

# Common mental disorders in immigrant and second-generation respondents: Results from the Israel-based World Mental Health Survey

International Journal of  
Social Psychiatry  
0(0) 1–8  
© The Author(s) 2012  
Reprints and permissions:  
sagepub.co.uk/journalsPermissions.nav  
DOI: 10.1177/0020764012443754  
isp.sagepub.com  


Ora Nakash,<sup>1</sup> Itzhak Levav<sup>2,3</sup> and Gilad Gal<sup>4</sup>

## Abstract

**Background:** The contrasting social status of ethnic groups differentially impacts the mental health of their members. This may be the case in Israel despite its egalitarian ideology. However, studies are a few and limited in scope.

**Aim:** To study mental health disparities between immigrant and second-generation disadvantaged and advantaged Jewish groups.

**Methods:** Data were extracted from the Israel World Mental Health Survey. This included the Composite International Diagnostic Interview and the General Health Questionnaire. We compared 547 first-generation immigrants born in North Africa/Asia and 708 born in Europe/America; and 707 second-generation immigrants of North African/Asian origin and 449 of European/American origin.

**Results:** The prevalence rate of common mental disorders in the preceding year was approximately double for respondents of North African/Asian origin compared with their European/American counterparts following adjustment for socio-demographic confounders. Immigrants: North African/Asian 12.4%, SE = 1.5; European/American 6.4%, SE = 1.0 (AOR = 2.1, 95% CI 1.4–3.4). Second generation: North African/Asian 10.1%, SE = 1.2; European/American 5.4%, SE = 1.1 (AOR = 1.7, 95% CI 1.1–3.2). Significant differences in emotional distress mean scores were observed only among second-generation respondents: North African/Asian respondents reported higher emotional distress ( $M = 18.7$ , SE = 0.5) compared with European/American ( $M = 17.3$ , SE = 0.4) (Wald  $F = 13.31$ ,  $p < .001$ ).

**Conclusions:** Results showed disparities in the mental health measures in both generations. It is likely that social causation factors, such as restricted opportunities in the context of higher aspirations, partially account for the findings.

## Keywords

disparities, ethnicity, Israel, mental health

## Introduction

Health disparities are defined as unequal health status and service utilization usually favouring members of advantaged over disadvantaged groups in society. Social advantage or disadvantage refers to the relatively favourable or unfavourable social, economic or political conditions that some groups systematically experience based on their relative position in social hierarchies (Braveman, 2006; Braveman, Egerter, & Mockenhaupt, 2011; Braveman, Egerter, & Williams, 2011; Institute of Medicine, 2002). Studies in many western countries have documented differences in health between advantaged and disadvantaged ethnic groups (Braveman, Egerter, & Williams, 2011; Marmot, 2010; National Center for Health Statistics, 2004). For example, in the USA, ethnically advantaged groups (non-Hispanic whites) have shown lesser rates of coronary heart disease than ethnically disadvantaged groups (e.g. non-Hispanic blacks), even when variables such as income,

education, geographic location and insurance status were controlled for (Ferdinand & Armani, 2009).

Research on ethnic-based mental health disparities documented mixed results. For example, in the USA, although disadvantaged ethnic groups (Hispanics and non-Hispanic blacks) have lower risk for mood and anxiety disorders and for substance use disorders relative to advantaged ethnic

<sup>1</sup>School of Psychology, Interdisciplinary Centre (IDC) Herzliya, Herzliya, Israel

<sup>2</sup>Ministry of Health, Jerusalem, Israel

<sup>3</sup>Haifa University, Haifa, Israel

<sup>4</sup>The Academic College Tel Aviv-Yaffo, Tel Aviv, Israel

## Corresponding author:

Ora Nakash, School of Psychology, Interdisciplinary Center (IDC) Herzliya, PO Box 167, Herzliya, 46150, Israel  
Email: onakash@idc.ac.il

groups (non-Hispanic whites), they show higher persistence of these disorders (Breslau, Kendler, Su, Gaxiola-Aguilar, & Kessler, 2005).

Consistent evidence for mental health disparities between ethnic groups was also documented in countries with national health care insurance systems, such as England and Israel (Epstein & Horev, 2007; Levav, 2009; McManus, Meltzer, Brugha, Bebbington, & Jenkins, 2009). For example, studies showed higher rates of depression and emotional distress, and lower rates of mental health service utilization among Israeli-Arabs than among their Jewish counterparts. Those findings, at least in part, have been imputed to social causation factors, for example adversity and stress (Dohrenwend, 1998), arising from the disadvantaged social status of the Arab minority (Kaplan et al., 2010; Levav et al., 2007). Evidence for differential risk for psychiatric morbidity could also be found within ethnic groups. For example, in the USA, second-generation disadvantaged Mexican-Americans evidence more psychopathology than the immigrant generation (Alegria et al., 2008; Vega et al., 1998). In Israel, mental health disparities within second-generation Jews have been identified as well (Dohrenwend et al., 1992), as reviewed in the next section.

### *Ethnic disparities among Israeli Jews*

Israeli Jews, who constitute approximately 75% of the country's total population, are ethnically diverse. Approximately, 9% of them are immigrants from North Africa and Asia, while 8% came from Europe and America (this proportion does not include the relative recent immigrants from the former Soviet Union) (Israel Central Bureau of Statistics, 2010). According to census data, 19% of the Jewish population are second generation whose father was born in North Africa or Asia, and 15% are second generation whose father was born in Europe or America (Israel Central Bureau of Statistics, 2010).

The Jews of European/American origin constitute the dominant social group among Israelis. Their dominance dates back to before the establishment of the State (1948), when they constituted approximately 80% of the Jewish population. During the first decade of the State, massive immigration came from European (mostly Holocaust survivors) and Arab countries, at similar proportions. Although both groups struggled to become absorbed, the European/Americans moved upwards more rapidly than the North African/Asians. The social mobility was attributed, among other factors, to their strong social and political connections with the old-stock immigrant and native European/Americans, and their positive public image as pioneers (represented by the *kibbutz*, the communist societies, largely settled by European/Americans). Later, German compensation

payments for the Nazi persecution helped them financially at a time of general scarcity. In contrast, the North African/Asians, who were often stereotyped as 'primitive' due to the lower formal educational level and Middle Eastern appearance, were subjected to discrimination and oppression (Shalom-Chetrit, 2010; Smooha, 2003). Negative attitudes and policies were generally met with weak resistance by this group due, among other reasons, to their limited experience in political organization, low formal education and limited financial resources (most had to flee their country of origin, leaving their possessions behind) (Ben-Rafael & Peres, 2005; Hever, Shenhav, & Motzafi-Haller, 2003; Shenhav, 2003; Shohat, 2006).

However, the North African/Asian group has made some social and economic gains over the years, particularly men, in the political arena and the army ranks. Yet, the social gap has remained, with documented socio-economic disparities in levels of education and average income (Israel Central Bureau of Statistics, 2010). For example, European/Americans have three additional years of education on average compared with their North African/Asian counterparts. This ethnic gap in education accounts for 50% of European/Americans working as professionals while only 18% of North African/Asians are in higher-status positions (Smooha, 2003). Similar gaps are observed in income: on average, North African/Asian families earn 85% of the income of their counterparts. The majority of the low and working classes are North African/Asian whereas the middle-upper class is disproportionately European/American (Smooha, 2003).

Some evidence suggests that these socio-economic inequalities have even widened among the second generation. For example, the gap in the successful completion of the high school matriculation exams – the entry ticket into higher education – was 18% among the immigrant generation, while among the second generation, the gap increased to 25% in favour of European/Americans (Cohen, 2006; Kashti, 1997; Shai, Olitzki, Ben Shetrit, & Mironitzev, 2005). North African/Asian women, compared with the men, show even greater inequalities and are at the lowest social stratum in terms of income (Efroni, 1997). Some authors have attributed the increased gap to their double-minority status, and to the patriarchal society that characterizes the traditional Arab culture in which they were raised (Dahan-Kalev, 1999; Shohat, 2006).

Although limited, some research has documented important ethnic differences in morbidity and mortality. For example, studies have documented differences in psychiatric morbidity showing higher prevalence of affective disorders among second-generation North African/Asians compared with their counterparts (Levav et al., 1993). A cohort-based study among second-generation ethnic groups

documented that North African/Asians compared with European/Americans had higher rates of major depression in women and antisocial personality and substance use disorders in men (Dohrenwend et al., 1992).

### Objective

The current study investigated selected aspects of mental health disparities, including common mental health disorders (CMD-12 months) and emotional distress, between immigrant and second-generation Israeli Jews of disadvantaged (North African/Asian origin) and advantaged (European/American origin) ethnic groups.

Consistent with a social causation hypothesis, we predicted that in both generations the disadvantaged ethnic group members will have higher prevalence rates of CMD-12 months and higher emotional distress mean scores compared with the advantaged ethnic group members.

## Methods

### Survey design

The study data were based on the Israeli component of the World Mental Health Survey of non-institutionalized adults (Kessler & Ustun, 2004). The sample population was extracted from the National Population Register (NPR) and comprised non-institutionalized *de jure* residents aged 21 and older. The sample was designed to reflect the distribution in the general population of selected gender-age-ethnicity groups (Israeli-Arabs, post-1990 immigrants from the former Soviet Union, other Israel-born Jews, and Jews born elsewhere). The interview sample was weighted back to the total population to compensate for unequal selection probabilities resulting from disproportionate stratification, clustering effects and non-response. The weights were adjusted to make weighted sample totals conform to known population totals taken from reliable Central Bureau Statistics (CBS) sources. Face-to-face interviews at the respondents' homes were conducted from May 2003 to April 2004, in Hebrew, Arabic and Russian. The survey was administered using laptop computer-assisted personal interview (CAPI) methods by professional survey interviewers trained and supervised by the CBS. Interviews lasted on average 60 minutes. The overall response rate was 73% (71% among Jewish respondents), totalling 4,859 completed interviews. A Human Subjects Committee approved the study (Levinson, Paltiel, Nir, & Makovki, 2007).

In this study we included only North African/Asian and European/American Jewish respondents of immigrant ( $n = 1,255$ ) and second ( $n = 1,245$ ) generations. For the immigrant group, the classification was based on the interviewee's country of birth, and for the second generation, according to both parents' countries of birth. Immigrants

and second generation originating in the former Soviet Union were omitted from the analysis due to their heterogeneous ethnic background (from both the European and Asian former Soviet republics).

We identified: 547 North African/Asian immigrants ( $n = 274$  men;  $n = 273$  women); 708 European/American immigrants ( $n = 323$  men;  $n = 385$  women); 707 second-generation North African/Asian ( $n = 373$  men;  $n = 334$  women); and 449 second-generation European/American ( $n = 235$  men;  $n = 214$  women).

### Survey questionnaire

The survey instrument was a detailed computerized schedule that included the following.

*Socio-demographic information.* A self-report questionnaire was used to collect information on age, gender, country of birth, years of education, marital status and religiosity (secular, traditional, religious, Orthodox). In addition, respondents were asked to report whether they had any chronic illnesses, including heart disease, asthma, diabetes, kidney disease, neurodegenerative disease, chronic obstructive pulmonary disease, tuberculosis and cancer.

*Diagnostic assessment.* The WHO-Composite International Diagnostic Interview (CIDI; Kessler & Ustun, 2004) was used as the psychiatric diagnostic instrument. The CIDI is a structured diagnostic interview that assesses the preceding 12-month prevalence of selected psychiatric disorders according to both the ICD-10 and DSM-IV classification systems. For this study, the following disorders were grouped under the rubric of common mental disorders (CMD-12 months): anxiety disorders (generalized anxiety disorder, panic disorder, agoraphobia without panic disorder and post-traumatic stress disorder) and mood disorders (major depressive disorder and dysthymia). Although the CIDI provided discrete diagnoses, statistical power constraints led us to group them together. Importantly, there were no significant differences in the prevalence rates of any of the studied disorders between North African/Asian compared with European/American among both immigrants ( $\chi^2 = 4.1$ , n.s.) and second-generation respondents ( $\chi^2 = 5.4$ , n.s.). Also, there were no significant differences in the severity of the diagnoses according to the Sheehan Disability Scale (Sheehan, 1983) ( $F(4,195) = 1.586$ , n.s.).

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.

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

### Statistical analysis

Prevalence estimates were derived using standard survey procedures that accounted for sampling probabilities and post-stratification adjustment to compensate for variation in survey non-response (Levinson et al., 2007). Prevalence rates of CMD-12 months were estimated by whether respondents' psychopathology met diagnostic criteria for DSM-IV disorder in the preceding year.

Cross-tabulations were used to calculate bivariate odds ratios (OR), 95% confidence intervals (95% CI) or *p*-values to assess the strength of the associations. Logistic and linear regression modelling accounted for the potential confounding effects of socio-demographic factors in binary variables (i.e. psychiatric diagnosis) and continuous variables (i.e. GHQ-12 mean scores), respectively. The regression coefficients were transformed into adjusted odds ratios (AOR) and their 95% CIs for ease of interpretation. We adjusted for confounding socio-demographic variables: age, gender, years of education, religiosity and marital status. In addition, we adjusted for chronic illness. These variables were included in the final models if their association with ethnicity and the mental health measures (i.e. CMD-12 months and GHQ-12) met a significant level of *p* < .1. Analyses were conducted separately for immigrant and second-generation ethnic groups. All analyses were performed using SPSS version 18.0 for windows (SPSS Inc., 2009).

### Results

#### Socio-demographic description of the ethnic groups

Among the immigrant generation, North African/Asian respondents were older than their counterparts, while the direction was reversed in the second generation. Immigrant and second-generation European/Americans had higher mean years of formal education than their counterparts. European/American respondents tended to report a secular orientation, while among North African/Asian respondents, the traditional orientation was prominent. No differences were found in the self-report of chronic illness among the immigrant generation. In the second generation, European/Americans reported more chronic illnesses than the North African/Asians. However, after adjusting for age, no significant differences were noted (AOR = 1.3, 95% CI 1.0–1.8). A large majority of European/American immigrants were Holocaust survivors (59.5%, SE = 3.0), in contrast to a small minority among the North African/Asian immigrants (4.8%, SE = 1.5;  $\chi^2 = 184.8$ , d.f. = 1, *p* < .001) (Table 1).

North African/Asian immigrant women had a lower mean years of education than their counterparts (*t* = -11.85, *p* < .001). A similar pattern was seen among men (*t* = -5.79, *p* < .001). The results repeated for second-generation women (*t* = -6.26, *p* < .001) and men (*t* = -5.44, *p* < .001) (Table 2).

**Table 1.** The sample population by ethnicity, socio-demographic characteristics and immigrant generation.

	Immigrant generation			Second generation		
	North African/ Asian ( <i>n</i> = 547)	European/ American ( <i>n</i> = 708)	<i>p</i>	North African/ Asian ( <i>n</i> = 707)	European/ American ( <i>n</i> = 449)	<i>p</i>
<b>Age (years)</b>	59.3	57.5	< .05	39.1	47.4	< .001
<b>M (SE)</b>	(0.56)	(0.69)		(0.34)	(0.69)	
<b>Gender (%)</b>						
Male	48.6	45.7	.38	51.1	51.6	.88
Female	51.4	54.3		48.9	48.4	
<b>Marital status (%)</b>						
Married	75.9	72.6	.18	72.6	73.0	< .01
Divorced	8.3	6.9		7.5	6.8	
Widowed	12.4	14.4		1.6	5.1	
Single	3.5	6.1		18.3	15.2	
<b>Education (years)</b>	10.1	13.6	< .001	12.8	14.8	< .001
<b>M (SE)</b>	(0.23)	(0.18)		(0.12)	(0.21)	
<b>Religious observance (%)</b>						
Orthodox	2.8	6.7	< .001	4.1	5.2	< .001
Religious	33.4	14.9		19.1	6.5	
Traditional	54.7	39.6		60.2	27.6	
Secular	9.0	39.4		16.7	60.7	
<b>Any chronic disease*</b>	36.8	38.5	.61	18.3	28.1	< .001

\*Any chronic disease: heart disease, asthma, diabetes, kidney disease, neurodegenerative disease, chronic obstructive pulmonary disease, tuberculosis, cancer

**Table 2.** Prevalence rates of common mental disorders in the preceding 12 months (CMD-12 months), emotional distress mean score, and education by ethnicity, immigrant generation and gender.

	Total		Men		Women	
	Immigrant generation	Second generation	Immigrant generation	Second generation	Immigrant generation	Second generation
<b>CMD-12 months % (SE)</b>						
European/American	6.4 (1.0) (n = 46)	5.4 (1.1) (n = 23)	3.5 (1.0) (n = 12)	4.9 (1.5) (n = 11)	8.9 (1.5) (n = 34)	6.0 (1.7) (n = 12)
North African/Asian	12.4 (1.5) (n = 65)	10.1 (1.2) (n = 71)	12.0 (2.1) (n = 31)	7.9 (1.4) (n = 32)	12.8 (2.1) (n = 34)	12.3 (1.9) (n = 39)
<b>GHQ-12 M (SE)</b>						
European/American	19.0 (0.5)	17.4 (0.4)	18.9 (0.7)	16.4 (0.5)	19.7 (0.5)	18.6 (0.7)
North African/Asian	19.1 (0.4)	18.8 (0.5)**	19.1 (0.8)	17.8 (0.6)**	19.5 (0.6)	19.8 (0.7)*
<b>Education M years (SE)</b>						
European/American	13.6 (0.18)	14.8 (0.21)	13.9 (0.3)	14.9 (0.3)	13.3 (0.2)	14.7 (0.3)
North African/Asian	10.1 (0.23)**	12.8 (0.12)**	11.4 (0.3)**	12.9 (0.2)**	8.8 (0.3)**	12.8 (0.2)**

Note: CMD-12 months = Common Mental Disorders in the preceding 12 months; GHQ-12 = General Health Questionnaire

\* $p < .05$ , \*\* $p < .001$

### Psychiatric morbidity

The prevalence rate of common mental disorders in the preceding 12 months (CMD-12 months) was double for the North African/Asian immigrants compared with their counterparts. The prevalence rate of CMD-12 months was lower in the second-generation groups, however the gap between the ethnic groups remained fairly stable (Table 2).

A significant statistical association was observed between ethnic group and CMD-12 months prevalence rates following adjustment for socio-demographic variables and chronic illness among both the immigrant (AOR = 2.1, 95% CI 1.4–3.2) and the second generations (AOR = 1.7, 95% CI 1.1–3.2) (Table 3).

Further analysis was conducted to identify gender differences. In the immigrant generation, the AOR of the CMD-12 months prevalence rate among North African/Asian men was higher than among their counterparts (AOR = 4.2%, 95% CI 1.8–9.5), while there were no significant differences among women (AOR = 1.4, 95% CI 0.8–2.4). This differential effect was supported by a significant gender x ethnicity interaction (Wald  $F = 5.42$ ,  $p < .01$ ). A reversed finding was noted in the second generation, for example no difference in the AOR was noted among men (AOR = 1.7, 95% CI 0.8–3.5.), while in women the AOR of the CMD-12 months prevalence rates was higher for North African/Asians than for European/Americans (AOR = 1.8, 95% CI 1.1–5.3). This differential effect was supported by a significant gender x ethnicity interaction (Wald  $F = 3.49$ ,  $p < .05$ ).

### Emotional distress

The adjusted analysis indicated no statistically significant differences in GHQ-12 mean scores between North African/Asian and European/American immigrants (Wald  $F = 0.43$ , n.s.) (Table 2). The GHQ-12 mean scores in the second generation were significantly higher for the North African/Asians compared with European/Americans (Wald  $F = 13.31$ ,  $p < .001$ ), among both men (Wald  $F = 9.1$ ,  $p < .01$ ) and women (Wald  $F = 4.37$ ,  $p = .05$ ).

### Discussion and conclusion

This paper presents data on mental health disparities between the disadvantaged North African/Asian group and the advantaged European/American group of Israeli Jews among a representative sample of non-institutionalized adults. Our findings show a fairly consistent picture of mental health disparities between those who immigrated as well as among the second-generation respondents. North African/Asian respondents were approximately twice as likely to be diagnosed with common mental health disorders in the preceding 12 months, compared with their European/American counterparts in both generations. Importantly, the differences remained significant after adjusting for socio-demographic variables, such as education, degree of religious observance and chronic illness. Our findings are consistent with other research conducted in Israel that documented ethnic differences in the prevalence rates of affective disorders and substance use disorders among

**Table 3.** Adjusted odds ratios (95% confidence interval) of common mental disorders in the preceding 12 months (CMD-12 months) by ethnicity and immigrant generation

CMD-12 months								
Variables	Immigrant generation				Second generation			
	OR	95% CI	AOR	95% CI	OR	95% CI	AOR	95% CI
<b>Marital status</b>								
Single/Divorced/Widowed/			Reference					
Married	0.5	0.4–0.8	0.5	0.3–0.8	0.4	0.2–0.6	0.3	0.2–0.5
<b>Education</b>								
0–9			Reference					
10–12	1.0	0.6–1.6	1.2	0.7–2.0	0.9	0.4–2.1	1.1	0.4–2.7
13–15	0.9	0.5–1.7	1.2	0.6–2.4	0.7	0.3–1.6	0.8	0.3–2.1
16+	0.6	0.3–1.0	0.9	0.5–1.8	0.4	0.2–1.0	0.5	0.2–1.5
<b>Chronic illness</b>	1.1	0.8–1.4	1.3	0.8–2.0	1.3	1.1–1.4	2.1	1.3–3.5
<b>Ethnicity</b>								
European/American			Reference					
North African/Asian	2.0	1.3–3.0	2.1	1.4–3.4	2.0	1.2–3.2	1.7	1.1–3.2

Note: OR = odds ratio (unadjusted); AOR = adjusted odds ratio for age, gender, years of education, religiosity, marital status and chronic illness in logistic regression models. Only significant variables are presented.

second-generation respondents in a cohort-based study (Levav et al., 1993). Our study further expands this literature to show that the ethnic gaps in common mental disorders exist in both generations, albeit smaller in the second compared with the immigrant generation.

Our findings suggest that there are potentially additional factors contributing to ethnic mental health disparities between the two studied groups beyond socio-demographic variables. The US Institute of Medicine's (2002) report highlighted the importance of deciphering these factors in light of mounting data showing that health disparities continue to exist even when education and socio-economic status (SES) are controlled. The US report posited that processes related to prejudice and stereotyping play a key role in the development of these disparities.

Notably, our findings show that although the Israel-born respondents of both Jewish ethnic groups showed some gains in mental health status compared with the immigrant generation, the ethnic-based mental health disparities remained. These findings are consistent with other sociological research that shows lingering gaps in education and income among the second-generation ethnic groups (Cohen, 2006; Smooha, 2003).

Interestingly, our findings show significant higher emotional distress mean scores between the second-generation ethnic groups, but not between the immigrant groups. It is possible that the differences in the emotional distress scores between North African/Asian and European/American respondents are attenuated by the increased emotional distress scores of the Holocaust survivors, which comprised the majority of the European/American immigrant group (Sharon, Levav, Brodsky, Shemesh, & Kohn, 2009).

Social causation models of mental illness, which attribute the inverse relationship between SES and mental illness to adversity and stress, may illuminate our findings (Aneshensel, 2009; Dohrenwend, 1998; Dohrenwend et al., 1992). Israeli Jews of North African/Asian origin continue to experience prejudice and negative stereotyping albeit in a form that is more implicit rather than explicit and direct (Saguy, Dovidio, & Pratto, 2008; Schwartz et al., 1991; Smooha, 2003). Social psychology research highlights the detrimental effect of aversive racism and ethnic micro-aggressions, which are characterized by subtle, unconscious and unacknowledged daily experiences of ethnic bias, on mental health (Dovidio, Gaertner, Kawakami, & Hodson, 2002; Sue et al., 2007; Williams & Mohammed, 2009; Williams, Neighbors, & Jackson, 2003).

It is plausible that the unacknowledged gap between the explicit public discourse, which advocates the irrelevance of these ethnic-based social gaps and promotes unfounded expectations about equal social standing in society, in contrast with implicit everyday experiences of micro-aggressions against individuals from North African/Asian origin, contribute to the continued feeling of adversity and stress experienced by the second generation of such origin. Their hopes and expectations of upward social mobility are undermined by social barriers that create an even greater sense of distress compared with their parents' generation. Kessler, Mickelson, and Williams (1999) further provided support for the role of perceived discrimination as a significant stressor that mediates the association between disadvantaged social groups and mental ill health. Indeed, some time ago Schwartz et al. (1991) found that Israeli Jews of North African/Asian origin were the object of prejudicial

attitudes manifested in the desire for social distance even when SES was controlled.

Interestingly, when examining gender differences in the prevalence rates of CMD-12 months within the generations different trends emerged. Particularly noticeable is the persistent high prevalence rate of CMD-12 months in African/Asian women in both generations despite the significant advancement in their education level. This may be explained by the added risk embodied in the double-minority status. These findings may be explained within the framework of social causation theory, by the significant sociopolitical gains made by Jewish men of North African/Asian descent over time, compared with women of the same ethnic group. Social researchers suggested that most gains observed in this ethnic group over the years were in the political and military areas (Smootha, 2003), which are heavily dominated by men. Thus, although second-generation North African/Asian women gained more years of education compared with their mothers – a gain that is larger than that observed among the men – they were not able to translate these advances into sociopolitical gains. This may have resulted in greater experience of relative deprivation compared with their male counterparts (Walker & Smith, 2001).

### Limitations

This study has several limitations. First, data are presented across different countries of origin. This might have concealed important intra-ethnic differences (e.g. immigrants from Morocco had a lower status than those from Iraq; similarly for those from Romania compared to those from Poland). Second, the analysis included disorders for which women typically have higher prevalence rates than men, such as anxiety and depression. Therefore, the findings related to gender differences may not generalize to psychiatric disorders more characteristic of men, such as substance abuse or antisocial personality (c.f. Dohrenwend et al., 1992).

This study highlights the importance of investigating ethnic mental health disparities, particularly among immigrant societies, to gauge the specific – and often unmet – needs for services of minority groups, including in the second generation (Alegria & Woo, 2009). The needs assessment should take into account, at least, the SES and ethnic status in each gender.

### Acknowledgements

This study was supported by Marie Curie Reintegration Grant funded by the European Union (#IRG231007 to Dr Nakash) and the Israel National Institute for Health Policy and Health Services Research (2006/6/ to Nakash).

This survey was funded by the Ministry of Health, the National Health Institute and the National Insurance Institute. It was carried out in conjunction with the World Health Organization/World

Mental Health (WMH) Survey Initiative. We thank WMH Data Collection and Data Analysis Coordination Centres for their assistance. These activities were supported by the National Institute of Mental Health (R01 MH070884), the MacArthur Foundation, the Pfizer Foundation, the US Public Health Service (R13-MH066849, R01-MH069864), the Fogarty International Center (FIRCA R03-TW006481) and the Pan American Health Organization.

### References

- Alegria, M., Canino, G., Shrout, P. E., Woo, M., Duan, N., Vila, D., Meng, X.-L. (2008). Prevalence of mental illness in immigrant and non-immigrant US Latino groups. *American Journal of Psychiatry*, *165*, 359–369.
- Alegria, M., & Woo, M. (2009). Conceptual issues in Latino mental health. In J. Grau, M. Azmitia, N. Cabrera, G. Carlo, J. Chain & F. A. Villarruel (Eds), *Handbook of Latino psychology: Community and developmental perspectives* (pp. 15–30). Thousand Oaks, CA: SAGE.
- Aneshensel, C. S. (2009). Toward explaining mental health disparities. *Journal of Health and Social Behavior*, *50*, 377–394.
- Ben-Rafael, E., & Peres, Y. (2005). *Is Israel one? Religion, nationalism and ethnicity confounded*. Boston and Leyden: Brill Academic Publisher.
- Braveman, P. A. (2006). Health disparities and health equity: Concepts and measurement. *Annual Review of Public Health*, *27*, 167–194.
- Braveman, P. A., Egerter, S., & Williams, D. R. (2011). Social determinants of health coming of age. *Annual Review of Public Health*, *32*(1), 381–398.
- Braveman, P. A., Egerter, S. A., & Mockenhaupt, R. E. (2011). Broadening the focus: The need to address the social determinants of health. *American Journal of Preventive Medicine*, *40*(1), S4–S18.
- Breslau, J., Kendler, K. S., Su, M., Gaxiola-Aguilar, S., & Kessler, R. C. (2005). Lifetime risk and persistence of psychiatric disorders across ethnic groups in the United States. *Psychological Medicine*, *35*, 317–327.
- Cohen, I. (2006). National, gender and ethnic income disparities [Hebrew]. In U. Ran & N. Berkovitz (Eds), *Inequality* (pp. 339–347). Beer Sheva: Ben Gurion University Press.
- Dahan-Kalev, H. (1999). Menuhshalot: Gender blindness of political theories and transparency of African/Asian women [Hebrew]. *Sociologia Israelit*, *4*, 265–287.
- Dohrenwend, B. P. (1998). *Adversity, stress, and psychopathology*. Oxford: Oxford University Press.
- Dohrenwend, B. P., Levav, I., Shrout, P. E., Schwartz, S., Naveh, G., Link, B. G., Stueve, A. (1992). Socioeconomic status and psychiatric disorders: The causation-selection issue. *Science*, *255*, 946–952.
- Dovidio, J. F., Gaertner, S. L., Kawakami, K., & Hodson, G. (2002). Why can't we just get along? Interpersonal biases and interracial distrust. *Cultural Diversity and Ethnic Minority Psychology*, *8*, 88–102.
- Efroni, L. (1997). In Israel men earn 1.9 more than women. Retrieved from <http://lib.cet.ac.il/pages/item.asp?item=3131> [in Hebrew].
- Epstein, L., & Horev, T. (2007). *Inequality in health and in the health system*. Jerusalem: Taub Center for Social Policy Studies in Israel [in Hebrew].

- Ferdinand, K. C., & Armani, A. (2009). *Cardiovascular disease in racial and ethnic minorities (Contemporary Cardiology)*. New York: Humana Press.
- Goldberg, D. P. (1978). *Manual of the General Health Questionnaire*. Windsor: NFER.
- Hever, H., Shenhav, Y., & Motzafi-Haller, P. (2003). *African/Asian in Israel: A critical observation into Israel's ethnicity*. Tel Aviv: Van Leer Institute and HaKibbutz HaMeuchad Publishing House [in Hebrew].
- Institute of Medicine. (2002). Unequal treatment: Confronting racial and ethnic disparities in health care. Retrieved from <http://www.iom.edu/~media/Files/Report%20Files/2003/Unequal-Treatment-Confronting-Racial-and-Ethnic-Disparities-in-Health-Care/DisparitiesAdmin8pg.pdf>
- Israel Central Bureau of Statistics. (2010). *Current data on the population in Israel* [in Hebrew]. Retrieved from [http://www.cbs.gov.il/reader/?Mival=cw\\_usr\\_view\\_SHTML&ID=629](http://www.cbs.gov.il/reader/?Mival=cw_usr_view_SHTML&ID=629)
- Kaplan, G., Glasser, S., Atamna, A., Alpert, G., Goldbourt, U., & Kalter-Leibovici, O. (2010). Depression among Arabs and Jews in Israel: A population-based study. *Social Psychiatry and Psychiatric Epidemiology*, 45, 931–939.
- Kashti, U. (1997). *The ethnic gap* (Vol. XIII). Jerusalem: Alternative Information Center.
- Kessler, R. C., Mickelson, K. D., & Williams, D. R. (1999). The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior*, 40, 208–230.
- Kessler, R. C., & Ustun, T. B. (2004). The World Mental Health (WMH) survey initiative version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *International Journal of Methods in Psychiatric Research*, 13, 93–121.
- Levav, I. (2009). *Psychiatric and behavioral disorders in Israel*. Jerusalem: Gefen Publishing House.
- Levav, I., Al-Krenawi, A., Ifrah, A., Geraisy, N., Grinshpoon, A., Khwaled, R., & Levinson, D. (2007). Common mental disorders among Arab-Israelis: Findings from the Israel National Health Survey. *Israel Journal of Psychiatry and Related Sciences*, 44, 104–113.
- Levav, I., Kohn, R., Dohrenwend, B. P., Shrout, P. E., Skodol, A. E., Schwartz, S., Naveh, G. (1993). An epidemiological study of mental disorders in a 10-year cohort of young adults in Israel. *Psychological Medicine*, 23, 691–707.
- Levinson, D., Paltiel, A., Nir, M., & Makovki, T. (2007). The Israel national health survey: Issues and methods. *Israel Journal of Psychiatry and Related Sciences*, 44, 85–93.
- McManus, S., Meltzer, H., Brugha, T., Bebbington, P., & Jenkins, R. (2009). Adult psychiatric morbidity in England, 2007: Results of a household survey. Retrieved from [http://www.ic.nhs.uk/webfiles/publications/mental%20health/other%20mental%20health%20publications/Adult%20psychiatric%20morbidity%202007/APMS%2007%20\(FINAL\)%20Standard.pdf](http://www.ic.nhs.uk/webfiles/publications/mental%20health/other%20mental%20health%20publications/Adult%20psychiatric%20morbidity%202007/APMS%2007%20(FINAL)%20Standard.pdf)
- Marmot, M. (2010). *Fair society, healthy lives: The Marmot review; strategic review of health inequalities in England post-2010*. London: The Marmot Review.
- National Center for Health Statistics. (2004). *Health United States 2004, with chart book on trends in the health of Americans*. Hyattsville, MD: US Government Printing Office.
- Saguy, T., Dovidio, J. F., & Pratto, F. (2008). Beyond contact: Intergroup contact in the context of power relations. *Personality and Social Psychology Bulletin*, 34, 432–445.
- Schwartz, S., Link, B. G., Dohrenwend, B. P., Naveh, G., Levav, I., & Shrout, P. (1991). Separating class and ethnic prejudice: A study of North African and European Jews in Israel. *Social Psychology Quarterly*, 54, 287–298.
- Shai, S., Olitzki, T., Ben Shetrit, M., & Mironitzev, N. (2005). *Entitlement and non-entitlement for Bagrut certificates: Analysis of Israeli high school students achievements' by demographic and scholar variables*. Jerusalem: Center for Social Justice and Democracy in memory of Yaakov Hazan in Van Lir institute [in Hebrew].
- Shalom-Chetrit, S. (2010). *Intra-Jewish conflict in Israel: White Jews, black Jews*. London: Routledge.
- Sharon, A., Levav, I., Brodsky, J., Shemesh, A. A., & Kohn, R. (2009). Psychiatric disorders and other health dimensions among Holocaust survivors 6 decades later. *British Journal of Psychiatry*, 195, 331–335.
- Shenhav, Y. (2003). *The Arab Jews: Nationality, religion and ethnicity*. Tel Aviv: Am Oved.
- Shohat, E. (2006). *Taboo memories, diasporic voices*. Durham, NC: Duke University Press.
- Smootha, S. (2003). Jewish ethnicity in Israel as a persistent real phenomenon. *Iyunim Bitkumat Israel*, 13, 413–425 [in Hebrew].
- Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. M. B., Nadal, K. L., & Esquilin, M. (2007). Racial microaggressions in everyday life. *American Psychologist*, 62, 271–286.
- Vega, W. A., Kolody, B., Aguilar-Gaxiola, S., Alderete, E., Catalano, R., & Caraveo-Anduaga, J. (1998). Lifetime prevalence of DSM-III-R psychiatric disorders among urban and rural Mexican Americans in California. *Archives of General Psychiatry*, 55, 771–778.
- Walker, I., & Smith, H. J. (2001). *Relative deprivation: Specification, development, and integration*. Cambridge: Cambridge University Press.
- Williams, D. R., & Mohammed, S. A. (2009). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine*, 32(1), 20–47.
- Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2003). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health*, 93, 200–208.