

## Research article Ερευνητική εργασία

# Comparing immigrant children with native Greek in self-reported-Quality of Life

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**R**esearch on an international and national context regarding immigrant children and adolescents' quality of life (QoL) is rather scarce. Few international studies have been conducted investigating the presence of psychopathology and providing evidence of behavioural and psychological problems in immigrant adolescents. Regarding immigrant quality of life, thus far investigation was directed mainly to adult immigrant individuals and not to their children. The aim of the present study was to investigate the quality of life (QoL) of immigrant children and young adolescents who live in the greater Athens area, and to compare them with their native Greek peers living in the same communities and attending the same schools. Method: Sixty three immigrant children, from Albanian and Eastern European origin (mean age 11.9 years) and 489 native children (mean age 11.33 years) were administered a QoL instrument specifically developed for children and adolescents: the Kid-KINDL<sup>R</sup> Questionnaire for 8–12 years old and the Kiddo-KINDL<sup>R</sup> Questionnaire for 13–16 years old. The dimensions examined in the KINDL<sup>R</sup> questionnaire refer to: physical well-being, emotional well-being, self-esteem, friends, family life and everyday life (school life). The Greek version is reported to show satisfactory values of validity and reliability. Administration of questionnaires was conducted at school after parent consent. Analysis included student's t-test, chi-square test, and multivariate linear regression analysis, as to investigate the relationship between KINDL<sup>R</sup> QoL dimensions' scores and nationality status, after controlling for gender and age. The results indicated that self-reported QoL scores of immigrant children were significantly poorer in comparison to native children in the domains of self-esteem and family life, as well as in the total QoL scores. In the rest of the QoL domains, similar scores were reported in both immigrant and their native classmates, that is in the dimensions of physical well-being, emotional well-being, friends and school. Investigating the effect of gender in KINDL<sup>R</sup> QoL parameters, after controlling for nationality and age, no evidence was found for differences between male and female children. Regarding the effect of age, older compared to younger in age children scored significantly lower in emotional well-being, self-esteem, and friends, school and total QoL. The results provide evi-

dence of QoL deficits in self-esteem and family life in immigrant children. QoL deficits seem to increase in more areas as immigrant children grow older. Dimensions regarding self-perception and family may be interrelated, mutually influencing one another. It may be suggested that immigrant children seem to experience reduced self-esteem and distressful feelings within family interpersonal relations. As they grow older, distress seems to become more evident in emotional and social areas of QoL. Mental health interventions should take into account the multilevel impact of family interpersonal experiences on child's psychosocial development, as to design and deliver appropriate interventions supporting parenting for immigrant groups of individuals. Also, specialized mental health promotion programs need to be provided for adolescent immigrant individuals.

**Key words:** Quality of life, immigrant children, immigrant adolescents, self-esteem.

## Introduction

During the 90s, a large number of economic immigrants moved from the former Eastern countries to Western Europe, while many of them settled with their families in host countries such as Greece. Research on immigrant children is mostly investigating the presence of psychopathology,<sup>1-4</sup> while several studies provide evidence of behavioural and psychological problems in immigrant adolescents.<sup>5-7</sup> Regarding quality of life (QoL), thus far the investigation involves mainly adult immigrants,<sup>8-10</sup> while evidence on immigrant child and adolescent QoL is rather scarce<sup>11-14</sup> and one relevant study indicated that children of immigrant parents had a significantly lower HRQOL total score.<sup>15</sup> Furthermore, some of these studies reported contradictory findings. Specifically, Ravens-Sieberer et al<sup>14</sup> indicated that QoL in immigrant children (according to their parents' reports) was not lower than that of native children. In contrast, as reported in the Pantzer et al study,<sup>13</sup> immigrant adolescents experienced problems with their peers reporting bullying, discrimination and poor social support. It is noteworthy that boys reported better quality of life than girls, as well as younger adolescents (12-14 years) than older ones. It is argued by the authors of the above study that QoL is mediated by the economic situation of the adolescent.

Regarding adult populations, the findings of Bayram et al<sup>9</sup> showed that adult Turkish immigrants may report higher quality of life in the host country than Turks living in their own country. Moreover, adult immigrants from Eastern Europe, even if less satisfied with life in general, reported "higher satisfaction with the societal conditions than the natives"<sup>9</sup> (Bayram et al 2007, p. 67). It is worth mentioning that adult im-

migrants have taken the initiative to immigrate, while one cannot argue the same for their children, who may be violently moved in a foreign country, away from the familiar environment and lacking the verbal skills to speak the language of the host country.

The aim of the present study was to investigate the quality of life of immigrant children and make a comparison with a similar age group of children living in the same community and attending the same mainstream schools. The present study was carried out during 2007-2008 in schools located in two municipalities of Athens (Byron and Kessariani), presenting a number of immigrant students in each classroom (i.e. 3 or 4 accounting for 10% to 15% of the class population).

## Material and method

### Participants

*Group A* (immigrant children) 63 children (34 boys, 29 girls), mean age was  $11.86 \pm 1.85$ ; age range was 8-14 years. Regarding their parents, 85% were of Albanian origin while the rest were Eastern Europeans.

*Group B* (Native Greek children) 489 native Greek children (245 boys, 244 girls), mean age was  $11.34 \pm 2.00$ , age range was similar.

Both groups of children attended the same schools and lived in the same community.

### Instruments

There are 3 versions of the KINDL<sup>R</sup> instrument, one for children between 4-7, one for children between 8-12 years and one for adolescents of 13-16 years (Kid-KINDL<sup>R</sup> Questionnaire/8-12 years, Ravens-Sieberer and Bullinger, 2000; Kiddo-KINDL<sup>R</sup>

Questionnaire/13–16 years, Ravens-Sieberer and Bullinger 2000).<sup>16</sup>

The dimensions of the KINDL<sup>R</sup> questionnaire refer to: physical well-being, emotional well-being, self-esteem, friends, family life and everyday life (school life). For each dimension there are 4 items and children's responses are recorded on a five Likert-scale. Higher scores indicate better quality of life.

The 3 forms of the KINDL<sup>R</sup> questionnaire have been translated for the Greek population.<sup>17</sup> The questionnaires were used recently in populations of Greek children and the statistical analysis has shown that the Cronbach's  $\alpha$  coefficient exceeded the acceptable minimum of 0.7 ranging from 0.71 to 0.90 for children aged 13 years or more and 0.70–0.80 for children aged below 13 years.<sup>18,19</sup> The Greek version of the questionnaires can be found in: <http://www.kindl.org>.

### **Procedure**

After approval was granted by the Pedagogical Institute operating under the Ministry of Education, and the Committee of Ethics of the University of Athens, a letter asking for written consent was sent to the parents via the schools, along with explaining the aim of this study. The children were then able to complete the questionnaires at school provided they had the written consent from their parents. One of the researchers was present in the classroom at the time of administration providing information about the purpose of the study.

### **Statistical methodology**

Dimensions of the KINDL<sup>R</sup> questionnaire and demographic characteristics were compared between immigrant and native children using the criteria Student's t-test and chi-square test as appropriate. Kolmogorov-Smirnov test evaluated the assumption of normality. Subsequently, multivariate linear regression analysis was used to investigate the relationship between KINDL<sup>R</sup> dimensions' scores and nationality status, after controlling for gender and age. Seven statistical models were performed with dependent variable each domain of the KINDL<sup>R</sup> questionnaire: "Physical Well-being" (model 1), "Emotional Well-being" (model 2), "Self-esteem" (model 3), "Family" (model 4), "Friends" (model 5), "School" (model 6) and "Total" (model 7). In all models, nationality status, gender and age were used as independent variables. Significance level was set at

$p=0.05$ . The data were analyzed with SAS statistical package (Version 9.1, SAS Institute Inc, Cary, NC).

### **Results**

The study sample consisted of 552 participants aged 8–17 years. Among them, 279 were males and 273 females. The mean age was calculated at  $11.39 \pm 1.99$  years. Regarding to nationality, 489 children were natives and the remaining 63 immigrants.

Table 1 presents the distribution of demographic characteristics and the KINDL<sup>R</sup> dimensions according to nationality status. There was no evidence for a significant difference in the distribution of gender ( $p=0.564$ ) and the mean age ( $p=0.050$ ) between native and immigrant children. In respect with the dimensions of the KINDL<sup>R</sup> questionnaire, mean scores of "Physical Well-being" ( $p=0.868$ ), "Emotional Well-being" ( $p=0.335$ ), "Friends" ( $p=0.549$ ) and "School" ( $p=0.205$ ) were not found to differ significantly between the two groups of participants. On the other hand, significantly lower mean scores in two domains of quality of life, namely "Self-esteem" ( $p<0.0001$ ) and "Family" ( $p<0.0001$ ), were noted in immigrants compared to native participants. When summarizing the six parameters of the KINDL<sup>R</sup> questionnaire, the mean "Total" score was estimated at  $73.17 \pm 6.92$  and  $78.15 \pm 9.66$  for immigrants and natives respectively, a difference that was highly significant ( $p<0.0001$ ).

Further on, multivariate linear regression analysis was performed (table 2). In accordance with the univariate findings, the KINDL<sup>R</sup> parameters associated with nationality status were "Self-esteem" ( $p<0.0001$ ) and "Family" ( $p<0.0001$ ) along with "Total" score ( $p=0.0003$ ). Specifically, the mean "Self-esteem" scores of immigrants were almost 15 points less than the respective scores of natives ( $b=-15.16$ ; 95% CI:  $-19.38, -10.94$ ;  $p<0.0001$ ). Immigrants scored almost 9 points less than the natives in the domain of family life ["Family" ( $b=-9.11$ ; 95% CI:  $-12.51, -5.72$ ;  $p<0.0001$ )]. As a whole, in the "Total" score immigrant children were found to achieve significantly poorer results ( $b=-4.54$ ; 95% CI:  $-6.99, -2.10$ ;  $p=0.0003$ ). Investigating the effect of gender in KINDL<sup>R</sup> parameters, after controlling for nationality and age, we found no evidence for a different score pattern between males and females in none statistical model. Regarding the effect of age, according to the multivariate findings, mean scores of "Physical Well-being"

**Table 1.** Distribution of demographic characteristics and KINDL<sup>R</sup> questionnaire dimensions in the group of 552 study participants according to nationality status.

Variables	Immigrants (n=63)	Natives (n=489)	p-value
Gender			0.564*
Males	34 (53.97)	245 (50.10)	
Females	29 (46.03)	244 (49.90)	
Age (years)	11.86±1.85	11.34±2.00	0.050**
Dimensions of KINDL <sup>R</sup> (score)			
Physical Well-being	80.48±11.60	80.17±13.80	0.868**
Emotional Well-being	81.67±11.67	83.23±12.17	0.335**
Self-esteem	52.62±10.51	68.24±16.63	<0.0001**
Family	72.30±9.75	81.62±13.24	<0.0001**
Friends	83.02±15.09	84.10±13.29	0.549**
School	68.89±13.00	71.54±15.95	0.205**
Total	73.17±6.92	78.15±9.66	<0.0001**

\*p-value derived from chi-square test

\*\*p-value derived from Student's t-test

**Table 2.** Results of multivariate linear regression analysis models for the changes in the score of each dimension of the KINDL<sup>R</sup> questionnaire by nationality status, gender and age in the group of 552 study participants.

Variables	Category or increment	Coefficient b (95% CI)	p-value
<i>Physical Well-being (model 1)</i>			
Nationality status	Immigrants vs Natives	0.35 (-3.24, 3.93)	0.849
Gender	Females vs Males	-0.68 (-2.95, 1.59)	0.558
Age	1 year more	-0.14 (-0.71, 0.43)	0.634
<i>Emotional Well-being (model 2)</i>			
Nationality status	Immigrants vs Natives	-1.07 (-4.23, 2.09)	0.506
Gender	Females vs Males	-0.14 (-2.14, 1.87)	0.895
Age	1 year more	-0.96 (-1.46, -0.45)	0.0002
<i>Self-esteem (model 3)</i>			
Nationality status	Immigrants vs Natives	-15.16 (-19.38, -10.94)	<0.0001
Gender	Females vs Males	-0.38 (-3.05, 2.30)	0.782
Age	1 year more	-0.91 (-1.58, -0.24)	0.008
<i>Family (model 4)</i>			
Nationality status	Immigrants vs Natives	-9.11 (-12.51, -5.72)	<0.0001
Gender	Females vs Males	1.93 (-0.23, 4.08)	0.080
Age	1 year more	-0.25 (-0.79, 0.30)	0.372
<i>Friends (model 5)</i>			
Nationality status	Immigrants vs Natives	-0.73 (-4.28, 2.83)	0.689
Gender	Females vs Males	0.26 (-2.00, 2.51)	0.824
Age	1 year more	-0.67 (-1.24, -0.10)	0.021
<i>School (model 6)</i>			
Nationality status	Immigrants vs Natives	-1.55 (-5.53, 2.43)	0.445
Gender	Females vs Males	-0.56 (-3.08, 1.96)	0.661
Age	1 year more	-2.16 (-2.80, -1.53)	<0.0001
<i>Total score (model 7)</i>			
Nationality status	Immigrants vs Natives	-4.54 (-6.99, -2.10)	0.0003
Gender	Females vs Males	0.07 (-1.48, 1.62)	0.929
Age	1 year more	-0.85 (-1.24, -0.46)	<0.0001

and "Family" were not found to differ significantly according to age ( $p=0.634$  and  $p=0.372$  respectively). Nevertheless, older, as compared to younger in age, children scored significantly less in "Emotional Well-being" ( $p=0.0002$ ), "Self-esteem" ( $p=0.008$ ), "Friends" ( $p=0.021$ ), "School" ( $p<0.0001$ ) and "Total" ( $p<0.0001$ ).

## Discussion

To the best of our knowledge this is the first study to investigate the QoL in immigrant young children between 8 and 14 years. Previous results come from studies investigating QoL solely in adolescents.<sup>6,12,13</sup>

Regarding the present study, the completed questionnaires by immigrant children and young adolescents accounted for 12% of all completed questionnaires. This is in concordance with the percentage of immigrant students attending schools (10–14.5%) in the current year. Eighty five per cent of this immigrant population came from Albania while the rest from other countries. All participating immigrant students attended mainstream schools and none of them had serious learning difficulties according to the reports of their schoolteachers.

The findings of the present study show lower quality of life in the self-esteem dimension, which is in line with the findings of other studies.<sup>6,7</sup> Furthermore, lower quality of life was reported in the domain of family life. Dissatisfaction of immigrant children with their family life may relate to excessive working hours of both parents, suggesting that they do not have the time to deal with their children effectively. In terms of gender, there are no differences, in that boys and girls reported a similar level of self-esteem, a somewhat surprising finding not in line with previous studies in which boys have been reported with higher self-esteem than girls.<sup>13</sup> Girls were reported to be twice as likely as boys to perceive worse health and health related quality of life in the physical and emotional dimensions.<sup>20</sup> In the present study, it was hypothesized that immigrant children would report worse quality of life in the domain of "friends" and "school life", in agreement with findings reported by other surveys<sup>13</sup> providing evidence that the occurrence of discrimination and bullying is higher among immigrant than in native adolescents. However, this hypothesis was not confirmed. A possible explanation would be that because the questionnaires were completed at school, immigrant students might have been unwilling to re-

port in the presence of classmates their experiences or feelings of rejection and discrimination imposed by other children. This is possible to happen because complaints from both immigrant parents and their children regarding discrimination and exclusion have been frequently reported in the local Mental Health Centre in which one of the researchers is appointed to offer mental health services.

Regarding the dimension of emotional well-being, our findings are in line with Derluyn et al study,<sup>21</sup> where no differences were found between immigrant and non immigrant adolescents in terms of facing emotional problems. The authors however assume that migrant adolescents may not report experiencing any emotional problems, because they are not willing to reveal them outside the family environment. This hypothesis is based on the study conducted by Sam<sup>7</sup> showing that "a good deal of low self image, depressive tendencies and psychological and somatic symptoms" were present among immigrant adolescents.

Finally, in terms of gender or age, the results of the present study do not provide evidence of differences between immigrant boys and girls. Nevertheless, older, as compared to younger in age children scored significantly less in the dimensions of KINDL<sup>R</sup> measuring "Emotional Well-being" "Self-esteem", "Friends", "School" and "Total" QoL. Such differences found in groups of older immigrant adolescents, may possibly reveal increasing deficits in dimensions of QoL that were not experienced by younger children. If immigrant children's deficits tend to increase during adolescence, then this is also an indication that should be noticed by families, schools and mental health professionals.

Also, relational deficits within immigrant families need to be further investigated, based on immigrant children's self-reported feelings of dissatisfaction with family. It is noteworthy that results from Greek adolescents do not confirm the presence of negative perceptions regarding family relations.<sup>22</sup> Further investigation may focus on identifying possible gaps in interpersonal communication or in parental care as to provide proper interpretations and relevant interventions for immigrant children's self-reported feelings of dissatisfaction with family.

## Conclusion

It seems that the participating immigrant children were willing to report experiencing lower self-esteem and higher disappointment about their family life. Regarding bullying, incidents against immigrant children have been reported in the local health services. However, because the participating children did not report lower QoL on the dimensions of friends and school life –as it was expected in the case of children suffering violent behavior from other children– it

would be fruitful to investigate these issues in a future study with the use of qualitative methodology.

## Clinical Implications

Interventions can be proposed to promote immigrant child QoL: (a) interventions aiming to empower children and adolescents, (b) interventions focusing on the enhancement of their self-esteem, (c) family interventions aiming to make parents more aware of issues concerning their family's quality of life and the needs of their children.

# Συγκριτική μελέτη Ποιότητας Ζωής παιδιών και εφήβων μεταναστών και Ελλήνων γονέων

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Οι ερευνητικές προσπάθειες σχετικά με την διερεύνηση της Ποιότητας Ζωής (ΠΖ) των παιδιών σχολικής ηλικίας και εφήβων με γονείς μετανάστες είναι σχετικά λίγες τόσο στη διεθνή όσο και στην ελληνική βιβλιογραφία. Λίγες μελέτες έχουν πραγματοποιηθεί σχετικά με την ψυχοπαθολογία και τα προβλήματα συμπεριφοράς ή τα συναισθηματικά προβλήματα σε εφήβους μετανάστες. Αναφορικά με την Ποιότητα Ζωής των μεταναστών αυτή διερευνήθηκε κυρίως σε ενηλίκους. Σκοπός της παρούσας έρευνας είναι η διερεύνηση της Ποιότητας Ζωής των παιδιών και νεαρών εφήβων με γονείς μετανάστες, που ζουν στην ευρύτερη περιοχή της Αθήνας, και η σύγκριση της με την Ποιότητα Ζωής των ελλήνων συμμαθητών τους που κατοικούν στην ίδια περιοχή και φοιτούν στα ίδια σχολεία. Εξήντα τρία παιδιά με γονείς μετανάστες (μέσος όρος ηλικίας 11,9 έτη) που προέρχονται από την Αλβανία και τις Ανατολικές Ευρωπαϊκές χώρες και 489 παιδιά με Έλληνες γονείς (μέσος όρος ηλικίας 11,33 έτη) συμπλήρωσαν ένα ερωτηματολόγιο ειδικά κατασκευασμένο για παιδιά και εφήβους: το ερωτηματολόγιο Kid-KINDL<sup>R</sup> Questionnaire /8–12 years και το ερωτηματολόγιο Kiddo-KINDL<sup>R</sup> Questionnaire/13–16 years στον χώρο του σχολείου. Οι διαστάσεις που διερευνώνται με το KINDL<sup>R</sup> αφορούν τη σωματική υγεία, τη συναισθηματική ευεξία, την αυτοεκτίμηση, τη σχέση με τους φίλους, την οικογενειακή ζωή και την καθημερινή ζωή (σχολική ζωή). Η συμπλήρωση των ερωτηματολογίων έγινε στον χώρο του σχολείου με τη γραπτή συγκατάθεση των γονέων. Η στατιστική ανάλυση περιελάμβανε το student's t-test, το  $\chi^2$  και πολυπαραγοντική γραμμική ανάλυση παλινδρόμησης για τη διερεύνηση της σχέσης μεταξύ διαστάσεων του KINDL<sup>R</sup> και της εθνικότητας ελέγχοντας τους παράγοντες του φύλου και της ηλικίας. Τα αποτελέσματα έδειξαν ότι η Ποιότητα Ζωής των παιδιών των μεταναστών είναι χειρότερη σε επίπεδο στατιστικά σημαντικό στους τομείς της αυτοεκτίμησης και της ζωής στα πλαίσια της οικογένειας σε σύγκριση με τους Έλληνες συμμαθητές τους, καθώς και στη συνολική Ποιότητα Ζωής. Στους άλλους τομείς, όπως στη σωματική υγεία, τη συναισθηματική ευεξία, την κοινωνική και τη σχολική ζωή αναφέρουν την ίδια ΠΖ. Η διερεύνηση του παράγοντα του φύλου και της ηλικίας μετά τον έλεγχο της εθνικότητας και της ηλικίας, έδειξε ότι δεν υπήρχε διαφορά μεταξύ αγοριών και κοριτσιών. Αναφορικά δε με την επίδραση της

ηλικίας, τα μεγαλύτερα παιδιά αναφέρουν υποδεέστερη ΠΖ στον τομέα της συναισθηματικής ευεξίας, την αυτοεκτίμηση, τους φίλους και τη συνολική ΠΖ σε σχέση με τα μικρότερα. Τα αποτελέσματα δείχνουν ότι τα παιδιά των μεταναστών αναφέρουν χειρότερη ΠΖ στον τομέα της αυτοεκτίμησης και της οικογενειακής ζωής. Αυτά τα ελλείμματα φαίνονται να διογκώνονται καθώς τα παιδιά μεγαλώνουν. Η αντίληψη εαυτού και η αντίληψη για την ποιότητα της οικογενειακής ζωής είναι αλληλοεξαρτώμενες στα παιδιά των μεταναστών και η μία επιδρά στην άλλη. Μπορούμε να υποθέσουμε ότι τα παιδιά των μεταναστών βιώνουν χαμηλή αυτοεκτίμηση και αγχογόνα συναισθήματα στο πλαίσιο των οικογενειακών σχέσεων. Καθώς μεγαλώνουν η δυσφορία γίνεται πιο έκδηλη στον συναισθηματικό και κοινωνικό τομέα. Οι ψυχολογικές παρεμβάσεις οφείλουν να λάβουν υπόψη την πολύπλοκη επίδραση των οικογενειακών εμπειριών στην ψυχοκοινωνική ανάπτυξη του παιδιού, ώστε να σχεδιάσουν και να εφαρμόσουν τις κατάλληλες παρεμβάσεις υποστηρίζοντας τον γονικό ρόλο στους μετανάστες. Επιπλέον εξειδικευμένα προγράμματα προαγωγής της ψυχικής υγείας πρέπει να οργανωθούν για τους εφήβους μετανάστες.

**Λέξεις ευρητηρίου:** Ποιότητα ζωής, παιδιά μετανάστες, έφηβοι μετανάστες, αυτοεκτίμηση.

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