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Treatment of suicidal people around the world[†]

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Background

Suicide is a leading cause of death worldwide; however, little information is available about the treatment of suicidal people, or about barriers to treatment.

Aims

To examine the receipt of mental health treatment and barriers to care among suicidal people around the world.

Method

Twenty-one nationally representative samples worldwide ($n=55\,302$; age 18 years and over) from the World Health Organization's World Mental Health Surveys were interviewed regarding past-year suicidal behaviour and past-year healthcare use. Suicidal respondents who had not used services in the past year were asked why they had not sought care.

Results

Two-fifths of the suicidal respondents had received treatment (from 17% in low-income countries to 56% in high-income countries), mostly from a general medical practitioner (22%), psychiatrist (15%) or non-psychiatrist (15%). Those who had actually attempted suicide were more likely to receive care.

Low perceived need was the most important reason for not seeking help (58%), followed by attitudinal barriers such as the wish to handle the problem alone (40%) and structural barriers such as financial concerns (15%). Only 7% of respondents endorsed stigma as a reason for not seeking treatment.

Conclusions

Most people with suicide ideation, plans and attempts receive no treatment. This is a consistent and pervasive finding, especially in low-income countries. Improving the receipt of treatment worldwide will have to take into account culture-specific factors that may influence the process of help-seeking.

Declaration of interest

R.C.K. has been a consultant for GlaxoSmithKline, Kaiser Permanente, Pfizer, Sanofi-Aventis, Shire Pharmaceuticals and Wyeth-Ayerst; has served on advisory boards for Eli Lilly & Co. and Wyeth-Ayerst; and has had research support for his epidemiological studies from Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, Johnson & Johnson Pharmaceuticals, Ortho-McNeil Pharmaceuticals, Pfizer and Sanofi-Aventis.

Suicidal behaviour is a persistent and lethal public health problem.^{1,2} Worldwide, suicide is among the leading causes of death.^{3,4} Prevention programmes have been established over the years,^{5,6} several of which have shown some effectiveness in decreasing the risk of suicide.⁷ Only a few psychological treatments have demonstrated an ability to decrease the risk of suicidal behaviour.^{8,9} Unfortunately, available data suggest that many people who are suicidal do not seek treatment.¹⁰ Although there is widespread agreement on the importance of suicide prevention efforts, basic information about the treatment of people who are suicidal is not available. For instance, there are no cross-national data available that document the proportion of suicidal people who actually receive treatment or the reasons why some of them do not seek treatment. Obtaining this information is vital for the identification of unmet needs and is an important first step for future prevention efforts.

The World Health Organization (WHO) World Mental Health surveys were designed, among other objectives, to address each of these shortcomings. These general population-based surveys use structured psychiatric interviews, validated for use worldwide, to measure the presence of mental disorders and suicidal behaviour, as well as treatment use and barriers to care. The current study builds on earlier World Mental Health studies reporting on the cross-national treatment of mental disorders,¹¹ and on the 12-month prevalence of suicidal behaviour,¹² and provides comprehensive cross-national data on the treatment of suicidal people. The specific aims of the study were to investigate:

- the proportion of suicidal respondents who had received some form of treatment;
- multivariate predictors of treatment use;
- barriers to receiving treatment;
- multivariate predictors of barriers to treatment;
- variations of treatment use across low-, middle- and high-income countries worldwide.

Method

The World Mental Health surveys were carried out in 21 countries in six continents, including Africa (Nigeria, South Africa), Asia (India, Israel, Japan, Lebanon, China – Beijing, Shanghai and Shenzhen), Australasia (New Zealand), Europe (Belgium, Bulgaria, France, Germany, Italy, The Netherlands, Romania, Spain, Ukraine) and North and South America (Brazil, Colombia, Mexico, USA). Respondents were selected using a stratified multistage clustered-area probability sampling strategy, apart from Japan where an unclustered two-stage probability sampling method was used. The total sample size was 109 381 with individual country sample sizes ranging from 2357 in Romania to 12 790 in New Zealand. The weighted average response rate across all countries was 72.1%. Using World Bank criteria,¹³ countries were classified as low-income (Colombia, India, Nigeria, China and Ukraine), middle-income (Brazil, Bulgaria, Lebanon, Mexico, Romania and South Africa) and high-income (all other survey countries) (see online Table DS1). Surveys were conducted face-to-face by trained lay interviewers. Informed consent was

[†]See editorial, pp. 8–10, this issue.

obtained before beginning interviews. Internal subsampling was used to reduce respondent burden by dividing the interview into two parts. Part 1 (given to all respondents) included socio-demographic variables, the core diagnostic assessment of mental disorders and suicidal behaviours. All Part 1 respondents who met criteria for any lifetime mental disorder, and a probability sample of other respondents, were administered Part 2 of the interview, which included additional information on access to care. Part 2 respondents' data were weighted by the inverse of their probability of selection for Part 2 of the interview to adjust for differential sampling. Analyses in this study were based on the weighted Part 2 subsample ($n = 55\,302$). Additional weights were used to adjust for differential probabilities of selection within households, to adjust for non-response, and to match the samples to population sociodemographic distributions. Further details of the survey design are reported elsewhere.^{14–16}

The WHO translation–back translation protocol was used to translate instruments and training materials. Translations were made by bilingual individuals with consultation to expert panels (with psychiatrists, psychologists and mental health researchers). The following steps were performed: translation from the original English version into the target language by two independent translators; review of these translations by a bilingual group and production of a revised version; translation of the revised version back into English by two different translators; and review of the back translations and production of the final version by the bilingual group. This protocol was followed in order to obtain instruments with acceptable cross-cultural validity for use worldwide.¹⁷

Classification of suicidality

Suicidality was assessed using the Composite International Diagnostic Interview (CIDI) 3.0 suicidality module.¹⁸ Based on their responses to questions about the experience of suicide ideation, plans and attempts (both planned and unplanned) in the preceding 12 months, respondents who endorsed a history of any suicidal thought or behaviour were classified into one of four groups of increasing severity: suicide ideation only, suicide plan, unplanned suicide attempt and planned suicide attempt.

Treatment and barriers to care

Treatment use was assessed by the CIDI–3.0 treatment module regarding past year receipt of treatment from any type of professional, either as an out-patient or in-patient, for problems with emotion regulation, anxiety, psychological distress or use of alcohol or drugs.^{11,18} Included were mental health professionals (e.g. psychiatrists, psychologists), general medical professionals (e.g. general practitioners, occupational therapists) and other non-healthcare professionals (e.g. religious counsellors, traditional healers, complementary or alternative medicine practitioners). Examples of these types of providers were presented in a booklet given to respondents as a visual recall aid. Respondents who reported no use of health services were asked whether there was a time in the past year when they had felt that they might have needed to see a professional for problems with their emotion regulation, anxiety or psychological distress. Those who answered affirmatively were asked to indicate which of the following reasons for *not* seeing a professional applied to them: low perceived need, structural barriers (i.e. lack of financial means, available treatments, personnel or transportation, or the presence of other inconveniences) and attitudinal barriers (i.e. the presence of stigma, low perceived efficacy of treatments or the desire to handle the problem on their own). Participants who responded that they did not need treatment in the past 12 months (i.e. they endorsed

the statement, ‘The problem went away by itself, and I did not really need help’ as a reason for not seeking treatment) were not asked about structural or attitudinal barriers and were coded as respondents with low perceived need (see Appendix for specific items).

Statistical analysis

Descriptive statistics were used to estimate the prevalence of past-year treatment use and barriers to care among suicidal respondents. Multivariate logistic regression models examined variations in treatment use associated with sociodemographic variables, suicidality severity, treatment history and lifetime history of respondents' mental disorders (mood, anxiety, substance use or impulse control disorders) as assessed by the CIDI version 3.0. Four main effect models were run, one for each of the three healthcare sectors (any mental health treatment, general medical treatment and any non-healthcare) and one for the entire sample. A similar approach was used to study barriers to treatment. In the logistic regression models, coefficients and standard errors were exponentiated for ease of interpretation and are reported as odds ratios with 95% confidence intervals. Multivariate predictors for either seeking treatment or barriers to treatment were adjusted for the possible influence of national differences, sociodemographic characteristics, suicidality severity, time (in years) since onset of suicidal ideation, treatment history and presence of DSM–IV lifetime mental disorders. Standard errors were estimated with the Taylor series method,¹⁹ using SUDAAN software (Software for Survey Data Analysis, version 8.1 on UNIX–Solaris/SUN operating system; www.rti.org/SUDAAN), to adjust for weighting and clustering.²⁰ Multivariate significance was evaluated with Wald chi-squared tests based on design-corrected coefficient variance–covariance matrices. Statistical significance was evaluated using two-sided design-based tests and the $P < 0.05$ level of significance.

Results

Treatment of suicidal people

Thirty-nine per cent of people who had engaged in suicidal behaviour in the past year had received some form of treatment for emotional difficulties in the past year (Table 1). Those with higher severity of suicidality accessed care at higher rates: 34–42% of those with suicidal thoughts (i.e. suicide ideation or plan) received care compared with 49–55% of those who made a suicide attempt. The type of care received most often by suicidal respondents was mental healthcare (23% of all suicidal respondents) followed by general medical care (22%) and non-healthcare services (11%). Receiving some form of treatment was predicted by higher education and income, married status, a past history of treatment and the presence of a mood or anxiety disorder (Table DS2). In addition, greater severity of suicidal behaviour and shorter time since first onset of suicidal ideation were associated with higher odds of receiving treatment. None of these clinical characteristics (suicidality severity, time since onset of the suicide ideation or lifetime mental disorders) or service use characteristics (history of treatment) was associated with higher odds of receiving specific types of treatment (Table DS2). In contrast, those with higher education, higher income and those who were never married had significantly higher odds of receiving mental health treatment; whereas those who were older, had lower education levels and were married had significantly higher odds of receiving general health treatment.

An analysis of differences in the receipt of care among high-, middle- and low-income countries (see Table DS3a–d for data reported separately for each country) revealed that the treatment

Table 1 Twelve-month treatment of suicidal people in the World Mental Health Surveys^a

	Suicide ideation only (n = 1161)			Suicide plan (n = 448)			Unplanned suicide attempt (n = 119)			Planned suicide attempt (n = 282)			Any suicidal behaviour (n = 2010)		
	%	n	s.e.	%	n	s.e.	%	n	s.e.	%	n	s.e.	%	n	s.e.
Any healthcare	31.1	391	1.7	38.1	172	2.8	52.1	60	5.8	40.6	118	3.5	34.8	741	1.3
Any mental healthcare	19.4	240	1.4	24.0	111	2.5	41.6	47	6.1	31.5	90	3.4	23.1	488	1.1
Psychiatrist	11.5	139	1.1	16.4	76	2.2	22.8	31	4.7	27.3	73	3.3	15.1	319	1.0
Other mental healthcare	12.5	153	1.2	14.3	68	2.0	33.5	36	6.0	19.3	56	3.1	14.9	313	1.0
General medical	20.3	257	1.5	25.1	116	2.3	30.3	36	5.3	20.1	70	2.8	21.8	479	1.1
Any non-healthcare	9.6	114	1.1	10.5	45	2.0	11.7	14	4.0	18.9	41	3.2	11.0	214	0.9
Human service	5.1	62	0.8	5.5	22	1.5	8.2	8	3.8	10.2	26	2.2	6.0	118	0.7
CAM	5.4	63	0.8	6.6	28	1.6	3.4	6	1.5	12.7	23	2.9	6.5	120	0.7
Any of the above	34.4	432	1.8	42.3	189	2.8	55.7	66	5.8	49.0	136	3.7	39.0	823	1.4

Human service refers to religious or spiritual advisor, social worker or traditional healer; CAM: complementary and alternative medicine. Treatment categories are not mutually exclusive. a. Countries included are Belgium, Brazil, Bulgaria, China, Colombia, France, Germany, India, Israel, Italy, Japan, Lebanon, Mexico, The Netherlands, New Zealand, Nigeria, Romania, South Africa, Spain, Ukraine and the USA.

of suicidal behaviour was most prevalent in high-income countries (56% of those experiencing any suicidal outcome received some form of treatment in the past 12 months) and less prevalent in middle-income (28%) and low-income (17%) countries for each of the suicidal outcomes examined (see Table DS4a–c for more detail).

Barriers to treatment

Among those who had engaged in suicidal behaviour in the past year but had not received treatment, low perceived need was consistently the most common barrier reported (58% of respondents with any suicidal outcome). This was the highest barrier endorsed among respondents with ideation (58%) and plan (63%), as well as those with planned (57%) and unplanned (40%) suicide attempts. The next most commonly reported barriers were those related to attitudes about seeking treatment. Of those who were suicidal in the past year but did not receive treatment, 27% said that they wanted to handle the problem on their own, 12% believed the problem would get better without treatment, 9% said the problem was not that severe, 8% believed that treatment would not be effective and only 7% reported stigma as the reason for not seeking treatment. The least-often endorsed barriers were structural barriers, which included limited finances (12%), lack of availability of treatment (11%), problems with transportation (4%) and the inconvenience of attending treatment (4%) (Table 2). Respondents with a history of receiving prior treatment were less likely to have a low perceived need for treatment but more likely to report the experience of structural barriers to treatment (Table DS5). In addition, greater respondent age was associated with the experience of fewer structural barriers. No other clinical or service use characteristics predicted the type of barriers to treatment experienced. Cross-national comparisons of the data revealed that low perceived need for treatment was the most often endorsed reason for not seeking treatment in low-income (67%) and middle-income (62%) countries. In high-income countries low perceived need for treatment (45%) was surpassed by attitudinal barriers (54%) as the primary reason for not seeking care for suicidal thoughts and behaviours (Table DS6a–c).

Discussion

This cross-national, population-based survey revealed that most people with suicidal thoughts, plans or attempts do not receive mental health treatment in any form. The rate of treatment was low across each of the 21 countries examined, but was especially low in middle- and low-income countries. Receipt of care was higher among those with more severe suicidality and among those with mood or anxiety disorders. Among suicidal respondents who did not receive any care, the most frequently endorsed reason for failure to seek treatment was low perceived need, followed by other attitudinal and structural barriers.

Limitations

Our results should be interpreted in the light of several important limitations. First, our study had a moderate response rate (73%). Non-responders in population surveys are likely to have higher rates of mental disorders than respondents.²¹ Second, respondents who did not speak the primary language of the country sufficiently, those resident in institutions and those without a fixed address were not included in this study. It may be that such people are more likely to be suicidal. Moreover, against the background that suicide risk is elevated among in-patients and specific respondent groups (such as those with psychotic disorder or borderline personality disorder), we might assume that the

Table 2 Barriers to treatment of suicidal people in the World Mental Health Surveys^a

Reasons for not seeking 12-month treatment	Ideation only (n = 723)			Suicide plan (n = 253)			Unplanned suicide attempt (n = 52)			Planned suicide attempt (n = 142)			Any suicidal behaviour (n = 1170)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
Low perceived need for treatment	57.6	2.8	403	62.6	3.8	155	40.0	8.1	26	57.0	5.4	77	57.8	2.2	661
Any structural barrier	15.4	2.5	114	12.0	2.1	38	16.7	6.8	7	19.5	3.9	34	15.3	1.9	193
Financial	11.9	2.5	82	8.9	1.9	27	11.1	6.1	4	15.8	3.6	27	11.7	1.9	140
Availability	10.6	2.4	77	8.3	1.9	24	11.5	5.4	5	17.4	3.8	28	10.9	1.8	134
Transportation	3.6	0.7	36	6.1	1.6	15	0.0	0.0	0	5.5	2.0	11	4.1	0.6	62
Inconvenient	3.7	0.8	33	2.5	0.9	10	2.9	2.9	1	4.9	2.1	9	3.5	0.6	53
Any attitudinal barrier	41.1	2.8	310	34.2	3.8	87	57.1	8.4	25	39.6	5.4	58	40.3	2.2	480
Wanted to handle on own	27.1	2.2	202	21.9	3.2	59	41.7	8.5	19	27.3	5.5	37	26.7	1.8	317
Perceived ineffectiveness	7.5	1.1	85	9.4	2.2	21	9.3	5.1	6	10.4	2.8	19	8.2	0.9	131
Stigma	6.5	1.3	55	5.0	1.3	15	4.5	2.8	3	11.9	2.8	21	6.7	0.9	94
Thought would get better	12.8	2.4	83	8.9	2.2	20	8.6	4.8	4	8.9	2.7	18	11.5	1.8	125
Problem was not severe	8.1	1.3	61	10.0	2.2	26	13.8	8.6	4	7.3	2.5	11	8.6	1.1	102

a. Countries included are Belgium, Brazil, Bulgaria, China, Colombia, France, Germany, India, Israel, Japan, Lebanon, Mexico, The Netherlands, New Zealand, Nigeria, Romania, South Africa, Spain, Ukraine and the USA.

prevalence of suicidal behaviour is higher among psychiatric in-patients than among people living in the community.²² Third, the CIDI 3.0 treatment module asks for treatment for emotional or substance misuse problems, not for suicidality specifically, and hence not as a specific behaviour to seek care for. Although we did control for national differences, suicidal behaviour may not always be considered as an emotional or psychological problem, and hence may not be considered a reason to seek help in mental healthcare. Moreover, the information on treatment access did not include information about the adequacy or effectiveness of the treatment received. Indeed, despite some evidence that treatments for mental disorders are also helpful in reducing suicidality,^{23,24} we cannot estimate to what extent treatments obtained in this study for mental disorders were adequate for treating suicidal behaviours. Further research should therefore focus in more detail on received treatment for both mental disorders and suicidal behaviour and criteria defining treatment adequacy/effectiveness. Fourth, because we used a 12-month time frame, we were unable to examine delays in the help-seeking process in the current study. Fifth, responses to the survey may have been biased by the use of retrospective self-report. Previous studies have shown that the validity of the assessment of service use could be biased dependent upon recall time periods,²⁵ or frequency of service use, all leading to a modest underestimation of more recent service use.²⁶ Sixth, respondents who did not feel a need for treatment were not asked about structural or attitudinal barriers, possibly leading to an underestimate of stigma. Moreover, we treated stigma as an independent reason for not seeking help, whereas it might be a function of attitudinal or structural barriers.

Unmet need worldwide

Notwithstanding these limitations, our study indicates that there is a high level of unmet need for treatment of suicidal behaviour worldwide. This unmet need is more dramatic in low- and middle-income countries, where less than one in four suicidal people receives any treatment in a given year. These findings suggest that those who are suicidal are more likely than people with mental disorders to receive treatment; 12-month treatment rates for mental disorders vary significantly worldwide but are all within the 1–15% range.²⁷ Studies have documented that effective treatments are available for suicidal behaviours, in full and partial in-patient²⁴ and out-patient^{8,9} settings, as well as in specialised psychiatric emergency programmes,²⁸ and so the low rate of treatment revealed in this study is particularly concerning. Furthermore, it is unlikely that most of those who reported receiving treatment in the current study actually received these effective interventions, given that only 23% of respondents received care from a mental health specialist. Instead, large percentages received treatment in the general medical field (22%) or non-healthcare settings (11%) where evidence-based treatments for suicidal behaviour are unlikely to be available. Despite the large international differences in the structure and organisation of healthcare systems, our findings suggest that these primary care and non-healthcare settings may serve as important entry points into treatment for people engaging in suicidal behaviour. This suggests that general practitioners and other non-mental health providers may serve as gatekeepers for suicidal patients worldwide,²⁹ guiding them towards evidence-based treatment in secondary care.

Seeking treatment for suicidality

The predictors of treatment in the current study are in line with those reported in previous work, with higher education and

income and greater clinical severity serving as core predictors.^{10,11} However, greater severity of suicidal behaviour was unrelated to the use of the mental healthcare over the use of other treatment. This suggests that although those who make actual suicide attempts are more likely to be treated than those who only think about suicide, they are not more likely to be referred for care from a mental health specialist.

The help-seeking process of suicidal people is complex. Once people have decided to seek treatment, they seem to wait and see whether the problem independently subsides and whether they can rid themselves of the behaviour.³⁰ Attitudinal factors may be especially likely among people with suicidal thoughts and behaviours. Such thoughts and behaviours typically are transient in nature, coming and going repeatedly over time. As a result, those experiencing a suicidal crisis may simply try to 'ride it out' until the crisis abates. In addition, those experiencing suicidal thoughts and behaviours typically feel pessimistic and hopeless and so may not have positive expectations that treatment will help them.³¹ The fact that four in ten respondents report attitudinal barriers (e.g. trying to solve the problem on their own) is a crucial finding because these attitudes may be implicated in delaying access to treatment and thus could result in progression of the problem. Attitudinal barriers also may place considerable limits on implementation of evidence-based mental health treatment and prevention programmes.³¹ One way to address these issues is to initiate public awareness programmes about suicide and its appropriate available treatments, as well as the value of educational programmes in suicide prevention,³¹ because time or financial restraints may prevent an overall increase of treatment resources. Indeed, there is extensive literature available demonstrating the relation between insight in emotional problems and acceptance of and compliance with treatment,³² as well as between educational programmes and suicide prevention,⁷ and so these represent important possible directions for future work. Discussing the help-seeking process for suicidality around the world, and accordingly deriving implications for the field, becomes even more complicated and difficult because of the cultural and contextual meaning of suicidality. Research has demonstrated the impact of specific cultural attitudes towards suicide rates and help-seeking behaviours.³³ This suggests that barriers to treatment may not be tackled easily, since barriers may reflect deeply rooted cultural ethics that influence different stages of the help-seeking process.³⁴

The idea is widely accepted that both stigma and financial barriers interfere considerably with mental health treatment.^{35–38} Our findings challenge this conventional wisdom and show that across income categories, stigma and financial barriers were reported by a minority of suicidal people (less than a fifth of all conditions studied). This suggests that stigma and financial barriers may not be as important as previously suggested and that prevention efforts may be most effective by targeting other attitudinal barriers. However, as this is the first study that has addressed this question, future research may focus on possible interactions between different kinds of barriers. Further research may also focus on the cultural diversity of the interplay between cultural ethics and barriers to treatment. For instance, one area that might be a focus of further study is the effect of family and/or community reactions after a suicide attempt on the process of seeking help.³⁴

Implications

In an era where great emphasis lies on the prevention of suicide worldwide, this first cross-national, population-based study of the patterns of treatment for suicidal behaviours holds some

important implications. Clinicians, policy-makers and healthcare planners should be aware of the significance of the degree of unmet need and the broad range of barriers that prevent suicidal people from seeking treatment, and specific effects of cultural differences on the help-seeking process. To decrease the large proportions of untreated suicidal behaviour, interventions may be needed to expand or reallocate treatment resources, especially in countries with lower access to treatment. Acknowledging that it may not be feasible to provide treatment to everyone who needs it in every country, a more efficient strategy – perhaps implemented in tandem with increased treatment resources – would be to target the barriers that are preventing people from receiving available care. Toward this end, our findings suggest that these barriers most often are not structural, financial or stigma-related, but instead concern attitudes that people hold toward seeking treatment for suicidal behaviours.

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Appendix

Barriers to treatment assessed in the World Mental Health Surveys

Low perceived need

The problem went away by itself, and I did not really need help.

Structural barriers

My health insurance would not cover this type of treatment.

I was concerned about how much money it would cost.

I was unsure about where to go or who to see.

I thought it would take too much time or be inconvenient.

I could not get an appointment.

I had problems with things like transportation, childcare or scheduling that would have made it hard to get to treatment.

Attitudinal barriers

I thought the problem would get better by itself.

I didn't think treatment would work.

I was concerned about what others might think if they found out I was in treatment.

I wanted to handle the problem on my own.

I was scared about being put into a hospital against my will.

I was not satisfied with available services.

I received treatment before and it did not work.

The problem didn't bother me very much.

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Data supplement

Table DS1 World Mental Health Survey sample characteristics categorised according to World Bank national income level^a

Country	Survey	Sample characteristics ^b	Field dates	Age range (years)	Sample size (n)			Response rate ^d
					Part 1	Part 2	Part 2 and age ≤44 years ^c	
<i>Low income</i>								
Colombia	NSMH	Stratified multistage clustered area probability sample of household residents in all urban areas of the country (approximately 73% of the total national population)	2003	18–65	4426	2381	1731	87.7
India	WMHI	Stratified multistage clustered area probability sample of household residents in Pondicherry region. NR	2003–5	18+	2992	1373	642	98.8
Nigeria	NSMHW	Stratified multistage clustered area probability sample of households in 21 of the 36 states in the country, representing 57% of the national population. Surveys were conducted in Yoruba, Igbo, Hausa and Efik languages	2002–3	18+	6752	2143	1203	79.3
China	B-WMH, S-WMH	Stratified multistage clustered area probability sample of household residents in the Beijing and Shanghai metropolitan areas	2002–3	18+	5201	1628	570	74.7
China	Shenzhen	Stratified multistage clustered area probability sample of household residents and temporary residents in the Shenzhen area	2006–7	18+	7134	2476	1993	80.0
Ukraine	CMDPSD	Stratified multistage clustered area probability sample of household residents. NR	2002	18+	4725	1720	541	78.3
<i>Total</i>					31 230	11 721	6680	
<i>Middle income</i>								
Brazil	São Paulo Megacity	Stratified multistage clustered area probability sample of household residents in the São Paulo metropolitan area	2005–7	18+	5037	2942		81.3
Bulgaria	NSHS	Stratified multistage clustered area probability sample of household residents. NR	2003–7	18+	5318	2233	741	72.0
Lebanon	LEBANON	Stratified multistage clustered area probability sample of household residents. NR	2002–3	18+	2857	1031	595	70.0
Mexico	M-NCS	Stratified multistage clustered area probability sample of household residents in all urban areas of the country (approximately 75% of the total national population)	2001–2	18–65	5782	2362	1736	76.6
Romania	RMHS	Stratified multistage clustered area probability sample of household residents. NR	2005–6	18+	2357	2357		70.9
South Africa	SASH	Stratified multistage clustered area probability sample of household residents. NR	2003–4	18+	4315	4315		87.1
<i>Total</i>					25 666	15 240	3072	

(continued)

Table DS1 World Mental Health Survey sample characteristics categorised according to World Bank national income level^a (continued)

Country	Survey	Sample characteristics ^b	Field dates	Age range (years)	Sample size (n)			Response rate ^d
					Part 1	Part 2	Part 2 and age ≤44 years ^c	
<i>High income</i>								
Belgium	ESEMeD	Stratified multistage clustered probability sample of individuals residing in households from the national register of Belgium residents. NR	2001–2	18+	2419	1043	486	50.6
France	ESEMeD	Stratified multistage clustered sample of working telephone numbers merged with a reverse directory (for listed numbers). Initial recruitment was by telephone, with supplemental in-person recruitment in households with listed numbers. NR	2001–2	18+	2894	1436	727	45.9
Germany	ESEMeD	Stratified multistage clustered probability sample of individuals from community resident registries. NR	2002–3	18+	3555	1323	621	57.8
Israel	NHS	Stratified multistage clustered area probability sample of individuals from a national resident register. NR	2002–4	21+	4859	4859		72.6
Italy	ESEMeD	Stratified multistage clustered probability sample of individuals from municipality resident registries. NR	2001–2	18+	4712	1779	853	71.3
Japan	WMHJ 2002–2006	Non-clustered two-stage probability sample of individuals residing in households in 11 metropolitan areas	2002–6	20+	4129	1682	547	55.1
The Netherlands	ESEMeD	Stratified multistage clustered probability sample of individuals residing in households that are listed in municipal postal registries. NR	2002–3	18+	2372	1094	516	56.4
New Zealand ^e	NZMHS	Stratified multistage clustered area probability sample of household residents. NR	2003–4	18+	12 790	7312	4119	73.3
Spain	ESEMeD	Stratified multistage clustered area probability sample of household residents. NR	2001–2	18+	5473	2121	960	78.6
USA	NCS–R	Stratified multistage clustered area probability sample of household residents. NR	2002–3	18+	9282	5692	3197	70.9
<i>Total</i>					52 485	28 341	12 026	
<i>Whole sample</i>					109 381	55 302	21 778	72.1 ^f

B–WMH, Beijing World Mental Health Survey; CMDPSD, Comorbid Mental Disorders during Periods of Social Disruption; ESEMeD, European Study of the Epidemiology of Mental Disorders; LEBANON, Lebanese Evaluation of the Burden of Ailments and Needs of the Nation; M–NCS, Mexico National Comorbidity Survey; NCS–R, US National Comorbidity Survey Replication; NHS, Israel National Health Survey; NR, nationally representative; NSHS, Bulgaria National Survey of Health and Stress; NSMH, Colombian National Study of Mental Health; NSMHW, Nigerian Survey of Mental Health and Wellbeing; NZMHS, New Zealand Mental Health Survey; RMHS, Romania Mental Health Survey; SASH, South Africa Health Survey; S–WMH, Shanghai World Mental Health Survey; WMHJ, World Mental Health India; WMHJ2002–2006, World Mental Health Japan Survey.

a. World Bank. *Data and Statistics*. World Bank, 2008. Accessed 12 May 2009 at <http://go.worldbank.org/D7SN088YU0>.

b. Most World Mental Health (WMH) surveys are based on stratified multistage clustered area probability household samples in which samples of areas equivalent to counties or municipalities in the USA 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) used municipal resident 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 four sample areas and one random respondent selected in each sample household. Sixteen of the 21 surveys are based on nationally representative (NR) household samples.

c. Brazil, Israel, Romania and South Africa did not have an age-restricted Part 2 sample. All other countries (with the exception of India, Nigeria, China and Ukraine, which were age-restricted to ≤39 years) were age-restricted to ≤44 years.

d. The 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 72.1%.

e. The New Zealand survey interviewed respondents aged 16+ years but for the purposes of cross-national comparisons we limited the sample to those aged 18+.

f. Weighted average response rate.

Table DS2 Multivariate predictors of treatment of suicidal people in the World Mental Health Surveys^{a, b}

	Among 12-month respondents with any suicidal behaviour (n = 20 10)		Among respondents with any suicidal behaviour who received treatment (n = 823)					
	Any 12-month treatment		Any mental healthcare		General medical care		Any non-healthcare	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Age								
Continuous (divided by 10)	1.1	(1.0–1.3)	0.9	(0.7–1.1)	1.3*	(1.0–1.6)	1.0	(0.8–1.3)
$\chi^2_1 [P]$	2.2	[0.141]	1.0	[0.319]	4.7**	[0.030]	0.0	[0.958]
Gender								
Female	0.9	(0.6–1.2)	0.8	(0.5–1.2)	1.3	(0.9–2.0)	1.9*	(1.2–3.0)
Male	1.0		1.0		1.0		1.0	
$\chi^2_1 [P]$	0.5	[0.480]	1.4	[0.241]	1.5	[0.223]	6.6**	[0.010]
Education								
Continuous	1.2*	(1.0–1.4)	1.2*	(1.0–1.5)	0.8*	(0.7–1.0)	1.2	(1.0–1.5)
$\chi^2_1 [P]$	5.3**	[0.021]	4.3**	[0.038]	4.0**	[0.045]	3.3	[0.070]
Marital status								
Never married	0.7*	(0.5–1.0)	1.9*	(1.1–3.3)	0.4*	(0.3–0.8)	1.8	(1.0–3.3)
Previously married	1.0	(0.7–1.4)	0.9	(0.6–1.4)	1.0	(0.6–1.7)	1.2	(0.7–2.1)
Married/cohabiting	1.0		1.0		1.0		1.0	
$\chi^2_2 [P]$	5.1	[0.076]	7.3**	[0.026]	9.7**	[0.008]	3.4	[0.186]
Income								
Continuous	1.1*	(1.0–1.1)	1.2*	(1.1–1.4)	0.9	(0.8–1.0)	0.8*	(0.6–1.0)
$\chi^2_1 [P]$	5.2**	[0.023]	10.3**	[0.001]	2.9	[0.090]	4.4**	[0.036]
Employment								
Student	2.1	(0.8–5.5)	1.9	(0.7–5.1)	0.7	(0.3–1.8)	1.1	(0.4–3.3)
Homemaker	1.6	(1.0–2.5)	1.4	(0.8–2.5)	0.7	(0.4–1.3)	0.8	(0.4–1.5)
Retired	0.5	(0.3–1.1)	1.5	(0.5–4.9)	0.8	(0.2–2.8)	0.2*	(0.0–0.8)
Other	1.0	(0.7–1.6)	1.8*	(1.1–2.9)	0.8	(0.5–1.3)	0.8	(0.4–1.5)
Working	1.0		1.0		1.0		1.0	
$\chi^2_4 [P]$	9.4	[0.052]	8.1	[0.088]	2.1	[0.716]	5.9	[0.210]
Severity of 12-month suicidality								
Suicide plan	1.4	(1.0–2.0)	1.0	(0.6–1.5)	1.1	(0.7–1.8)	1.1	(0.6–1.9)
Unplanned suicide attempt	2.7*	(1.5–4.9)	2.2	(1.0–5.1)	1.5	(0.7–3.4)	0.6	(0.2–1.7)
Planned suicide attempt	2.1*	(1.4–3.2)	1.5	(0.9–2.6)	0.6	(0.3–1.0)	1.5	(0.8–2.8)
Ideation only	1.0		1.0		1.0		1.0	
$\chi^2_3 [P]$	19.7**	[0.000]	6.1	[0.108]	5.7	[0.125]	3.7	[0.302]
Time since ideation								
Continuous (divided by 10)	0.9*	(0.7–1.0)	1.1	(0.9–1.3)	0.9	(0.7–1.1)	1.0	(0.8–1.2)
$\chi^2_1 [P]$	4.0**	[0.044]	0.7	[0.402]	1.5	[0.221]	0.2	[0.680]
History of treatment								
Yes	6.2*	(4.5–8.7)	1.1	(0.7–1.9)	0.8	(0.5–1.4)	2.4*	(1.3–4.4)
$\chi^2_1 [P]$	114.3**	[0.000]	0.2	[0.641]	0.5	[0.478]	8.6**	[0.003]
Lifetime disorder								
Any anxiety	1.9*	(1.4–2.5)	1.3	(0.8–2.0)	1.3	(0.8–2.0)	1.0	(0.6–1.7)
Any mood	1.8*	(1.3–2.4)	1.5	(0.9–2.3)	1.0	(0.7–1.5)	1.1	(0.7–1.9)
Any impulse	0.9	(0.6–1.3)	0.9	(0.5–1.7)	1.1	(0.6–1.8)	0.8	(0.4–1.4)
Any substance	0.9	(0.6–1.3)	1.2	(0.8–1.8)	1.1	(0.7–1.7)	1.2	(0.7–2.0)
$\chi^2_4 [P]$	38.4**	[0.000]	5.0	[0.284]	1.7	[0.784]	1.8	[0.776]
$\chi^2_{19} [P]$	244.4**	[0.000]	52.1**	[0.000]	49.5**	[0.000]	42.0**	[0.002]

a. Countries included are Belgium, Brazil, Bulgaria, China, Colombia, France, Germany, India, Israel, Italy, Japan, Lebanon, Mexico, The Netherlands, New Zealand, Nigeria, Romania, South Africa, Spain, Ukraine, USA.
b. Results are based on multivariate logistic regression model controlling for countries.
* $P < 0.05$, 2-sided test; ** $P < 0.01$, 2-sided test.

Table D53(a) Mental healthcare of suicidal people in the World Mental Health Surveys

Country	Ideation only (n=240)			Suicide plan (n=111)			Unplanned suicide attempt (n=47)			Planned suicide attempt (n=90)			Any suicidal behaviour (n=488)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
Colombia	7.5	2.5	11	39.7	13.1	9	53.4	17.5	7	12.0	5.6	3	18.8	4.1	30
Mexico	5.5	3.3	4	15.8	8.4	4	15.7	15.5	1	33.5	9.4	5	13.8	3.4	14
USA	40.6	4.5	63	49.6	9.5	21	64.8	12.1	16	58.8	7.7	15	46.6	3.4	115
Belgium	60.5	15.9	7	78.6	18.9	5	75.3	22.8	2	16.3	14.4	2	50.9	13.0	16
France	30.1	12.6	12	66.5	15.2	8	0.0	0.0	0	65.6	24.8	4	38.5	10.5	24
Germany	31.2	18.8	3	18.8	12.0	3	100.0	0.0	1	0.0	0.0	0	26.3	12.8	7
Italy	8.1	7.6	1	53.1	35.2	1	0.0	0.0	0	0.0	0.0	0	15.0	9.5	2
The Netherlands	3.1	3.4	1	0.0	0.0	0	100.0	0.0	1	57.8	30.1	2	9.5	4.7	4
Spain	28.5	7.5	13	32.5	12.5	4	100.0	0.0	1	100.0	0.0	4	34.4	7.3	22
Ukraine	1.3	1.4	1	0.0	0.0	0	42.2	28.9	1	0.0	0.0	0	2.9	2.1	2
Israel	22.3	6.1	11	17.0	9.2	3	0.0	0.0	0	34.1	17.8	3	21.0	4.7	17
Lebanon	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	24.4	21.2	1	5.7	5.6	1
Nigeria	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0
South Africa	9.1	3.3	8	1.1	1.1	1	43.1	20.2	2	8.7	4.7	4	8.8	2.5	15
China	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	28.1	23.6	1	2.3	2.3	1
Japan	15.5	7.8	6	38.0	21.9	2	23.0	21.2	1	44.3	28.6	2	19.7	7.6	11
New Zealand	31.9	3.5	74	36.0	6.3	37	29.4	12.2	8	58.5	12.5	31	35.0	2.8	150
Romania	9.2	7.5	2	25.6	24.1	1	0.0	0.0	0	69.5	30.0	1	17.8	10.0	4
Bulgaria	8.7	5.9	2	7.8	7.9	1	0.0	0.0	0	0.0	0.0	0	8.1	5.7	3
Brazil	20.1	5.9	17	32.8	8.3	10	51.3	18.9	6	49.6	13.3	8	28.8	5.5	41
India	0.9	0.9	1	0.0	0.0	0	0.0	0.0	0	14.6	8.1	3	2.3	1.5	4
Shenzhen (China)	5.6	4.6	3	3.6	4.0	1	0.0	0.0	0	27.6	24.7	1	5.6	4.0	5

Table DS3(b) General medical healthcare of suicidal people in the World Mental Health Surveys

Country	Ideation only (n=257)			Suicide plan (n=116)			Unplanned suicide attempt (n=36)			Planned suicide attempt (n=70)			Any suicidal behaviour (n=479)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
Colombia	4.4	2.6	6	14.9	13.2	1	17.7	9.7	4	6.9	5.1	2	8.0	2.7	13
Mexico	4.6	2.4	6	0.0	0.0	0	14.1	11.4	2	10.6	7.1	4	5.3	2.1	12
USA	32.9	4.1	50	36.0	8.7	16	48.3	11.4	12	39.5	8.5	10	35.7	2.2	88
Belgium	82.3	9.9	9	83.4	14.6	6	36.5	28.6	1	24.8	18.6	3	58.5	13.8	19
France	37.5	14.9	11	77.2	10.8	9	0.0	0.0	0	49.8	28.8	5	45.0	12.8	25
Germany	8.1	5.4	3	67.7	19.5	4	0.0	0.0	0	0.0	0.0	0	25.4	11.6	7
Italy	48.1	15.3	6	100.0	0.0	2	0.0	0.0	0	0.0	0.0	0	56.1	13.8	8
The Netherlands	21.7	12.1	6	31.7	26.8	2	100.0	0.0	1	77.8	21.2	2	28.5	12.6	11
Spain	16.3	6.8	7	67.6	16.1	6	100.0	0.0	1	18.1	15.3	2	25.4	6.9	16
Ukraine	20.0	9.7	8	17.8	8.5	4	0.0	0.0	0	5.4	5.5	1	16.5	6.2	13
Israel	19.5	6.0	9	8.6	8.1	1	48.0	25.5	2	37.9	18.7	3	20.5	4.9	15
Lebanon	17.8	12.4	2	0.0	0.0	0	62.7	33.1	1	0.0	0.0	0	12.6	6.7	3
Nigeria	0.4	0.4	1	5.9	5.9	1	0.0	0.0	0	0.0	0.0	0	1.8	1.6	2
South Africa	13.8	4.1	10	16.4	8.3	4	43.1	20.2	2	15.4	7.0	5	15.9	3.7	21
China	8.1	8.1	1	4.2	4.5	1	0.0	0.0	0	45.8	25.5	2	10.0	6.4	4
Japan	3.7	2.9	2	11.5	11.3	1	0.0	0.0	0	0.0	0.0	0	4.2	2.6	3
New Zealand	39.5	4.1	101	37.9	5.4	44	28.8	10.8	8	34.8	9.6	24	38.3	3.1	177
Romania	3.3	3.9	1	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	2.6	2.9	1
Bulgaria	5.4	3.4	2	92.7	5.8	6	0.0	0.0	0	0.0	0.0	0	18.2	5.7	8
Brazil	8.1	3.9	8	20.2	6.5	5	34.2	20.9	2	18.3	8.6	6	14.1	3.7	21
India	5.3	2.4	6	5.5	3.2	3	0.0	0.0	0	1.3	1.3	1	4.6	1.3	10
Shenzhen (China)	7.3	5.3	2	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	6.3	4.5	2

Table D53(c) Treatment in any non-healthcare sector of suicidal people in the World Mental Health Surveys

Country	Ideation only (n = 114)			Suicide plan (n = 45)			Unplanned suicide attempt (n = 14)			Planned suicide attempt (n = 41)			Any suicidal behaviour (n = 214)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
Colombia	1.3	0.9	2	3.1	3.1	1	17.7	15.8	1	0.0	0.0	0	3.9	2.8	4
Mexico	0.0	0.0	0	2.5	2.6	1	0.0	0.0	0	4.9	3.8	2	1.5	1.2	3
USA	23.1	3.7	32	16.9	6.5	9	27.3	9.6	7	42.6	9.8	11	24.6	2.9	59
Belgium	8.0	7.7	1	17.4	16.1	1	0.0	0.0	0	0.0	0.0	0	6.8	6.7	2
France	11.6	10.1	2	0.0	0.0	0	0.0	0.0	0	7.9	8.6	1	9.4	7.7	3
Germany	4.9	3.8	2	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	3.0	2.2	2
Italy	16.2	11.1	2	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	13.7	9.5	2
The Netherlands	3.1	3.4	1	68.3	26.8	1	0.0	0.0	0	0.0	0.0	0	7.2	5.9	2
Spain	0.0	0.0	0	7.0	6.9	1	0.0	0.0	0	0.0	0.0	0	1.1	1.1	1
Ukraine	5.3	3.1	2	7.0	4.7	2	0.0	0.0	0	6.9	6.9	1	5.6	2.5	5
Israel	3.0	2.2	2	19.9	10.3	3	0.0	0.0	0	17.1	15.4	1	8.1	3.3	6
Lebanon	0.0	0.0	0	0.0	0.0	0	37.3	33.1	1	3.5	3.8	1	2.6	2.2	2
Nigeria	0.0	0.0	0	5.9	5.9	1	0.0	0.0	0	0.0	0.0	0	1.6	1.6	1
South Africa	5.1	2.7	5	13.6	7.8	3	5.7	5.8	1	26.6	8.3	7	11.4	3.4	16
China	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0
Japan	16.1	7.9	6	13.4	12.9	1	25.8	23.0	1	39.7	26.1	1	17.3	6.9	9
New Zealand	16.6	3.1	43	14.3	5.1	15	4.1	3.5	2	27.4	10.4	11	16.5	2.6	71
Romania	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0
Bulgaria	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0
Brazil	6.4	4.1	4	9.2	5.4	4	5.9	5.8	1	35.3	15.1	4	10.3	2.9	13
India	10.1	4.8	6	2.6	2.0	2	0.0	0.0	0	0.0	0.0	0	6.2	2.6	8
Shenzhen (China)	5.8	4.2	4	0.0	0.0	0	0.0	0.0	0	27.6	24.7	1	5.5	3.7	5

Table DS3(d) Treatment in any care sector of suicidal people in the World Mental Health Surveys

Country	Ideation only (n=432)			Suicide plan (n=189)			Unplanned suicide attempt (n=66)			Planned suicide attempt (n=136)			Any suicidal behaviour (n=823)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
Colombia	11.9	3.5	16	57.7	12.0	11	68.4	17.2	10	14.2	6.0	4	26.0	4.8	41
Mexico	9.4	4.0	9	18.4	8.1	5	29.9	19.9	3	42.8	7.9	10	18.9	3.4	27
USA	63.1	3.9	95	71.6	7.8	31	81.6	9.5	20	76.3	5.7	21	67.9	2.8	167
Belgium	89.2	7.5	10	83.4	14.6	6	75.3	22.8	2	24.8	18.6	3	64.1	14.4	21
France	52.1	15.9	17	93.9	4.9	11	0.0	0.0	0	100.0	0.0	6	62.2	13.6	34
Germany	39.3	19.2	6	79.5	18.2	6	100.0	0.0	1	0.0	0.0	0	49.6	15.4	13
Italy	56.0	17.1	7	100.0	0.0	2	0.0	0.0	0	0.0	0.0	0	62.7	15.1	9
The Netherlands	21.7	12.1	6	100.0	0.0	3	100.0	0.0	1	100.0	0.0	3	34.6	15.3	13
Spain	28.5	7.5	13	67.6	16.1	6	100.0	0.0	1	100.0	0.0	4	39.9	9.3	24
Ukraine	25.3	9.0	10	21.4	9.0	5	42.2	28.9	1	12.3	8.9	2	23.4	5.8	18
Israel	41.5	7.4	20	45.4	12.7	7	48.0	25.5	2	82.9	15.4	6	47.0	6.0	35
Lebanon	17.8	12.4	2	0.0	0.0	0	100.0	0.0	2	27.9	21.4	2	20.8	8.4	6
Nigeria	0.4	0.4	1	5.9	5.9	1	0.0	0.0	0	0.0	0.0	0	1.8	1.6	2
South Africa	19.2	4.3	17	23.5	8.6	7	48.8	19.5	3	47.0	9.9	14	27.2	4.3	41
China	8.1	8.1	1	4.2	4.5	1	0.0	0.0	0	45.8	25.5	2	10.0	6.4	4
Japan	19.2	8.6	8	62.9	21.0	4	48.8	27.7	2	84.0	18.1	3	28.6	9.3	17
New Zealand	57.1	3.8	144	52.0	6.8	56	46.7	13.7	12	64.3	13.0	37	56.2	3.2	249
Romania	9.2	7.5	2	25.6	24.1	1	0.0	0.0	0	69.5	30.0	1	17.8	10.0	4
Bulgaria	11.4	5.8	3	92.7	5.8	6	0.0	0.0	0	0.0	0.0	0	23.0	6.8	9
Brazil	27.2	7.3	25	42.6	8.1	14	51.3	18.9	6	65.7	11.6	13	37.0	6.3	58
India	15.0	4.8	12	8.0	3.7	5	0.0	0.0	0	16.0	8.2	4	12.4	3.1	21
Shenzhen (China)	14.1	6.7	8	3.6	4.0	1	0.0	0.0	0	27.6	24.7	1	13.0	5.9	10

Table DS4(a) Twelve-month treatment of suicidal people in high-income World Mental Health Survey countries^a

	Ideation only (n=594)			Suicide plan (n=211)			Unplanned suicide attempt (n=60)			Planned suicide attempt (n=107)			Any suicidal behaviour (n=972)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
<i>Any healthcare</i>	47.9	2.6	302	56.3	4.4	125	58.6	7.5	37	64.4	6.6	76	51.7	2.1	540
<i>Any mental healthcare</i>	30.7	2.3	191	38.2	4.3	84	44.1	8.0	30	52.4	6.4	63	35.0	1.8	368
Psychiatrist	17.0	1.9	102	26.9	3.8	58	22.5	5.0	18	44.3	6.1	50	21.8	1.6	228
Other mental healthcare	21.8	2.1	134	23.8	3.7	54	38.7	8.0	25	39.7	6.3	44	24.8	1.8	257
<i>General medical</i>	31.7	2.5	204	37.6	3.8	91	40.2	7.3	25	35.7	5.6	49	33.7	1.8	369
<i>Any non-healthcare</i>	14.8	1.8	91	14.8	3.2	31	14.7	4.8	10	26.8	5.6	25	15.9	1.5	157
<i>Human service</i>	7.2	1.3	46	6.3	2.0	14	7.2	3.5	4	17.1	4.0	18	8.0	1.0	82
<i>CAM</i>	9.5	1.5	56	9.7	2.6	21	7.5	3.1	6	16.6	5.2	13	10.1	1.3	96
<i>Any of the above</i>	51.9	2.7	326	60.9	4.4	132	64.7	7.5	41	70.3	6.6	83	56.1	2.1	582

Human service refers to religious or spiritual advisor, social worker or traditional healer, CAM, complementary and alternative medicine.
a. Belgium, France, Germany, Israel, Italy, Japan, The Netherlands, New Zealand, Spain and the USA.

Table DS4(b) Twelve-month treatment of suicidal people in middle-income World Mental Health Survey countries^a

	Ideation only (n=275)			Suicide plan (n=113)			Unplanned suicide attempt (n=28)			Planned suicide attempt (n=92)			Any suicidal behaviour (n=508)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
<i>Any healthcare</i>	17.0	2.5	53	25.8	5.0	27	44.4	12.1	12	34.0	5.7	30	23.0	2.2	122
<i>Any mental healthcare</i>	11.2	2.1	33	14.1	3.8	17	40.9	12.4	9	24.0	5.6	19	15.4	2.0	78
Psychiatrist	8.6	1.9	26	8.6	2.9	12	20.4	9.2	7	22.9	5.6	17	11.6	1.8	62
Other mental healthcare	4.5	1.5	13	7.8	3.2	9	35.9	12.6	6	8.7	4.1	8	7.4	1.5	36
<i>General medical care</i>	9.5	2.1	29	17.4	4.6	15	35.2	12.6	7	13.6	4.3	15	13.1	2.0	66
<i>Any non-healthcare</i>	3.8	1.5	9	9.2	4.0	8	6.0	3.6	3	21.6	5.9	14	8.0	1.7	34
<i>Human service</i>	2.9	1.3	8	6.7	3.8	4	6.0	3.6	3	9.4	4.2	7	4.9	1.6	22
<i>CAM</i>	0.8	0.8	1	5.8	3.4	5	0.0	0.0	0	16.0	5.2	9	4.4	1.2	15
<i>Any of the above</i>	18.5	2.7	58	30.9	5.1	33	47.9	11.9	14	49.1	6.2	40	27.6	2.6	145

Human service refers to religious or spiritual advisor, social worker or traditional healer, CAM, complementary and alternative medicine.
a. Brazil, Bulgaria, Lebanon, Mexico, Romania and South Africa.

Table DS4(c) Twelve-month treatment of suicidal people in low-income World Mental Health Survey countries^a

	Ideation only (n=292)			Suicide plan (n=124)			Unplanned suicide attempt (n=31)			Planned suicide attempt (n=83)			Any suicidal behaviour (n=530)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
<i>Any healthcare</i>	9.5	2.0	36	15.6	3.8	20	48.1	12.6	11	13.8	3.9	12	14.2	2.0	79
<i>Any mental healthcare</i>	3.5	1.1	16	6.8	2.6	10	38.4	12.9	8	10.9	3.6	8	7.7	1.5	42
Psychiatrist	2.4	0.9	11	4.6	2.3	6	25.0	11.5	6	7.6	2.8	6	5.2	1.3	29
Other mental healthcare	1.1	0.6	6	2.4	1.4	5	23.8	12.1	5	4.5	2.6	4	3.5	1.2	20
<i>General medical care</i>	7.1	1.9	24	8.8	3.2	10	11.5	6.0	4	6.0	2.7	6	7.6	1.4	44
<i>Any non-healthcare</i>	4.7	1.5	14	3.5	1.4	6	11.5	10.6	1	1.4	1.1	2	4.5	1.3	23
<i>Human service</i>	2.9	1.4	8	2.2	1.2	4	11.5	10.6	1	0.4	0.4	1	3.1	1.2	14
<i>CAM</i>	1.7	0.8	6	1.2	0.9	2	0.0	0.0	0	1.0	1.0	1	1.4	0.6	9
<i>Any of the above</i>	13.6	2.3	48	17.8	3.9	24	48.1	12.6	11	14.8	4.0	13	17.2	2.1	96

Human service refers to religious or spiritual advisor, social worker or traditional healer, CAM, complementary and alternative medicine.
a. China, Colombia, India, Nigeria and Ukraine.

Table DS5 Multivariate predictors of barriers to treatment of suicidal people in the World Mental Health Surveys among those who did not receive treatment ($n = 1170$)^a

	Low perceived need for treatment		Any structural barrier		Any attitudinal barrier	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Age						
Continuous (divided by 10)	1.0	(0.8–1.3)	0.7*	(0.6–0.9)	1.0	(0.8–1.2)
χ^2_1 [P]	0.0	[0.889]	6.8**	[0.009]	0.1	[0.755]
Gender						
Female	0.8	(0.5–1.4)	1.5	(0.8–2.6)	1.1	(0.7–1.7)
Male	1.0		1.0		1.0	
χ^2_1 [P]	0.5	[0.474]	1.8	[0.185]	0.1	[0.810]
Education						
Continuous	0.9	(0.8–1.2)	0.8	(0.6–1.0)	1.1	(0.9–1.3)
χ^2_1 [P]	0.4	[0.517]	2.9	[0.089]	0.5	[0.462]
Marital status						
Never married	1.0	(0.6–1.7)	0.8	(0.4–1.3)	0.9	(0.6–1.6)
Previously married	0.9	(0.5–1.6)	1.1	(0.6–2.0)	1.1	(0.7–1.9)
Married/cohabiting	1.0		1.0		1.0	
χ^2_2 [P]	0.1	[0.948]	1.0	[0.608]	0.3	[0.845]
Income						
Continuous	1.0	(0.9–1.1)	1.1	(1.0–1.2)	1.0	(0.9–1.2)
χ^2_1 [P]	0.3	[0.594]	1.9	[0.166]	0.3	[0.556]
Employment						
Student	1.5	(0.4–5.8)	0.8	(0.2–2.9)	0.7	(0.2–2.6)
Homemaker	1.2	(0.7–2.2)	1.4	(0.7–2.8)	0.9	(0.5–1.6)
Retired	1.3	(0.5–3.4)	2.3	(0.7–7.1)	0.6	(0.2–1.5)
Other	0.6	(0.3–1.1)	1.3	(0.7–2.4)	1.6	(0.9–2.8)
Working	1.0		1.0		1.0	
χ^2_4 [P]	5.3	[0.258]	3.2	[0.529]	6.0	[0.198]
Severity of 12-month suicidality						
Suicide plan	1.1	(0.6–1.9)	0.7	(0.4–1.3)	0.8	(0.5–1.4)
Unplanned suicide attempt	0.5*	(0.2–1.0)	1.0	(0.3–3.1)	1.9	(0.9–4.2)
Planned suicide attempt	0.7	(0.4–1.2)	1.1	(0.6–2.2)	1.2	(0.7–2.2)
Ideation only	1.0		1.0		1.0	
χ^2_3 [P]	5.0	[0.175]	1.3	[0.732]	3.5	[0.315]
Time since ideation						
Continuous (divided by 10)	1.1	(0.9–1.3)	0.9	(0.7–1.1)	1.0	(0.8–1.2)
χ^2_1 [P]	0.4	[0.511]	0.9	[0.330]	0.2	[0.636]
History of treatment						
Yes	0.5*	(0.3–0.9)	2.2*	(1.4–3.6)	1.6	(1.0–2.7)
χ^2_1 [P]	6.1**	[0.014]	11.8**	[0.001]	3.8	[0.052]
Lifetime disorder						
Any anxiety	0.7	(0.5–1.1)	1.4	(0.8–2.2)	1.3	(0.8–2.0)
Any mood	0.8	(0.5–1.3)	1.5	(0.9–2.5)	1.3	(0.8–1.9)
Any impulse	1.0	(0.6–1.7)	1.0	(0.6–1.8)	0.9	(0.5–1.5)
Any substance	1.0	(0.6–1.8)	1.3	(0.8–2.4)	1.1	(0.6–1.8)
χ^2_4 [P]	3.6	[0.470]	4.6	[0.329]	3.3	[0.515]
χ^2_{19} [P]	31.6**	[0.034]	48.9**	[0.000]	25.8	[0.137]

Results are based on multivariate logistic regression model controlling for countries.

* $P < 0.05$; ** $P < 0.01$, 2-sided test.

a. Countries include: Belgium, Brazil, Bulgaria, Colombia, France, Germany, India, Israel, Italy, Japan, Lebanon, Mexico, The Netherlands, New Zealand, Nigeria, China, Romania, South Africa, Spain, Ukraine and the USA.

Table DS6(a) Barriers to treatment of suicidal people from high-income World Mental Health Survey countries^a

	Ideation only (n=267)			Suicide plan (n=78)			Unplanned suicide attempt (n=18)			Planned suicide attempt (n=23)			Any suicidal behaviour (n=386)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
<i>Low perceived need for treatment</i>	47.6	4.6	121	39.7	7.3	33	25.2	11.9	6	40.5	14.4	10	44.8	3.8	170
<i>Any structural barrier</i>	14.3	2.5	47	10.8	3.7	11	21.6	13.0	3	20.2	9.8	6	14.4	2.0	67
Financial	9.1	2.0	32	8.8	3.4	9	13.8	12.4	1	20.2	9.8	6	10.0	1.7	48
Availability	7.9	1.8	28	5.6	2.9	5	7.9	6.2	2	14.1	8.8	3	7.9	1.5	38
Transportation	5.1	1.6	16	5.1	3.0	3	0.0	0.0	0	2.3	2.3	1	4.7	1.3	20
Inconvenient	3.9	1.2	13	3.3	1.7	5	0.0	0.0	0	3.4	3.4	1	3.6	1.0	19
<i>Any attitudinal barrier</i>	50.8	4.6	144	58.9	7.4	44	74.8	11.9	12	56.2	14.6	12	53.5	3.8	212
Wanted to handle on own	33.1	3.7	93	38.2	7.0	40	59.4	14.1	9	48.4	15.4	9	36.0	3.3	141
Perceived ineffectiveness	11.3	2.1	43	17.0	5.3	11	20.5	12.6	4	2.8	2.4	2	12.1	1.9	60
Stigma	5.6	1.4	21	5.5	2.9	5	7.9	6.2	2	16.9	9.2	5	6.4	1.3	33
Thought would get better	11.5	2.6	33	5.2	2.6	5	7.9	6.2	2	10.9	8.1	3	10.2	2.0	43
Problem was not severe	12.5	2.7	33	11.2	4.2	9	10.7	9.9	1	22.0	10.1	6	12.8	2.2	49

a. Belgium, France, Germany, Israel, Italy, Japan, The Netherlands, New Zealand, Spain and the USA.

Table DS6(b) Barriers to treatment of suicidal people from middle-income World Mental Health Survey countries^a

	Ideation only (n=212)			Suicide plan (n=77)			Unplanned suicide attempt (n=14)			Planned suicide attempt (n=51)			Any suicidal behaviour (n=354)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
<i>Low perceived need for treatment</i>	61.6	5.6	119	64.4	6.0	41	44.7	13.4	6	67.8	7.5	30	62.3	4.1	196
<i>Any structural barrier</i>	19.2	6.1	42	20.1	4.5	20	16.2	10.6	2	16.6	5.3	13	19.0	4.3	77
Financial	16.2	6.3	32	14.6	4.3	13	6.0	5.9	1	11.5	4.7	9	15.0	4.3	55
Availability	14.4	6.2	29	16.7	4.2	16	16.2	10.6	2	16.3	5.3	12	15.1	4.3	59
Transportation	4.0	1.1	17	10.4	3.4	9	0.0	0.0	0	4.5	2.4	5	5.1	1.1	31
Inconvenient	3.6	1.1	13	3.3	1.9	4	10.2	9.5	4	4.9	3.3	4	3.9	1.0	22
<i>Any attitudinal barrier</i>	36.9	5.7	86	29.6	6.1	29	45.1	13.2	7	27.2	7.2	16	34.6	4.2	138
Wanted to handle on own	21.8	3.2	58	19.2	4.9	20	42.7	13.0	6	16.1	6.6	8	21.3	2.6	92
Perceived ineffectiveness	5.6	1.8	21	9.0	3.8	7	6.0	5.9	1	9.6	4.1	7	6.8	1.5	36
Stigma	6.2	1.9	18	7.3	2.3	7	6.0	5.9	1	4.1	2.4	4	6.2	1.3	30
Thought would get better	18.1	5.8	31	16.4	5.0	11	6.0	5.9	1	5.9	3.4	5	15.9	4.1	48
Problem was not severe	4.6	1.5	13	12.2	4.0	11	2.4	2.5	1	3.1	2.5	2	5.8	1.3	27

a. Brazil, Bulgaria, Lebanon, Mexico, Romania and South Africa.

Table DS6(c) Barriers to treatment of suicidal people from low-income World Mental Health Survey countries^a

	Ideation only (n=244)			Suicide plan (n=98)			Unplanned suicide attempt (n=20)			Planned suicide attempt (n=68)			Any suicidal behaviour (n=430)		
	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n	%	s.e.	n
<i>Low perceived need for treatment</i>	66.0	4.8	163	83.7	4.2	81	50.4	16.5	14	55.2	7.1	37	67.3	3.8	295
<i>Any structural barrier</i>	12.7	3.8	25	4.5	1.9	7	12.5	10.6	2	22.1	6.5	15	12.3	3.1	49
Financial	10.8	3.8	18	2.9	1.5	5	12.5	10.6	2	17.8	5.9	12	10.2	3.1	37
Availability	9.7	3.3	20	2.0	1.1	3	11.2	10.6	1	20.4	6.4	13	9.6	2.7	37
Transportation	1.1	0.7	3	2.4	1.4	3	0.0	0.0	0	8.3	4.4	5	2.2	0.9	11
Inconvenient	3.5	2.0	7	0.7	0.7	1	0.0	0.0	0	5.8	3.9	4	3.1	1.3	12
<i>Any attitudinal barrier</i>	33.4	4.8	80	14.3	4.1	14	49.6	16.5	6	43.1	7.0	30	31.7	3.8	130
Wanted to handle on own	25.3	4.9	51	8.5	3.2	9	24.0	13.1	4	26.9	6.9	20	22.2	3.8	84
Perceived ineffectiveness	4.8	1.3	21	2.1	1.2	3	1.3	1.3	1	15.5	5.4	10	5.4	1.2	35
Stigma	7.9	3.3	16	2.1	1.2	3	0.0	0.0	0	17.3	4.1	12	7.6	2.1	31
Thought would get better	8.5	2.9	19	4.7	2.7	4	11.2	10.6	1	10.9	4.1	10	8.2	2.4	34
Problem was not severe	6.4	2.3	15	6.5	3.1	6	25.6	19.0	2	3.2	1.8	3	6.9	2.0	26

a. China, Colombia, India, Nigeria and Ukraine.