

1,195) and 68.2% in the total sample. The results were weighted back to the total population to compensate for clustering effects and non-responses.

Mothers and adolescents were interviewed separately, face-to-face, at their homes, by trained lay interviewers. Israeli born youth and their mothers were interviewed either in Hebrew or in Arabic, while among immigrants from the FSU, mothers were interviewed in Russian and the adolescents in Hebrew. Parents provided written informed consent for their own and their child's participation in the study, as approved by the Human Subjects Committee of the Schneider Children's Medical Center. Adolescents were explained the objectives and methods of the survey and their right to abstain from answering the questionnaire or specific questions. Confidentiality was assured.

A total of 957 completed interviews were collected, 826 from Israel-born adolescents and their mothers and 131 from their peers who immigrated to Israel after 1989.

Measures

Screening for emotional and behavioral problems

The Strengths and Difficulties Questionnaire (SDQ) [12], a screening instrument for evaluating social functioning and emotional and behavioral problems in children and adolescents was used. Its 5 scales cover four clinical domains: hyperactivity-inattention, emotional symptoms, peer-relationship and conduct problems, and a pro-social behavior scale. Items are rated on a 3-point scale as 0 (not true), 1 (somewhat true), or 2 (certainly true). The questionnaire is multi-informant, i.e. includes both observer- and self-report version for adolescents aged 11 to 17 years. The psychometric properties of the SDQ tested in different cultural contexts and settings have been found to be satisfactory [13,14]. According to Goodman [15], internal consistency reliability (Cronbach alpha) was reported as 0.73, retest stability after 4-6 months was 0.62, and cross-informant correlation was 0.34. We used the Arabic and Russian versions of the instrument readily available at <http://www.sdqinfo.com/>, while the Hebrew version

numbers of adolescents included in the analysis (N = 15) (data not shown).

Characteristic*	Immigrants (n = 17)		Israel-born (n = 80)		Immigrants vs. Israel-born respondents	
	N	%	N	%	OR	(95% CI)**
Gender						
Boys	11	16.1	37	10.2	1.69	0.76 – 3.77
Girls	6	7.5	43	11.7	0.61	0.22 – 1.71
Maternal marital status						
Married	14	13.0	56	8.5	1.61	0.86 – 3.01
Divorced/single	3	8.4	24	27.4	0.24	0.07 – 0.88
Number of siblings						
0 or 1 sibling	9	11.9	20	20.2	0.53	0.23 – 1.21
2 +	8	12.2	60	9.3	1.36	0.60 – 3.07
Maternal education (yrs)						
0-11	3	13.4	19	8.0	1.79	0.42 – 7.54
12+	14	13.0	55	11.8	1.12	0.61 – 2/05
Paternal employment						

Table 5 shows results of the two regression analyses, separately conducted to predict rates of any mental disorder and of service use (the dependent variables) from a set of independent variables including immigrant status, maternal marital status, maternal education and number of siblings. The presence of a mental disorder was included in the logistic regression model when assessing use of

therefore this explanation is advanced as a hypothesis for future research.

Risk factors

Multivariate analyses showed that marital status of the mother was the only significant sociodemographic predictor for any mental disorder in the adolescent. This finding is consistent with studies showing that children in single-mother families are at significantly increased risk of psychiatric problems [10,38], although other studies have found no such association [39]. They also showed that marital status of the mother, independently of immigrant status, predicted higher use of services by single or divorced mothers for mental health concerns of their children. It is possible that children of single mothers, although well educated, had more unmet needs [40]. Another possibility is that divorced mothers are likely to have fewer children and adolescents growing up with fewer siblings may feel lonelier and depressed [10].

Limitations and strengths

The main limitation of this study is the small size of the immigrant sample, due to which we included all immigrants in one category and were not able to differentiate between immigrants from different

