%) would define a sub-threshold diagnosis. For panic disorder, a score of 3–6 (probability of 87–100%) would define a diagnosis and a score of 2 (probability of 42%) would define a sub-threshold diagnosis. For OCD, a score of 3 (probability of 84%) would define a diagnosis. No sub-threshold diagnosis was defined since, for a score of 2 the probability is only 6.4%.

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