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Tables, Figures, and Supplemental material

Table 1. Twelve-month contact coverage by disorder and perceived need for treatment^a

	Prevalence % (SE)	Perceived Need (PN)/dx % (SE)	Contact Coverage			
			PN=Yes % (SE)	PN=No % (SE)	PN Total % (SE)	
I. Anxiety disorders						
GAD	1.8 (0.1)	58.7 (1.5)	44.4 (1.9)	6.3 (1.0)	28.7 (1.3)	
Panic/ AGO	1.5 (0.1)	60.5 (1.5)	45.4 (1.9)	8.1 (1.3)	30.7 (1.4)	
PTSD	1.3 (0.1)	55.7 (2.0)	42.6 (2.6)	5.0 (0.9)	26.0 (1.7)	
Specific	5.9 (0.1)	31.6 (0.8)	25.6 (1.1)	1.5 (0.3)	9.1 (0.4)	
Social	2.3 (0.1)	49.8 (1.4)	35.5 (1.8)	3.7 (0.7)	19.6 (1.0)	
Any	9.3 (0.2)	45.0 (0.7)	36.7 (1.2)	3.3 (0.4)	18.3 (0.6)	
II. Mood disorders						
MDD	4.3 (0.1)	54.8 (1.0)	38.3 (1.3)	5.2 (0.6)	23.4 (0.8)	
BPD	1.1 (0.0)	55.4 (1.9)	23.3 (2.0)	4.0 (1.1)	14.7 (1.2)	
Any	5.4 (0.1)	55.0 (0.9)	35.2 (1.1)	5.0 (0.5)	21.6 (0.7)	
III. Substance use disorder						
AUD	1.9 (0.1)	32.7 (1.5)	13.5 (1.8)	1.9 (0.5)	5.7 (0.7)	
DUD	0.6 (0.0)	45.5 (3.4)	16.2 (3.3)	2.7 (1.1)	8.8 (1.7)	
Any	2.3 (0.1)	35.6 (1.5)	14.3 (1.8)	2.0 (0.5)	6.4 (0.8)	
IV. Number of disorders						
1	9.7 (0.1)	32.2 (0.6)	22.3 (0.9)	1.2 (0.2)	8.0 (0.4)	
2	2.7 (0.1)	51.0 (1.2)	33.7 (1.6)	4.8 (0.6)	19.5 (0.9)	
3+	1.4 (0.0)	70.5 (1.5)	45.3 (1.9)	11.8 (1.9)	35.4 (1.5)	
V. Severity						
Severe	3.7 (0.1)	64.3 (1.1)	41.4 (1.5)	9.9 (1.1)	30.1 (1.1)	
Moderate	5.2 (0.1)	44.9 (1.1)	30.1 (1.4)	2.4 (0.4)	14.8 (0.7)	
Mild	4.8 (0.1)	25.4 (0.9)	19.5 (1.8)	0.6 (0.2)	5.4 (0.5)	
Any	13.8 (0.2)	46.5 (0.6)	34.1 (1.0)	3.5 (0.3)	17.7 (0.5)	
(n)	(56,927)	(18,702)	(9,309)	(9,393)	(18,702)	

Abbreviations: PN, Perceived Need for treatment; %, proportion of observation in the column total with the outcome indicated in the heading for the column; SE, the design-based standard error of % taking into consideration the weighting and geographic clustering of observations; GAD, Generalized anxiety disorder; Panic/ AGO, Panic disorder or agoraphobia; PTSD, post-traumatic stress disorder; Specific, Specific phobia; Social, Social phobia; MDD, major depressive disorder; BD, bipolar spectrum disorder; AUD, alcohol use disorder (either abuse or dependence); DUD, drug use disorder (either abuse or dependence); Severe, the subset of respondents with either 12-month BP-I, AUD with a physiological dependence syndrome, DUD with a physiological dependence syndrome, suicide attempt, or self-reported severe role impairment due to their 12-month mental and/or substance use disorders; Moderate, the subset of respondents without severe disorder who reported moderate role impairment due to their 12-month mental and/or substance use disorders; Mild the subset of respondents with a 12-month disorder who do not qualify for either severe or moderate disorder; Any, entries in the Any rows are the weighted averages of the entries in the above rows within the same subset; (n), the unweighted number of survey observations in the denominator (i.e., in the total Part II sample of respondents in the first column, in the total sample of 12-month person-disorders in the second and last columns, in the subsample of person-disorders with perceived need in the third column, and in the subsample of person-disorders without perceived need in the fourth column).

^aPooled across all WMH surveys, with surveys weighted by sample size rather than by country population size.

Table 2. Pooled within-country disorder-related predictors of 12-month contact coverage among respondents with 12-month disorders evaluated at the level of the person-disorder (n=18,702)^a

	Univariable		Multivariable		Multivariable consolidated	
	RR	(95% CI)	RR	(95% CI)	RR	(95% CI)
I. Anxiety disorders						
GAD	1.7*	(1.5-1.9)	1.7*	(1.5-1.9)	1.4*	(1.3-1.6)
Panic/ AGO	1.6*	(1.5-1.8)	1.7*	(1.5-1.9)	1.5*	(1.4-1.7)
PTSD	1.1	(1.0-1.2)	1.3*	(1.2-1.4)	1.2*	(1.1-1.3)
Specific	0.7*	(0.7-0.8)	0.9	(0.9-1.1)	1.1	(1.0-1.2)
Social	1.0	(0.9-1.1)	1.1*	(1.0-1.2)	1.2*	(1.1-1.3)
II. Mood disorders						
MDD	1.2*	(1.1-1.2)	1.4*	(1.3-1.5)	1.4*	(1.3-1.5)
BD	0.6*	(0.6-0.8)	0.7*	(0.6-0.9)	0.7*	(0.6-0.9)
III. Substance use disorders						
AUD	0.4*	(0.3-0.5)	0.5*	(0.4-0.6)	0.6*	(0.5-0.7)
DUD	0.4*	(0.3-0.6)	0.5*	(0.4-0.7)	0.6*	(0.4-0.7)
χ^2_8		350.6*		272.2*		159.5*
IV. Number of disorders						
1	1.0	-	-	-	-	-
2	1.7*	(1.5-1.9)	1.0	-	1.0	-
3+	2.4*	(2.1-2.7)	1.2*	(1.1-1.4)	1.1*	(1.0-1.3)
$\chi^2_{1/2}$		185.2		10.7*		4.5*
V. Severity						
Severe	2.5*	(2.1-3.1)	2.2*	(1.8-2.6)	2.0*	(1.6-2.4)
Moderate	1.7*	(1.4-2.1)	1.5*	(1.3-1.9)	1.5*	(1.2-1.8)
Mild	1.0	-	1.0	-	1.0	-
χ^2_2		126.9*		98.0*		81.6*
VI. Perceived need						
Yes	8.4*	(6.9-10.3)	6.3*	(5.2-7.7)	5.0*	(4.1-6.1)
No	1.0	-	1.0	-	1.0	-
χ^2_1		457.4*		327.7*		253.3 ^b
VII. Number of continuous years since dx onset ^c						
	1.0	(1.0-1.0)	1.0	(1.0-1.0)	0.9*	(0.9-0.9)
χ^2_1		0.6		0.0		31.1*

Abbreviations: Univariable, associations of each row predictor with contact coverage in a separate model controlling only for survey; Multivariable separate, associations of all disorder-related predictors with contact coverage in a single model controlling for survey; Multivariable consolidated, associations of all disorder-related predictors with contact coverage in a single model controlling for survey and all socio-demographics and all predictors involving prior treatment history; RR, relative risk of contact coverage as a function of the row predictor; 95% CI, the design-based 95% confidence interval of RR; taking into consideration the weighting and geographic clustering of observations; GAD, Generalized anxiety disorder; Panic/ AGO, Panic disorder or agoraphobia; PTSD, post-traumatic stress disorder; Specific, Specific phobia; Social, Social phobia; MDD, major depressive disorder; BD, bipolar spectrum disorder; AUD, alcohol use disorder (either abuse or dependence); DUD, drug use disorder (either abuse or dependence); Severe, the subset of respondents with either 12-month BP-I, AUD with a physiological dependence syndrome, DUD with a physiological dependence syndrome, suicide attempt, of self-reported severe role impairment due to their 12-month mental and/or substance use disorders; Moderate, the subset of respondents without severe disorder who reported moderate role impairment due to their 12-month mental and/or substance use disorders; Mild the subset of respondents with a 12-month disorder who do not qualify for either severe or moderate disorder; dx, diagnosis.

^aPooled across all WMH surveys, with surveys weighted by sample size rather than by country population size.

^bPerceived need interacted significantly with disorder severity ($\chi^2_2=31.1$, $p<0.001$) in the consolidated model, as the association of disorder severity with contact coverage was significantly less pronounced, although still statistically significant, in the presence (RR=1.2-1.6 for moderate-severe disorders relative to mild disorders; $\chi^2_2=37.2$, $p<0.001$) than absence (RR=2.9-7.9; $\chi^2_2=49.6$, $p<0.001$) of perceived need for treatment. The interactions of perceived need with type ($\chi^2_8=9.0$, $p=0.35$) and number ($\chi^2_1=2.7$, $p=0.10$) of disorders, in comparison, were nonsignificant.

^cThe mean and standard deviation number of years since onset of the disorder were 20.2 and 13.0, respectively. The variable was standardized to a mean of 0 and standard deviation of 1 for purposes of analysis.

*Significant at the .05 level, two-sided design-based test.

Table 3. Pooled within-country sociodemographic-related predictors of 12-month contact coverage among respondents with 12-month disorders evaluated at the level of the person-disorder (n=18,702)^a

	Distribution		Univariable		Multivariable		Multivariable consolidated	
	%	(SE)	RR	(95% CI)	RR	(95% CI)	RR	(95% CI)
I. Sex								
Female	62.6	(0.7)	1.1*	(1.0-1.2)	1.1*	(1.0-1.3)	1.0	(0.9-1.1)
Male	37.4	(0.7)	1.0	-	1.0	-	1.0	-
χ^2_1	-		3.9*		4.2*		0.3	
II. Age								
18-29	30.0	(0.6)	0.8*	(0.7-1.0)	0.8	(0.7-1.1)	1.0	(0.8-1.2)
30-44	33.1	(0.6)	1.1	(1.0-1.3)	1.2	(1.0-1.5)	1.1	(0.9-1.3)
45-59	25.4	(0.5)	1.2*	(1.0-1.4)	1.3*	(1.1-1.6)	1.1	(1.0-1.3)
60+	-	-	1.0	-	1.0	-	1.0	-
χ^2_3	-		33.5*		32.4*		6.5	
III. Education ^b								
Low	18.6	(0.5)	0.7*	(0.7-0.9)	0.7*	(0.6-0.8)	0.9	(0.8-1.0)
Low-average	25.9	(0.6)	0.8*	(0.7-0.9)	0.8*	(0.7-0.9)	0.9*	(0.8-1.0)
High-average	33.8	(0.6)	0.8*	(0.7-1.0)	0.8*	(0.7-1.0)	1.0	(0.9-1.1)
High	-	-	1.0	-	1.0	-	1.0	-
χ^2_3	-		20.5*		32.2*		6.3	
IV. Employment status								
Homemaker	12.6	(0.4)	1.1	(1.0-1.3)	1.1	(1.0-1.3)	1.0	(0.9-1.2)
Retired	9.6	(0.4)	1.2*	(1.0-1.4)	1.3*	(1.0-1.6)	1.1	(0.9-1.3)
Student	4.4	(0.3)	1.2	(0.9-1.6)	1.4*	(1.1-2.0)	1.5*	(1.1-2.1)
Disabled/unemployed	17.8	(0.5)	1.3*	(1.2-1.5)	1.4*	(1.3-1.6)	1.1*	(1.0-1.3)
Employed	-	-	1.0	-	1.0	-	1.0	-
χ^2_4	-		24.2*		36.1*		11.5*	
V. Health insurance								
Private	57.0	(0.7)	1.4*	(1.2-1.6)	1.3*	(1.1-1.6)	1.3*	(1.2-1.5)
Public	31.4	(0.7)	1.4*	(1.2-1.6)	1.3*	(1.1-1.5)	1.2*	(1.0-1.3)
Any	83.1	(0.5)	1.6*	(1.3-2.0)	-	-	-	-
χ^2_2	-		-		16.8*		19.1*	
VI. Perceived need								
Yes	46.5	(0.6)	8.4*	(6.9-10.3)	8.0*	(6.6-9.8)	5.0*	(4.1-6.1)
No	53.5	(0.6)	1.0	-	1.0	-	1.0	-
χ^2_1	-		457.4*		425.9*		253.3*	

Abbreviations: Univariable, associations of each row predictor with contact coverage in a separate model controlling only for survey; Multivariable separate, associations of all socio-demographic predictors with contact coverage in a single model controlling for survey; Multivariable consolidated, associations of all socio-demographic predictors with contact coverage in a single model controlling for survey, disorder-related predictors and predictors involving prior treatment history; %, the distribution of the socio-demographic predictors; SE, the design-based standard error of % taking into consideration the weighting and geographic clustering of observations; RR, relative risk of contact coverage as a function of the row predictor; 95% CI, the design-based 95% confidence interval of RR; taking into consideration the weighting and geographic clustering of observations.

^aPooled across all WMH surveys, with surveys weighted by sample size rather than by country population size.

^bIn quartiles defined by country-specific distributions.

*Significant at the .05 level, two-sided design-based test.

Table 4. Twelve-month conditional probability of contact coverage by treatment history among respondents with 12-month disorders evaluated at the level of the person-disorder separately in subsamples with (9,309) and without (9,393) perceived need for treatment^a

	Distribution of predictors				Conditional probability of contact coverage			
	PN=Yes		PN=No		PN=Yes		PN=No	
	%	(SE)	%	(SE)	%	(SE)	%	(SE)
I. Any prior treatment								
Yes	67.3	(0.9)	35.9	(0.8)	34.1	(1.0)	3.5	(0.3)
No	32.7	(0.9)	64.1	(0.8)	19.9	(1.2)	1.1	(0.2)
II. Provider type								
Psychiatrist	37.0	(0.9)	13.3	(0.6)	51.8	(1.5)	13.8	(1.6)
Other mental health	38.3	(1.0)	16.3	(0.6)	46.7	(1.6)	10.4	(1.4)
General medical	38.6	(1.0)	20.5	(0.7)	46.4	(1.6)	8.0	(1.1)
Human services	10.4	(0.6)	3.0	(0.3)	50.1	(3.1)	12.3	(3.5)
CAM	13.1	(0.7)	3.9	(0.3)	47.9	(2.5)	17.4	(3.2)
III. Number of provider types								
1	27.5	(0.9)	21.9	(0.7)	26.5	(1.6)	4.5	(0.8)
2	18.7	(0.8)	8.7	(0.5)	41.2	(2.1)	7.9	(1.5)
3	13.6	(0.8)	4.0	(0.3)	58.9	(2.4)	18.5	(3.3)
4	5.6	(0.5)	1.0	(0.1)	56.3	(3.7)	24.0	(7.5)
5	1.8	(0.3)	0.3	(0.1)	77.4	(5.0)	40.6	(15.4)
IV. Treatment types								
Medication-only	15.8	(0.8)	13.0	(0.6)	24.7	(2.2)	3.6	(0.8)
Counselling-only	16.9	(0.7)	10.2	(0.5)	30.8	(2.0)	5.8	(1.3)
Both	34.6	(1.0)	12.7	(0.5)	53.4	(1.6)	13.5	(1.7)
V. Helpfulness of treatment								
Helpful	37.1	(1.1)	14.7	(0.6)	58.0	(1.4)	14.1	(1.6)
Never help	14.6	(0.7)	8.0	(0.5)	30.0	(1.9)	6.5	(1.6)
Only for other dxs	15.6	(0.7)	13.3	(0.6)	10.8	(1.2)	1.4	(0.5)
No past treatment	32.7	(0.9)	64.1	(0.8)	19.9	(1.2)	1.1	(0.2)

Abbreviations: PN, perceived need for treatment; SE, the design-based standard error of % taking into consideration the weighting and geographic clustering of observations.

^aPooled across all WMH surveys, with surveys weighted by sample size rather than by country population size.

Table 5. Pooled within-country treatment history predictors of 12-month contact coverage among respondents with 12-month disorders evaluated at the level of the person-disorder separately in subsamples with (9,309) and without (9,393) perceived need for treatment^a

	Subsample with perceived need						Subsample without perceived need					
	Univariable RR	(95% CI)	Multivariable RR	(95% CI)	Multivariable with consolidated RR	(95% CI)	Univariable RR	(95% CI)	Multivariable RR	(95% CI)	Multivariable with consolidated RR	(95% CI)
I. Any prior treatment												
Yes	1.7*	(1.5-2.0)	-	-	-	-	6.5*	(3.9-10.7)	-	-	-	-
No	1.0	-	-	-	-	-	1.0	-	-	-	-	-
χ^2_1		72.1*		-		-		54.6*		-		-
II. Provider type												
Psychiatrist	1.9*	(1.7-2.1)	1.0	(0.8-1.3)	1.0	(0.8-1.3)	5.7*	(3.9-8.4)	1.0	(0.4-2.8)	0.8	(0.3-2.4)
Other mental health	1.6*	(1.5-1.8)	1.0	(0.8-1.2)	0.9	(0.8-1.2)	4.5*	(3.0-6.7)	1.0	(0.4-2.5)	0.9	(0.4-2.3)
General medical	1.5*	(1.4-1.7)	1.0	(0.8-1.2)	0.9	(0.7-1.2)	3.0*	(2.1-4.3)	0.6	(0.3-1.5)	0.6	(0.2-1.4)
Human services	1.4*	(1.2-1.6)	1.0	(0.7-1.2)	1.0	(0.8-1.2)	3.3*	(2.0-5.3)	0.9	(0.3-2.3)	0.9	(0.3-2.5)
CAM	1.3*	(1.2-1.5)	0.7*	(0.6-1.0)	0.8	(0.6-1.0)	5.1*	(3.4-7.7)	1.0	(0.4-2.8)	1.1	(0.5-2.7)
χ^2_5		-		17.0*		11.3*		-		6.3		5.1
$\chi^2_4^b$		-		12.9*		6.7		-		5.3		5.0
III. Number of provider types												
1	1.2*	(1.0-1.4)	1.0	-	1.0	-	4.0*	(2.3-7.0)	1.0	-	1.0	-
2	1.8*	(1.6-2.1)	1.2	(0.9-1.6)	1.2	(0.9-1.7)	7.2*	(3.8-13.5)	1.3	(0.5-3.4)	1.1	(0.4-3.0)
3	2.5*	(2.1-2.9)	1.5	(0.9-2.5)	1.5	(0.9-2.4)	16.1*	(9.1-28.3)	2.7	(0.5-14.3)	3.2	(0.6-16.0)
4	2.3*	(1.9-2.7)	1.5	(0.7-3.2)	1.5	(0.7-3.0)	22.6*	(10.0-50.8)	3.9	(0.3-51.7)	3.2	(0.3-38.7)
5	3.2*	(2.6-3.8)	2.2	(0.8-5.6)	2.0	(0.8-4.8)	31.6*	(12.9-77.4)	5.9	(0.2-187.3)	4.5	(0.1-140.6)
$\chi^2_{5/4}$		239.3*		9.2		8.5		122.1*		4.0		10.9*
IV. Treatment types												
Medication-only	1.1	(0.9-1.4)	1.0	-	1.0	-	3.1*	(1.7-5.7)	1.0	-	1.0	-
Counselling-only	1.3*	(1.1-1.6)	1.1	(0.9-1.4)	1.1	(0.9-1.4)	5.3*	(2.8-10.0)	1.9*	(1.0-3.5)	1.8	(1.0-3.4)
Both	2.2*	(1.9-2.5)	1.3*	(1.1-1.6)	1.3*	(1.1-1.5)	10.6*	(6.3-18.1)	1.7	(1.0-2.9)	1.5	(0.9-2.7)
$\chi^2_{3/2}$		198.6*		12.4*		7.8*		83.9*		4.8		4.1
V. Helpfulness of treatment												
Helpful	2.5*	(2.2-2.8)	1.7*	(1.5-1.9)	1.7*	(1.5-1.9)	11.8*	(7.1-19.7)	6.6*	(3.0-14.4)	6.5*	(2.8-15.4)
Never help	1.3*	(1.1-1.6)	1.0	-	1.0	-	5.7*	(3.1-10.7)	4.1*	(1.8-9.1)	4.0*	(1.7-9.0)
Only for other dxs	0.5*	(0.4-0.7)	0.4*	(0.3-0.6)	0.5*	(0.4-0.6)	1.3	(0.6-3.1)	1.0	-	1.0	-
No past treatment	-	-	-	-	-	-	-	-	-	-	-	-
$\chi^2_{3/2}$		454.6*		183.5*		156.2*		109.5*		22.0*		18.5*

Abbreviations: Univariable, associations of each row predictor with contact coverage in a separate model controlling only for survey; Multivariable separate, associations of all predictors involving treatment history with contact coverage in a single model controlling for survey; Multivariable consolidated, associations of all disorder-related predictors with contact coverage in a single model controlling for survey, disorder-related predictors, and socio-demographics; %, the distribution of the predictors involving treatment history; SE, the design-based standard error of % taking into consideration the weighting and geographic clustering of observations; RR, relative risk of contact coverage as a function of the row predictor; 95% CI, the design-based 95% confidence interval of RR; taking into consideration the weighting and geographic clustering of observations.

^aPooled across all WMH surveys, with surveys weighted by sample size rather than by country population size.

^bThe χ^2_4 values evaluate the global significance of differences in RR across the 5 provider types.

*Significant at the .05 level, two-sided design-based test.

Supplementary Table 1. WMH sample characteristics by World Bank income categories^a

					Sample size			
Country by income category	Survey ^b	Sample characteristics ^c	Field dates	Age range	Part I	Part II	Part II and age ≤ 44 ^d	Response rate ^e
I. Low and middle income countries								
Brazil - São Paulo	São Paulo Megacity	São Paulo metropolitan area.	2005-8	18-93	5,037	2,942	--	81.3
Bulgaria	NSHS	Nationally representative.	2002-6	18-98	5,318	2,233	741	72.0
Bulgaria - 2	NSHS - 2	Nationally representative.	2016-17	18-91	1,508	578	--	61.0
Colombia ^f	NSMH	All urban areas of the country (approximately 73% of the total national population).	2003	18-65	4,426	2,381	1,731	87.7
Colombia – Medellin	MMHHS	Medellin metropolitan area.	2011-12	19-65	3,261	1,673	--	97.2
Lebanon	LEBANON	Nationally representative.	2002-3	18-94	2,857	1,031	595	70.0
Mexico	M-NCS	All urban areas of the country (approximately 75% of the total national population).	2001-2	18-65	5,782	2,362	1,736	76.6
Nigeria	NSMHW	21 of the 36 states in the country, representing 57% of the national population. The surveys were conducted in Yoruba, Igbo, Hausa and Efik languages.	2002-4	18-100	6,752	2,143	1,203	79.3
Peru	EMSMP	Five urban areas of the country (approximately 38% of the total national population).	2004-5	18-65	3,930	1,801	1,287	90.2
Romania	RMHS	Nationally representative.	2005-6	18-96	2,357	2,357	--	70.9
TOTAL					(41,228)	(19,501)	(7,293)	79.8
II. High-income countries								
Argentina	AMHES	Eight largest urban areas of the country (approximately 50% of the total national population).	2015	18-98	3,927	2,116	--	77.3
Belgium	ESEMeD	Nationally representative. The sample was selected from a national register of Belgium residents.	2001-2	18-95	2,419	1,043	486	50.6
France	ESEMeD	Nationally representative. The sample was selected from a national list of households with listed telephone numbers.	2001-2	18-97	2,894	1,436	727	45.9
Germany	ESEMeD	Nationally representative.	2002-3	19-95	3,555	1,323	621	57.8
Israel	NHS	Nationally representative.	2003-4	21-98	4,859	4,859	--	72.6
Italy	ESEMeD	Nationally representative. The sample was selected from municipality resident registries.	2001-2	18-100	4,712	1,779	853	71.3
Japan	WMHJ 2002-2006	Eleven metropolitan areas.	2002-6	20-98	4,129	1,682	--	55.1
Netherlands	ESEMeD	Nationally representative. The sample was selected from municipal postal registries.	2002-3	18-95	2,372	1,094	516	56.4
Northern Ireland	NISHS	Nationally representative.	2005-8	18-97	4,340	1,986	--	68.4

Poland	EZOP	Nationally representative.	2010-11	18-65	10,081	4,000	2,276	50.4
Poland – 2	EZOP - 2	Nationally representative.	2018-19	18-96	11,998	4,776	--	63.5
Portugal	NMHS	Nationally representative.	2008-9	18-81	3,849	2,060	1,070	57.3
Spain	ESEMeD	Nationally representative.	2001-2	18-98	5,473	2,121	960	78.6
Spain-Murcia	PEGASUS-Murcia	Murcia region - regionally representative.	2010-12	18-96	2,621	1,459	--	67.4
United States	NCS-R	Nationally representative.	2001-3	18-99	9,282	5,692	3,197	70.9
TOTAL					(76,511)	(37,426)	(10,706)	63.7
III. TOTAL					(117,739)	(56,927)	(17,999)	69.3

^aSome of the WMH countries have moved into new income categories since the surveys were conducted. The income groupings above reflect the status of each country at the time of data collection. The current income category of each country is available at <http://data.worldbank.org/country> (World Bank, 2024).

^bNSHS (Bulgaria National Survey of Health and Stress); NSMH (The Colombian National Study of Mental Health); MMHHS (Medellín Mental Health Household Study); LEBANON (Lebanese Evaluation of the Burden of Ailments and Needs of the Nation); M-NCS (The Mexico National Comorbidity Survey); NSMHW (The Nigerian Survey of Mental Health and Wellbeing); EMSMP (La Encuesta Mundial de Salud Mental en el Peru); RMHS (Romania Mental Health Survey); AMHES (Argentina Mental Health Epidemiologic Survey); ESEMeD (The European Study Of The Epidemiology Of Mental Disorders); WMHJ2002-2006 (World Mental Health Japan Survey); NISHS (Northern Ireland Study of Health and Stress); EZOP (Epidemiology of Mental Disorders and Access to Care Survey); NMHS (Portugal National Mental Health Survey); PEGASUS-Murcia (Psychiatric Enquiry to General Population in Southeast Spain-Murcia); NCS-R (The US National Comorbidity Survey Replication).

^cMost WMH surveys were based on stratified multistage clustered area probability household samples in which samples of areas equivalent to counties or municipalities in the US were selected in the first stage followed by one or more subsequent stages of geographic sampling (e.g., towns within counties, blocks within towns, households within blocks) to arrive at a sample of households, in each of which a listing of household members was created and one or two people were selected from this listing to be interviewed. No substitution was allowed when the originally sampled household resident could not be interviewed. These household samples were selected from Census area data in all countries other than France (where telephone directories were used to select households) and the Netherlands (where postal registries were used to select households). Several WMH surveys (Belgium, Germany, Italy, Poland, Poland 2, Spain-Murcia) used municipal, country resident or universal health-care registries to select respondents without listing households. The Japanese sample is the only totally un-clustered sample, with households randomly selected in each of the 11 metropolitan areas and one random respondent selected in each sample household. 16 of the 25 surveys are based on nationally representative household samples.

^dArgentina, Brazil, Bulgaria 2, Colombia-Medellin, Israel, Japan, Northern Ireland, Poland 2, Romania, and Spain-Murcia did not have an age restricted Part 2 sample. All other surveys, with the exception of Nigeria (which was age restricted to ≤ 39) were age restricted to ≤ 44.

^eThe response rate is calculated as the ratio of the number of households in which an interview was completed to the number of households originally sampled, excluding from the denominator households known not to be eligible either because of being vacant at the time of initial contact or because the residents were unable to speak the designated languages of the survey. The weighted average response rate is 69.3%.

Supplementary Table 2. Socio-demographic distribution of the total sample and subsample of respondents with 12-month disorders in the total sample and in the 16 surveys that asked about reasons for lack of perceived need^a

	Total Part II sample						Sample Part II with 12-month disorder					
	Unweighted		Weighted		Unweighted		Weighted		Unweighted		Weighted	
	%	(SE)	%	(SE)	%	(SE)	%	(SE)	%	(SE)	%	(SE)
Sex												
Female	57.7	(0.2)	52.1	(0.3)	66.2	(0.4)	61.2	(0.6)	67.6	(0.3)	62.6	0.7
Male	42.3	(0.2)	47.9	(0.3)	33.8	(0.4)	38.8	(0.6)	32.4	(0.3)	37.4	0.7
Age												
Median (IQR)	43	(31-57)	41	(29-56)	40	(29, 53)	39	(27-51)	40	(29-52)	39	(27-51)
18-29	22.2	(0.2)	25.7	(0.3)	26.0	(0.4)	30.2	(0.6)	26.1	(0.3)	30.0	(0.6)
30-44	30.6	(0.2)	30.1	(0.3)	33.5	(0.4)	32.2	(0.5)	34.2	(0.3)	33.1	(0.6)
45-59	26.6	(0.2)	24.7	(0.3)	26.6	(0.4)	24.9	(0.5)	27.0	(0.3)	25.4	(0.5)
60+	20.7	(0.2)	19.4	(0.2)	13.9	(0.3)	12.7	(0.4)	12.6	(0.2)	11.5	(0.4)
Education ^{b,c}												
Low	18.7	(0.2)	17.5	(0.2)	19.9	(0.4)	18.2	(0.5)	20.3	(0.3)	18.6	(0.5)
Low-average	24.1	(0.2)	23.6	(0.3)	25.2	(0.4)	25.3	(0.6)	25.8	(0.3)	25.9	(0.6)
High-average	33.9	(0.2)	35.0	(0.3)	32.6	(0.4)	34.1	(0.6)	32.1	(0.3)	33.8	(0.6)
High	20.8	(0.2)	21.4	(0.3)	19.2	(0.4)	19.0	(0.5)	18.7	(0.3)	18.4	(0.5)
Marital status												
Married/cohabitating	62.7	(0.2)	63.3	(0.3)	56.1	(0.4)	55.4	(0.6)	54.5	(0.4)	53.9	(0.6)
Previously married	16.4	(0.2)	12.9	(0.2)	19.3	(0.4)	16.4	(0.4)	20.4	(0.3)	17.6	(0.5)
Never married	20.9	(0.2)	23.8	(0.3)	24.6	(0.4)	28.2	(0.6)	25.1	(0.3)	28.6	(0.7)
Employment status												
Employed/self-employed	57.9	(0.2)	59.5	(0.3)	55.4	(0.4)	56.9	(0.6)	54.0	(0.4)	55.6	(0.7)
Homemaker	11.4	(0.1)	10.2	(0.2)	14.5	(0.3)	12.2	(0.4)	14.9	(0.3)	12.6	(0.4)
Retired	15.7	(0.2)	14.9	(0.2)	10.8	(0.3)	10.4	(0.4)	10.0	(0.2)	9.6	(0.4)
Student	3.8	(0.1)	5.0	(0.1)	3.8	(0.2)	4.7	(0.3)	3.6	(0.1)	4.4	(0.3)
Disabled/unemployed	11.1	(0.1)	10.4	(0.2)	15.5	(0.3)	15.8	(0.4)	17.5	(0.3)	17.8	(0.5)
Family Income ^{d,e}												
Low	26.8	(0.2)	27.3	(0.3)	30.1	(0.4)	30.7	(0.6)	31.7	(0.3)	32.3	(0.7)
Low-average	23.6	(0.2)	23.7	(0.2)	24.1	(0.4)	24.6	(0.5)	24.4	(0.3)	24.7	(0.5)
High-average	27.3	(0.2)	27.2	(0.3)	25.3	(0.4)	24.9	(0.6)	24.6	(0.3)	24.3	(0.6)
High	22.3	(0.2)	21.8	(0.3)	20.5	(0.4)	19.8	(0.5)	19.4	(0.3)	18.7	(0.5)
Insurance												
Private/Occupational	61.7	(0.2)	62.1	(0.4)	57.9	(0.4)	58.4	(0.7)	56.6	(0.4)	57.0	(0.7)
Public insurance	26.1	(0.2)	26.1	(0.3)	29.3	(0.4)	29.7	(0.6)	30.8	(0.3)	31.4	(0.7)
Any insurance	82.1	(0.2)	82.5	(0.3)	81.2	(0.3)	82.7	(0.5)	81.6	(0.3)	83.1	(0.5)
(n)	(56,927)		(56,927)		(12,508)		(12,508)		(18,702)		(18,702)	

Abbreviations: SE, the design-based standard error of % taking into consideration the weighting and geographic clustering of observations; (n), the unweighted number of survey respondents in the denominator (i.e., in the total sample in the first two columns, who met criteria for any 12-month disorders in the total sample in the third column, and who met criteria for any disorders in one of the 16 surveys that asked about reasons for lack of perceived need in the fourth column)

^aSee Supplementary Table 1 for the 16 WMH surveys that asked about reasons for lack of perceived need with surveys weighted by sample size rather than by country population size.

^bIn quartiles defined by country-specific distributions (see (Evans-Lacko et al., 2018) for details).

^cThe education distribution doesn't add to 100% because education was not assessed in France and all French respondents were coded no on all the education variables.

^dLow was defined as less than 50% of the country-specific median, low-average as between low and the country-specific median, high-average as between low-average and twice the country-specific median, and high as more than twice the country-specific median.

^eSome of the WMH countries have moved into new income categories since the surveys were conducted. The income groupings above reflect the status of each country at the time of data collection. The current income category of each country is available at <http://data.worldbank.org/country> (World Bank, 2024).

*Significant at the .05 level, two-sided design-based test.

Supplementary Table 3. Standardized country-level predictors of receiving 12-month treatment adjusting for compositional differences in individual-level predictors (n=18,702)^a

	With perceived need		Without perceived need	
	RR	(95% CI)	RR	(95% CI)
I. Without adjustment for between-county compositional differences				
Non-psychiatrist MDs/population	1.2*	(1.1-1.3)	1.2	(0.9-1.6)
χ^2_1		7.6*		1.9
Healthcare spending/GDP	1.1*	(1.0-1.3)	1.3	(1.0-1.7)
χ^2_1		4.3*		2.7
II. With adjustment for between-county compositional differences				
Non-psychiatrist MDs/population	1.1*	(1.0-1.3)	1.2	(0.9-1.6)
χ^2_1		7.0*		2.0
Healthcare spending/GDP	1.1	(1.0-1.2)	1.1	(0.8-1.4)
χ^2_1		3.2		0.1
III. Only the County-Level Predictors				
Non-psychiatrist MDs/population	1.2*	(1.1-1.4)	1.2	(0.9-1.6)
χ^2_1		7.0*		1.9
Healthcare spending/GDP	1.2*	(1.0-1.4)	1.5*	(1.1-2.0)
χ^2_1		4.7*		5.9*

Abbreviations: RR, relative risk of contact coverage as a function of the row predictor; 95% CI, the 95% confidence interval of RR; taking into consideration the weighting of observations.

^aPooled across all WMH surveys, with surveys weighted by sample size rather than by country population.

Results in Part I show between-country differences in mean treatment rates before adjustment for the compositional differences in individual-level predictors in the consolidated individual-level model.

*Significant at the .05 level, two-sided design-based test.

References

- Evans-Lacko, S, Aguilar-Gaxiola, S, Al-Hamzawi, A, Alonso, J, Benjet, C, Bruffaerts, R, Chiu, WT, Florescu, S, de Girolamo, G, Gureje, O, Haro, JM, He, Y, Hu, C, Karam, EG, Kawakami, N, Lee, S, Lund, C, Kovess-Masfety, V, Levinson, D, Navarro-Mateu, F, Pennell, BE, Sampson, NA, Scott, KM, Tachimori, H, Ten Have, M, Viana, MC, Williams, DR, Wojtyniak, BJ, Zarkov, Z, Kessler, RC, Chatterji, S and Thornicroft, G (2018). "Socio-economic variations in the mental health treatment gap for people with anxiety, mood, and substance use disorders: Results from the WHO World Mental Health (WMH) surveys." *Psychol Med* **48**(9): 1560-1571.
<https://doi.org/10.1017/s0033291717003336>.
- World Bank. (2024). "World Bank Open Data." Retrieved April 10, 2024, from <https://data.worldbank.org/>.