European Journal of Special Education Research
ISSN: 2501 - 2428
ISSN-L: 2501 - 2428
Available on-line at: www.oapub.org/edu

doi: 10.5281/zenodo.2648297 Volume 4 | Issue 2 | 2019

REPRESENTATION OF IMMIGRANT STUDENTS IN SPECIAL EDUCATION: EVIDENCE IN GREECE DURING 2003-2013[i]

Anna Zouganeli[1ii],
Konstantinos Mastrothanasis[2]
[1]PhD., Greek Ministry of Education,
School Advisor for Primary Education, Greece
[2]PhDc., University of the Aegean,
Department of Primary Education, Greece

Abstract:
The main purpose of this article is to explore the representation of immigrant students in Greece during 2003-2013, with regard to their reference to diagnostic services (Centers of Differential Diagnosis and Support; KEDDY) and their identification in various disability categories, particularly those of intellectual disability, dyslexia and complex cognitive, social and emotional disorders. According to the results obtained, immigrant students are not overrepresented in assessment requests and diagnostic process in special education in relation to their Greek students. In particular, Greek and immigrant students were proportionately represented in the judgmental categories of special educational needs (dyslexia, mental retardation, complex cognitive, emotional and social disorders). A slight but statistically non-significant trend of disproportionate representation of Greek students in the category of dyslexia is discussed.

Keywords: immigrant students, representation, special education, diagnostic services

Astratto:
Lo scopo principale di questo articolo è quello di esplorare la rappresentanza degli studenti immigrati in Grecia nel periodo 2003-2013, per quanto riguarda il loro riferimento ai servizi diagnostici (Centri di diagnosi e supporto differenziale, KEDDY) e la loro identificazione in varie categorie di disabilità, in particolare quelle di disabilità intellettiva, dislessia e disturbi cognitivi, sociali ed emotivi complessi. In base ai risultati ottenuti, gli studenti immigrati non sono sovrarappresentati nelle richieste di valutazione e nel processo diagnostico nell'istruzione speciale in relazione ai loro studenti greci. In particolare, gli studenti greci e immigrati erano rappresentati proporzionalmente nelle categorie giudicatrici di bisogni educativi speciali (dislessia,

[i] RAPPRESENTANZA DEGLI STUDENTI IMMIGRATI NELLA FORMAZIONE SPECIALE: PROVE IN GRECIA NEL 2003-2013
[ii] Correspondence: email pred18001@aegean.gr

ritardo mentale, disturbi cognitivi complessi, emotivi e sociali). Una leggera ma non statisticamente significativa tendenza di rappresentazione sproporzionata degli studenti greci nella categoria della dislessia e discussa.

Parole chiave: studenti immigrati, rappresentanza, educazione speciale, servizi diagnostici

1. Introduction

Following the political developments in North Africa, Greece and Italy are the main immigrant gateways to Europe for non-documented immigration, especially from 2008 onwards (European Union, 2013). The Greek financial crisis of 2010-2016 did not reduce the immigration flow. Instead, the Ministry of Interior reported a sharp increase in the number of immigrants entering the Greek territory in 2008 and 2015. Moreover, there is a different ethnic composition in migration flows, as the number of undocumented immigrants from Asian and African countries has increased (Gogonas & Michail, 2015; Laboratory of Migration and Diaspora, 2011). These are mainly refugees from war zones such as Syria and Afghanistan. During 2015, the Amnesty International has reported that more than 851,319 refugees, asylum-seekers and immigrants crossed the sea to reach the Aegean islands. Poor planning and the deep financial crisis exacerbated the humanitarian crisis in the islands, and there is a concern for the potential of educational system to meet these needs (Amnesty International, 2016, p. 168).

The disproportionality refers to "*the degree to which a membership in a particular group affects the possibility of placement on a specific disability category*" (Oswald, Coutinho, Best, & Singh, 1999, p. 198). In general, the disproportionate representation refers to over- or under-representation of a particular population group, which is often defined not only by race/ethnicity but also by socioeconomic status and gender or residence status. Although studies have historically tended to focus on ethnic groups or historical minorities that are over-represented in special education, there are groups which are also underrepresented (Kauffman, Simpson & Mock, 2009).

Several U.S. studies have found a disproportionate representation of minority students in special education, especially African-Americans (Skiba et al., 2008). However, a resent well-designed study by Morgan et al. (2015) contradicts previous findings. The data of the Office for Civil Rights in the US Department of Education shows that African-American students are overrepresented over time in the special education categories of intellectual disabilities and emotional and/or behavioral disorders (EBD). These disability categories typically have no known biological cause and their identification is based on a more subjective professional judgment.

In England, Strand and Lindsay (2009) considered the existence of disproportionality in special education of black students compared with the white's British classmates. In Finland although the Finnish education system does not allow institutional comparisons relating to the representation of pupils from ethnic groups in

special education it is observed that Roma children are placed very easily in special classes (Kivirauma & Ruoho, 2007). Roma children in Eastern European countries such as Serbia, Czech Republic, Hungary found to be overrepresented in special education classrooms (Anastasiou, Gardner & Michail, 2011). In Spain, because the majority of immigrants are Hispanics, language is not a barrier to learning process, in addition to the small number of students identified with special educational needs do not leave room for misidentification and placement in special education (Anastasiou et al., 2011). The over-representation of immigrant children from low socio-economic groups for learning disabilities in special schools, creating great concern for the effectiveness of the education system in Germany as for the inequalities and broader social problems created as a consequence of (Werning, Loser & Urban, 2008). The disproportionate representation of minority students in special education is an issue for the American education almost for four decades. A range of factors may have contributed to its creation.

2. Disproportionality, minorities and special education

A number of factors contributing to the problem of disproportionate representation, such as child poverty, namely low birth weight, malnutrition, exposure to lead and other environmental factors, are discerned in the extensive bibliography (e.g. Artiles, 2003; Artiles, Trent & Palmer, 2004; Donovan & Cross, 2002; Losen & Orfield, 2002). Other factors include educational and curricula inequalities (Ferri & Connor, 2005), the limited opportunities for educators to develop professionally (Donovan & Cross, 2002), the analysis level on which the research refers to -for example the division of schools in national, state and local (Artiles, Rueda, Salazar & Higareda, 2005)- the proportion of an ethnic group or a historical minority in the native population of a particular region, the indicators that were used to measure the problem (Heller, Holtzman & Messick, 1982; Morgan et al., 2015), etc..

Furthermore, surveys indicate that a regulatory factor for the existence of disproportionality is the low socio-economic status. Recent American surveys highlight the important role of the economic factor resulting from the disproportionate representation in special education. Poverty seems to have a significant effect on placing students in a specific educational context, on generating health problems that affect general development and consequently student performance, thus increasing the special educational needs (Anastasiou, Morgan, Farkas & Wiley, 2017) and possibly exacerbating gender inequalities. Students are at a higher risk and need special education services when they are poor, or members of ethnic groups, or of a historical minority. (Anastasiou et al., 2011).

As indicated by research, the referral, evaluation and identification process for special education students belonging to ethnic groups or historical minorities is becoming vague and problematic, in relation to teachers' expectations and perceptions, as well as their difficulty to cope with behavioral problems posed by these students.

(Losen, Hodson, Ee & Martinez, 2014; Losen, Ee, Hodson & Martinez, 2015). For example, African-Americans with behavioral problems are more likely to be placed in special education programs than their classmates from other ethnic groups, possibly as a consequence of the historical and /or current prejudice encountered by their teachers. (Hosp & Reschly, 2004).

In addition to behavioral problems, other reasons for referring children from ethnic groups or historical minorities to special education structures are: reduced language development or accumulation of cognitive deficits and mild mental retardation (Donovan & Cross, 2002). As supported by Anastasiou et al. (2011), the tendency of disproportionate representation of migrant children in special education is mainly associated with special education categories (mild mental retardation, emotional disturbances, learning difficulties) requiring the establishment of clear eligibility criteria. Consequently, students may be misclassified, discriminated against, under-served, or may receive services that do not meet their needs (Blanchett, Klingner & Harry, 2009; Collins, Connor, Ferri, Gallagher & Samson, 2016).

In such case, the fact that prejudice or misidentification exist vis-à-vis ethnic groups or historical minorities indicates another weakness of the educational system in this direction (Kauffman, Anastasiou & Maag, 2017; Townsend, 2000).

3. Method

3.1. Purpose of study and research questions

This study aims to investigate whether or not disproportionality exists among students referred to the Centers for Differential Diagnosis, Diagnosis and Support of Special Education Needs (CDDDS), in Greece, depending on their nationality, as well as the existence of any disproportionality in regard to their identification for various categories of disability.

The study attempted to provide answers to the following specific questions:

1) Is there disproportionality among students referred to the CDDDS depending on their nationality?
2) Is there disproportionality in the request categories among Greeks and other ethnic groups referred to the CDDDS?
3) Is there disproportionate representation of students examined at the CDDDS depending on their status of residence?
4) Is there disproportionate representation of students diagnosed at the CDDDS depending on their nationality?
5) Is there disproportionate representation of students in different diagnostic categories depending on their nationality?

3.2. Datasets

To achieve the purpose of the study and to answer the research questions, two primary datasets derived from a) four diagnostic centers (CDDDS) of the Greek Ministry of

Education which derives from two of the thirteen Greek regions and b) the Hellenic Statistical Authority (ELSTAT), covers the time period 2003-2013 were used.

The Centers for Differential Diagnosis, Diagnosis and Support of Special Education Needs (CDDDS, Kendra Diaforodiagnosis, Diagnosis kai Ypostiriksis Eidikon Ekpedeutikon Anagon, KEDDY, Law 3699/2008), previously called as Centers for Diagnosis, Evaluation and Support (Law 2817/2000), are the public organizations of Greek Ministry of Education, Research and Religious Affairs that provide diagnoses for the purpose of identifying special educational needs. Moreover, they can recommend placement as well as guide educators, learners and parents. The older than five years of age children can be diagnosed on those centers. Furthermore, school placement and educational support recommendations are the main functions of them. The first set of data was collected under permission from the Special Education Division of the Greek Ministry of Education following our request for entry into the CDDDS (protocol no. 194044/C6/12.17.2013 and 194046/C6/12.16.2013) contained individual student information as well as diagnostic evaluation reports from the A and C CDDDS of Athens, the CDDDS of Piraeus and the CDDDS of Patras. The latter is representative of Western Greece, since the wider Patras region has the largest student population compared to other Greek regions.

Following consultations with CDDDS supervisors, on-site visits were paid and archives were made available to us in digital form and concerned 12.171 students who requested assessment from the four different CDDDS. From the 12.171 students, 3.526 (29,0%) requested assessment at the CDDDS A' of Athens, 2.655 (21,8%) at the C' of Athens, 4.054 (33,3%) at the CDDDS in Piraeus and 1.936 (15.9%) at the CDDDS in Patras. Regarding the gender, 8.408 (69,1%) were boys and 3.763 (30.9%) were girls. As of their nationality, 11.002 (90.4%) students were of Greek origin and 1.169 (9.6%) of another origin (Albanian ets.). 4.906 (40,3%) are enrolled in elementary schools, 3.266 (26.8%) in middle schools, 2.669 (21.9%) in high schools, 58 (0.5%) in vocational schools and 60 (0.5%) in special education (special schools). 893 (7.3%) were in kindergarten and 319 (2.6%) had incomplete data for their nationality. As for the referrals, 8.395 (69.0%) were requested by parents, 2.367 (19.4%) from Schools/Educators and 1.409 (11.6%) from relatives.

The second dataset provided by the Hellenic Statistical Authority (published in www.statistics.gr) and contains information about the student population per education level and citizenship. Some statistical data were sent to us electronically on March 4, 5, and 6, 2015, following telephone requests to Hellenic Statistical Authority.

3.3. Analyses

The primary datasets were transferred to linear array tables using the SPSS 20 statistical packet and were analyzed quantitatively. The chi-square test was applied to answer the research questions. A level of statistical significance (p) was set at 5% whereas the findings with $p<.05$ were considered statistically significant.

The magnitude of the effects was calculated using the Cramer's V (*V*) index. Cohen's (1988) guidelines for *V*, are that a large effect is greater than or equal to .5, an intermediate effect is between .3 and .5 and a small effect is between .1 and .3, according the number of degrees of freedom (*df*). Suggested norms for *V*, based Gravetter and Wallnau (2013, p. 615), are that a large effect is .22, a medium effect is .13 and a small effect is .05 for *df*=5, a large effect is .25, a medium effect is .15 and a small effect is .05 for *df*=4, a large effect is .29, a medium effect is .17 and a small effect is .06 for *df*=3, a large effect is .35, a medium effect is .21 and a small effect is .07 for *df*=2 and finally a large effect is .50, a medium effect is .30 and a small effect is .10 for *df*=1. To represent the results, the frequency (N) as well as the absolute frequency (N%) were used.

4. Results

4.1. Students referred to the CDDDS and nationality

To obtain an answer to the first question of our survey, the data from the CDDDS and the Hellenic Statistical Authority were compared. The latter, however, did not provide comparative data for populations of Greek or other nationality for kindergarten for the years 2004-2012. Specifically, their data under "other nationality" was only available for 2000, 2012 and 2013.

According to data available at the Hellenic Statistical Authority, the total population in Attica during 2003-2013 is by 4.535.150 (88.88%) of Greek nationality and the remaining 567.203 (11.12%) of other (than Greek) nationality. The same applies to Western Greece where 949.804 (94.12%) is Greek and the remaining 59.312 (5.88%) is other nationality.

As for the frequency per CDDDS and nationality, in the C' CDDDS of Athens 2.453 (92.4%) of the referred students are of Greek nationality and 202 (7.6%) of other nationality. In the CDDDS of Piraeus the 3.835 (94.6%) and 219 (5.4%) respectively, in the A' CDDDS of Athens 3.034 (86.0%) and 492 (14.0%) and in CDDDS of Patras 1.680 (86.8%) and 256 (13.2%). That is, in a total of 12.171 referrals, 11.002 (90.4%) are of Greek nationality and the remaining 1.169 (9.6%) of another nationality (see Table 1).

Based on the expected different ratio of the two populations, there are no statistically significant differences between the referred Greek students and those of other nationalities (χ^2=0.007, *df*=1, *p*>.05). In other words, among Greek and non-Greek students who are referred to the CDDDS the 9:1 ratio is proportionate to their representation in the population of the two regions. In short, there is no disproportionate representation of students referred to the CDDDS depending on their nationality. Also, there is also no statistically significant difference between the Greek and other than Greek category of referred students to the CDDS in terms of gender (χ^2=0.254, *df*=1, *p*>.05).

Table 1: Absolute frequencies and relative frequencies of students referred to the CDDDS and total student population

Nationality	Referred students		Total student population (2003-13)	
	N	N%	N	N%
Greek	11.002	90.40%	5.484.954	89.75%
Other	1.169	9.60	625.515	10.25%
Total	12.171	100.00%	6.111.469	100.00%

However, there are statistically significant differences between Greek and other non-Greek referred students in terms of school level (grade). Here, the observed differences in the frequencies between the Greek and the immigrant students (see Table 2) are statistically significant (χ^2=127.09, *df*=5, *p*<.001, *V*=.01), with small effect size.

Table 2: Absolute and relative frequencies of referred students per school grade and nationality

Grade	Greek nationality		Other nationality	
	N	N%	N	N%
Kindergarten	743	83.2%	150	16.8%
Elementary School	4.391	89.5%	515	10.5%
Middle School	2.990	91.5%	276	8.5%
High School	2.532	94.9%	137	5.1%
Vocational/Technical	52	89.7%	6	10.3%
Special Schools- EEEEK	53	88.3%	7	11.7%
Total	10.761	90.8%	1.091	9.2%

There is a statistical difference between the Greek and the other than Greek referred students as to the referral source too. The observed differences in the frequencies between the Greek and the immigrant students as to the referral source (see Table 3) is statistically significant (χ^2=6.42, *df*=2, *p*<.001, *V*=.01). The effect size appeared to be small.

Table 3: Absolute and relative frequencies of referred students per referred source and nationality

Referral source	Greek nationality		Other nationality	
	N	N%	N	N%
Parents - Siblings	7.616	90.7%	779	9.3%
School - Teacher	2.138	90.3%	229	9.7%
Other relatives	1.248	88.6%	161	11.4%
Total	11.002	90.4%	1.169	9.6%

4.2 Greek and immigrant students who are referred to the CDDDS and request categories

The observed differences in frequencies between Greek and immigrant students in terms of referral requests is statistically significant (χ^2=132.67, *df*=5, *p*<.001, *V*=.01). The effect size is small. Thus, from the statistical point of view, there are significant differences between the referred Greek students and those of other than Greek origin as per referral request (see Table 4).

Table 4: Absolute and relative frequencies of referred students per referral request and nationality

Referral request	Greek nationality			Other nationality		
	N	N% (Req.)	N% (Nat.)	N	N% (Req.)	N% (Nat.)
Assessment, reassessment, evaluation renewal	4.908	87.9%	44.6%	677	12.1%	57.9%
Parallel support	92	95,8%	0.8%	4	4.2%	0.3%
Poor hearing, home teaching, syndromes	69	89.6%	0.6%	8	10.4%	0.7%
Change in educational frame, adjustment to school environment	586	85.1%	5.3%	103	14.9%	8.8%
Integration	156	88.1%	1.4%	21	11.9%	1.8%
Dyslexia	5.191	93.6%	47.2%	356	6.4%	30.5%
Total	11.002	90.4%	100.0%	1.169	9.6%	100.0%

Therefore, there is disproportionality in the request categories between Greek and immigrant students who are referred to the CDDDS. Comparatively, as indicated in table 4, more Greek students are referred with a request for Parallel Support (0.8% vs. 0.3%) and Dyslexia (47.2% vs. 30.5%), while more students under the other nationality category are referred with a request for "Change of educational frame, and adjustment to school environment" (8.8% vs. 5.3%).

The ambiguity, however, of the category “Assessment, reassessment, evaluation renewal” that may also involve dyslexia, does not contribute to a truly safe comparison of the data. Also, the overlapping of “Parallel support” with the "Integration" category, which slightly exceeds the "other nationality" (1.8% vs. 1.4%), results to similar comparison problems.

4.3. Examined students, nationality and proportional representation

Based on the expected proportionate difference between the two populations (see Table 5), there are no statistically significant differences between Greek and other than Greek students that are examined (χ^2=0.82, df=1, p>.05). In other words, the students between the Greek and the other nationality are examined at the CDDDS in a ratio 9:1, which reflects their representation in the population of the two regions. In sum, there is no disproportional representation of examined students depending on their nationality.

Table 5: Absolute frequencies and relative frequencies of students referred to the CDDDS by nationality, based on the expected proportional representation

Nationality	Evaluated students		Total student’s population (2003-13)	
	N	N%	N	N%
Greek	5.669	87.43%	5.484.954	89.75%
Other	815	12.57%	626.515	10.25%
Total	6.484	100.00%	6.111.469	100,00%

4.4 Diagnosed students, nationality and proportional representation

Based on the expected different ratio of the two populations (see Table 6), there are no statistically significant differences between Greek and non-Greek students that are diagnosed (χ^2=0.33, *df*=1, *p*>.05). In other words, students between the Greek and "other" nationality are diagnosed by the CDDDS in a 9:1 ratio, which is proportionate to their representation in the population of the two regions. In brief, there is no disproportionality of students that are diagnosed by the CDDDS depending on their nationality.

Table 6: Absolute frequencies and relative frequencies of students evaluated from the CDDDS and total student population

Nationality	Evaluated students		Total student population (2003-13)	
	N	N%	N	N%
Greek	2.988	88.14%	5.484.954	89.75%
Other	402	11.86%	626.515	10.25%
Total	3.390	100.00%	6.111.469	100.00%

4.5 Diagnostic categories and nationality

The observed difference in the frequencies between Greek and immigrant students in terms of the diagnostic category (see Table 7) is not statistically significant (χ^2=17.48, *df*=12, *p*>.05).

Having too many categories, however, does not help our comparison. Therefore, we combined the high frequency categories (complex cognitive emotional and social disorders, DEPY, NY, learning difficulties, language disorders) keeping Dyslexia and Specific Learning Difficulties (S.L.D.) separately. We also combined the categories of low frequency (autism, health problems, mobility problems, vision and hearing problems). We excluded, however, the multitudinous category "negative diagnosis" (since the issue has already been investigated in question 4 as well as the limited, "unspecified diagnosis" with similar percentages (0.4 and 0.5) for both groups under comparison.

Table 7: Absolute and relative frequencies of referred students per referral request to the CDDDS and nationality (N=6.484)

Diagnostic category	Greek nationality			Other nationality		
	N	N% (Diag.)	N% (Nat.)	N	N% (Diag.)	N% (Nat.)
S.L.D. & Dyslexia	1.314	90.1%	23.2%	144	9.9%	17,7%
Autism (& Asperger)	337	87.5%	5.9%	48	12.5%	5,9%
Complex cognitive emotional social disorders	163	88.6%	2.9%	21	11.4%	2,6%
Hyperactivity (& Dyslexia, learning difficulties)	154	85.6%	2.7%	26	14.4%	3,2%
Mental Retardation (& Down)	251	87.5%	4.4%	36	12.5%	4,4%
Learning difficulties	331	86.2%	5.8%	53	13,8%	6,5%
Language disorders	190	84.4%	3.4%	35	15,6%	4,3%
Health problems (& epilepsy)	59	92.2%	1.0%	5	0,8%	0,6%

Mobility problems.	105	84.0%	1.9%	20	16,0%	2,5%
Vision problems	17	85.0%	0.3%	3	15,0%	0,4%
Hearing problems	45	86.5%	0.8%	7	13,5%	0,9%
Unspecified diagnosis	22	84.6%	0.4%	4	15,4%	0,5%
Total with diagnosis	2.988	88.14%	52.70%	402	11,86%	49,32%
Negative diagnosis	2.681	86.7%	47.3%	413	13,3%	50,7%
Total	5.669	87.4%	100.0%	815	12,6%	100,0%

The observed differences in the frequencies between the Greek students and those of other nationality as per referral request (see Table 8) is statistically significant (χ^2=9,64, *df*=2, *p*<0,01, *V*=.00). The effect size is small. Thus, there are statistically significant differences between Greek and "other" nationality students who were diagnosed with regard to the diagnostic category. Therefore, there is a percentage difference in some diagnostic categories between Greek students and students of other nationality that were diagnosed at the CDDDS.

Table 8: Absolute and relative frequencies of diagnosed students from the CDDDS per diagnostic category and nationality (N= 3.364)

Diagnostic category	**Greek nationality**			**Other nationality**		
	N	**N% (Diag.)**	**N% (Nat.)**	**N**	**N% (Diag.)**	**N% (Nat.)**
S.L.D. & Dyslexia	1.314	90.1%	44.3%	144	9.9%	36,2%
Low frequency disabilities	563	87.2%	19.0%	83	12.8%	20,9%
High frequency disabilities	1.089	86.4%	36.7%	171	13.6%	43,0%
Total	2.966	88.16%	100.0%	398	11.83%	100,0%

In the overview of Table 8, it appears that the percentage of Greek students diagnosed with dyslexia (44.3%) is slightly higher compared to that of other nationality (36.2%). The opposite pattern appears under the diagnostic category "high frequency disabilities" (36.7% Greek vs 43.0% other). The percentages of the two groups in the diagnostic category "low frequency disabilities" are similar (19.0% vs 20.9%).

To confirm the above pattern, we focused on the two high frequency diagnostic categories, namely the category "Dyslexia and Specific Learning Difficulties (S.L.D.)" and the "High Frequency Disabilities" (Complex cognitive emotional and social disorders, ADHD, NY, Learning difficulties, language disorders). Table 9 contains these data.

Table 9: Absolute and relative frequencies of diagnosed students from the CDDDS per diagnostic category and nationality (N= 2.718)

Diagnostic category	**Greek nationality**			**Other nationality**		
	N	**N% (Diag.)**	**N% (Nat.)**	**N**	**N% (Diag.)**	**N% (Nat.)**
S.L.D. & Dyslexia	1.314	90.1%	54.7%	144	9.9%	45.3%
High frequency disabilities	1.089	86.4%	45.3%	171	13.6%	54.7%
Total	2.403	88.16%	100.0%	315	11.83%	100.0%

The observed differences in the frequencies between the Greek and the other nationalities as per referral request is statistically significant since (χ^2=9,01, *df*=1, *p*<0,01, *V*=.00). The effect size is small. That is to say significant statistical differences appear between the Greek and other nationality in students who are diagnosed under the two diagnostic categories.

The overview of Table 9 indicates a slightly higher percentage of Greek students diagnosed in the category Dyslexia/SLD (54.7%) compared to students of other nationality (45.3%). The opposite pattern appears in the diagnostic category "high frequency disabilities" (45.3% Greek vs 54.7% other nationality). That is, the isolation of the two diagnostic categories confirms the reverse diagnostic pattern observed in Table 8.

5. Discussion

Our study aimed at examining the special education services provided to students of other nationalities by the CDDDS, and at investigating whether or not disproportionality exists among them and the Greek students. According to our findings, there is no disproportionate representation of Greek and non-Greek students in any of the categories of special education needs, particularly in the sensitive "subjective" categories (mental retardation, complex cognitive, emotional and social disorders), since 11.9% of students diagnosed at the CDDDS are of other nationality and 88.1% are Greek (see Table 6). These percentages, compared to the corresponding proportion of the populations (9:1), indicate that there is no disproportionate representation in the diagnosis provided by the CDDDS to the two student population groups.

The above findings are in agreement with the English nation-wide survey of Strand and Lindsay (2009), which has found that phenomena of disproportionality were not observed in ethnic groups or historical minorities in the sensitive "subjective" categories of special education needs (dyslexia, mental retardation, complex cognitive, emotional and social disorders). In the same survey, over-representation of Pakistani origin students was found in the genetically specified categories of special education, an issue related to cultural practices such as inbreeding, etc. Our findings are also in agreement with American research over the past five years supporting that according to long-term data analysis for five disability cases (learning difficulties, dyslexia, mental retardation, complex cognitive, emotional and social disorders, health problems), students from ethnic or linguistic minorities (Spanish-speaking, African-Americans) are under-represented in the above categories although they are more likely to have special educational needs than their white classmates, mainly due to economic inequalities (Morgan et al., 2015).

Even though our study found no disproportionality of students diagnosed according to their nationality, there was a slight tendency of disproportionate representation of Greek students in the category Dyslexia/SLD versus students of other

nationality (45.3%). Exactly the opposite pattern was presented with the "high frequency disability" diagnostic category where a slight tendency of disproportionate representation of students of another nationality (45.3% vs. Greek students 54.7%) was observed (see Table 9). In the disputed categories of mental retardation and complex cognitive and social disorders, however, the percentages of Greek and other students are comparatively similar. In other words, for the mental retardation category the percentages of the two groups were 4.4% and for the complex cognitive and social disorders were 2.9% for the Greeks and 2.6% for the other students (see Table 7).

Many studies, whose results differ, have focused on the disproportionate representation of African-American and white students in terms of "high frequency disabilities" (mental retardation and emotional and/or behavioral disorders). Some of these studies suggest that African-American students are less likely to be diagnosed with mental retardation, emotional and/or behavioral disorders than their white classmates (Anastasiou et al., 2017). Meanwhile, some other researchers have long seen a possibility of over-representation of African-American students vis-à-vis their white classmates in the categories of mental retardation, emotional and/or behavioral disorders (Skiba et al., 2008).

Regarding "high frequency disabilities" disproportionate representation was not found in our own research, as the percentage of Greek and other nationality students is approximately of the same frequency as the proportionate representation of the two groups in the school population.

From the general category of learning difficulties requiring special education in Greece, dyslexia is the one that enables the child -by law and by obtaining the relevant certificate- to receive support either by additional training or some hours of personalized teaching at Inclusive Classes. Furthermore, the dyslexic student is entitled by law to participate only in oral exams while at school, and to be examined orally in the nation-wide entrance exams for admission to tertiary education. According to data provided by American surveys, primary and secondary school students belonging to ethnic groups or historical minorities, with limited English, are over-represented by more than 10% in the dyslexia category (Artiles et al., 2005). Something similar was not found in our research, with the exception of a slight tendency for disproportionality in dyslexia, which corresponds to a 1:1.2 ratio, and could be considered negligible.

`The case of dyslexia, as argued by Anastasiou & Polychronopoulou (2009), could be explained by taking into account the social context where it takes place. When the characterization of dyslexia, regardless of the way it is diagnosed (psychometric criteria or intervention model), allows for favorable adjustments or supportive advantages, it is expected that social pressures will encourage parents to use them effectively for the benefit of their children. It is even supported by Horvart, Weinger & Lareau (2003) that organized networks of middle-class parents demonstrate a particular ability to intervene in school-related matters and make full use of educational benefits for the good of their children.

Something similar is also encountered in Greece with dyslexia. Dyslexia is a sensitive issue in Greece, and dyslexic students are exempted from conventional exams. Instead, they are given the opportunity to be examined orally, and not in writing, during school exams as well as the so called "university entrance examinations", a series of challenging exams, which determine the students' entry into higher education. Greek parents take advantage of this opportunity and make efforts to possibly achieve more favorable settings for their children through their interventions in diagnostic services (Anastasiou & Polychronopoulou, 2009). Therefore, despite the fact that there is no disproportionate representation of Greek and other nationality students in Greece in regard to dyslexia, the influence of Greek parents results to a tendency of disproportionality.

For parents of other nationality and working class families, contact with special education services appears to be minimal (Morgan et al., 2015; Lareau, 2000). Certain scholars argue that services reject parental anxieties (Anastasiou et al., 2017), parents themselves have fewer contacts with special education professionals because of lack of social care (Morgan et al., 2015), while some others have found that the parent-professional interactions are so structured as to render parents effectively powerless as partners in their children's educational careers due to the standardized structure of the communication framework in diagnostic services, to which they are unable to respond, as revealed in Bennett's ethnographic study (1988).

Our study also examined whether or not disproportionality exists among students referred to the CDDDS, and in the request categories that these students are referred to. In Greece, the assessment process of special educational needs may be divided into three stages (referral, examination, diagnosis) which are spaced apart from each other because of the large number of children that CDDDS have to serve. For that reason, the existence or non-existence of disproportionality in the other two stages of the assessment process was examined.

In our survey disproportionality among Greek and other nationality students referred to the CDDDS was not found. Based on our data, the percentage of referred Greek students is 90.4% and that of other nationality 9.6%. That is, students between the Greek and the other nationalities are referred to the CDDDS in a ratio of 9:1, which is proportional to their representation in the school population of the two regions examined in our sample (Attica and Western Greece).

The only differences are observed in school grades and referral sources. Greek students are referred to the CDDDS in greater frequency while in high school (94.9% vs 5.1%) and the referral is done by parents and siblings (90.7% vs 9.3%). On the contrary, students of other nationality are referred in greater frequency while in kindergarten (16.8% vs 83.2%) and the referral is done by relatives (11.4% vs 88.6%) (see Tables 2 & 3).

The data of our research, however, is different when compared to American surveys. Various American researchers claim that African-American students are likely to be referred to special education more often than their white or Hispanic classmates

because of their color (Samson & Lesaux, 2009). There are others, though, who find that children of ethnic or linguistic minorities are less likely to be referred to special education services mainly because of their economic disadvantage and low socio-economic level (Anastasiou et al 2011; Morgan et al., 2015).

In examining the findings of our research in relation to the gender of children referred to the KEDDY from 2003 to 2013, it is observed that boys outnumber girls in a ratio of about 1:3 in both groups of student populations, i.e., Greek and other nationality.

An important role of the diagnosis/evaluation process in special education structures is also played by gender, as boys are about twice as likely to be referred to and to be recognized as people with special educational needs (Donovan & Cross, 2002).

Coutinho and Oswald (2005) state that in the United States, boys are 1.3 times more likely than girls to be identified with mental retardation, twice more likely to be identified with learning difficulties, and 3.4 times more likely to be identified with severe emotional disturbance. The biggest differences between the two sexes were found in the category of learning difficulties and emotional and/or behavioral disorders (Coutinho & Oswald, 2011). Similar results were found in a study conducted in England where boys were 2.5 times more likely than girls to be identified with special educational needs (Strand & Lindsay, 2009), with the most significant differences among students with emotional disorders.

In the results of our research there are no differences in the representation of students of the two groups (Greeks and other nationality), but an interesting pattern is presented, which is contrary to what has been recorded in American surveys. Specifically, Greek students are referred to the CDDDS with a higher frequency when in high school and the referral is done by parents and siblings, while students of other nationalities are referred more often when in kindergarten and the referral is done by other relatives. On the contrary, as indicated by some American researchers, ethnic groups or historical minorities with limited English are underrepresented in kindergarten and over-represented in high school (Artiles & Rueda, 2002). In fact, the majority of referrals are made by educators (Gottlieb, Gottlieb & Trongone, 1991) and an interaction has also been found between teachers and students of another nationality (Oswald, Countinho & Best, 2002).

Given the six-year compulsory schooling, students of another nationality come to Greek education in kindergarten. These children, although born in Greece and speaking Greek, have a different culture from the host country, which also affects their language code (Chatzidaki & Maligkoudi, 2013). The increased referral rates of kindergarten students of another nationality may perhaps be explained by the fact that the largest community of another nationality is Albanian parents who wish for their children to receive Greek education. Thus, in their effort to succeed towards this direction (Michael, 2010), they address the CDDDS for assistance when school teachers find it difficult to cope with requests related to special linguistic needs.

On the contrary, Greek students are referred to the CDDDS at a relatively higher frequency when in high school in order to benefit, perhaps, from the favorable arrangements in regard to the country-wide examinations, which determine student entry to tertiary education. (Anastasiou & Polychronopoulou, 2009). In Greece, there is no institutionalized procedure encouraging school teachers to refer students directly to the CDDDS for assessment. Therefore, the family plays the most significant role in the referral and assessment process (Artiles & Trent, 1994). Immigrant parents, however, are often unable to deal with the issue due to language difficulties and for this reason they seek assistance from relatives who assume the translator's role. (Hardinetal, 2009).

By examining the referral requests in the CDDDS, we found that there is a slight tendency for disproportionality in the request categories. Comparatively, there are more Greek students who are referred with a request for Parallel Support (0.8% vs. 0.3%) and Dyslexia (47.2% vs. 30.5%), than students of other nationality who are referred with a request for Change of Educational framework, adaptation to school environment (8.8% vs. 5.3%). However, the ambiguity of the category "Evaluation, re-evaluation, evaluation renewal" (44.6% for Greek students vs. 57.9% for other nationalities), which may also be related to dyslexia, does not contribute to a safe comparison of our data. Also, the overlapping of "Parallel support" with the "Integration" category, where the percentage of students of other nationality is slightly higher (1.8% vs. 1.4%), causes similar comparison problems (see Table 4). Therefore, it is observed that Greek parents tend to address the CDDDS with requests for parallel support and dyslexia, while the other nationality is requesting change of educational environment, re-evaluation and integration.

Up until recently, the certificate of dyslexia was valid for three years and beyond this period the child had to be re-evaluated (Law 3699/2008). But with the compensatory education programs in force (Integration and Parallel Support Departments), and the justified oral exams arrangement for dyslexic students, it is rather unlikely that the CDDDS' interdisciplinary team will not re-issue the dyslexia certificate so that students may benefit from the favorable regulations. Perhaps, this is not known to parents of another nationality and that might be the reason for addressing the CDDDS with no coherent requests. On the contrary, Greek parents are more informed, more determined, know better what they are asking for and are able to submit more coherent requests when addressing the CDDDS for referral. On the other hand, parents of another nationality are estimated to have significantly limited information concerning their rights (Kivirauma, Klemelä & Rinnie, 2006), due to their lack of the Greek language in certain cases. The findings of our study indicated that there is no disproportionality among the students examined at the CDDDS depending on their nationality. That is, students of Greek and other nationalities are examined in a 9:1 ratio, which is proportionate to their representation in the Greek population.

The findings of our research cannot be compared directly to the ones conducted in the United States, as the identification process in Greece differs. As already discussed by Anastasiou & Iordanidis (2006) the typical scenario for referral, assessment and

intervention is for the parents to submit an application to the CDDDS of their district. Following the application process, they are invited to discuss the assessment prospects, i.e., examination and diagnosis in order for the child to receive special educational services. The waiting period may range from one month to two years, due to long lists, the large number of student population per CDDDS district, as well as the insufficient number of staff, especially in the service centers of Athens and Thessaloniki. As a result of this queue, students in need of specialized help receive the least possible benefit from conventional teaching. (Anastasiou et al., 2017). In the United States, however, children are referred by the general education teachers to the Special Education Commission - with the consent of their parents - in order to receive special education services. The Commission meets immediately, and a few days later the school district must start the intervention program (Anastasiou & Polychronopoulou, 2009).

Our research clearly indicates that disproportionality of other nationality students in relation to their Greek classmates does not exist in special education support structures in regard to referrals for diagnosis and assessment. Therefore, the chances of erroneous placement of other nationality students due to insufficient examination for culture-related or linguistic factors are more likely to be diminished (Sullivan, 2011). The dominant issue that emerged is the slight tendency of disproportionate representation of Greek students in the dyslexia category, which is more directly related to the specificity of dyslexia which provides supportive advantages that can only be subject to inflationary pressures generated by the structure of society (Anastasiou & Polychronopoulou, 2009, p. 67).

About the Author(s)

Anna Zouganeli is a School Advisor of Primary Education in Greece. She holds a PhD in Special Education from the Department of Primary Education of the University of Western Macedonia. She is a scientific associate of the School of Pedagogical and Technological Education (ASPETE).

Konstantinos Mastrothanasis is a PhD Candidate in the Department of Primary Education of the University of the Aegean. He serves as a primary school teacher as well as a scientific associate of the School of Pedagogical and Technological Education (ASPETE) and the National and Kapodistrian University of Athens.

References

Amnesty International (2016). *Amnesty International Report 2015/16 - Greece*, 24 February, available at: https://www.refworld.org/docid/56d05b536.html [accessed 3 April 2019]

Anastasiou, D., & Iordanidis, G. (2006). *Problems with inadequate staffing in KDAYs (Centers for Diagnosis, Assessment and Support): Trends, dysfunctions, suggestions*. In P. G. Georgogiannis (Ed.), Proceedings of the 1st International Conference on

Education Managment. Patras, Greece: Center for Intercultural Education - Department of Elementary Education, University of Patras. [in Greek].

Anastasiou, D., & Polychronopoulou, S. (2009). Identification and Overidentification of specific learning disabilities (dyslexia) in Greece. *Learning Disability Quarterly,* 32, 55-69.

Anastasiou, D., Gardner, R. III., & Michail, D. (2011). Ethnicity and Exceptionality. In J. Kauffman, & D. Hallahan (eds.) *Handbook of Special Education* (pp. 745-758). New York, NY: Routledge.

Anastasiou, D., Gardner, R. III., & Michail, D. (2014). Disability in Multicultural Theory: Conceptual and Social Justice Issues. *Journal of Disability Policy Studies*, 27(1), 3-12.

Anastasiou, D., Morgan, P., Farkas, G., & Wiley, A. (2017). Minority Disproportionate Representation in Special Education: Politics and Evidence, Issues and Implications. In J. M. Kauffman, D. P. Hallahan, and P. C. Pullen (Eds.) *Handbook of Special Education* (2nded.). (pp. 897-910). New York, NY: Routledge.

Artiles, A. J. (2003). Special education's changing identity: Paradoxes and dilemmas in views of culture and space. *Harvard Educational Review*, 73, 164-202.

Artiles, A. J., & Rueda, R. (2002). General guidelines for monitoring minority overrepresentation in special education. *CASE Newsletter*, 43(5), 5-6.

Artiles, A. J., & Trent, S. C. (1994). Overrepresentation of minority students in special education: A continuing debate. *The Journal of Special Education*, 27, 410-437.

Artiles, A. J., Rueda, R., Salazar, J. J., & Higareda, I. (2005). Within-group diversity in minority disproportionate representation: English language learners in urban school districts. *Exceptional Children*, 71(3), 283-300.

Artiles, A. J., Trent, S. C., & Palmer, J. (2004). Culturally diverse students in special education: Legacies and prospects. In J. A.Banks & C. M. Banks (Eds.), *Handbook of research on multicultural education* (pp. 716–735). San Francisco, CA: Jossey-Bass.

Bennett, A. T. (1988). Gateways to powerlessness: Incorporating Hispanic deaf children and families into formal schooling. *Disability, Handicap, and Society* 3(2), 119-151.

Blanchett, W. J., Klingner, J. K., & Harry, B. (2009). The intersection of race, culture, language, and disability: Implications for urban education. *Urban Education*, 44, 389-409.

Chatzidaki A., & Maligkoudi C. (2013). Family language policies among Albanian immigrants in Greece. *International Journal of Bilingual Education and Bilingualism,* 16(6), 675- 689.

Cohen, B. (1988). *Statistical power analysis for behavioral sciences*. Hillsdale, NJ: Erlbaum.

Collins, K. M., Connor, D., Ferri, B., Gallagher, D., & Samson, J. F. (2016). Dangerous assumptions and unspoken limitations: A disability studies in education response to Morgan, Farkas, Hillemeier, Mattison, Maczuga, Li, and Cook (2015). *Multiple Voices for Ethnically Diverse Exceptional Learners*, 16(1), 4-16.

Coutinho, M. J., & Oswald, D. P. (2005). State variation in gender disproportionality: Findings and recommendations. *Remedial and Special Education*, 26, 7-15.

Coutinho, M. J., & Oswald, D. P. (2011). Gender and Exceptionality. In Kauffman, J. M., & Hallahan, D., *Handbook of Special Education* (pp. 759-773). New York, NY: Routledge.

Donovan, M. S., & Cross, C. T. (2002). *Minority students in special and gifted education*. Washington, DC: National Academy Press.

European Union (2013). *The European Union explained: Migration and asylum.* Luxembourg: Publications Office of the European Union.

Ferri, B. A., & Connor, D. J. (2005). In the shadow of Brown: Special education and overrepresentation of students of color. *Remedial and Special Education*, 26, 93-100.

Gogonas, N., & Michail, D. (2015). Ethnolinguistic vitality, language use and social integration amongst Albanian immigrants in Greece. *Journal of Multilingual and Multicultural Development.* 36(2), 198-211.

Gottlieb, J., Gottlieb, B. W., & Trongone, S. (1991). Parent and teacher referrals for a psychoeducational evaluation. *Journal of Special Education, 25* (2), 155-167.

Gravetter, F. J., & Wallnau, L. B. (2013). *Statistics for the behavioral sciences*. Belmont, CA: Wadsworth.

Hardin, B., Roach-Scott, M., & Peisner-Feinberg, E. (2009). Special Education Referral, Evaluation, and Placement Practices for Preschool English Language Learners. *Journal of Research in Childhood Education,* 22(1), 39-54.

Heller, K. A., Holtzman, W. H., & Messick, S. (Eds.). (1982). *Placing children in special education: A strategy for equity.* Washington, DC: National Academy Press.

Horvat. E. M., Weininger, E. B., & Lareau, A. (2003) From Social Ties to Social Capital: Class Differences in the Relations between Schools and Parent Networks *American Educational Research Journal*, 40(2), 319-351.

Hosp, J. L., & Reschly, D. J. (2004). Disproportionate representation of minority students in special education: Academic, demographic, and economic predictors. *Exceptional Children,* 70, 185-199.

Kauffman, J. M., & Landrum, T. J. (2009). Politics, civil rights, and disproportional identification of students with emotional and behavioural disorders. *Exceptionality,* 17, 177-188.

Kauffman, J. M., Anastasiou, D., & Maag, J. W. (2017). Special education at the crossroad: An identity crisis and the need for a scientific reconstruction**.** *Exceptionality,* 25(2), 139-155.

Kauffman, J. M., Simpson, R. L., & Mock, D. R. (2009) Problems related to under service: A rejoinder. *Behavioural Disorders*, 34(3), 172-180.

Kivirauma, J., & Ruoho, K. (2007). Excellence through special education? Lessons from the Finnish school reform. *Review of Education*, 53, 283-302.

Kivirauma, J., Klemelä, K., & Rinnie, R. (2006). Segregation, integration, inclusion – the ideology and reality in Finland *European Journal of Special Needs Education*, 21(2), 117-133.

Laboratory of Migration and Diaspora (2011). *Immigration Topic 2*. National and Kapodistrian University of Athens.

Lareau, A. (2000). *Home Advantage: Social Class and Parental Intervention in Elementary Education*. Lanham, MD: Rowman and Littlefield.

Losen, D. J., & Orfield, G. (2002). *Racial inequality in special education.* Cambridge, MA: Harvard Education Press.

Losen, D. J., Ee, J., Hodson, C., & Martinez, T. (2015). Disturbing inequities: Exploring the relationship between racial disparities in special education identification and discipline. In D. J. Losen (Ed.), *Closing the school discipline gap* (pp. 89-106). New York: Teachers College.

Losen, D. J., Hodson, C., Ee, J., & Martinez, T. (2014). Disturbing inequities: Exploring the relationship between racial disparities in special education identification and discipline. *Journal of Applied Research on Children: Informing Policy for Children at Risk,* 5(2), 1-21.

Morgan, P., Farkas, G., Hillemeier, M., Mattison, R., Maczuga, S., Li H., & Cook, M. (2015). Minorities Are Disproportionately Underrepresented in Special Education: Longitudinal Evidence Across Five Disability Conditions. *Educational Researchers*, 44(5), 278-292.

Morgan, P., Scheffner Hammer, C., Farkas, G., Hillemeier, M., Maczuga, S., Cook, M., & Morano, S. (2016). Who Receives Speech/Language Services by 5 Years of Age in the United States? *American Journal of Speech-Language Pathology*, 25, 183-199.

Oswald, D. P, Coutinho, M. J., Best, A. M., & Singh, N. N. (1999). Ethnic representation in special education: The influence of school related economic and demographic variables. *The Journal of Special Education,* 32, 194-206.

Oswald, D. P., Coutinho, M. J., & Best, A. M. (2002). Community and school predictors of overrepresentation of minority children in special education. In D. J. Losen & G. Orfield (Eds.), *Racial inequity in special education* (pp. 1–13), Cambridge, MA: Harvard Civil Rights Project.

Samson, J. F., & Lesaux, N. K. (2009). Language-Minority Learners in Special Education Rates and Predictors of Identification for Services. *Journal of Learning Disabilities*,42(2), 148-162.

Skiba, R. J., Simmons, A. B., Ritter, S., Gibb, A. C., Rauch, M. K., Cuadrado, J., & Chung, C-G. (2008). Achieving equity in special education: History, status, and current challenges. *Exceptional Children, 74* (3), 264-288.

Strand, S., & Lindsay, G. (2009). Evidence of Ethnic Disproportionality in Special Education in an English Population. *Journal of Special Education*. 43(3), 174-190.

Sullivan, A. (2011). Disproportionality in special education identification and placement of English language learners. *Exceptional Children, 77* (3), 264–288.

Townsend, B. L. (2000). The disproportionate discipline of African American learners: Reducing school suspensions and expulsions. *Exceptional Children*, 66, 381–391.

Werning, R., Loser J. M., & Urban, M. (2008). Cultural and Social Diversity. An Analysis of Minority Groups in German Schools. *The Journal of Special Education,* 42(1), 47-54.