Isr J Psychiatry Relat Sci Vol 44 No. 2 (2007) 104–113

Common Mental Disorders Among Arab-Israelis: Findings from the Israel National Health Survey

Itzhak Levav, MD,[1] Alean Al-Krenawi, PhD,[2] Anneke Ifrah, MPH,[3] Nabil Geraisy, MD,[4] Alexander Grinshpoon, MD,[1] Razek Khwaled, MA,[1] and Daphna Levinson, PhD[1]

1 *Mental Health Services, Ministry of Health, Jerusalem, Israel*

2 *Ben-Gurion University, Beersheba, Israel*

3 *Israel Center for Disease Control, Ministry of Health, Jerusalem, Israel*

4 *Northern Regional Office, Ministry of Health, Haifa, Israel*

Abstract: Objectives: Psychiatric epidemiological data on Arab populations are generally scanty. This community-based survey, a component of the World Health Organization's 27-country study, explored the prevalence rates of anxiety and mood disorders, emotional distress and help-seeking practices among Arab-Israelis, and compared them with those found among Jewish-Israelis. *Methods*: Close to 5,000 non-institutionalized individuals were interviewed with the WHO/Composite International Diagnostic Interview (CIDI) to determine the prevalence rates of selected psychiatric diagnoses, and with the 12-item General Health Questionnaire (GHQ) to measure emotional distress. The schedule included other items, e.g., socio-demographic variables and help-seeking practices. *Results*: Arab-Israelis, in contrast to Jewish-Israelis, had higher mean GHQ-12 scores and lower self-appraisal of mental health. Twelve-month prevalence rates for any anxiety or affective disorder were not significantly higher among Arab-Israelis. Among respondents with diagnosed disorders, rates of help-seeking from specialized health services were lower among Arab-Israelis than among Jewish-Israelis. Intention to consult was elicited from both groups when the disorders were accompanied by higher distress scores. *Conclusions*: Despite major health gains, the social stresses impacting the Arab-Israeli minority may explain both the higher emotional distress and lower self-appraisal of mental health. However, no impact was observed of social causation factors on the rates of common mental disorders in the Arab-Israeli group. Cultural factors, including the definition of disorders and stigma and a lesser availability of culturally-tailored services, could account for the marked treatment gap.

Introduction

At 19.1%, Arab-Israelis constitute a sizeable minority of the Israeli population. Yet, except for a few studies (1–3), psychiatric epidemiological research on the Arab population remains wanting. A similar situation is found in most Arab countries, where only a few community-based surveys have been conducted (4–6). In Lebanon, where epidemiological research thrives compared to other Arab countries, 500 community respondents were interviewed in the early 1990s with the Diagnostic Interview Schedule (DIS), version III. The lifetime rates for major depression were the highest of a group of ten countries that participated in an international study, overall, 19.0%; women, 23.1%; men, 14.7%. These relatively high rates were attributed to the effects of the civil war that had raged in that country (6). Additional psychiatric epidemiological surveys in Arab countries focused on selected, relatively small populations, typically, primary medical care visitors (7).

Lately, the World Mental Health Survey (WMHS), launched and coordinated by WHO and Harvard University in 27 countries (8), investigated the prevalence of several disorders as well as service-related factors, such as the use of services. This global effort included Israel and Lebanon; both sites open (Israel) and broaden (Lebanon) a still narrow psychiatric epidemiological window into Arab populations (4). The more recent and larger WMHS-Lebanese study yielded the following 12-month prevalence rates: anxiety, 11.2% (95% CI 8.9–13.5); and mood disorders, 6.6% (95% CI 4.9–8.2) (8).

Help-seeking practices. Authors have discussed the assumptive world (9) that orients some Arab groups

Address for Correspondence: Itzhak Levav, MD, 29 Rivka Street, Jerusalem, Israel.
E-mail: Itzhak.Levav@moh.health.gov.il

regarding the etiology of mental disorders and the sources of care. In many Arab countries, the assumptive world has had limited interaction with western psychiatry, while in Israel, as a result of the higher supply of services, the interaction has been greater. However, the behavioral expression of such a set of concepts in the use of mental health services in Israel remains generally unknown, except for national data on psychiatric hospitalizations (1) for all Arab-Israelis, and anthropological data on the Bedouin population. With regard to the latter group, a recent study reported that men were more familiar with the biomedical model, while women relied on traditional practitioners (10). Also, female patients were aware of the stigma associated with seeking psychiatric services, viewed as the repository of their family's honor; contacts of this nature among unmarried women risk jeopardizing both their honor and marital prospects (11). Conceivably, such avoidance may give room to symptom substitution, physical complaints being perceived as a more legitimate pathway to care since individuals are assumed to have no control over them (12).

The extent of the treatment gap, defined as the difference between the true and treated prevalence rates of mental disorders (13), is probably one mode of expression of the assumptive world. The WMHS, in addition to data on morbidity, also provides information on the treatment gap (8).

Arabs in Israel. Arab-Israelis include three groups classified by their religious affiliation: Moslems (1,055,400), Christians (115,000), and Druze (109,600), as of 2003. Although different in many regards other than religion (e.g., median age: 18.5, 27.9, and 22.7 respectively, and health status: e.g., for infant mortality the respective rates for 2003 are 8.6, 3.2 and 7.1 per 1,000 live births (14), we aggregated them due to power analysis constraints. The Arab minority, which enjoys full citizenship rights and which has made remarkable progress in health and life expectancy over the years (14), still suffers from a disadvantaged position in the larger society (15). As for Arab-Israeli women, their social disadvantage is compounded by their subordinate position in a patriarchal community (16). They share this plight with women in most Arab countries (17, 18).

A case for study. Socio-psychological factors which may have an effect on the prevalence rates of anxiety and depression disorders can be traced to the rapid process of social change taking place in the Arab-Israeli population, analogous to that described by Ghubash et al. (19) in Dubai, in which tradition and modernity clash daily, and to the experience of the *Nakba* (Arabic for catastrophe) which for the Arab population followed the establishment of the State of Israel and the defeat of Arab armies in the War of Independence in 1948. Conceivably, these socio-psychological factors may have had an effect on the prevalence rates of anxiety and depression disorders, as elicited by CIDI, and/or on emotional distress, as determined by the GHQ. For women, social stress may be further amplified. Seif El Dawla noted: "When women's position in Arab society is examined there are sufficient causes in current social arrangements to account for the surfeit of depression and anxiety …" (14).

Objectives of this report. To identify the true prevalence rates and socio-demographic covariates of anxiety and depressive disorders, emotional distress, self-appraisal of mental health and help-seeking among Arab-Israelis in contrast with Jewish-Israelis.

Material and Methods

Our household survey followed the procedures established by the World Mental Health initiative (8, 20).

Sampling procedure. The sample population was extracted from the National Population Register (NPR) and comprised non-institutionalized *de jure* residents aged 21 and over. The sample was designed to reflect a fixed distribution of respondents combining the following characteristics: 1. Population groups, Arab and Jewish (Israel-born, pre- and post-1990 immigrants); 2. Age groups, 21–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75 and above; and 3. Gender.

In large localities (N=73), where approximately 80% of the total population live, a one-stage stratified sample was drawn. Each stratum was defined as a combination of population group, age and gender. The records in each stratum were sorted by geographic characteristics and a systematic sample was drawn. In small localities (N=1113), a two-stage

sample was drawn. First, the localities were assigned to 33 strata according to localization, size, and type (e.g., village, kibbutz). A systematic sample of localities was drawn from each stratum with probability proportional to their size; 89 localities were selected, at least two localities in each stratum. In the second stage, the sampling rate was set so that the final probability of individuals was fixed across localities. A systematic sample of individuals in the sampled localities was drawn from the NPR, after sorting the records by population group, age and gender. On average, 15 respondents were selected in each locality.

Weighting procedures. The interviewed 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 of Statistics (CBS) sources.

The questionnaire. The survey instrument was a detailed, computerized schedule that included:

1. Socio-demographic information; 2. The 12-item General Health Questionnaire (GHQ-12), which has previously been used both locally (2) and in Arab countries (7). This scale serves to screen for psychiatric disorder and to measure emotional distress. Scores range between 12 and 48, where higher scores indicate increased distress. 3. The World Mental Health Survey (WMH)-CIDI, a fully structured diagnostic instrument which assesses lifetime and recent prevalence of disorders according to both the ICD-10 and the DSM-IV psychiatric classification systems. In our survey the following disorders were assessed: anxiety disorders (panic disorder, generalized anxiety disorder, agoraphobia without panic disorder, and post-traumatic stress disorder); mood disorders (major depressive disorder, dysthymia, bipolar I and II disorders); and substance use disorders (alcohol and drug abuse and dependence). Prevalence estimates of mental disorder were determined by whether respondent's past or current symptoms met the 12-month and/or lifetime diagnostic criteria for DSM-IV disorder. For each disorder, a screening section was administered to all respondents. All participants answering positively to a specific screening question were referred to the respective diagnostic section of the questionnaire. Whenever appropriate, organic exclusion criteria were taken into account in the evaluation of the DSM-IV diagnoses. 4. Items exploring the use of general and mental health services. Respondents were asked whether they had consulted with any one of a list of professionals for problems related to their mental health. The professionals included those in specialized mental health services (psychologists, psychiatrists, social workers), general medical professionals (such as family physicians), religious counselors (rabbis, sheikhs), and other healers (e.g., naturopaths). Respondents who never used professional or traditional services were asked whether they ever thought they needed such services or whether they intended to consult. 5. Self-appraisal of mental health. All respondents were asked to appraise their mental health using a 1 to 5 scale, from excellent to poor. 6. Self-appraisal of social status. Respondents were asked to rate their social status on a 1–10 scale in relation to that of the general society, from the lowest, 1, to the highest, 10.

The original English schedules were translated into Arabic and Hebrew following a translation and back-translation procedure. Special attention was given to the cultural adequacy of terms and their acceptability to respondents with different educational backgrounds. A panel of experienced clinicians, whose mother tongue was Arabic or Hebrew, discussed the equivalence of terms. Three of the authors (AA, NG and RK) are familiar with questionnaire construction in Arabic.

Field operation. The interviews were conducted from May 2003 to April 2004. The survey was administered using laptop computer-assisted personal interview (CAPI) methods by professional survey interviewers trained and supervised by the CBS. The interviews were conducted in Arabic, Hebrew or Russian, according to the respondent's preference. The overall response rate was 73%; 88% among Arab-Israelis and 71% among Jewish-Israelis, totaling 4,864 completed interviews. There were no replacements.

The survey and field procedures were approved by the Human Subjects Committee of the Eitanim-Kfar Shaul Hospitals.

Statistical analysis. This analysis is based on the two main subgroups of the entire sample: Arab-Israelis:

men, 324; women, 335; and Jewish-Israelis: (local-born or immigrants who arrived before 1990); men, 1662; women, 1670.

For the analysis, educational level was dichotomized as lower (0–9 years) and higher (10 years and above). Age was classified into two groups, 21–49 years and 50 and above. Marital status was classified as married, divorced or separated,, and never married. Income was dichotomized as below and above the median national income. Number of children and persons in the household were grouped as follows, 1–3, 4–6, and 7 and over. Employment was classified into three groups: employed, unemployed in the last 12 months, and not in the workforce. Twelve-month prevalence rates and standard errors were calculated. GHQ scores were analyzed by population group (Arab-Israelis vs Jewish-Israelis), gender and education using analysis of variance (MANOVA). The association between help-seeking practices and socio-demographic variables were studied by means of univariate and multivariate analyses.

Table 1. *Socio-demographic characteristics of the Arab-Israeli and Jewish-Israeli study samples (raw figures and weighted proportions)*

Variables	Jewish-israelis				Arab-Israelis			
	Males		Females		Males		Females	
	N	%	N	%	N	%	N	%
Age groups								
21–49	1003	63	961	61	251	78	247	76
50+	659	37	709	39	73	22	88	24
Family status								
Married	1139	70	1066	66	255	77	241	73
Separated/Divorced/Widowed	135	7	335	18	6	2	35	9
Never married	388	23	269	16	63	21	59	18
Educational level								
Lower, 0–9 years	161	9	226	13	110	34	152	45
Higher, 10+ years	1495	91	1438	87	211	66	183	55
Income								
Below the median	618	41	661	45	244	78	271	84
Above the median	1044	59	1009	55	80	22	64	16
No. of persons in household								
1–3	869	48	967	53	74	19	99	23
4–6	721	46	636	42	181	56	170	52
7+	72	6	67	6	69	25	66	25
No. of children								
1–3	868	70	951	70	96	42	100	39
4–6	277	24	298	25	104	42	103	41
7+	53	5	59	5	37	16	53	20
Employment status								
Employed	1123	64	936	54	212	62	90	22
Unemployed	90	6	98	7	36	7	23	4
Does not belong to the workforce	449	30	636	39	76	31	222	74

Table 2. *Mean 12-GHQ scores by demographic variables (univariate analysis)*

Variables	Sample N	Mean scores	SE	p
Total	3889	7.9	0.11	
Population groups				<0.0001
Arab-Israelis	632	10.8	0.35	
Jewish-Israelis	3257	7.3	0.11	
Gender				<0.0001
Male	1943	7.0	0.15	
Female	1946	8.6	0.15	
Age groups				<0.0001
21–49	2435	7.4	0.13	
50+	1454	8.6	0.19	
Family status				<0.0001
Married	2637	7.5	0.13	
Separated/divorced/widowed	479	10.4	0.38	
Never married	773	7.4	0.20	
Median income				<0.0001
Below	1741	8.6	0.17	
Above	2148	7.0	0.12	
Educational level				<0.0001
Lower, 0–9 years	2162	9.0	0.16	
Higher, 10+ years	1713	6.3	0.12	
Employment status				<0.0001
Employed	2338	6.4	0.10	
Unemployed in the past 12 months	239	9.3	0.47	
Not in the workforce	1312	9.7	0.22	

Table 3. *Multivariate analysis of emotional distress by population group, gender, age group and educational level: mean GHQ scores and 95% confidence intervals*

Mean GHQ (95% CI)								
Population groups*	Arab-Israelis				Jewish-Israelis			
Gender*	Males		Females		Males		Females	
Age groups*	21–49	50+	21–49	50+	21–49	50+	21–49	50+
Educational level*								
Lower, 0–9 years	9.9	14.7	11.3	15.1	6.7	7.8	8.6	10.2
of schooling	(8.3–11.5)	(12.3–17.0)	(10.3–12.3)	(12.5–17.7)	(6.2–7.2)	(7.0–8.6)	(8.0–9.3)	(9.4–10.8)
Higher 10+ years	7.1	5.6	8.9	8.3	5.5	5.7	6.6	7.0
of schooling	(5.5–8.8)	(2.9–8.2)	(7.6–10.3)	(0.5–16.0)	(5.1–5.9)	(5.0–6.4)	(6.2–7.0)	(6.3–7.7)

*p<0.0001

Results

Sample characteristics. Table 1 describes the sample by selected socio-demographic features. In comparison with Jewish-Israeli respondents, Arab-Israelis were younger, more likely to be married, with lower incomes, lower levels of education, larger families with more individuals living in the household. In addition, they were less likely to be employed full time and, for women, less likely to be in the workforce.

Emotional Distress. The 12-GHQ scale showed high reliability, Cronbach's *alpha*: 0.76 for Arab-Israelis and Jewish-Israelis, in both genders.

Univariate analysis. Arab-Israeli respondents, both men and women, had higher mean scores: overall score, 10.8 (SE 0.35); men, 10.2 (SE 0.5); women, 11.5 (SE 0.41), than their Jewish counterparts: overall score, 7.3 (SE 0.11); men, 6.4 (SE0.14); women, 8.1 (SE 0.15). Both differences were statistically significant ($p<0.0001$). Mean GHQ scores were significantly higher among older adults (ages 50 and above); respondents with lower levels of education; those with incomes below the median; and individuals outside of the workforce or who had been unemployed during the past year (Table 2).

Multivariate analysis. In the multivariate analysis (MANOVA), population group (Arab/Jews), gender, age and education were included in the model (Table 3). In all categories, GHQ scores were higher among Arab-Israelis than in Jewish-Israelis, among women than in men, and among those of lower than higher educational status. Older age (50 and above) was found to be a significant risk factor only among those of lower educational status. The highest GHQ mean score was found among older Arab-Israeli women of lower educational status (15.1; 95% CI 12.5–17.7). Younger Jewish-Israeli men of higher educational status had the lowest score (5.5; 95% CI 5.1–5.9).

Prevalence of Common Mental Disorders

Anxiety Disorders. Overall, there were no statistically significant differences between Arab-Israelis and Jewish-Israelis in the 12-month prevalence rates of any anxiety disorder (Table 4). Among men, Arab-Israelis had higher rates than Jewish-Israelis, 3.7% (2.1–6.5) and 2.8% (2.1–3.8), respectively. The findings were in the opposite direction for women: Arab-Israelis, 3.0% (1.5–5.8) and Jewish-Israelis, 3.6% (2.8–4.6).

Affective Disorders. The overall 12-month prevalence rates were, for Arab-Israelis, 8.2% (6.2–11.0) and for Jewish-Israelis, 5.9% (5.1–6.8). The respective rates for men were 6.2% (3.8–9.4) and 4.7% (3.8–5.8), and for women, 10.5% (7.3–14.8) and 7.1% (5.9–8.5). Differences between Arab-Israelis and Jewish-Israelis were of borderline significance ($p=0.06$).

The combined rates of any affective or anxiety disorder were higher among Arab-Israelis than among Jewish-Israelis, and higher among women than among men. These differences, however, did not reach statistical significance (Table 4).

Table 4. *12-month prevalence rates of DSM-IV any affective and anxiety disorder by population group and gender (%)*

Population groups	n	Any affective disorder* % (95% CI)	Any anxiety disorder** % (95% CI)	Any affective or anxiety disorder** % (95% CI)
Arab-Israelis		8.2 (6.2–11.0)	3.3 (2.2–5.0)	11.1 (8.7–14.2)
Males	324	6.2 (3.8–9.4)	3.7 (2.1–6.5)	10.2 (7.0–14.7)
Females	335	10.5 (7.3–14.8)	3.0 (1.5–5.8)	12.0 (8.6–16.7)
Jewish-Israelis		5.9 (5.1–6.8)	3.2 (2.6.2–3.9)	9.3 (8.3–10.3)
Males	1662	4.7 (3.8–5.8)	2.8 (2.1–3.8)	8.4 (7.2.-9.8)
Females	1670	7.1 (5.9–8.5)	3.6 (2.8–4.6)	10.1 (8.6–11.7)

* overall gender difference: $p=0.0008$. overall Arab-Israel/Jewish Israeli difference: $p=0.06$

** overall gender difference: NS overall Arab-Israeli/Jewish-Israeli difference: NS

Table 5. *Mean GHQ scores by population group, presence of anxiety or mood disorder and expressed need for care*

Population group	Arab-Israelis				Jewish-Israelis			
	Affective or anxiety disorder		No affective or anxiety disorder		Affective or anxiety disorder		No affective or anxiety disorder	
Expressed need for care	n	Mean GHQ (SE)	n	Mean GHQ (SE)	n	Mean GHQ (SE)	n	Mean GHQ (SE)
Yes	18	20.1 (1.2)	27	16.6 (1.1)	42	15.8 (1.2)	130	11.3 (0.5)
No	34	16.7 (1.6)	546	9.3 (0.3)	134	13.6 (0.8)	2702	6.0 (0.1)

GHQ and any anxiety or affective disorder. Mean GHQ scores for respondents who were diagnosed with any disorder, anxiety or affective, were considerably higher for Arab men (18.9; SE 1.5) than for Jewish men (13.6; SE 0.7). Findings were similar for women: Arab women, 18.6 (SE 1.3), and Jewish women, 15.4 (SE 0.6).

Help-seeking. A considerably higher proportion of Jewish-Israeli than Arab-Israeli respondents, both men and women, sought help from the medical or psychiatric health systems when affected by any anxiety or affective disorder in the last 12 months: Jews, 8.6%; Arabs, 3.8%. Among those respondents who had never sought such help, 5.8% of Jews and 7.5% of Arabs nevertheless considered that they were in need of help. GHQ scores were higher among respondents who thought they needed help than among those who did not think they were in need of help, and were consistently higher among Arab-Israeli respondents (Table 5).

Self-appraisal of mental health. Respondents were asked to rate their overall mental health from excellent to poor. The appraisal of their mental health was as follows: excellent or very good: Arab-Israelis, 61.2% and Jewish-Israelis, 72.8%; good: 16% and 6.9%, respectively; fair: 11.8% and 5.7%, respectively; and poor: 4.2% and 1.2%, respectively. Women in both population groups were more likely than men to rate their mental health as poor. The difference between Arab-Israelis and Jewish-Israelis was statistically significant (Mann-Whitney, $p<.0001$).

Self-appraisal of social status. Respondents rated their social status on a 1–10 scale in relation to that of the population of Israel, from the lowest, 1, to the highest, 10. Overall, the mean rating of the Arab-Israelis respondents was 4.76 (SE 0.26) (men, 5.05 [SE 0.48]; women, 4.5 [SE 0.15]). The mean rating of the Jewish-Israeli respondents was significantly higher, both overall and separately, in both genders: overall, 6.5 (SE 0.12) (men, 6.8 [SE 0.21]; women, 6.27 [SE 0.12]).

Discussion

Several constraints limited our ability to examine more closely the common mental disorders among the Arab population, including their magnitude and covariates. Firstly, following the protocol of the WMH study, the Arab-Israeli minority group was not over-sampled (8). As a result, the relatively small number of cases in some cells ruled out more complex analyses, and differences that possibly existed did not reach statistical significance. Second, to increase the statistical power, Arab-Israelis of Christian, Druze and Moslem religious affiliation were grouped together, although they differ in many respects, as noted in the introduction. A third limitation is that somatization disorders, which have been noted to be relatively frequent among Arab populations (4, 13), but not by all authors (21), were not included in this study. Lastly, the study was conducted during the second *Intifada*, however, the differential impact of this conflict on the different Arab- and Jewish-Israeli groups was not specifically assessed.

Several strengths balanced out those limitations: The World Mental Health Survey, of which this study was part, utilizes an identical system of case identification and diagnosis, thus enabling future comparisons with Lebanon, the single Arab country that participated in the WMH study, and, eventually,

with other countries. Our response rate was very satisfactory, particularly among the Arab-Israeli respondents: 88%. Finally, we believe that our study met adequate standards of cultural sensitivity and awareness, taking into account, for instance, that the study of depressive affect necessitates identification of the linguistic patterns used by individuals to describe their emotional pattern when depressed (22). In this respect, the extensive experience with Arabic-speaking patients of two of the authors (AA and NG) enabled us to move from an initial etic to an emic approach (23).

Arab-Israelis differed from Jewish-Israelis in a number of parameters: they had higher scores of emotional distress, lower self-appraisal of mental health, and fewer requests for psychiatric help. The following factors, among others, may explain the higher emotional distress scores among Arab Israelis: 1. Response style might be imputed, as noted in an earlier community-based study on the elderly (2). Arab-Israeli respondents seem to more readily express and amplify complaints in contrast to their Jewish-Israeli counterparts, as noted for every gender, educational level and age group. 2. The compounded social stress experienced by the Arab minority is in all likelihood an additional factor. Indeed, the Arab population, in addition to being more disadvantaged — which was subjectively acknowledged with regard to the self-appraisal of social status — is under the pressure of westernization and the need to succeed in a developed country. In this dual process, Arab women are probably more affected than men due to their subordinate status in a traditional, patriarchal society. Despite considerable health gains made by Arab-Israelis (14), in contrast to the Jewish-Israeli majority their status lags behind (14). This is analogous to other social fields where researchers have found that relative differences in income significantly affect happiness, even when absolute income is held constant (24).

Interestingly, the social stresses inherent in the minority status of Arab-Israelis were not significantly associated with differential rates of common mental disorders. This lack of effect of social causation factors with regard to common mental disorders was similarly noted by Kessler et al. (25), but not by others (26).

How does this study fare in relation to others conducted in Arab countries? Comparisons are hindered by both the rarity of community psychiatry surveys in the region (4) and by methodological issues, such as the use of different diagnostic instruments and the time period reported for the rates. The study in Al Ain, in the United Arab Emirates, used CIDI, but it reported lifetime rates (4), which are known to be unreliable. The above-mentioned study in Dubai used the PSE-Psychiatric Status Examination diagnosis (19), while in Lebanon the DIS was used for the same purpose (6). It is only within the framework of the World Health Survey that Israel and Lebanon could compare prevalence rates. Until further analysis is carried out, we may only compare the rates of affective disorders: Arab-Israelis have a higher overall 12-month prevalence rate than was found in Lebanon (8.2% [8.2–8.3] *vs* 6.6% [4.9–8.2], respectively).

Arab-Israeli respondents sought less help from health services than their Jewish counterparts, possibly due to issues of stigma and/or less available culturally appropriate services. This pattern, however, was reversed with regard to the stated intention to consult when a disorder, affective or anxiety, was present. Importantly, studies have found that Arab-Israeli women are more likely to make use of telephone counseling than men (27), although the majority of mental health system users are men (28). This suggests that if the barriers of confidentiality and anonymity could be lowered, despite the widespread reservations towards mental health care, particularly among women, a greater proportion of those in need of care could make use of mental health services.

Finally, although social and economic changes are taking place among Arab-Israelis, the mental health system still is perceived as a western development, which could very conceivably act as a barrier to the use of mental health services in this population.

Despite major health gains, the social stresses of being a minority that is undergoing major social changes may explain the greater emotional distress among Arab-Israelis. A combination of cultural and political factors, including the perceptions of mental disorder, psychiatric care and stigma, as well as a lesser availability of culturally-tailored services, may

account for the marked treatment gap among Arab-Israelis.

Acknowledgements

This survey was supported by the Ministry of Health, The National Insurance Institute and the National Institute for Health Policy and Health Services Research. We acknowledge with thanks the collaboration of the Central Bureau of Statistics and the Consultative Committee of the study. It was carried out in conjunction with the World Health Organization/World Mental Health (WMH) Survey Initiative. We thank the WMH staff for assistance with instrumentation, fieldwork, and data analysis. These latter activities were supported by the United States National Institute of Mental Health (R01MH070884), the John D. and Catherine T. MacArthur Foundation, the Pfizer Foundation, the U.S. Public Health Service (R13-MH066849, R01-MH069864, and R01 DA016558), the Fogarty International Center (FIRCA R01-TW006481), the Pan American Health Organization/World Health Organization, Eli Lilly and Company, Ortho-McNeil Pharmaceutical, Inc., GlaxoSmithKline, and Bristol-Myers Squibb.

References

1. Mental Health Services. Department of Information and Evaluation: Mental Health in Israel. Statistical Annual 2003. Jerusalem: Ministry of Health, 2004.
2. Shemesh AA, Kohn R, Blumstein T, Geraisy N, Novikov I, Levav I. A community study on emotional distress among Arab and Jewish-Israelis over the age of sixty. Int J Ger Psychiatry 2006;21:64–76.
3. Al-Krenawi A, Graham J, Dean Y, Eltaiba N. Cross-national study of attitudes towards seeking professional help: Jordan, United Arab Emirates (UAE) and Arabs in Israel. Int J Soc Psychiatry 2004; 50: 102–114.
4. Ghubash R. Epidemiological studies in the Arab world. In: Okasha A, Maj M, editors. An Arab perspective. Cairo: World Psychiatric Association, Scientific Book House, 2001.
5. Ghubash R, Hamdi E, Bebbington P. The Dubai community psychiatric survey. I Prevalence and socio-demographic correlates. Soc Psychiatry Psychiatr Epidemiol 1992; 27:53–61.
6. Weissmann MM, Bland RC, Canino GJ, Faravelli C, Greenwald St, Hwu H-G, et al. Cross-national epidemiology of major depression and bipolar disorder. JAMA 1996; 276: 293–299.
7. El-Rufaie OEF, Daradkeh TK. Validation of the Arabic version of the thirty- and twelve-item General Health Questionnaires in primary care. Br J Psychiatry 1996, 169: 662–664.
8. The WHO World Mental Health Survey Consortium: Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. JAMA 2004; 291: 2581–2590.
9. Al-Issa I, Al-JununA, editors. Mental illness in the Islamic world. Madison, Wisconsin: International Universities Press, 2002.
10. Kohn R, Saxena S, Levav I, Saraceno B. The treatment gap in mental health care. Bull World Health Org 2004; 82: 858–866.
11. Al-Krenawi A, Graham JR. Gender and biomedical/traditional mental health utilization among the Bedouin-Arabs of the Negev. Cult Med Psychiatry 1999;23:219–243.
12. Al-Krenawi A. Family therapy with a multiparental/multispousal family. Fam Process 1998; 37: 65–81.
13. Racy J. Somatization in Saudi women: A therapeutic challenge. Br J Psychiatry 1980; 137:212–216.
14. Israel Center for Disease Control. The health status of the Arab population in Israel, 2004. Ministry of Health, State of Israel. July, 2005.
15. Samooha S. The advances and limits of the Israelization of Israel's Palestinian citizens. In: Abdel-Malek A, Jacobson DC, editors. Israeli and Palestinian identities in history and literature. New York: St. Martins' Press, 1999.
16. Elnekave E, Gross R. The healthcare experiences of Arab Israeli women in a reformed healthcare system. Health Policy 2004; 69:101–116.
17. Seif El Dawla A. Social factors affecting women's health in the Arab region. In: Okasha A, Maj M, editors. An Arab perspective. Cairo: World Psychiatric Association, Scientific Book House,2001.
18. Kadri N, Moussaoui D. Mental health of women in the Arab world: Chapter13. In: Okasha A, Maj M, editors. An Arab perspective. Cairo: World Psychiatric Association, Scientific Book House, 2001: pp. 189–206.
19. Ghubash R, Hamdi E, Bebbington P. The Dubai community psychiatric survey. III Acculturation and the prevalence of psychiatric disorders. Psychol Med 1992; 223:121–131.
20. Kessler RC, Ustun TB. The World Mental Health (WMH) Survey initiative version of the World Health Organization Composite International Diagnostic Interview (CIDI). Int J Methods Psychiatr Res 2004; 13: 93–121.

21. Al-Lawati J, Al-Lawati N, Al-Siddiqui M, Anthony SX, Al-Naamani A, Martin RG, Kolbe R, Theodorsson T, Osman Y, Al-Hussaini AA, Al-Adwi S. Psychological morbidity in primary health care in Oman. A preliminary study. Med Sciences 2000; 2:105–110.
22. Amin Y, Hamdi E, Abou-Saleh MT Depression in the Arab world. In: Okasha A, Maj M, editors. An Arab perspective. Cairo: World Psychiatric Association, Scientific Book House, 2001: pp. 89–122.
23. Favazza A, Oman A. Overview: Foundations of cultural psychiatry. Am J Psychiatry 1978; 135: 293–303.
24. Blanchflower D, Oswald A. Well-being over time in Britain and the USA. J Public Economics 2004; 88: 1359–1387.
25. Kessler RC, Foster CL, Saunders W, Stang P. Social consequences of psychiatric disorders, I: Educational attainment. Am J Psychiatry 1995; 1026–1032.
26. Skapinakis P, Lewis G, Araya R, Jones K, Williams G. Mental health inequalities in Wales, UK: Multi-level investigation of the effect of area deprivation Br J Psychiatry 2005; 186:417–422.
27. Al-Krenawi A, Graham J R, Fahker Aldin M. Telephone counseling: A comparison of Arab and Jewish Israeli usage. Int Soc Work 2003; 46:495–509.
28. Feinson M C, Popper M, Handelsman M. Utilization of public ambulatory mental health services in Israel: A focus on age and gender patterns. Jerusalem: Ministry of Health, 1992 (Hebrew).