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*Int J Soc Psychiatry* published online 10 October 2013

DOI: 10.1177/0020764013504562

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# Ethnic disparities in mental health treatment gap in a community-based survey and in access to care in psychiatric clinics

International Journal of  
Social Psychiatry  
0(0) 1–9  
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DOI: 10.1177/0020764013504562  
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## Abstract

**Background:** Contrasting social status of ethnic groups differentially impacts the use of psychiatric services, including in Israel, despite its universal health system. However, relevant studies are limited.

**Aims:** To examine ethnic differences in mental health treatment gap and in access to specialized care.

**Methods:** Data were gathered from two sources. Study I included *Mizrahi* (Jews of North African/Asian origin, socially disadvantaged,  $n = 136$ ) and *Ashkenazi* (Jews of European American origin, socially advantaged,  $n = 69$ ) who were diagnosed with common mental disorders in the preceding 12 months in the Israeli component of the World Mental Health Survey. Study II included *Mizrahi* ( $n = 133$ ) and *Ashkenazi* ( $n = 96$ ) service users entering ambulatory mental health care.

**Results:** Study I showed that the treatment gap was larger among *Mizrahi* compared with *Ashkenazi* respondents (28% standard error (SE) = 4.1 and 45% SE = 6.2, respectively, sought services) following adjustment for sociodemographic confounders (adjusted odds ratio (AOR) = 2.28, 95% confidence interval (CI) = 1.1–4.8). Study II showed that the access to specialized care lagged over a year among 40% of service users of both ethnic groups. No significant ethnic differences emerged in variables related to delay in accessing care.

**Conclusions:** Treatment gap was larger among ethnically disadvantaged compared with the advantaged group. However, once in treatment, service users of both ethnic groups report similar barriers to care.

## Keywords

Treatment gap, treatment lag, mental health, ethnic differences, treatment barriers

## Introduction

Worldwide, treatment gap in mental health care, measured by the difference between true and treated prevalence, is frequent (Kohn, Saxena, Levav, & Saraceno, 2004; Wang, Aguilar-Gaxiola, et al., 2007; Wittchen & Jacobi, 2005). A World Health Organization (WHO) review of 37 studies showed that the proportion of people untreated for particular disorders is as follows: schizophrenia – 32%, depression – 56%, dysthymia – 56%, bipolar disorder – 50%, panic disorder – 56%, generalized anxiety disorder – 58%, obsessive compulsive disorder – 57% and alcohol abuse and dependence – 78% (Kohn et al., 2004). In the World Mental Health Survey (WMHS), the largest international psychiatric epidemiological study conducted so far, Wang, Aguilar-Gaxiola, et al. (2007) documented low utilization rates of mental health services for anxiety, mood and substance abuse disorder in 17 countries. Their findings showed that in each of the countries studied, at least

two-thirds of the persons with mental disorders received no treatment. In Israel, approximately 50% of those diagnosed with common mental disorders (CMD) in the previous 12 months did not use any type of services for their emotional problems (Levinson, Lerner, Zilber, Grinshpoon, & Levav,

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2007). As a result, many individuals with psychiatric disorders residing in the community remain untreated, although effective treatments for those disorders exist (National Institute of Health and Clinical Excellence (NICE), 2012; WHO, 2012).

A related and nearly as severe service problem is treatment lag, defined as the time elapsed from illness onset to accessing care (Garg, Sidana, & Chavan, 2011; Levinson, Lerner, et al., 2007; Ponizovsky, Geraysy, Shoshan, Kremer, & Smetannikov, 2007; Wang, Angermeyer, et al., 2007). In a study on treatment lag in 15 WMHS countries, the median lag to mental health care reported by noninstitutionalized adult community members ranged from 3 to 30 years for anxiety disorders, from 1 to 14 years for mood disorders and from 6 to 18 years for substance use disorders (Wang, Angermeyer, et al., 2007). Data gathered on entry into specialized care showed similar delays. In a psychiatric clinic-based study in India among first time service users, the mean treatment lag duration was 30 months (Garg et al., 2011). Importantly, some research in countries where psychiatric services are more available suggests that among those who do access care for emotional problems, specialized care is most frequently sought. For example, a study conducted in six European countries documented that approximately two-thirds of individuals with a mental disorder, who sought health services, had contacted a mental health professional in the preceding 12 months (Alonso et al., 2004).

Identifying the factors that contribute to treatment gap and lag is warranted to address them effectively. These consist of structural factors, for example, financial considerations (cost of treatment) and limited availability and accessibility of services (Alegría, Canino, & Pescosolido, 2009; Collins, Westra, Dozois, & Burns, 2004), and service-user-based factors that include beliefs and attitudes toward mental health treatment, for example, feeling that the 'real' problem is not acknowledged, assuming that treatment is not effective, believing that the problem will go away by itself and desiring to deal with the problem without outside help (Brohan, Elgie, Sartorius, & Thornicroft, 2010; Kadri & Sartorius, 2005; Katz et al., 1997; Offord, Boyle, Campbell, & Goering, 1996; Parikh, Lin, & Lessage, 1997). In addition, experiences of group-based discrimination, arising from lower social status, may translate into cultural mistrust toward the medical establishment and thus operate as a barrier (Whaley, 2001).

Studies have documented ethnic differences in mental health care and service utilization (Alegría et al., 2009). For example, in Israel, the treatment gap among Arab-Israelis is wider than among Jewish-Israelis, in part due to reduced availability and accessibility of linguistically and culturally appropriate care (Al-Krenawi, 2009). With reference to treatment lag, Ponizovsky et al. (2007) found that Arab-Israeli service users showed a two-fold delay in seeking mental health care compared to their

Jewish-Israeli counterparts. This delay was associated with lesser years of formal education and other than psychiatric attribution of the symptoms. Other research documented that higher religious observance is also associated with specific patterns of mental health service utilization (Bilu & Witztum, 1993; Greenberg, 1992). Struch et al. (2007) found that ultra-orthodox Jews had less positive attitudes toward seeking mental health care than their secular counterparts. In particular, they reported less willingness to seek treatment openly and stronger desire to conceal the request for treatment.

In this article, we examined ethnic differences in mental health treatment gap among nationally representative community sample and in structural and service-user-based factors associated with access to care in clinic-based settings. Notably, Israel has a national health insurance system inclusive of psychiatric care that is freely available (with a marginal co-payment for medications). In addition, a more than a decade old legislation, 'The Rehabilitation of Persons with Psychiatric Disabilities in the Community Act', mandates avenues of inclusion for persons with mental disorders. Thus, Israel constitutes a suitable setting to examine whether ethnic differences in service utilization still remain even when the mental health system operates under relatively favorable conditions, for example, almost free of charge treatments (Levav & Grinshpoon, 2004).

In the current investigation, we focused on differences in service utilization patterns between *Mizrahi* (Jews of North African/Asian origin) and *Ashkenazi* (Jews of European/American origin) ethnic groups in Israel. Consistent evidence (Israel Central Bureau of Statistics, 2012) and research from public health and the social sciences (Nakash, Gal, & Levav, 2012; Nakash, Gerber, Goldbourt, Benyamini, & Drory, 2013; Nakash, Saguy, & Levav, 2012; Saguy, Dovidio, & Pratto, 2008; Smooha, 2003) show that inequality between these groups is apparent in levels of education (*Ashkenazi* have three additional years of education on average compared with their counterparts), average income (*Mizrahi* families earn 85% of the income of their counterparts) and mental health status (prevalence rates of mood and anxiety disorders are twice higher among first- and second-generation *Mizrahi* respondents). In addition, *Mizrahi* group members tend to experience more prejudice and negative stereotyping, albeit in a more implicit rather than explicit and direct form (Saguy et al., 2008; Schwartz et al., 1991; Smooha, 2003).

Our inquiry relied on two complementary studies. In Study I, we examined the ethnic differences in mental health service utilization in an adult representative community sample that was selected with no reference to treatment status and was collected as part of the Israeli component of the WMHS (Levinson, Paltiel, Nir, & Makovki, 2007).

In Study II, we examined ethnic differences in structural factors (accessibility of services) and service-user-based factors (stigma toward mental health care, perception of

discrimination, knowledge and attitudes toward mental health care) and service-related factors (referral paths to specialized care) that may have led to lag in accessing care among a consecutive sample of new and returning service users in public mental health clinics. We also investigated the possible effect of covariates (sociodemographics and mental health-related variables) associated with access to care.

## Study I

### Methods

**Survey design.** Data were based on the Israeli component of the WMHS of noninstitutionalized adults (Kessler & Ustun, 2004). The sample population was extracted from the National Population Register (NPR) and comprised noninstitutionalized *de jure* residents aged 21 years and older. The sample was designed to reflect the distribution of selected gender–age–ethnicity groups (Israeli-Arabs, post-1990 immigrants from the former Soviet Union, other Israel-born Jews and Jews born elsewhere) in the general population. The interview sample was weighted back to the total population to compensate for unequal selection probabilities resulting from disproportionate stratification, clustering effects and nonresponse. The weights were adjusted to make weighted sample totals conform to known population totals taken from reliable Central Bureau of Statistics (CBS) sources. Face-to-face interviews at the respondents' homes were conducted from May 2003 to April 2004 in Arabic, Hebrew and Russian. Laptop computer-assisted personal interviews were conducted by well-trained and supervised interviewers. Interviews lasted on average 60 minutes. The overall response rate was 73% (71% among Jewish respondents) totaling 4,859 completed interviews. A Human Subjects Committee approved the study (Levinson, Paltiel, et al., 2007). In the current study, we included only *Mizrahi* (born in Africa/Asia or both parents were born in Africa/Asia) and *Ashkenazi* (born in Europe/America or both parents were born in Europe/America) Jewish-Israeli respondents who were diagnosed with CMD in the preceding 12 months (CMD-12 months;  $N = 205$ ).

**The survey questionnaire.** The schedule included the following:

*Sociodemographic information:* age, gender, country of birth, years of education and marital status.

*Diagnostic assessment.* The WHO-Composite International Diagnostic Interview (CIDI; Kessler & Ustun, 2004) was used to generate psychiatric diagnoses. CIDI is a structured diagnostic interview which assesses the preceding 12-month diagnoses of selected psychiatric disorders according to both the International Statistical Classification of Diseases and Related Health

Problems–Tenth Revision (ICD-10) and *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*) classification systems. For this study, CMD-12 months included anxiety disorders (generalized anxiety disorder, panic disorder, agoraphobia without panic disorder and posttraumatic stress disorder,) and mood disorders (major depressive disorder and dysthymia). Screening items for each disorder were administered to all respondents while those who answered positively were asked the questions in the respective diagnostic section of the main questionnaire. Organic exclusion criteria were taken into account in determining *DSM-IV* diagnoses.

*The General Health Questionnaire (GHQ-12; Goldberg, 1978).* This 12-item scale screens for CMD and measures emotional distress. Items are rated on a 4-point Likert scale, and scores range from 12 to 48, where higher scores indicate increased emotional distress.

*Mental health service utilization.* Respondents were asked to indicate whether they had visited any one of a list of agents (health professionals: psychiatrist, psychologist, social worker; primary care physician, other doctors; religious counselors; and traditional and nontraditional healers) to talk about problems related to their mental health condition in the past 12 months. Due to statistical power constraints, we grouped all services together (Kessler & Ustun, 2006; Levinson, Lerner, et al., 2007; Levinson, Paltiel, et al., 2007).

**Statistical analysis.** Prevalence estimates were derived using standard survey procedures that accounted for sampling probabilities, as well as post stratification adjustment to compensate for variation in survey nonresponse (Levinson, Paltiel, et al., 2007).

Logistic modeling accounted for the potential confounding effects of sociodemographic factors (including age, gender, years of education and ethnicity) and clinical factors (emotional distress) in binary variables (service utilization). The regression coefficients were transformed into adjusted odds ratios (AORs) and their 95% confidence intervals (CIs) for ease of interpretation. All analyses were performed using SPSS Statistics version 20.0 (SPSS Inc., Chicago, IL).

## Results

Table 1 presents sociodemographic characteristics of *Mizrahi* ( $n = 136$ ) and *Ashkenazi* ( $n = 69$ ) community-based respondents who were diagnosed with CMD-12 months and who sought ( $n = 65$ ) or did not seek treatment ( $n = 140$ ).

Among *Mizrahi* respondents, 28% (standard error (SE) = 4.1%) sought any type of treatment for their emotional problems in the preceding 12 months compared with 45% (SE = 6.2%) among their *Ashkenazi* counterparts ( $\chi^2 (369) = 5.98, p < .05$ ). Following control for

**Table 1.** Sociodemographic characteristics of respondents diagnosed with common mental disorders in the preceding 12 months in a community-based sample by service utilization and ethnic group ( $N = 205$ ).

	Sought treatment				Did not seek treatment				Statistic
	Mizrahi		Ashkenazi		Mizrahi		Ashkenazi		
	N	%	N	%	N	%	N	%	
Gender									$\chi^2(2.97) = 3.62, NS$
Male	19	48.2%	12	39.8%	44	42.2%	11	27.2%	
Female	17	51.8%	17	60.2%	56	57.8%	29	72.8%	
Age (mean years, SE)	36	46.4 (2.0)	29	49.7 (2.6)	100	48.1 (1.7)	40	55.6 (2.9)	Wald $F = 2.35, NS$
Education (mean years, SE)	36	11.5 (0.5)	29	14.1 (0.6)	100	10.7 (0.4)	39	13.4 (0.5)	Wald $F = 10.17, p < .001$
Religiosity									$\chi^2(8.73) = 61.4, p < .001$
Secular	6	15.3%	14	52.2%	5	6.3%	22	57.4%	
Traditional	21	59.8%	12	43.3%	63	63.2%	13	32.6%	
Religious	6	15.7%	1	4.5%	29	27.2%	2	4.3%	
Ultra-orthodox	3	9.2%	0	–	3	3.2%	3	5.7%	

SE: standard error; NS: not significant.

sociodemographic variables (i.e. age, gender and years of education), the association between ethnicity and treatment gap remained significant (AOR = 2.28, 95% CI = 1.1–4.8; see Table 2).

## Study II

### Methods

**Sample.** Study II included 300 consecutive adult service users who presented for a first ever or a renewed episode of care in four psychiatric clinics in two large cities in Israel between June 2011 and April 2012. We included only users who self-identified as of *Mizrahi* ( $n = 133$ ) or *Ashkenazi* ( $n = 96$ ) ethnic affiliation (new service users:  $n = 66$ ; returning service users:  $n = 163$ ).

**Procedure.** Consecutive service users completed a set of questionnaires in their native language (Hebrew, Russian) upon accessing care. These were handed out by the administrative personnel. The study was approved by the Institutional Ethics Committees, and data collection was in compliance with human subject protocols at all participating clinics.

### Measures

**General questionnaire.** It included sociodemographic information: age, gender, education, income (below average, average and above average), employment status (employed/unemployed), country of birth, marital status and religion and degree of religiosity (secular, traditional and religious). In addition, it included history of psychiatric treatment and barriers to seeking care: first time the service user felt distressed, if he or she turned to services at the time and to whom (including religious leaders and

**Table 2.** Adjusted odds ratios (AOR) (95% confidence interval (CI)) of treatment gap among respondents diagnosed with common mental disorders in the preceding 12 months ( $N = 205$ ).

Variable	B	AOR (95% CI)	$p$
Origin	.822		<.05
Mizrahi		1	
Ashkenazi		2.28 (1.1–4.8)	
Gender	-.216		NS
Male		1	
Female		1.24 (0.6–2.5)	
Age	.025	1.03 (1.0–1.1)	NS
Education years	-.097	0.91 (0.8–1.0)	NS
Emotional distress	-.131	0.88 (0.8–0.9)	<.001
Nagelkerke pseudo r-square		24.8%	
Wald $F (5, 197) = 4.504$			<.001

NS: not significant.

other services). If no help was sought, the reason for abstention was explored: (1) structural barriers (i.e. ‘the mental health clinic was far from my home’, ‘I thought it would cost money to come to treatment’); (2) negative attitudes toward mental health care (i.e. ‘I was afraid they will say I have a mental illness’, ‘I was ashamed that someone will know I am coming for mental health treatment’); and (3) lack of knowledge regarding mental health care (i.e. ‘I thought the problem will go away on its own’, ‘I didn’t know that an emotional problem can be treated’, ‘I didn’t know where to turn for help’).

In addition, service users were asked about the present episode of help-seeking, including questions regarding the referral source and the time that elapsed from the moment

he or she first felt distressed to the time of contact with services, means of transportation used to the clinic and the physical difficulties to access the clinic.

*The GHQ-12 (Goldberg, 1972)* (see Study I for details). The internal consistency reliability of the scale was good (Cronbach's  $\alpha = .88$ ).

*Mental health stigma (Struch et al., 2007)*. This 9-item scale is a modified version of the 'Orientations to Seeking Professional Help Scale' (Fischer & Turner, 1970), which is commonly used instrument to assess respondent's attitudes toward mental health services. The specific items employed were selected from a local study aimed at assessing attitudes and barriers toward seeking help (Struch et al., 2007, 2008). Items included statements about explicit willingness to seek mental health treatment (e.g. 'I will feel uncomfortable going to mental health treatment because of what people will think of me'), attitudes toward mental health treatment (e.g. 'I would prefer to turn to a friend than to mental health treatment, even for an emotional problem') and perception of the benefits of mental health treatment (e.g. 'someone who has a healthy logic does not need mental health treatment'). Users were asked to rate the degree to which they thought that the statement is true on a 5-point scale, ranging from *not true at all* (1) to *very true* (5). The final score was the mean sum score for all items. The internal consistency of the scale was good (Cronbach's  $\alpha = .76$ ).

*Everyday Discrimination Scale (Williams, Yu, Jackson, & Anderson, 1997)*. This 9-item self-report measure assesses the frequency of experiences of routine, minor acts of discrimination (e.g. 'You are treated with less respect than other people', 'You are called names or insulted'). Participants were asked to rate their experiences on a 5-point scale, ranging from *never* (1) to *almost every day* (5). The final score included mean score for all items. The internal consistency of the scale was good (Cronbach's  $\alpha = .74$ ).

**Statistical analysis.** Analyses were performed using the SPSS version 20.0 (SPSS Inc., Chicago, IL); *t*-tests and chi-square tests of independence were performed to investigate differences between ethnic groups in continuous and categorical variables, respectively. To examine whether barriers to care and clinical presentation differ between new and returning service users, analyses were performed separately for these two groups.

## Results

**Sociodemographic and clinical characteristics of the sample.** *Ashkenazi* compared with *Mizrahi* service users had higher mean years of formal education. Among returning service users, *Ashkenazi* participants tended to report a

secular orientation and a larger percentage of employment compared with their *Mizrahi* counterparts. Among new service users, *Mizrahi* participants tended to report higher mean score of emotional distress compared with their *Ashkenazi* counterparts (Table 3).

**Pathway to specialized care.** Most new and returning service users reported having been referred for specialized care by family or friend and neighbors (Table 4). Higher percentage of returning *Mizrahi* service users tended to report having been referred by general physicians or emergency room, and/or social services than their *Ashkenazi* counterparts.

**Treatment lag for specialized care.** Table 5 presents the treatment lag and structural and user-based barriers to specialized care. No significant ethnic differences emerged among new and returning service users on any of the variables. Of all service users, 40% waited over a year from the time they felt the problem started to the time they contacted the clinic. Only a minority (10% or less) reported having difficulty finding the clinic in both groups. In addition, no significant ethnic differences were found with regard to the time to arrive to the clinic (approximately mean time 25 minutes) and in perception of discrimination (which was at midpoint of the scale). Approximately one-third of participants reported past structural and attitudinal barriers, while little less than half reported knowledge-related barriers to seeking treatment in the past. New *Mizrahi* service users tended to report higher mental health-care stigma compared with their *Ashkenazi* counterparts.

## Discussion

Using two data sources, we investigated ethnic differences in rates of mental health treatment gap as reported by a large community-based study and factors associated with access to specialized care as elicited from service users upon contacting outpatient psychiatric care.

Study I, based on the Israeli component of the WMHS, showed that the treatment gap among *Mizrahi* respondents was more than two times larger in the preceding 12 months, compared with their *Ashkenazi* counterparts. The documented difference remained significant after adjusting for sociodemographic variables such as education. This treatment gap is important in light of data showing that *Mizrahi* respondents were approximately twice as likely to be diagnosed with CMD-12 months, compared with their *Ashkenazi* counterparts (Nakash, Gal, et al., 2012). The lower service utilization pattern among the disadvantaged groups is consistent with some research in other Western countries that showed higher treatment gap among minority populations (Alegria et al., 2002, 2008; Wells, Klap, Koike, & Sherbourne, 2001). For example, using a US nationally representative data source, Alegria et al. (2008) evaluated

**Table 3.** Sociodemographic characteristics, emotional distress and past treatment by ethnic group among new and returning service users (N = 229).

	Returning service users		Statistic	New service users		Statistic
	Mizrahi (N = 95)	Ashkenazi (N = 68)		Mizrahi (N = 38)	Ashkenazi (N = 28)	
	N (%)	N (%)		N (%)	N (%)	
Gender			$\chi^2(1) = 0.2, NS$			$\chi^2(1) = 1.08, NS$
Male	37 (40.2)	29 (43.3)		11 (28.9)	5 (17.9)	
Female	55 (59.8)	38 (56.7)		27 (71.1)	23 (82.1)	
Age (mean years, SD)	42.6 (15.9)	39.3 (15.0)	$t(157) = 1.30, NS$	40.6 (13.5)	45.1 (17.8)	$t(64) = -1.18, NS$
Education (mean years, SD)	12.2 (3.0)	14.3 (3.7)	$t(113) = -3.71, p < .001$	11.8 (2.2)	14.3 (2.4)	$t(60) = -4.32, p < .001$
Employment status			$\chi^2(1) = 3.65, p = .06$			$\chi^2(1) = 0.29, NS$
Employed	30 (32.6)	31 (47.7)		20 (54.1)	17 (60.7)	
Unemployed	62 (67.4)	34 (52.3)		17 (45.9)	11 (39.3)	
Income			$\chi^2(2) = 0.80, NS$			$\chi^2(2) = 5.51, NS$
Below average	57 (67.9)	46 (71.9)		16 (48.5)	18 (69.2)	
Average	15 (17.9)	8 (12.5)		14 (42.4)	4 (15.4)	
Above average	12 (14.3)	10 (15.6)		3 (9.1)	4 (15.4)	
Born in Israel			$\chi^2(1) = 9.01, p < .01$			$\chi^2(1) = 4.87, p = .05$
Yes	72 (82.8)	41 (61.2)		30 (81.1)	15 (55.6)	
No	15 (17.2)	26 (38.8)		7 (18.9)	12 (44.4)	
Marital status			$\chi^2(2) = 2.39, NS$			$\chi^2(2) = 0.01, NS$
Single	25 (27.2)	22 (32.8)		15 (39.5)	11 (39.3)	
Married/living with partner	33 (35.9)	28 (41.8)		12 (31.6)	9 (32.1)	
Separated/divorced/widowed	34 (37.0)	17 (25.4)		11 (28.9)	8 (28.6)	
Religiosity			$\chi^2(2) = 16.10, p < .000$			$\chi^2(2) = 1.09, NS$
Secular	28 (32.2)	36 (55.4)		11 (28.9)	8 (33.3)	
Traditional	38 (43.7)	9 (13.8)		16 (42.1)	7 (29.2)	
Religious	21 (24.1)	20 (30.8)		11 (28.9)	9 (37.5)	
GHQ sum score (SD)	30.7 (8.9)	31.7 (6.6)	$t(153) = -0.86, NS$	30.1 (6.9)	26.9 (7.3)	$t(62) = -1.77, p = .08$

GHQ: General Health Questionnaire; SD: standard deviation; NS: not significant.  
Results represent percentage unless otherwise specified.

**Table 4.** Referral paths to specialized care by ethnic group among new and returning service users (N = 229).

Treatment referral	Returning service users		Statistic	New service users		Statistic
	Mizrahi (N = 95)	Ashkenazi (N = 68)		Mizrahi (N = 38)	Ashkenazi (N = 28)	
	N (%)	N (%)		N (%)	N (%)	
Family/friend/neighbor	28 (30.8)	24 (36.9)	$\chi^2(5) = 10.51, p = .06$	15 (39.5)	10 (38.5)	$\chi^2(5) = 6.01, NS$
General medical doctor/ emergency room	19 (20.9)	6 (9.2)		7 (18.4)	7 (26.9)	
Mental health worker (psychologist, psychiatrist)	20 (22)	19 (29.2)		4 (10.5)	2 (7.7)	
Social services	11 (12.1)	2 (3.1)		4 (10.5)	1 (3.8)	
Self	10 (11)	8 (12.3)		7 (18.4)	2 (7.7)	
Other	3 (3.3)	6 (9.2)		1 (2.6)	4 (15.4)	

**Table 5.** Treatment lag and objective and subjective barriers to seeking specialized psychiatric care by ethnic group among new and returning service users (N = 229).

	Returning service users		Statistic	New service users		Statistic
	<i>Mizrahi</i> (N = 95)	<i>Ashkenazi</i> (N = 68)		<i>Mizrahi</i> (N = 38)	<i>Ashkenazi</i> (N = 28)	
	N (%)	N (%)		N (%)	N (%)	
Treatment lag			$\chi^2(4) = 3.97, NS$			$\chi^2(4) = 3.16, NS$
Week or less	9 (10.2)	3 (4.8)		5 (13.5)	1 (3.8)	
1 month or less	16 (18.2)	9 (14.3)		9 (24.3)	7 (26.9)	
6 months or less	14 (15.9)	17 (27.0)		9 (24.3)	6 (23.1)	
Over half a year	11 (12.5)	7 (11.1)		2 (5.4)	4 (15.4)	
Over a year	38 (43.2)	27 (42.9)		12 (32.4)	8 (30.8)	
Structural barriers to care – clinic accessibility						
Time to arrive to clinic in minutes: mean (SD)	25.6 (17.3)	27.4 (20.6)	$t(136) = -0.56, NS$	19.0 (21.1)	29.4 (22.8)	$t(56) = -1.79, NS$
Difficulty finding clinic			$\chi^2(1) = 0.02, NS$			$\chi^2(1) = 2.80, NS$
Yes	10 (11.2)	8 (11.9)		0 (0)	2 (7.1)	
No	79 (88.8)	59 (88.1)		38 (100)	26 (92.9)	
Means of transportation to clinic			$\chi^2(4) = 9.53, p < .05$			$\chi^2(4) = 4.97, NS$
Walking	22 (24.4)	20 (30.3)		10 (26.3)	7 (25.0)	
Bus	25 (27.8)	28 (42.4)		8 (21.1)	11 (39.3)	
Private car	36 (40)	12 (18.2)		17 (44.7)	7 (25.0)	
Taxi	6 (6.7)	4 (6.1)		3 (7.9)	2 (7.1)	
Other	1 (1.1)	2 (3.0)		0 (0)	1 (3.6)	
Service-user-based barriers to care						
Stigma toward mental health treatment: mean (SD)	2.5 (0.8)	2.3 (0.8)	$t(153) = 1.18, NS$	2.6 (0.9)	2.3 (0.8)	$t(61) = 1.73, p = .09$
Perceptions of discrimination: mean (SD)	2.1 (1.1)	2.3 (1.2)	$t(149) = -0.99, NS$	1.6 (0.7)	1.7 (0.9)	$t(54) = -0.30, NS$
Reasons for not seeking mental health services in the past <sup>a</sup>						
Structural	8 (32)	8 (40)	$\chi^2(1) = 0.31, NS$	7 (36.8)	6 (31.6)	$\chi^2(1) = 0.12, NS$
Attitudes	14 (56.0)	6 (30.0)	$\chi^2(1) = 3.04, NS$	6 (31.6)	6 (31.6)	$\chi^2(1) = 0.00, NS$
Knowledge	11 (44.0)	9 (45.0)	$\chi^2(1) = 0.01, NS$	9 (47.4)	10 (52.6)	$\chi^2(1) = 0.11, NS$

SD: standard deviation; NS: not significant.

<sup>a</sup>Structural barriers to seeking treatment included the following items: 'I didn't know where to turn for help', 'the mental health clinic was far from my home', 'I thought it would cost money to come to treatment'. Negative attitudes to mental health care included the following items: 'I was afraid they will say I have a mental illness' and 'I was ashamed that someone will know I am coming to mental health treatment'. Lack of knowledge regarding mental health care included the following items: 'I thought the problem will go away on its own' and 'I didn't know that an emotional problem can be treated'.

differences in access to depression treatment between ethnic or racial minority patients and non-Latino Whites. They found that for those with last year depressive disorder, 63.7% of Latinos, 68.7% of Asians and 58.8% of African Americans, in contrast to 40.2% of non-Latino Whites, did not access any last year mental health treatment.

Notably, Study II, that was conducted in psychiatric clinics among service users upon contacting care, showed that once the person overcame the hesitance to come to care, none of the structural and service-user-based barriers measured emerged as significantly different between the ethnic groups. The findings regarding lack of ethnic

differences in barriers to care were consistent among both new and returning service users. Interestingly, among new service users, *Mizrahi* participants tended to report higher emotional distress scores compared with their *Ashkenazi* counterparts, which may suggest that they enter treatment in a more severe state.

Future epidemiological studies in the general population should investigate possible ethnic differences in barriers and catalysts to seek care among nonclinical samples which may account for the higher treatment gap among the disadvantaged ethnic group.

Importantly, our findings show that treatment gap (at least 50% of respondents with CMD-12 did not seek services) and delay to specialized care (approximately 40% of service users waited more than a year before they sought specialized services) are prevalent and warrant well-articulated action to reduce them. The early recognition and timely treatment of mental health problems may help reduce suffering, prevent disability and render interventions more cost-effective (Garg et al., 2011; Levav et al., 2004; Patel et al., 2010).

Barriers to care are multifaceted and include structural (availability and accessibility of services) and service-based factors (attitudes and knowledge). As in other studies (Collins et al., 2004; Kohn et al., 2004), our findings show that respondents report multiple barriers including structural variables (e.g. time to get to clinic and costs) and negative attitudes. Stigma against seeking mental health services stemming from, among other reasons, fear of being shamed and socially excluded and gaps in knowledge was also frequently mentioned. For example, more than one-third of the service users in the clinic study reported that they delayed entering treatment hoping the illness will 'go away by itself' (Study II). Although some randomized controlled trials suggest that only 20% of persons with major depression who do not receive treatment achieve remission within 20 weeks (Hornblow, Bushnell, Wells, Joyce, & Oakley-Browne, 1990), more commonly, particularly for disadvantaged groups, treatment lag may increase the likelihood of entering treatment at emergency state and reduce its efficacy (Alegría et al., 2009).

Special attention should be given to referral paths to specialized care (Alegría et al., 2009) as they determine the point of entry to specialized treatment. Our findings show that ethnic differences emerged among returning service users: those from the disadvantaged groups were more likely to be referred by general medical doctors, emergency rooms and/or social services. It is thus almost redundant to state that these community gatekeepers need to be included in a well-coordinated network of mental health services rather than remain as disconnected agents of care.

The study has several limitations. First, data are presented grouping together respondents from different countries of origin. This might have concealed important intra-ethnic differences (e.g. immigrants from Morocco had a relatively lower status than those from Iraq, similarly for those from Romania compared to those from Poland). Second, the survey in Study II included self-report measures which may be subjected to social desirability bias.

Efforts to reduce ethnic differences in unmet mental health needs should focus on community residents who never sought services. Barriers to care among these respondents should be identified and addressed. Actions to bridge the mental health gap through improved availability and accessibility of the services and the reduction of service-user-based barriers, such as stigma, would

facilitate access to the benefits derived from evidence-based mental health treatments in both primary care and/or in specialized services. In addition, specific training in identifying and treating the comorbid mental disorders should be made available for primary care physicians who serve as important gatekeepers, particularly among disadvantaged groups.

### Conflict of interest

The authors declare that they have no conflict of interest.

### Funding

Study I was supported by the Israeli Ministry of Health and Study II was supported by the Israel National Institute for Health Policy and Health Services Research (2006/6/8 to Nakash).

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