

# Mental health in migrant schoolchildren in Italy: teacher-reported behavior and emotional problems

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**Abstract:** The migration process is a cause of physical and social stressors that may lead to mental health problems, particularly in children. In Italy, there are few studies about migrant children's mental health; thus, the aim of this study is to compare the prevalence and types of emotional and behavioral problems in migrant schoolchildren to those of native Italian children. The research involved migrant (first- and second-generation) and native schoolchildren attending kindergarten, primary, and secondary school. A questionnaire was administered to parents to collect information about the sociodemographic characteristics of the children. All teachers filled in the Teacher's Report Form for migrant and native children. The findings show that teachers detect academic and adaptive problems more easily in migrant schoolchildren, but they are probably less aware of the children's psychological problems. The observations made in this study provide a starting point in understanding the psychological status and main problems noted among migrant children.

**Keywords:** migrant children, mental health, teacher report, adaptive troubles, emotional problems

## Introduction

Recently, immigration has grown more considerably in Italy than in many other European countries. The International Organization for Migration presented a report on Italian migration between 1951 and 2011, highlighting the country's transformation from an impoverished country of emigration 60 years ago to a major destination country for migrants.<sup>1</sup> This report, in combination with the Idos Study and Research Centre, shows that while 300,000 Italians emigrated in 1951, a remarkable 300,000 immigrants arrived in Italy in 2011. From 1946 to 1951 – the year in which the International Organization for Migration was established – 1,420,000 Italians emigrated to find work and new lives abroad. In the 5 years from 2006 to 2011, 1,535,000 foreigners came to Italy for exactly the same reason. Nowadays, over 4.5 million immigrants with residence permits live in Italy, and they represent 6.5% of the population; nearly over half of these residents are women. A total of 85% of foreigners reside in the northern and central regions of the country, and the remaining 13.5% live in the south. Romanians (968,576) represent the largest national group, followed by Albanians (482,627), and Moroccans (452,424). There are also 209,234 Chinese and 200,730 Ukrainians.

The Italian Ministry of Education, University and Research, and the Initiatives and Studies on Multiethnicity (ISMU) presented a detailed background on the national school population without considering Italian citizenship during the

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academic year 2010/2011.<sup>2</sup> The admissions of migrant children to schools increased from 59,389 per year in 1996/1997 to 711,064 in 2010/2011. These data highlight that students without Italian citizenship now constitute a structural reality of the country. Currently, migrant students comprise 7.9% of the total student population, with primary schools making up the majority of subscribers with 254,644 admissions (9% of the total enrollment in the primaries); however, the most significant increase in the last decade has occurred at the secondary school level. Nursery schools had the highest percentage of migrant students; 78.3% of those without citizenship were born in Italian territory.<sup>2</sup>

There is a significant gap in pass rates between Italian and foreign students, especially at the secondary school level, where the percentage of nonpromoted Italian noncitizen students still appeared in the school year 2009/2010 at a rate of 30%, although this rate is slightly decreasing; this is about twice the rate recorded among Italians.

The National Institute for Statistics Data (Istat-2011) recorded the presence of 95,709 foreigners in the Apulian area.<sup>3</sup> Compared to the provincial territorial distribution, it should be noted that the foreign presence coming from countries with strong migratory pressure is mostly concentrated within the city and the province of Bari, where almost half of the foreigners (46.2% of residents) reside. In 2011, Apulia experienced an increase in foreign residents of +13.5% compared to 2010. Albanians predominate in Apulia with nearly 23,000 visitors, forming 23.8% of the foreign resident population, followed by Romanians 23.6% and Moroccans 8%.

The mental health of migrant children is becoming an important area of investigation due to the continued increase in migrant children in Italy. Actually, the migration process is a cause of physical and social stressors that may lead to mental health problems, particularly in children. Several studies have investigated mental health among migrant and ethnic minority group children and adolescents. As a part of the Action Plan 2008–2011, the World Psychiatric Association has produced guidance papers on this issue, which is of great practical interest to psychiatrists worldwide.<sup>4</sup> The third guidance report, produced by a task force led by Bhugra et al<sup>5</sup> provides a review on mental health problems in migrant residents, highlighting that children may have difficulty in adjusting both at home and at school. However, the literature has not consistently confirmed whether immigrant youths are at greater risk of psychological distress.<sup>6,7</sup> Furthermore, the mental health of immigrant children may be influenced by several conditions including sex, age, ethnicity, degree

of urbanization, parental educational status, or the number of parents in the household (one parent or two parents).<sup>8</sup> Indeed, some European studies have found less favorable findings surrounding the mental health of migrant youth when compared to native residents.<sup>9,10</sup>

However, in other studies, similar mental health findings have been noted among native and migrant children;<sup>11–14</sup> yet, some studies have found lower rates of psychological distress among migrant children, and higher rates of internalizing and externalizing symptoms among native children.<sup>13</sup> The absence of consistent results pertaining to the relationship between psychological distress and migration process may be explained by the fact that studies have used different assessment techniques, and there has been variability among the subjects of assessment, the socioeconomic status of participants, and the regional distribution of migrants.

In Italy, information about how migrant children adapt to their host cultures and the problems they are faced with is limited. The first moment of contact with peers and with the host culture is at school, which may provide an ideal setting for the early identification of any psychosocial problems that might explain the difference in pass rates between migrant and Italian native students. The school experience provides an ideal opportunity where teachers can identify emotional and behavioral problems in early stages among children and adolescents, from both immigrant and nonimmigrant groups. Identification is an essential step towards the early treatment of such problems.

In Italy there are few studies about migrant children's mental health; thus the aim of this study is to compare the prevalence and types of emotional and behavioral problems in migrant schoolchildren to those of Italy-born children. In the study presented here, teachers' reports on migrant children living in Italy have been compared to teachers' reports on native Italian children.

## Methods Procedure

The study is a part of "The mental health in migrant children - proposed intervention" project promoted by National Institute for Health Promotion of the Migrant Populations in cooperation with the Unit of Child Neuropsychiatry, University of Bari "Aldo Moro," Italy. This study was carried out in Bari, the capital of the Puglia region. The research involved migrant (first- and second-generation) and native schoolchildren attending kindergarten, primary, and secondary school. Teachers, parents, and children gave informed consent to participate in the study. For the

migrants with language problems, it was possible to use a cultural-linguistic mediator both for the process of obtaining informed consent and for completion of the survey. First, we contacted the head teachers of primary and secondary schools of Bari, and then we selected a random sampling based on the availability of schools to participate in the project. A total of 110 families were involved in the study, but only 76 families gave informed consent to participate. The majority of the children in our sample lived with their biological parents (87%), while other children lived with their mothers (6%), with their mothers and other relatives (4%), with their parents and other relatives (2%), and a few children lived only with their fathers (1%). Fifty-one teachers agreed to participate in the study. The study was carried out between February 2010 and May 2011.

## Assessment

A questionnaire was administered to parents to collect information about their family composition, their country of birth, their age on arrival in Italy, their religion, and their social interactions outside of school.

All teachers filled in the Teacher's Report Form (TRF) for migrants and native children;<sup>15</sup> the native children constituted the control group. The first section of the scale includes 20 items related to the child's social competency, as rated by the teacher. "These items address the child's participation in sports, hobbies, games, activities, organizations, jobs, chores, friendships, social interactions during play, independent work, and school functioning."<sup>16</sup> The Adaptive Functioning Scale scores assess the following measures: academic performance, happy, working hard, behaving, learning, and total adaptive. These items are scored by the teacher as: 1 = far below the level of the class; 2 = below the level of the class; 3 = at the level of the class; 4 = above the level of the class; and 5 = very above the level of the class. Lower scores (<40) indicate lower functioning on Adaptive Functioning scales and Academic Performance. The second section consists of 120 items on behavioral or emotional problems during the past 6 months, and these are scored by the teacher as: 0 = not true; 1 = somewhat or sometimes true; and 2 = very true or often true. The main areas of this construct are aggression, hyperactivity, bullying, conduct problems, defiance, and violence.

The following behavioral and emotional problems are also measured: aggressive behavior; anxiety/depression; attention problems; delinquent rule-breaking behavior; social problems; somatic complaints; thought problems; withdrawn; externalizing; internalizing; and total problems.

Higher scores (>70) indicate higher levels of maladaptive behavior on total problems, externalizing problems, and internalizing problems scales. Child Behavior Checklist items evaluate three types of internalizing behavior: withdrawn, somatic complaints, and anxious/depressed. Items indicating whether the child is withdrawn evaluate whether the child would rather be alone, is secretive, shows shyness, stares, sulks, or is sad or withdrawn. Items that evaluate somatic complaints include dizziness, tired, aches, headaches, nausea, vomiting, and complaints about eyes, skin, or stomach problems. Anxious/depressed items evaluate the presence of loneliness, crying, perfectionism, worthlessness, nervousness, fear, guilt, suspiciousness, sadness, and worries. Internalizing behaviors are associated with various physical and psychiatric illnesses. Externalizing items focus on delinquent or aggressive behavior. Delinquent behaviors include a lack of guilt, lying, cheating, setting fires, stealing, swearing, truancy, and vandalism. Aggressive behaviors assessed by externalizing scale items include arguing, bragging, attention-seeking, jealousy, screaming, showing off, being demanding, teasing, threatening, and having a temper. These Child Behavior Checklist items identify behaviors that are consistent with diagnoses of conduct disorder, and oppositional defiant disorders, as described in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders.

The TRF was translated into Italian.<sup>17</sup> The instrument has an internal validity of 0.90–0.91 for the scales of internalizing disorders and of 0.95–0.96 for externalizing disorders. Cronbach's coefficient alpha for the two scales was 0.95 and 0.96, respectively.<sup>18–22</sup>

## Data analysis

The aim of the analysis was to examine the prevalence of emotional and behavioral problems in migrant and Italy-born children. All demographic and clinical variables were subjected to statistical analysis. Descriptive analysis was carried out for the sociodemographic characteristics of the migrant and nonmigrant groups. We compared the mean scores between migrants and native groups using the independent samples *t*-test. We also used independent samples *t*-tests both to verify the impact of sex (male/female) within- and between-groups, and to compare findings between first- and second-generation migrants. The Kruskal–Wallis analysis is a nonparametric method, and this was used to compare the scores between ethnic groups. Post hoc analyses were performed for the significant variables found. For TRF, the borderline and clinical groups were combined.

The significance level was set at  $P < 0.05$ . For statistical processing, we used the data processing program, the Statistical Package for Social Science version 20.0 (IBM Corporation, Armonk, NY, USA).

## Results

The migrant children sample consisted of 90 children (52 males and 38 females) with a mean age of 8 years old (standard deviation (SD) = 2.96). The mean age on arrival in Italy for foreign-born children was 4 years old (SD = 4.7). Of this sample, 17% attended kindergarten, 69% attended primary school, and 14% attended secondary school. A total of 57% of children were born abroad and were from 13 different countries of birth; the remaining 43% of pupils were Italy-born. The largest foreign-born groups of children were from Mauritius (20%), Albania (18%), China (15%) and Morocco (11%). The control group consisted of 90 native children selected according to their age (mean (M) = 8 years; SD = 2.62) and sex (53 males and 37 females). Of this sample, 13% attended kindergarten, 75% attended primary school, and 12% attended secondary school. The sociodemographic data are summarized in Table 1.

In general, teachers detected that 9% of migrant children and 6% of native children have only one kind of impairment, while 38% of migrant children and 44% of native children reported clinically significant distresses or impairments in one or more important areas of functioning. The migrant children reported significant impairments compared to native children across different subscales that assess adaptive functioning: academic performance ( $P = 0.002$ ); working hard ( $P = 0.017$ ); learning ( $P = 0.007$ ); happy

( $P = 0.009$ ); and total adaptive ( $P = 0.005$ ). Moreover, we found a statistically significant difference between native and migrant schoolchildren, which underlines a greater clinical impairment of native children, across the following domains: anxious/depressed ( $P = 0.029$ ); somatic complaints ( $P = 0.039$ ); attention problems ( $P = 0.022$ ); aggressive behaviors ( $P = 0.04$ ); internalizing problems ( $P = 0.011$ ); externalizing problems ( $P = 0.013$ ); total problems ( $P = 0.004$ ); anxiety ( $P = 0.015$ ); and somatic problems ( $P = 0.024$ ). These results and the percentages of children that demonstrate impairments in each domain are summarized in Table 2.

By exploring the influence of some characteristics on the emotional and behavioral problems across the entire group, the results showed that migrant schoolgirls have higher scores in measures of somatic problems ( $P = 0.01$ ) and somatic complaints ( $P = 0.04$ ) than migrant schoolboys (Table 3). On the contrary, in the control sample, males reported statistically higher scores than females in somatic problems ( $P = 0.03$ ). The within-group statistical analysis demonstrated that male migrants have a greater impairment in adaptive functioning than male natives across the following measures: academic performance ( $P = 0.004$ ); hard work ( $P = 0.009$ ); behaving ( $P = 0.029$ ); learning ( $P = 0.003$ ); and total adaptive ( $P = 0.00$ ). Italy-born male children reported greater clinical impairment across the following measures: anxious/depressed ( $P = 0.01$ ); somatic complaints ( $P = 0.002$ ); internalizing problems ( $P = 0.003$ ); total problems ( $P = 0.03$ ); anxiety ( $P = 0.008$ ); and somatic problems ( $P = 0.002$ ) (Table 3). Statistical analysis among the groups demonstrated that female natives reported greater clinical impairment than female migrant children across measures of attention problems ( $P = 0.03$ ) and externalizing problems ( $P = 0.02$ ). These results are given in Table 3.

Comparisons between first- and second-generation migrants were made using unrelated *t*-tests (Table 4). There was a significant difference between the two group for Social Problems, in fact migrants of first-generation reported significantly higher levels than second-generation migrants ( $P = 0.048$ ). There were no significant differences between these groups about other behavioral and emotional problems.

The migrants from Mauritius reported experiencing academic problems (25%), total adaptive problems (19%), and internalizing problems (11%). The children from Albania mainly showed internalizing problems (19%). Indeed, Chinese migrants reported experiencing academic

**Table 1** Sociodemographic characteristics of the migrant and native group

	Migrant group	Native group
N	90	90
Sex, N (%)		
Male	52 (58%)	53 (59%)
Female	38 (42%)	37 (41%)
Age (years)		
Mean $\pm$ SD	8 $\pm$ 2.96	8 $\pm$ 2.62
Range	3–15	2–15
School level		
Kindergarten	15 (17%)	12 (13%)
Primary	62 (69%)	67 (75%)
Secondary	13 (14%)	11 (12%)
First-generation	51 (57%)	
Second-generation	39 (43%)	
Mean age at arrival (years)	4 $\pm$ 4.7	

**Abbreviations:** N, number; SD, standard deviation.

**Table 2** Teacher's Report Form scores of the migrant and control groups

	Migrant group		Native group		t	P
	N (%)	M ± SD	N (%)	M ± SD		
Academic performance	17 (22.7%)	46.1 ± 7.1	13 (16.7%)	50.3 ± 9	3.11	0.002*
Working hard	15 (20%)	47.1 ± 7	15 (20%)	50.5 ± 9.4	2.42	0.017*
Behaving	7 (9%)	48 ± 7.3	7 (9%)	50.4 ± 8	1.89	0.061
Learning	13 (17.3%)	47.1 ± 7.1	11 (14%)	50.9 ± 9.2	2.716	0.007*
Happy	12 (16%)	46 ± 7	4 (5.1%)	49.3 ± 7.8	2.653	0.009*
Total adaptive	18 (24%)	46.1 ± 7.5	14 (17.9%)	50 ± 9.1	2.862	0.005*
Anxious/depressed	8 (8.9%)	54.4 ± 6.1	12 (13.3%)	56.7 ± 7.4	2.207	0.029*
Withdrawn	11 (12%)	55.2 ± 7	11 (12%)	56.9 ± 6.6	1.562	0.12
Somatic complaints	1 (12%)	51.7 ± 3.7	6 (6.7%)	53.2 ± 5.6	2.083	0.039*
Social problems	7 (9%)	54.9 ± 6.2	5 (6.4%)	55.5 ± 6.2	0.552	0.58
Thought problems	–	50.9 ± 3	3 (3.8%)	52.2 ± 4.9	1.861	0.065
Attention problems	2 (2.2%)	52.4 ± 3.9	9 (10%)	54.2 ± 6.4	1.878	0.022*
Rule-breaking behavior	3 (4%)	53.4 ± 5.3	6 (7.7%)	53.8 ± 6	0.386	0.7
Aggressive behavior	2 (2.2%)	53.2 ± 5	7 (7.8%)	55.2 ± 7.5	2.069	0.04*
Internalizing problems	13 (14.4%)	50.3 ± 10.7	27 (30%)	54.3 ± 10.2	2.571	0.011*
Externalizing problems	9 (10%)	49.3 ± 8.2	19 (21%)	52.6 ± 9	2.52	0.013*
Total problems	8 (8.9%)	48.3 ± 10	19 (21%)	52.6 ± 9.6	2.932	0.004*
Affective problems	5 (5.6%)	53.7 ± 5.7	8 (8.9%)	54.9 ± 5.6	1.354	0.178
Anxiety	8 (8.9%)	55.1 ± 6.5	23 (25.6%)	57.6 ± 7.3	2.444	0.015*
Somatic problems	2 (2.2%)	51.2 ± 3.4	5 (6.4%)	53.1 ± 6.1	2.273	0.024*
Attention deficit	1 (1.1%)	52.8 ± 4.5	11 (12%)	54.6 ± 7.9	1.855	0.065
ODD	3 (3.3%)	52.5 ± 4.6	6 (6.7%)	54.1 ± 6	1.928	0.055
Conduct disorders	1 (1.1%)	53 ± 5.7	5 (6.4%)	53.3 ± 6.4	0.301	0.763

Note: \* $P < 0.05$ .

Abbreviations: M, mean; SD, standard deviation; ODD, oppositional defiant disorder.

problems (25%), total adaptive problems (25%), and internalizing problems (31%). The children from Morocco reported facing externalizing problems (50%). The children from Romania reported total adaptive problems (50%), and the migrants from Georgia showed academic problems (40%), total adaptive problems (20%), and internalizing problems (20%). The Kruskal–Wallis analysis, as shown in Table 4, indicated that there were significant differences across externalizing problems ( $P = 0.01$ ), the prevalence of oppositional defiant disorder ( $P = 0.04$ ), conduct problems ( $P = 0.02$ ), rule-breaking behavior ( $P = 0.03$ ), and aggressive behavior ( $P = 0.03$ ). In particular, children from Morocco showed reported significant impairments when compared to the other ethnic groups with respect to conduct problems, rule-breaking behavior, and the prevalence of oppositional defiant disorder ( $P < 0.05$ ). The migrants from Mauritius reported more externalizing problems and aggressive behavior than the other ethnic groups ( $P < 0.05$ ) (Table 4).

## Discussion

Migration is a complex social process that often subjects individuals and families to social factors and stressors that

can affect one's mental health.<sup>5</sup> In particular, children are more vulnerable in the migration process, and they are often neglected by the health care system.<sup>7</sup> The separation from support systems, inadequate language skills, and disparities in social and economic status may place migrant children in a vulnerable position.<sup>6</sup> During migration, family background may be disrupted and children may be separated from parents and caregivers. This can cause psychological distress that, in turn, affects their mental health status. For these reasons it is very important to study the impacts of migration on children's mental health. Several studies were carried out on the migration process, while few studies focused on the mental health of migrant children.

Some studies have shown that the mental health status of young migrants is worse than that of native ones; however, the results on the mental health status of migrant children reported in the literature are not unique, and this could be due to differences in sampling (age, sex, cultural background, race, or ethnicity) and methodology (assessment of children, parents, or teachers).<sup>9,23</sup> Some studies performed on Turkish immigrant children in The Netherlands have shown different results based on whether the reports were of children, parents, or teachers. Darwish Murad et al<sup>9</sup> and Janssen et al<sup>24</sup> demonstrated that

**Table 3** Teacher's Report Form scores within- and between-group (male versus female)

	Migrant group			Native group			Between-group			Within-group		
	Male		Female	Male		Female	Migrant		Native	Male		Female
	%	M ± SD	%	%	M ± SD	%	P	P	P	P	P	
Academic performance	25.60%	45.6 ± 6.8	18.80%	13.30%	50.6 ± 8.7	21.20%	0.52	0.68	0.004*	0.16		
Working hard	18.60%	47.2 ± 7	21.90%	11.10%	51.8 ± 8.6	30.30%	0.93	0.15	0.009*	0.47		
Behaving	11.60%	48 ± 7.5	6.30%	8.90%	51.9 ± 8.4	9.10%	0.96	0.05	0.029*	0.81		
Learning	20.90%	46.8 ± 6.9	12.50%	8.90%	52 ± 8.6	21.20%	0.7	0.19	0.003*	0.43		
Happy	16.30%	46.7 ± 7.3	15.60%	6.70%	49.7 ± 7.8	3.00%	0.42	0.67	0.07	0.057		
Total adaptive	25.60%	46.3 ± 7.7	21.90%	8.90%	51.8 ± 8.3	30.30%	0.85	0.05	0.00*	0.42		
Anxious/depressed	7.70%	54.2 ± 6	10.50%	18.90%	57.7 ± 7.9	5.40%	0.73	0.12	0.01*	0.71		
Withdrawn	7.70%	55.4 ± 6.4	18.40%	11.30%	57.4 ± 7	13.50%	0.79	0.39	0.14	0.5		
Somatic complaint	1.90%	51 ± 3.3	-	9.40%	54.2 ± 6.3	2.70%	0.04*	0.03*	0.002*	0.35		
Social problems	7.00%	54.6 ± 6.1	12.50%	11.10%	56 ± 7	-	0.6	0.38	0.32	0.67		
Thought problems	-	51.3 ± 3.2	-	6.70%	52.7 ± 5.8	-	0.23	0.26	0.16	0.18		
Attention problems	3.80%	52.6 ± 4.3	-	9.40%	53.9 ± 6.4	10.80%	0.6	0.58	0.21	0.03*		
Rule-breaking behavior	4.70%	54 ± 5.9	3.10%	8.90%	54.4 ± 6.7	6.10%	0.31	0.28	0.74	0.84		
Aggressive behavior	3.80%	53.5 ± 5.8	-	9.40%	55.2 ± 7.2	5.40%	0.53	0.96	0.19	0.1		
Internalizing problems	11.50%	50.2 ± 10	18.40%	32.10%	56.1 ± 9.9	27.00%	0.9	0.05	0.003*	0.59		
Externalizing problems	13.50%	49.8 ± 8.8	5.30%	22.60%	52.3 ± 9.3	18.90%	0.49	0.73	0.16	0.02*		
Total problems	7.70%	49 ± 9.6	10.50%	22.60%	52.9 ± 9.9	18.90%	0.68	0.79	0.03*	0.05		
Affective problems	1.90%	53.9 ± 5.4	10.50%	9.40%	55.0 ± 5.7	8.10%	0.69	0.78	0.32	0.37		
Anxiety	7.70%	54.7 ± 6.1	10.50%	28.30%	58.3 ± 7.2	21.60%	0.5	0.31	0.008*	0.5		
Somatic problems	2.30%	50.4 ± 2.6	3.10%	6.70%	54 ± 6.9	6.10%	0.01*	0.1	0.002*	0.6		
Attention deficit	1.90%	53 ± 5.1	-	11.30%	54.4 ± 7.3	13.50%	0.77	0.74	0.26	0.12		
ODD	3.80%	53 ± 4.8	2.60%	5.70%	54.4 ± 5.5	8.10%	0.27	0.56	0.17	0.19		
Conduct disorders	2.30%	53.7 ± 6.7	-	6.70%	53.7 ± 6.4	6.10%	0.2	0.52	0.98	0.58		

Note: \*P < 0.05

Abbreviations: M, mean; SD, standard deviation; ODD, oppositional defiant disorder.

**Table 4** First- and second-generation and ethnic disparities in Teacher's Report Form (TRF)

Social problems	First-generation	Second-generation	t	P					P
	M ± SD	M ± SD		M (%)	M (%)	M (%)	M (%)	M (%)	
	56.06 ± 6.5	56.06 ± 6.5	2.014	0.048*					
	Mauritian	Albanian	Chinese	Moroccan	Romanian	Georgian	Others <sup>a</sup>	P	
	M (%)	M (%)	M (%)	M (%)	M (%)	M (%)	M (%)		
Academic performance	44.6 (25%)	49.5 (8%)	46.7 (25%)	46 (22%)	46.0 (17%)	42.2 (40%)	45.1 (31%)	0.46	
Working hard	48.7 (19%)	50.5 (0%)	47.9 (25%)	44.3 (22%)	44.5 (33)	45.0 (20%)	44.8 (30.8%)	0.26	
Behaving	50.5 (0%)	50.7 (8%)	48.6 (8%)	42.0 (33%)	46.2 (17%)	46.0 (0%)	46.8 (8%)	0.07	
Learning	48.5 (19%)	50.2 (8%)	48.3 (17%)	43.8 (22%)	45.5 (17%)	45.0 (20%)	44.7 (23.1%)	0.42	
Happy	47.9 (12%)	47.9 (15%)	45.0 (25%)	45.0 (11%)	46.5 (0%)	44.2 (20%)	44.4 (23%)	0.49	
Total adaptive	48.5 (19%)	49.5 (8%)	46.6 (25%)	42.3 (22%)	44.2 (50%)	43.8 (20%)	43.5 (38%)	0.11	
Anxious/depressed	54.2 (11%)	55.6 (19%)	55.1 (8%)	56.6 (10%)	53.2 (0%)	51.0 (0%)	53.3 (5%)	0.74	
Withdrawn	54.4 (11%)	54.1 (6%)	60.4 (31%)	56.5 (0%)	54.5 (0%)	56.6 (20%)	53.2 (14%)	0.31	
Somatic complaint	50.4 (0%)	50.5 (0%)	53 (1%)	54.4 (0%)	51.2 (0%)	51.4 (0%)	51.9 (0%)	0.25	
Social problems	52.8 (8%)	54.0 (15%)	55.6 (8%)	59.8 (33%)	55.7 (0%)	52.4 (0%)	55.7 (8%)	0.23	
Thought problems	50.0 (0%)	50.8 (0%)	51.8 (0%)	53.1 (0%)	50 (0%)	50.0 (0%)	50.7 (0%)	0.19	
Attention problems	51.5 (0%)	51.6 (0%)	51.6 (0%)	56.3 (10%)	53.3 (0%)	51.4 (0%)	52.5 (0%)	0.13	
Rule-breaking behavior	51.9 (0%)	53.2 (0%)	50.9 (0%)	57.5 (0%)	54.0 (0%)	51.8 (0%)	55.5 (23%)	0.03*	
Aggressive behavior	51.2 (0%)	53.4 (0%)	52.8 (0%)	58.6 (10%)	52.0 (0%)	53.2 (20%)	52.9 (5%)	0.03*	
Internalizing problems	49.4 (11%)	48.6 (12%)	55.1 (31%)	54.5 (10%)	47.5 (0%)	48.4 (20%)	48.7 (9%)	0.414	
Externalizing problems	45.8 (0%)	51.6 (6%)	49.8 (0%)	56.5 (50%)	48.8 (0%)	49.4 (0%)	47.0 (14%)	0.01*	
Total problems	45.3 (0%)	48.4 (12%)	50.4 (7%)	54.7 (20%)	48.2 (0%)	46.6 (0%)	47.3 (14%)	0.33	
Affective problems	52.0 (0%)	52.9 (0%)	57.7 (15%)	54.8 (10%)	52.0 (0%)	53.4 (20%)	53.6 (5%)	0.15	
Anxiety	55.6 (11%)	55.6 (6%)	55.1 (15%)	57.1 (10%)	52.0 (0%)	52.4 (0%)	54.7 (9%)	0.69	
Somatic problems	50.0 (0%)	50.5 (8%)	53.2 (8%)	53.0 (0%)	51.3 (0%)	50.0 (0%)	51.1 (0%)	0.29	
Attention deficit	51.9 (0%)	51.6 (0%)	52.1 (0%)	57.7 (0%)	54.2 (0%)	51.2 (0%)	52.8 (5%)	0.06	
ODD	51.0 (0%)	52.6 (0%)	52.6 (0%)	57.6 (20%)	50.7 (0%)	51.2 (0%)	52.4 (5%)	0.04*	
Conduct disorders	51.2 (0%)	52.4 (0%)	51.2 (0%)	57.3 (0%)	52.0 (0%)	52.0 (0%)	55.6 (8%)	0.02*	

**Notes:** <sup>a</sup>Bangladesh (N = 3); India (N = 2); Brazil (N = 2); Ethiopia (N = 2); Argentina (N = 1); England (N = 1); Bulgaria (N = 1); Venezuela (N = 1); Montenegro (N = 1). \*P < 0.05.

**Abbreviations:** M, mean; SD, standard deviation; ODD, oppositional defiant disorder.

Turkish migrant adolescents (ages 11–18 years) showed similar levels of externalizing problems and higher levels of internalizing problems than their Dutch native peers. Bengi-Arslan et al<sup>25</sup> revealed that migrant parents reported an increased level of internalizing problems and perceived more externalizing problems in their children (ages 4–18 years) than native parents. On the contrary, teachers report that Turkish immigrant and Dutch native youth (ages 4–18 years) revealed no differences in internalizing and externalizing problems.<sup>11</sup>

Stevens and Vollebergh<sup>6</sup> reported that Moroccan immigrant youths (ages 4–18 years) reported fewer externalizing problems than Dutch native youths, whereas their parents reported no differences in internalizing and externalizing problems between migrant and native children. The teachers presented a different picture, where Moroccan migrant youth reported experiencing far more externalizing problems than Dutch native youth. Zwirs et al<sup>26</sup> found greater differences in teacher-reported externalizing problems between Moroccan immigrant and Dutch native boys (ages 5–11 years) than between Moroccan immigrant and Dutch native girls. Another study revealed no differences in self-reported internalizing

and externalizing problems for immigrant compared to native youth (ages 4–18 years), whereas immigrant parents reported relatively high levels of internalizing problems for their daughters; teacher reports revealed more externalizing and fewer internalizing problems for immigrant youth when compared to native youth.<sup>27</sup>

Moreover, the difference among first-generation and second-generation migrants is an important variable associated with distress. First-generation girls and second-generation boys were identified as particularly vulnerable to psychiatric problems. First-generation immigrant children (ages 0–11 years) present fewer parent-reported emotional and behavioral problems than second-generation and native children.<sup>26</sup> Alati et al<sup>12</sup> showed that first-generation migrant parents self-reported the same internalizing and externalizing problems when compared to Australian-born parents (ages 5–14 years). Leavey et al's<sup>28</sup> comparative study in London found that migrant children (ages 11–16 years), particularly young boys – despite better results for prosocial behavior and fewer conduct and hyperactivity problems than native peers – fared less well on measures of emotional difficulties

and peer problems. Migrant children were also more likely to come from low-income families and were much less likely than their native peers to use alcohol, a factor strongly associated with conduct problems, hyperactivity, and poor prosocial skills. The researchers also showed that language appears to be an important variable associated with distress.

A considerable amount of literature describes the psychological distress experienced in migrant children, presenting predominantly as posttraumatic distress, depression, and other symptoms such as irritability, restlessness, sleep problems, somatic symptoms, and conduct disorder.<sup>5,6,29,30</sup>

Some studies showed that the prevalence of school-related behavioral problems was higher in school-aged migrants in groups who had poorer general health, particularly boys. Poor health might also hinder the achievement of migrant children and adolescents because of the association with a higher prevalence of school-related behavioral problems, such as negative learning attitudes, learning disabilities, antisocial behavior, risk behavior, and social maladjustment. Because of the lower socioeconomic resources and environmental isolation that occurs after migrating to urban areas, these school-aged migrants may be exposed to more stressors that influence their health, and these children could suffer from poor health.<sup>31</sup> In addition, it was found that migrant adolescents (ages 11–18 years) experienced more traumatic events and exhibited higher levels of peer problems and avoidance symptoms than their Belgian peers.<sup>31</sup> On the contrary, nonmigrant adolescents revealed more symptoms of anxiety, externalizing problems, and hyperactivity. Migrant boys (mean age = 13 years) reported experiencing more depression and anxiety symptoms than Norwegian native boys, whereas this difference was absent in girls.<sup>32</sup> These results were confirmed by Fandrem et al,<sup>33</sup> who found that the level of depressive symptoms was significantly higher among immigrant adolescents than their Norwegian counterparts; but when analyzed separately for boys and girls, the difference was still significant for boys. The results indicate that ethnic minorities and immigrants have more depressive symptoms than their native-born peers. Moreover, quality of life studies in other countries show that natives have higher scores on health-related quality of life and objective life quality compared to immigrants.<sup>34,35</sup>

In addition, characteristics of the migrant groups (such as their cultural background and their position in the host country) appear to be important factors that are related to emotional distress and risk behaviors in studies that have compared migrants and native adolescents. There is a significant variation in psychiatric and emotional problems, conduct disorders, and acculturation between ethnic groups.

Willgerodt and Thompson<sup>36</sup> found that ethnicity predicted depression and delinquency behaviors, while the generation level within ethnic groups predicted somatic symptoms and substance use. The findings underscore the importance of examining subgroups and generations of migrant groups.

One of the few research studies carried out in Italy on migrant children's mental health showed the presence of learning and behavior disorders; males showed aggressive behavior and females exhibited social withdrawal and depressive symptoms.<sup>37</sup> However, common elements between both sexes included the presence of learning disorders and psychosomatic symptoms such as dermatitis, gastrointestinal disorders, headaches, and widespread pain.<sup>37</sup> According to our knowledge, this is the first school-based study that compares the mental health status between migrant and native children in Italy. The results demonstrated that migrant children display more problems in adaptive functioning and academic performance; on the contrary, native children show greater internalizing and externalizing problems. Problems in adaptive functioning and academic performance in migrant children are due to difficulties and to the family's poor involvement in their children's schooling. Rarely are migrant children helped in terms of their homework by parents or specialist educators. The lack of knowledge of the Italian language by migrant parents may have a negative influence on the school experience of children who are often delegated to linguistic mediation to address the relationship between the school system and families. For this reason, migrant parents have difficulties participating in both institutional (information and training initiatives, class meetings, delivery of assessment documents, interviews with teachers, collegial body elections) and informal meetings.

The greater internalizing and externalizing problems in native compared to migrant children may be due to differences in culture. In the most progressive countries, like Italy, native children tend to express their emotions freely, and for this reason their behavior can sometimes be more uninhibited and inadequate.<sup>38</sup> In fact, people living in individualistic cultures express their emotions, even the negative ones, towards others. This is completely opposite of the findings within a collectivistic culture. The difficulty of migrant children in expressing their psychological distress may be due to the fact that they belong to more traditional and rigid cultures, where the manifestation of emotional and behavioral problems is not always acceptable. For this, they tend to express less about their psychological stress and can be referred to as "over-controlled" (ie, the children keep everything inside).



Further research should assess the level of functional impairment caused by emotional and behavioral symptoms. Moreover, the parenting style among many migrants instills obedience and respect for authority in children, and recognizes the complementary roles of families and schools. Some children may adopt a strategy of passivity and invisibility, also encouraged by parents, avoiding consciously or unconsciously the expression of emotional and behavioral difficulties. All of these factors could explain why teachers rate migrant children more positively in terms of behavioral domains; in fact, it is probable that teachers are less aware of the psychological status of migrant children. Within the sample of migrant students, teachers reported more somatic problems in girls than boys; in contrast, in the native group, teachers reported more somatic complaints in boys than girls. Within the sample, teachers reported that migrant boys showed academic and adaptive functioning difficulties, while teachers revealed internalizing and externalizing problems in native boys. Therefore, in relation to sex, the substantial differences between migrant and native groups appear to be led by males.

In addition, teachers reported that children of first-generation migrants have more social problems than second-generation migrant children. These results are presumably related to language and adaptation problems, as already suggested in the literature. Not having Italian as a first language could be a significant risk factor for developing symptoms of psychological distress. Further experimental investigations are needed to establish whether this vulnerability is related to language attainment per se, or a combination of risk factors associated with adaptational and other social stressors faced by migrant families living in Italy. Another important finding included the differences observed between ethnic groups. Further research should be done to investigate the Moroccan and Mauritanian cultures in particular in order to explain the major difficulties in behavioral disorders.

Few studies in Italy have focused on migrant children and how their migration experiences contribute to their overall psychological well-being. The school has a particular significance for the subject in forming childhood experiences, where the migrant child deals with both performance and relational situations that can be stressful in terms of the dual management of relationships with teachers and peers. These situations, if properly guided in a stable and reassuring emotional environment, may promote strategies that students can use to cope with their stressful situations.<sup>39</sup> The findings show that teachers more easily detect the academic differences in migrant schoolchildren, and that they are probably

less aware of the children's psychological status, as well as their undetected, latent, and hidden problems. It is important to provide teachers with the knowledge and instruments to promote mental health well-being in migrant children.<sup>31</sup> Indeed, the complex nature of child migration requires a critical review of theoretical models and working practices for all involved school professionals.<sup>40</sup> Schools should have the necessary tools to deal with this situation, especially given that migration is constantly expanding.

The current investigation was limited by the fact that language and cultural barriers between teachers of the host culture and immigrant children could hinder the appropriate expression of internalizing problems by immigrant children and the perception of these problems by their teachers. Inevitably, cultural differences between native teachers and migrant children may impact assessment. A future study investigating the agreement rates between one's self-reports, parents' reports, and teachers' reports would be very interesting. More broadly, research is also needed to determine the influence of environmental conditions including socioeconomic status, integration with the host population, parents' educational level, parenting style, presence of biological parents or other relatives in the home, and the language spoken at home on migrant children's psychological well-being. In fact, these factors could contribute to adjustment behaviors and effective transitioning in migrant children.

## Conclusion

These findings suggest that it is necessary to develop an intercultural approach that promotes the mental health of migrant children and to develop intervention models for the correct and timely access to the National Health Service, especially in respect to different cultural identities of migrant children. The observations made in this study provide a starting point to understand the structure and psychopathological problems among migrant children, and underscore the importance of the early detection of these problems for appropriate intervention strategies to address school-related behavior problems. For these reasons, it is important to increase the education and training of workers in order to improve their ability to recognize the emotional and behavioral problems exhibited by migrant children.

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## Disclosure

The authors report no conflicts of interest in this work. We confirm that we have read the journal's position on issues involved in ethical publication and affirm that this report is consistent with those guidelines. All authors have seen and approved of the final version of the paper, and accept responsibility for the data presented. There are no financial or other conflicts of interest that may be related to the authors.

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