Psychological Distress and Common Mental Disorders Among Immigrants: Results From the Israeli-Based Component of the World Mental Health Survey

Julia Mirsky, Ph.D.; Robert Kohn, M.D., M.Phil.; Itzhak Levav, M.D., M.Sc.; Alexander Grinshpoon, M.D., Ph.D., M.H.A.; and Alexander M. Ponizovsky, M.D., Ph.D.

Background: The Israel National Health Survey (INHS), the local component of the World Mental Health Survey, was designed to estimate the prevalence rates of common mental disorders and psychological distress in the total adult population. This report focuses on the immigrant population and explores 2 alternative hypotheses about the association between migration and psychiatric morbidity—the migration-morbidity hypothesis and the healthy-immigrant hypothesis.

Method: The INHS included face-to-face interviews, conducted from May 2003 to April 2004, with 2114 Israeli-born Jewish respondents and 844 post-1990 immigrants from the former Soviet Union (FSU). Psychological distress was measured with the 12-item General Health Questionnaire, and psychiatric disorders were diagnosed with the World Mental Health version of the Composite International Diagnostic Interview.

Results: Psychological distress among FSU immigrants was significantly higher than among their Israeli-born counterparts for both genders. Twelve-month prevalence rates of common mental disorders were generally higher in the FSU group of immigrants than in the comparison group (any disorder: men, 9.5% vs. 8.7%, OR = 1.57 [95% CI = 1.44 to 1.71]; women, 12.5% vs. 9.5%, OR = 1.42 [95% CI = 1.33 to 1.53] and mood disorders: men, 5.6% vs. 4.4%, OR = 1.37 [95% CI = 1.27 to 1.54]; women, 8.6% vs. 7.3%, OR = 1.17 [95% CI = 1.07 to 1.28]).

Conclusion: The findings, which generally support the migration-morbidity hypothesis, are discussed in light of the nonselective migration policy implemented in Israel. Additional factors such as length of residence in the host country, immigration circumstances, and ethnicity are associated with immigrants' mental health and need further investigation.

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Corresponding author and reprints: Julia Mirsky, Ph.D., Ben-Gurion University, Beer-Sheva, Israel (e-mail: julmir@bgu.ac.il).

The Israel National Health Survey (INHS) was designed to estimate the true prevalence rates of common mental disorders and psychological distress in the total noninstitutionalized adult population in the country. The INHS was carried out in conjunction with the World Mental Health (WMH) Survey conducted in 27 countries under the guidance of Harvard University, Boston, Mass., and the World Health Organization. The INHS followed the uniform procedures established for the WMH survey.[1] This report, which focuses on the immigrant population from the former Soviet Union (FSU) in Israel, explores the association between migration and both psychological distress and common psychiatric disorders.

Decades of research on the mental health association with psychiatric morbidity have yielded complex and often inconsistent findings.[2–9] Two alternative explanations have been raised to account for those findings. The classical acculturation-stress hypothesis, also known as the migration-morbidity hypothesis, holds that international migration is associated with emotional distress resulting from disruption of family and other support networks; exposure to unfamiliar environments; social exclusion; and—at least in early years, if not permanently—low socioeconomic standing. Short of comparisons made with suitable samples in the country of origin, this hypothesis derives support from findings that show higher psychological distress scores and rates of mental disorders among immigrants compared to suitable nonimmigrant samples in the host country.[10] In contrast, the selection hypothesis, or healthy-immigrant hypothesis, proposes that healthier (and younger and better educated) individuals are more likely to emigrate from their homelands.[8] Usually, they are also strongly motivated to cope with the difficulties of transition arising from challenges, such as unemployment, underemployment, and poverty, and feel supported by the belief that they will overcome those difficulties in due time.[11] A test of this hypothesis relies on the comparison of the immigrants with suitable samples of their country of origin. It receives support from findings that show lower psychological distress and psychiatric morbidity among immigrants. As above, an alternative yet indirect way to test it, given insurmountable built-in difficulties in that design, is to compare the immigrants with suitable groups in the host country. It becomes possible to support this hypothesis, if the results show less morbidity among immigrants than in the host country's nonimmigrant population.

Worldwide findings with regard to the 2 hypotheses are mixed. Some studies supported the migration-morbidity hypothesis,[2–5] while others have provided evidence for the healthy-immigrant hypothesis.[6–9] Findings on the mental health of immigrants in Israel have been equally mixed. The majority of recent studies focused on immigrants who arrived in the country from the FSU before and after the fall of the communist regime, as they comprise 14% of the population and the largest group of immigrants in the country.[12] Most studies found higher psychological distress among these immigrants.[13–19] Given budgetary and methodological constraints, nearly all those studies measured psychological distress with screening scales but failed to ascertain rates of psychiatric disorders. For example, the 27-Demoralization Scale of the Psychiatry Epidemiology Research Interview was applied in a nationally representative sample of 600 FSU immigrants who arrived in Israel in 1989–1990. Statistically significantly higher psychological distress scores were found in this sample (immigrant men, mean = 1.0, SD = 0.1; women, mean = 1.3, SD = 0.1) compared to a sample of Israeli-born Jews (men, mean = 0.8, SD = 0,1; women, mean = 1.0, SD = 0.6).[18] No other studies were based on nationally representative samples, but their results were similar. For example, a study based on a convenience sample of 1953 FSU immigrants[13] reported that the prevalence rate of distress-free symptoms ranged from 9% to 20%, and the rate of distress-related symptoms ranged from 38% to 43%. However, this study did not assess psychiatric morbidity, and neither did it apply a comparative design with a nonimmigrant population.[13] In contrast, the present study assessed psychological distress and the prevalence rate of common psychiatric disorders in a nationally representative sample and compared the FSU immigrant population to the Israeli-born Jewish population.

METHOD

Sampling and Procedure

The sample was extracted from the National Population Register and comprised noninstitutionalized de jure residents aged 21 and older. The sample was designed to reflect gender-age-population distribution of selected groups in the general population including Israeli-born Jews, FSU immigrants, and immigrants from other countries who came to Israel since 1990. The 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 create weighted sample totals conforming to known population totals taken from reliable Central Bureau of Statistics (CBS) sources.

Face-to-face interviews at the homes of respondents were conducted from May 2003 to April 2004 in Hebrew or Russian. The survey was administered by interviewers trained and supervised by the CBS using laptop computer–assisted personal interview.

A letter signed by the Government Statistician, explaining the purpose of the survey and the rights of respondents, was sent to each potential respondent prior to the first contact attempt. Upon making in-person contact with the sampled respondent, the interviewer explained the survey again and obtained verbal informed consent. Interviews, on average, took 60 minutes. The overall response rate was 73%. There were no replacements. Of the total 4859 completed interviews, 844 were with FSU immigrants, and 2114 were with Israeli-born Jewish subjects. The Human Subjects Committee of the Israeli Ministry of Health approved the study.

Assessment of Psychological Distress

Psychological distress was measured with the 12-item General Health Questionnaire (GHQ-12),[20] often used for psychiatric screening in the community and in general practice. The GHQ-12 consists of statements that

Table 1. Demographic Characteristics of Former Soviet Union (FSU) Immigrants and Israeli-Born Jewish Respondents[a]

Sample Characteristic	FSU Immigrants (N = 844), % (N)	Israeli-Born Jews (N = 2114), % (N)	χ^2 Test	df	p
Gender			211.2	1	< .00001
Male	43.7 (384)	50.3 (1081)			
Female	56.3 (460)	49.7 (1033)			
Age, y			1418.3	3	< .00001
21–34	27.6 (209)	47.9 (987)			
35–49	25.5 (213)	32.4 (678)			
50–64	23.4 (205)	15.4 (345)			
65+	23.5 (217)	4.3 (104)			
Marital status			1922.0	2	< .00001
Married	61.2 (512)	64.8 (1333)			
Separated, divorced, widowed	24.3 (216)	7.8 (181)			
Never married	14.5 (116)	27.4 (600)			
Education			971.9	3	< .00001
Lowest quartile	8.5 (76)	12.0 (242)			
Mid-low quartile	22.3 (179)	46.7 (971)			
Mid-high quartile	26.6 (221)	15.8 (338)			
Highest quartile	42.6 (368)	25.5 (563)			
Employment status			370.8	2	< .00001
Employed	54.6 (479)	66.8 (1508)			
Unemployed	6.8 (49)	7.9 (148)			
Not in workforce	38.7 (316)	25.3 (458)			

[a]The Ns presented are unweighted, and the percentages presented are weighted.

describe common psychological symptoms. Respondents rate themselves according to the degree to which they have experienced each symptom over the past few weeks on a 4-point scale (ranging from much less to much more than usual).[20] In this abbreviated version of the General Health Questionnaire, the mean GHQ scores range from 12 to 48.[21,22]

Assessment of Psychiatric Morbidity

The WMH Survey Initiative version of the Composite International Diagnostic Interview (CIDI) made up the core of the interview.[23] This is a fully structured diagnostic instrument that assesses lifetime and recent prevalence of selected psychiatric disorders according to both the ICD-10 and the DSM-IV classification systems. In the INHS, the following disorders were included: anxiety disorders (panic disorder, generalized anxiety disorder, agoraphobia without panic disorder, posttraumatic stress disorder) and mood disorders (major depressive disorder, dysthymia, bipolar I and II disorders). The anxiety disorders excluded specific phobia, social phobia, and obsessive-compulsive disorder. Prevalence estimates of mental disorders were determined by whether respondents' past or current symptoms met the 12-month and/or lifetime diagnostic criteria for DSM-IV disorder (the latter not utilized here). For each disorder, a screening subquestionnaire was administered to each respondent. All participants answering positively to a specific screening item 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.

Statistical Analysis

The SUDAAN statistical package,[24] Taylor series linearization method, was used to estimate the standard errors due to the stratified sample design and the need for weighting. The analysis was conducted using procedures without replacement for nonrespondents. The 12-month prevalence rates for the specific diagnoses and the mean scores for the GHQ-12 were obtained for both the Israeli-born Jews and FSU immigrants. χ^2 Test was used to examine differences in selected categorical demographic risk factors between the 2 groups. Logistic regression and its odds ratio (OR) and corresponding 95% confidence interval (CI) were used to examine the association between specific diagnoses, as the dependent variables, and immigrant status, as the independent variable, controlling for demographic variables that were potential confounders. Similarly, differences between the 2 groups' GHQ mean scores were examined both by a t test and regression analysis controlling for confounders. All results, unless otherwise stated, are presented as weighted data.

RESULTS

Table 1 provides the distribution of the respondents by gender, age, marital status, education, and employment status. A comparison between the immigrant and nonimmigrant respondents showed significant differences across all demographic characteristics. This comparison accurately reflected the census data, with a relatively higher proportion of women, more unmarried persons, older age, and higher educational level in the immigrant as compared to the general Israeli population.[12] Due to

Table 2. 12-Item General Health Questionnaire (GHQ-12) Scores of Former Soviet Union (FSU) Immigrants and Israeli-Born Jewish Respondents

	FSU Immigrants		Israeli-Born Jews			
GHQ-12 Scores	N	Mean (SE)	N	Mean (SE)	t Test	p
Total	793	21.5 (0.04)	2087	17.7 (0.08)	62.2	.0000
Men	361	20.1 (0.03)	1069	16.9 (0.06)	42.0	.0000
Women	432	22.5 (0.05)	1018	18.5 (0.06)	51.1	.0000

Table 3. 12-Month Prevalence Rates of Mental Disorders Controlled for Demographic Variables of Former Soviet Union (FSU) Immigrants and Israeli-Born Jewish Respondents

				Immigrants vs Israeli-Born[a]	
Diagnostic Category	FSU Immigrants (N = 384), % (N)	Israeli-Born Jews (N = 1081), % (N)	p	OR	95% CI
Men					
Any disorder	9.5 (33)	8.7 (96)	.0000	1.57	1.44 to 1.71
Mood disorders[b]	5.6 (19)	4.4 (47)	.0000	1.37	1.27 to 1.54
Anxiety disorders[c]	0.9 (4)	2.9 (30)	.0000	0.38	0.31 to 0.46
Women					
Any disorder	12.5 (59)	9.5 (95)	.0000	1.42	1.33 to 1.53
Mood disorders[b]	8.6 (39)	7.3 (71)	.0004	1.17	1.07 to 1.28
Anxiety disorders[c]	4.6 (22)	3.0 (32)	.0000	1.47	1.27 to 1.69

[a]Odds ratio with 95% confidence intervals for Israeli-born Jews vs. FSU immigrants.
[b]Major depressive episode or dysthymia.
[c]Generalized anxiety disorder, agoraphobia, or panic disorder (social phobia or specific phobias were excluded).

these differences between the samples, the results were analyzed and are presented for men and women separately and were computed controlling for demographic variables.

Table 2 presents GHQ-12 mean scores of the immigrant and comparison groups controlling for demographic variables. For both men and women, GHQ-12 scores were significantly higher in the immigrant sample.

Table 3 compares the 12-month prevalence rates of common mental disorders as diagnosed with the CIDI, mood disorders and anxiety disorders, and the combination of both (any disorder). The prevalence rates of diagnostic categories that were unstable due to a small number of cases are not presented. Twelve-month prevalence rates were significantly higher among FSU immigrants than among their counterparts for any disorder (men, 9.5% vs. 8.7%, OR = 1.57, 95% CI = 1.44 to 1.71; women, 12.5% vs. 9.5%, OR = 1.42, 95% CI = 1.33 to 1.53) and similarly for mood disorders (men, 5.6% vs. 4.4%, OR = 1.37, 95% CI = 1.27 to 1.54; and women, 8.6% vs. 7.3%, OR = 1.17, 95% CI = 1.07 to 1.28). Immigrants were about one and a half times as likely as Israeli-born Jews to suffer any disorder. The rate of anxiety disorders was higher only among immigrant women (4.6% vs. 3.0%, OR = 1.47, 95% CI = 1.27 to 1.69), while immigrant men had significantly lower rates than their counterparts (0.9% vs. 2.9%, OR = 0.38, 95% CI = 0.31 to 0.46). Among the specific disorders, the prevalence rate of major depressive disorder was higher among both men and women in the immigrant sample than among Israeli-born Jews (men, 5.4% vs. 4.1%, OR = 1.42, 95% CI = 1.25 to 1.61; women, 8.2% vs. 6.5%, OR = 1.23, 95% CI = 1.13 to 1.34). The rate of generalized anxiety disorder was higher among immigrant women (3.0% vs. 1.6%, OR = 1.97, 95% CI = 1.89 to 2.06), but among immigrant men it was lower than in their counterparts (0.0% vs. 1.8%, OR = 0.0, 95% CI = 0.0 to 0.0).

DISCUSSION

Elevated levels of psychological distress were found in the group of FSU immigrants in Israel as compared to the group of Israeli-born Jews, several years after arrival to the host country. Although statistically significant, on a clinical level a difference of 3–4 points in the mean GHQ scores that was found between the immigrant and Israeli-born Jewish respondents may be ambiguous. The clinical implication of this finding is that attention needs to be paid to even minor elevation in psychological distress among immigrants.

Twelve-month prevalence rates of any psychiatric disorder were higher for FSU immigrants than for Israeli-born Jews. A closer analysis reveals that this difference is mostly due to the higher rate of mood disorders among immigrants, while a higher rate of anxiety disorders was found only among immigrant women.

Our findings generally support the migration-morbidity hypothesis. As many other studies have previously shown,[2–5] ours indicates that migration may be associated with psychological distress. However, we did not find

support for the healthy-immigrant hypothesis that has gained support in recent epidemiologic studies in the United States. In those studies, immigrants to the United States had significantly lower risk for psychiatric disorders than U.S.-born subjects.[25,26] It is likely that the healthy-immigrant hypothesis did not obtain support from our findings because, for Jewish immigrants, an open-gate policy is in full effect in Israel.

This study has a few limitations. The WMH Survey focused only on common mental health disorders and did not cover the full spectrum of mental disorders. It also excluded subthreshold cases (except for those indirectly assessed with the GHQ) and institutionalized individuals. Therefore, the prevalence rates from this survey may underestimate the total mental health burden in Israel in the general and immigrant populations. In the case of FSU immigrants, there is an additional concern of underreporting, as studies have shown that FSU immigrants possess group characteristics that may affect the expression of their mental health status, such as a tendency to deny psychological distress and to express it via somatic symptoms, a low tolerance for psychiatric disorders, and a tendency to underutilize psychosocial services in favor of general practitioners or family doctors.[27–30]

An important advantage of this study is the fact that it is based on a representative sample of the total country population residing in the community. Previous general mental health surveys in Israel were limited to population subgroups,[31] and surveys of the immigrant population focused mostly on young adults[19,32] and second-generation immigrants.[33–35] Another strength of this study is that it was conducted as part of an international initiative, thus enabling relevant cross-country comparisons. For example, the 12-month prevalence rate of mood disorders in the FSU immigrant population in Israel (7.3%) was lower than in Ukraine (9.5%).[1]

The main lesson from our findings is that both hypotheses—the healthy-immigrant hypothesis and the migration-morbidity hypothesis—might be valid in different migration contexts and for different groups of immigrants. As it has already been argued, neither the paradigm of the "sick" nor of the "healthy" immigrant, taken singly, suffices to explain the complex findings in this area.[11] It may thus be more productive both for analytic and for services and program planning to pursue research on factors that may affect the mental health of immigrants, such as premigratory and postmigratory variables, personal predispositions, familial factors, and socio-environmental conditions. Three of these factors—length of residence in the host country, immigration circumstances and conditions, and ethnicity—are suggested here as especially relevant to the present study population and constitute important themes for further research.

First, the impact of time since migration needs to be explored more closely. Postmigratory adjustment takes place over a long period of time and its psychological sequelae may change over time. It has been shown that initial positive psychological reactions in migration may change into psychological distress in later stages of the process.[36] For example, recent studies from the United States suggest an increase in psychiatric morbidity in immigrant populations as late as in the third generation.[26,37]

Second, the impact of environmental circumstances and conditions in the host country on mental health needs further exploration. The case of immigrants from the FSU is unique, as it provides an opportunity for the study of environmental effects in comparative, cross-national designs. Since the disintegration of the Soviet Union, immigrants from this country have settled in a variety of host countries—most West European countries as well as North America—that differ in the conditions they offer to immigrants. The unique characteristics of FSU immigration to Israel are its mass nature (about 1 million immigrants arrived in the country within less than 10 years) and the fact that these immigrants comprise a significant percent (14%) of the host population. Pioneer comparative research of FSU immigrants in Israel and Germany suggests that the existence of a large ethnic group of FSU immigrants in Israel may explain the lower rates of psychological distress of FSU immigrants in Israel as compared to their peers in Germany.[36,38] In contrast, in the United States, where the FSU immigrant community is relatively small and dispersed, the levels of anxiety and depression among FSU immigrants are lower than among their peers in Israel.[39]

The third factor is the ethnicity of immigrants. A group of studies have shown significantly lower risk for psychiatric disorders in several disadvantaged minority groups as compared to U.S.-born subjects: Mexican Americans,[40] Chinese Americans,[41] and East and Southeast Asians in Canada.[42] Findings from other countries show variations between immigrants from different ethnic groups; for example, in Belgium, depression and generalized anxiety were more prevalent in the population originating from Turkey and Morocco than in population groups originating from within the European Union.[43] These findings suggest that the interaction between immigrants' ethnicity and their psychological distress and psychiatric disorders is complex and needs further research.[10]

To conclude, the findings of this research, which generally support the migration-morbidity hypothesis, need to be evaluated in the context of the nonselective migration policy implemented in Israel.

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