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Title of PhD thesis:

**INCLUSION OF CHILDREN WITH
A BACKGROUND OF MIGRATION
INTO GREEK KINDERGARTENS
VIA PHYSICAL EDUCATION
AND OUTDOOR ACTIVITIES**

RESUME

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The dissertation has been discussed and admitted to defense by the Department of Preschool and Media Pedagogy of the Faculty of Educational Sciences and the Arts of the Sofia University “St. Kliment Ohridski”. The content of the dissertation includes the introduction, chapter one regarding inclusive education and children with a background of migration, chapter two about physical education and outdoor activities in kindergarten, chapter three that involves the research in Greek kindergartens children, chapter four regarding the educational program that took place, results, conclusions, recommendations, bibliography, appendix and author’s contribution in the topic and her publications. The dissertation is 235 pages long, of which 39 pages for bibliography and 10 pages for annexes. The text incorporates 91 tables and 11 figures. The bibliography includes 461 titles in English language. The Abstract follows the structure of the dissertation and preserves the original numbering of tables and charts included therein.

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Introduction

The last thirty years have witnessed an ever-increasing flow of immigrants to European countries, including Greece (Mattheoudakis et al, 2020). Migration flows come from the Balkans, the states of the former Soviet Union, but also from Africa, the Middle East and Asia. Among them a significant number of children is included. According to Papandreou et al. (2022) the children of immigrants attend Greek schools which are called upon to effectively manage the resulting cultural diversity.

The inclusion of children with an immigrant background into the Greek educational system begins in the kindergarten age. Infants of immigrants' experience several difficulties in educational performance and, also, in behavior and psychosocial development that result in school dropout due to lack of inclusion practices and appropriate curriculum in the educational system to deal with diversity (Borch, 2022).

Inclusion, suggested as an answer to the problem mentioned above, is a psycho-pedagogical approach whose goal is to create a climate of diversity acceptance for all individuals for them to develop academically, socially, and psychologically (Fotiadou et al., 2022). In recent years focus of inclusive education has shifted to all children and especially to those who are in a vulnerable position and belong to minorities, such as children with a migrant background (UNESCO, 2018).

In the context of the discussion regarding the inclusion of children with an immigrant background, the concept of intercultural education is found. Intercultural education focuses on the one hand on the coexistence of students from different cultural backgrounds in the same school context and on the other hand on providing all children with equal educational opportunities regardless of their origin, socio-economic background, religion, and gender and simultaneously utilizes diversity for children to be promoted in all developmental fields (Faas et al., 2014; Artiles, 2020).

Inclusive and intercultural education needs to be implemented at all educational levels worldwide. Preschool education is the first step in children's schooling which affects their latter educational and psychosocial development. Preschool children need to be in a high-quality school environment that provides them with the educational opportunities they need in their development as individuals and will also help them to adapt to the wider social context to which they belong through positive interactions (Kyriazopoulou et al., 2022).

Preschool curriculum is occupied by recreational activities and Physical education is one of the subjects offered in kindergartens with the aim of encouraging children to be physically active, to play and get in touch with their bodies (Cosar & Orhan, 2019). Through physical games and sports children express themselves, discover the world and learn, gain positive experiences, active participation and develop socially and emotionally, utilizing non- verbal communication strategies (Trevlas, 2003; Abdullaeva, 2022; Kouli and Papaioannou, 2009).

The purpose of this research is the design and implementation of a physical education and outdoor activities intervention in a kindergarten attended by students both with and without an immigrant background. The paper describes the goals of the intervention regarding inclusion, emotional and social development, participation, and the creation of a climate of safety and well-being for the children.

The paper consists of seven chapters in which there is a theoretical and a research section. The first two chapters present the theoretical part of the work, regarding inclusive and intercultural education as well as link between physical education and inclusion of immigrants at the education. The third chapter includes the research part. This chapter is dedicated to the purpose, objectives, and hypotheses on which the research is based. The fourth chapter describes the design of the intervention program and the activities included in it. The fifth chapter records the tools used to collect the data during the experiment process. The sixth chapter presents the results of the quantitative and qualitative research that took place. In the seventh chapter results are discussed.

CHAPTER ONE

INCLUSIVE EDUCATION AND CHILDREN WITH A BACKGROUND OF MIGRATION

1.1 Historical and theoretical review of Inclusion

“Inclusion” is a term which has been used in education for several decades. Initially, it was used to refer to children with special educational needs who experienced significant deviations from the mainstream educational system, leading to special treatment and exclusion (Srivastava et al., 2015). The 1970’s highlighted the need of change in the special education schooling environment where the specific group of children studied (Thomas, 2013). The need of change in the approach of special education led to the concept of “integration” which referred to the actual physical placement of these special needs children in the general education schools, but without any planning which didn’t lead to the desired results. The problematic nature of integration led to the emergence of an alternative approach, that of inclusion (Polat, 2011).

The inclusion movement in education developed to cancel the discrimination and segregation against children with special educational needs in general education and was based on two basic principles. The first principle concerns the right of all children to education and the second principle refers to the need of schools to adjust to the children’ needs and abilities to restrict social discrimination (Waitoller & Artiles, 2013; Ainscow, 2005).

1.2 Inclusion and students with immigrational status

Inclusion poses a central issue in educational policies internationally. Nowadays, the focal point of contemporary educational policies consists of including all children in the school environment while emphasizing specifically on those groups of children that were traditionally excluded from educational opportunities, such as immigrants (Ainscow & Messiou, 2018).

According to Migliarini and Stinson (2021) the inclusion of students of immigrational backgrounds operates within the same framework with the concept of equity since all children are considered and approached as equals. The main objective of inclusive schools is to form positive social experiences regardless of the children’ national or racial characteristics as well as the nationality make-up of the school.

Positive social experiences will avert their being discriminated against, victimized or lonely. As a matter of fact, inclusive school environments promote harmonious coexistence, interaction, and development of social skills while at the same time providing security, the sense of belonging, acceptance of diversity (Nishina et al., 2019; Koutsouris et al., 2019). The importance of inclusion of immigrant children in a school environment where they will study together with native children is profound. Scientific interest has grown due to the continuous increase of multicultural population in schools (Gropas & Triantafyllidou, 2011).

1.3 Basic concepts of the inclusion of children with a background of migration

The inclusion of children with a background of migration has been the focus of scientific studies of recent decades and is advanced in models that involve assimilation, integration, and intercultural education (Kaloforidis, 2014).

1.3.1 Assimilation

Assimilation does not approach cultural diversity in a positive manner since it exerts pressure on individuals with a background of migration to adopt the cultural principles of the dominant group, while the needs of immigrants are ignored. This model requires immigrants to perform changes to actively participate in society. Failure to perform these changes results in their marginalization (Hajisoteriou & Angelides, 2015).

1.3.2 Integration

The model of integrational approach takes into consideration the existence of cultural differences among individuals and recognizes the co-existence of social groups with apparent cultural and social differences (Hajisoteriou, 2012). According to this model children with a background of migrations are integrated into the general school together with the children of the cultural majority however this refers more to their physical placement and less with their cultural integration. This is evident by the fact that significant cultural characteristics of the children, such as their native language, are accepted so far as they do not disturb the balance of the school community (Catarci, 2014).

1.3.3 Intercultural education

Intercultural education is a pedagogical approach that recognizes cultural pluralism and puts forward solutions for its effective application to the educational

system. At this point, it is necessary that a distinction be made between intercultural and multi-cultural education. Multi-cultural education involves and supports the co-existence of individuals with different cultural backgrounds in the same educational environment. On the other hand, intercultural education goes beyond the simple co-existence of individuals of different cultural characteristics, and it rather focuses on their interaction (Alleman-Ghionda, 2009).

As reported by Neuner (2012) the context of intercultural education is complex and difficult to define. It was founded on the vision of a world which promotes respect for human rights and ensures democratic participation of all individuals. The use of the term intercultural refers to the educational approach which acknowledges and accepts cultural diversity in terms of respect. This means that all children regardless of race/ethnicity/cultural background are educated together in the same environment free of any segregation (Nikolaou, 2011).

According to Banks and Banks (2004) the purpose of intercultural education is the creation of equal educational opportunities to children belonging to minorities, ensuring involvement at school and community. This approach focuses on establishing and cultivating the sense of belonging in all children which will assist them in their psychological and social development (Nikolaou, 2007).

1.3.4 Relating inclusive education to inclusive intercultural education.

Intercultural education is considered the optimal approach for the management of diversity among the student population. Bunăiașu (2015) highlights the significant role it plays towards the inclusion of children of immigrational backgrounds in the general school since they both focus on acceptance of diversity. In both cases, diversity and differences among children are considered with respect and gratitude as a wider range of dissimilarity enriches life and human experience. Children are called upon to learn from their differences and expand their educational experience. This enrichment contributes to the acquisition of knowledge, skills and attitudes which help the smooth operation of both the school and the community (Neuner, 2012). Also, they target the elimination of segregations and work toward the growth of a system which enables children to develop active roles in school and society (Mamas, 2014). Furthermore, emphasize on children who are viewed as different and may be potentially marginalized. In addition, both educational models promote the establishment of an

“open” school encouraging the cooperation of all members of the school and local community and leading to the development of respect towards diversity (Salahshour, 2021). A final common characteristic is that they consider of great importance the reform of educational policies so that they are adapted to the children’ needs (Artiles, 2020). It is the educational environment and educational units that have to adapt to diversity and not the opposite (Nikolaou, 2005).

1.4 Practical application of inclusion

As reported by Hajisoteriou (2012) the attendance of children of immigrational background in general schools is applied using certain practices which follow the principles of both inclusive and intercultural education. Co-education of children with and without a background of migration constitutes the basic principle of applying inclusion. Curriculum, also, plays a major role in the practical application of inclusion. As mentioned by Tupas (2014) teaching different cognitive subjects includes the perspective of other cultures as to encourage the assimilation of minorities. In addition, curriculum is development to involve psychosocial opportunities (Fernández-Castillo, 2009).

Another necessity that arises through this practice is the adaptation of schoolbooks to accommodate the linguistic needs of all children. On a practical level, it is suggested that both the official language and the native languages of the children should be utilized in the inclusive schools in order all school members to communicate effectively (Beacco et al., 2016). Furthermore, educational material is enriched by expansion and with the use of different tools, such as audiovisual media (Hajisoteriou, 2012).

Furthermore, attention should be focused on the physical environment of the classrooms in inclusive schools and on the way space and material is arranged. The presence of cultural references in the school classrooms is of vital importance (Drosopulos, 2017). The strategies of desk arrangement and seating plans can promote interaction, co-operation, and group work. The adjustment of the educational environment to foster an intercultural atmosphere contributes to the achievement of the aims of inclusion (Protassova & Rodina, 2014). Moreover, according to Najar (2015) inclusion also requires organizing and performing pedagogical activities which extend beyond the limits of a school unit, and which expand to the local community.

Additionally, in its practical application, inclusive education referring to children with a background of migration involves projects focusing on educators. Through training, teachers will acquire the ability and experience to develop in their professional field and obtain the knowledge and skills necessary to manage a multi-cultural class (Kiel et al., 2016). Summing up, the pedagogical methods utilized for the inclusion of children with a background of migrations and their reformation as per the principles of inclusive education are of crucial importance.

1.4.1 Pedagogical approaches and methods

To achieve inclusion of immigrant children in a school, it is essential to make use of all approaches, methods and tools that promote inclusive and intercultural education. During the process of the lesson, all pedagogical methodology focuses on student experience that will lead to their cognitive, emotional, and social development based on the acceptance of diversity (Hajisoteriou, 2012).

Main pedagogical approaches and connected methods with them, are the following:

- Differentiation of teaching. During the implementation of this approach, educators must detect their children's needs and adapt their teaching while continuously assessing the results of their methods and adjust them accordingly (Tomlinson, 2017). According to Valiandes et al. (2018) implementation of differentiated instruction in intercultural classes emphasizes on the development of the cognitive abilities of all children by enforcing the development of their social and emotional skills.
- Co-operative learning. In co-operative learning activities are not conducted individually, but rather in pairs or small groups (Sharan, 2010). Co-operative learning contributes to a climate of tolerance and understanding while it encourages children to express their feelings, thoughts, and knowledge during the lesson. It promotes the development of a connection among children as well as with their teacher (Buchs and Maradan, 2021).
- Project-based learning. As mentioned by Barrett (2018) this method is based on the concept that knowledge draws on experience which can be applied in everyday life. Children take part in projects and activities that have references to everyday life and lead to functional use.

- Game playing. According to Berti and Zingari (2019) game playing is regarded as the pedagogical method which provides children with the opportunity to learn and comprehend while enjoying pleasant activities. The psycho-emotional development of children has always been associated with game playing, which is a way they gain insight and awareness of themselves and the others around them. In inclusive classes, game playing proves very useful and beneficial since it helps to create the environment for participation and communication.

1.4.2 The role of teachers in inclusive/intercultural education

Teachers are the individuals implementing the pedagogical strategies, mentioned above, and have a significant role to play in the application of the principles of inclusive education in support of children with a background of migrations (Hajisoteriou, 2012). All things considered; teachers have a significant role to play in the inclusive education of children with a background of migration. According to Papadopoulos (2020) these professionals, with their attitude, knowledge, and practices, influence the way the intercultural objectives of inclusion are achieved. Essentially, a teacher should be in constant contact with his inner self and the external environment, free of prejudices or stereotypes, while promoting the principles of intercultural education (Salgur, 2013). In addition, in inclusive schools, teachers are emotionally involved while interacting with their children. These professionals do not limit their role in merely conveying knowledge and information, on the contrary, they educate their children in experiencing the benefits of inclusion (Zembylas & Papamichael, 2017). Furthermore, teachers are the ones responsible for promoting collaboration between school and families. The parents' involvement will have a positive impact on the school community in general and will contribute to the achievement of the whole range of intercultural education (Papadopoulos, 2020).

1.4.3 Inclusive schools and kindergartens

Schools are often wrongly characterized as inclusive because their principles and program is based in assimilation or integration rather in inclusion, as described in a previous chapter (Szalai, 2011; Dumcius et al., 2013). In other cases, ability grouping is used, setting more obstacles to the successful implementation of inclusive education because it encourages instead of discouraging segregation and marginalization of children (Heckman, 2008). The above categories point out the mistaken way in which inclusive education could be implemented. The successful implementation of inclusion

always involves the proper practices and pedagogical methods according to its principles together with creating the appropriate conditions that will benefit children (Janta & Harte, 2016).

1.5 Advantages of inclusion concerning students with immigrant background

Experience has confirmed the overall effectiveness of inclusion as the most appropriate pedagogical approach implemented in schools with a diverse cultural population although extra research is required (Florian et al., 2019; Pirchio et al. 2019).

1.5.1 Advantages concerning learning and school performance

Affects positively school performance and educational progress. Reduces low performance even at pre- school stage because it keeps their interest on education vivid (Martinez-Usarralde et al., 2017). Specifically, immigrants achieve similar results at school to those of the native children (Borgna and Contini, 2014).

1.5.2 Advantages concerning psychosocial development

Inclusion has direct reference to the psychosocial development of children with a background of migrations. Inclusive schools foster interaction among all children regardless of differences so, in this respect, inter-relations and friendships are created, increasing sense of belonging (Sanchez-Marti and Ramirez-Iniguez, 2012). Adding to that, inclusion enhances participation in the learning experience and cooperation (Janta and Harte, 2016; Valero et al., 2018). In addition, inclusion aids the development of social identity (Contini and Maturo, 2011). Simultaneously, self-appreciation, self-respect, self-efficiency, and their positive self-image are all favorably affected (Caetano et al., 2020).

1.6 Profile of immigrant children in Greece

Greece received numerous families migrating from the former Soviet Union and from Albania during the 1980's (Damanakis, 2011). Former Soviet Union immigrants were considered as diaspora Greeks, whereas Albanians were often considered as illegal. The children of the former were accepted and received a more positive treatment from native children in the Greek schools (Fakiolas, 1999). Data show numerous immigrant students at the 2000's decade in Greek schools who experienced significant difficulties in the Greek educational system (Motti-Stefanidi, 2014). Global economic crisis and war led to a new flow of immigrants from Syria and Afghanistan during the 2010's decade. According to UNICEF (2018; 2019) statistics, in 2018, 18500 children

of immigrational and refugee background were recorded residing in Greece. Furthermore, according to Sorkos and Magos (2021), in inner city schools, a significant number of the student population comprises of children of Chinese origin. The same is true about children of Asian and African origin.

1.7 Legislative Framework for inclusive and intercultural education in Greece

1.7.1 Legislative Framework for Inclusive education

Inclusion as a term appeared in Greek legislation around 2000's referring to special education needs. Inclusion was established as the co-existence of all children in the same school environment at 2008 (Stasinou, 2013). Although the concept referred to special needs rather than cultural differences. It was intercultural education which was intended to refer to the needs of this latter group.

1.7.2 Legal provisions for intercultural education

During the 1980's legal provisions introduced and applied mainly focused on teaching the children the Greek language and familiarizing them with the Greek civilization in an assimilative way (Nikolaou, 2008). A new law Art. 4415/16 defined the interrelations and interactivity of individuals of different cultural backgrounds in order to restrict inequality and exclusion.

1.7.3 Legal provisions for schools and kindergartens

First intercultural schools were established at Thessaloniki and Athens to lead to smooth assimilation of immigrants in the Greek society (Κυπριανός, 2004). The practices included reception classes and exclusion. The major changes introduced in 2016 law with the establishment of intercultural schools that could include all children regardless of origins and backgrounds and secondly the mandatory teaching of a second language, besides the official Greek language. It has to be underlined that the shifting to multiculturalism and inclusion presented various obstacles and limitations contrary to the claims on the legislative level, generating so called intercultural and inclusive (Palaiologou and Eyaggelou, 2003).

1.8 Problems and difficulties faced by children with a background of migration

1.8.1 Children with a background of migrations and school performance

Immigrant children are characterized by poor school performance, higher rates of dropping out and difficulties in securing employment after school (Gabielli et al.,

2021). In addition, the gap in performance compared to native students is significant (Triventi et al., 2021).

1.8.2 Children with a background of migration and well-being

Migrating and attempting to adjust and integrate into a new sociocultural environment are fundamentally stressful situations that affect the health and functionality of young individuals (Yeh and Inose, 2002). Additionally, immigrant children express problems of internalization and externalization (Miconi et al., 2018).

1.8.3 Problems and difficulties faced by children with a background of migration in Greece

Children attending Greek schools come up against difficulties which affect their mental health and social life. Among them are included poor academic performance, social issues such as loneliness, stress, and anxiety (Leontari, 2001; Paliologou, 2007).

1.9 Attitudes and perceptions of teachers and native children concerning children with a background of migrations

Children belonging to ethnic and/or cultural minorities are still experiencing difficulties at school (Passiatore et al., 2019). The negative attitude of teachers and native children towards children with a background of migration have a definitive effect on the relationships and interaction between the two parties (Ortega et al., 2020; Miklikowska et al., 2021). Negative attitudes towards children of ethnic/cultural minorities are prevalent on an international scale and are crucial as to the adjustment and psychosocial development of children (Costa et al., 2021).

1.10 Involvement of immigrant's parents in school: perceptions and concerns of children education

Parents are called upon to cooperate with educators and school staff to support their children's educational success together with their smooth integration and psychosocial and emotional development (Moorman, Kim and Sheridan, 2015). A main obstacle in the collaboration among school and family is placed on language gap (Fandrem & Stoen, 2021).

CHAPTER TWO:

PHYSICAL EDUCATION AND OUTDOOR ACTIVITIES OF CHILDREN WITH A BACKGROUND OF MIGRATION IN KINDERGARTEN

2.1 The importance of Physical Education in pre-school children

In modern times, the integration of physical education in the kindergarten curricula is recommended by many different international organizations thus indicating the important role it plays in the smooth development of individuals (Chow et al., 2015). Physical education, as part of the educational experience, comprises of a system of different pedagogical influences which focus on children's development and positively affect physiology, emotions, and social interactions (Andermo et al., 2020; Kamolovich, 2021).

2.1.1 Physical Education: Objectives

Main objective is the physical health and development of children's essential mobility skills (Pica, 2011). Also, important is emotional and social expression through physical activities (Galimovich, 2020). Moreover, physical education aims to enhancing self-confidence and strengthening children' personality (Gordon et al., 2016).

2.1.2 Practical applications

Physical education is included in the curriculum of pre-school education in various countries on an international scale. There are two ways by which physical education is implemented: through structurally planned sets of exercises and free game playing (Hassan et al., 2022).

2.1.3. Physical Education as part of the curriculum of Greek pre-school Education

In Greece, the instruction of physical education takes place in all pre-schools. Greek kindergartens cater to children aged 4 to 6 years and most of the children who reside permanently in Greece attend these schools. Physical education, recognized and accepted by the Greek Institute of Educational Policy in 2003, is a valid and equally important subject as the rest of the subjects taught in pre-school education (Ntoliopoulou & Sousloglou, 2003).

2.2 Outdoor activities in pre-school children

Outdoor activities play a significant role in pre-school education and aim at the holistic development of children. It is a fact that children of this age feel the necessity to learn about themselves from their own experience and to utilize this knowledge to access the world around them (Chi et al., 2016). The significance of the kindergarten playground in children's education is also stressed by the Greek Kindergarten Curriculum. According to the study of McArdle et al. (2013) there is evidence of the positive impact of outdoor play on kindergarten children. In addition, and within the framework of outdoor activities, emphasis is placed on the interactivity of children with their peers (Gustavsson, 2009).

2.3 Physical Education and inclusion

Physical education provides fertile ground for the development of the principles of intercultural education and inclusion since it does not focus on the acquisition of knowledge but, it rather concentrates on the physical and emotional involvement of students. Children are in an environment where they play, cooperate, communicate, disagree, and reconcile only through physical activity, without the need for words. Physical experiences help students overcome the stress of verbal communication, eliminate possible stereotypes and prejudices they may have and accept their classmate regardless of his/her origin (Kouli & Papaioannou, 2009).

2.4 The role of the teachers of physical education in inclusion

The teacher of physical education as any other educator needs to be free of prejudices and has to consistently work to ensure inclusion. According to Yao (2018) teachers can effectively utilize the exterior environment and all the activities that can be performed there for the mobility and psychosocial development of children. Through outdoor activities such as sports, dances and games, students learn to interact and work together, achieving inclusion. Teachers must encourage students and help them, rather than control or lead them (Grimminger, 2010).

2.5 The role of parents in inclusion

Children whose parents are actively involved in school life show a better academic performance and psychosocial development when they are compared to children whose parents are not involved in their education. According to Tamzarian et al. (2012) parental involvement in education and, as a result, in the inclusion of students with immigrant backgrounds requires the adults' cooperation with the teachers.

Effective cooperation begins with the teachers, who, as described in the previous chapter, should be able to find the proper way to approach the caretakers.

2.6 The benefits of physical education in inclusion and the psychosocial development of students with a background of migration

Physical education is considered a valuable tool in the enforcement of social and emotional skills such as recognition and expression of emotions, empathy, self-regulation of emotions and behavior and the development of social skills like cooperation and problem solving (Takala et al., 2014; Takala et al. 2015). From all the above, we can conclude that physical education is strongly associated with inclusion along with the personal development of all children, whether they belong to ethnic or cultural minorities or not. These theoretical claims are substantiated by the results of empirical studies which highlight the beneficial effect of physical education on students with immigrant backgrounds (Burrann et al., 2017).

CHAPTER THREE:

PSYCHOLOGICAL-PEDAGOGICAL RESEARCH ON THE EFFECT OF PHYSICAL EDUCATION AND OUTDOOR ACTIVITIES ON THE INCLUSION OF CHILDREN WITH A BACKGROUND OF MIGRATION INTO GREEK KINDERGARTENS

3.1 Theoretical Database and Research Gap

According to Van Mieghem et al., (2020) inclusive education is a complicated and multi-dimensional concept which originates in physical education. This concept includes the active participation of all children in the learning process and, at the same time, is directed towards the reduction of the exclusion of children belonging to minorities. According to Pasichnyk et al. (2021) physical education is an important part of pre-school education which contributes to the achievement of inclusion. The benefits of physical education on the social and emotional development of pre-school children can be used to promote the inclusion of children in schools of general education.

The implementation of inclusion, as an educational approach, has been under constant observation by the scientific community. However, the focus of investigation of the results has been on certain groups of children such as those who are handicapped (Nahmias et al., 2014; Phillips & Meloy, 2012). The study of the impact of inclusion on children with a background of migrations has been limited. Furthermore, research seems to also have been focused on children of national minorities of primary or secondary school age (Thorjussen, 2021). Thus, it is obvious that there has been limited investigation on the role that physical education plays in the inclusion of immigrant children of pre-school age.

3.2 Aim, Tasks and Hypotheses of the Research

The **aim of this research** is to identify the effects of physical education as part of the school curriculum on pre-school children with a background of migration and, at the same time, investigate how outdoor activities performed during the lesson contribute to the inclusion of these children.

This research attempts to attain the **following tasks**:

- To overview and analyze the concept of inclusion and intercultural education according to the international literature to step on this via author's experimental research.

- The pursuit and study of scientific data investigating the role of physical education and the use of outdoor activities during PE in the inclusion of children with and without a background of migration in kindergarten.
- Design research tools for the measurement of inclusion in kindergarten.
- Developing, implementing, and proving the effectiveness of author's educational program for inclusion of children with a background of migration based on physical education and outdoor activities, which can be used with all children as well.
- To feature how the educational program affects the behavior of children with and without a background of migration.

This research is based on the following **hypotheses**:

Hypothesis #1

We suppose that educational program with physical education and outdoor activities could contribute to the creation of a positive kindergarten/school environment which will offer security, acceptance of cultural diversity and a positive perception of kindergarten/school for both the children with a background of migration and to the children without.

Hypothesis #2

Children with or without a background of migration who participate in an educational program based on PE and outdoor activities aiming at inclusion will show greater development of their emotional skills (empathy, self-awareness, and self-regulation) compared to those (children) who will not participate in this program.

Hypothesis #3

Children with or without a background of migration who will participate in the educational program based on physical education and outdoor activities aiming at inclusion, will show greater development of his/her social skills (social interaction, cooperation, adaptability) promoting inclusion when compared to children who have not participated in this intervention.

Hypothesis #4

Pre-school child with or without a background of migration who will participate in an educational program based physical education and outdoor activities aiming at inclusion, the child will show fewer behavioral problems (Behaviors of internalization, behaviors of externalization, hyperactivity/ attention deficiency) when compared to children who have not participated in the intervention.

Hypothesis #5

We suppose that there will be an increase of active involvement and well-being with the planned educational program in physical education and outdoor activities, for all the children but specifically for the children with a background of migration .

3.3 Research Planning, Randomization and Experimental Protocol

The design of the specific experiment was based on the choice of factorial design because the effects had to be examined independently of one or more related variables. The selection of the number of specimens was based on the formula below:

$$n = [t(1 - \alpha/2; df) \cdot s \cdot \frac{\sqrt{2}}{B}]^2 = \left[\frac{t^2(1 - \alpha/2; df) \cdot s^2 \cdot 2}{B^2} \right]$$

Where B is the desired statistical power, that is the possibility of rejection of the null hypothesis when that is invalid. With α we symbolize the desired level of significance ($\alpha=0.05$). s^2 the specimen distribution, with df the calculated independent numbers and with the statistical value of Student as to α , df. Figure 1 shows the varying of values as to different combinations of t and s. According to the findings of the simulations conducted, the final specimen must consist of 10 for every group examined to cover the 68,20% of the total distribution of the specimen population of 20 participants to cover 95,44% of the distribution and of 30 participants to cover a 99,6% of the total distribution of specimen population.

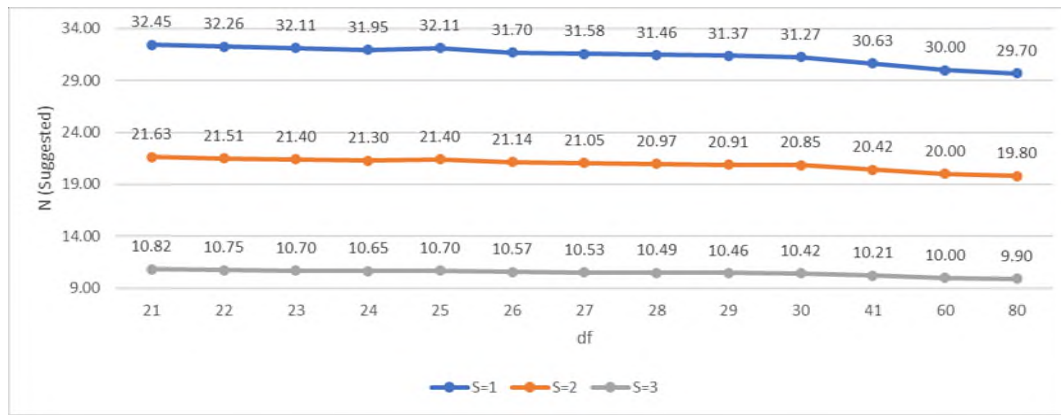


Figure 1. *Sample number simulation*

3.4 Research Tool

The printed questionnaire was the tool used to collect information. Three different types of questionnaires were used: one for parents (Questionnaire for parents - Booth and Ainscow, 2011), one for teachers (Questionnaire for teachers - Booth and Ainscow, 2011), and one for the children (Visualized question for children - Booth and Ainscow, 2011). All three parties were asked to complete their questionnaires.

3.4.1 Inclusion questionnaire: general description

The third edition of the questionnaire of Booth and Ainscow (2011) is available for free use and includes questions for evaluating all aspects of school life covering indoor and outdoor school activities conducted by the teachers and performed by the children and their parents.

3.4.2 Questionnaire with teachers regarding inclusion

The part of the Booth and Ainscow (2011) questionnaire intended for teachers (see Appendix C), includes a total of 70 questions based on the Likert four grade scale (1=Agree, 2=Neutral, 3=Disagree, 4=I do not know/I cannot answer, scaling the following dimensions:

- A. Creating an inclusion culture: A1. Community includes 11 questions, A2. Values, includes 10 questions
- B. Creating the rules of inclusion: B1. School, includes 13 questions, B2. Support, includes 9 questions

- C. Development of inclusion practices: C1. Total participation in procedures, includes 13 questions, C2. Inclusion in learning, includes 14 questions

From the questions available, 31 questions were selected which accurately represent the reality and daily life of a Greek public school.

3.4.3 Questionnaire with parents regarding inclusion

The section of the Booth and Ainscow (2011) questionnaire addressing parents (see Appendix B), contains 56 questions on a three-answer scale (1=Agree, 2=Neutral, 3=Disagree). From these questions 38 questions were selected to be used in the research as the most appropriate and representative of the reality and daily life of a Greek public school.

3.4.4 Visualized questions of inclusion for children

The section of the Booth and Ainscow (2011) questionnaire addressing children (see Appendix A), contains 24 questions on the three-answer scale and the answers are pictured with emoticons (😊, 😐, 😞) without verbal representation. From the total of 24 questions, 19 questions were selected which were considered representative of the reality and daily life in a Greek public school. In all sectors mentioned above changes to Likert scale were made to facilitate measurements.

3.4.5 Questionnaire with teachers regarding well-being and involvement of children

The teachers participating in the research were asked to evaluate the well-being and participation of their children according to Ferre Laevers (2005) Questionnaire of well-being and involvement of children, further developed and adapted by Engels-Kritidis (2020) (see Appendix D) before and after the experimental intervention. The evaluation was facilitated with the use of 4 questions.

A1.1: Level of children's well-being in activities organized by the teacher (pedagogical situation and other forms of interaction).

A1.2: Level of the children's well-being and other activities chosen by children.

A2.1: Level of children's participation in group activities organized by the teacher (pedagogical situation and other forms of interaction).

A2.2: Level of participation of children in games and other activities chosen freely by the children.

The questions were derived and adopted by Engels-Kritidis (2020) following the Laevers questionnaire (2005) which studies the levels of the kindergarten children's well-being and participation. The grading of the answers was based on the five answer Likert scale (1=Very Low to 5= Very High). For each dimension (Well-being and Participation) the grading ranged from 2 to 10 points where higher grading indicates higher levels of Well-being and Participation. This questionnaire is a widely used tool of high reliability according to researchers who used it in similar studies (Declercq, 2011; Howard & McInnes, 2013; Wainwright et al., 2018).

3.4.6 Questionnaire with parents regarding socioemotional condition of children

The **BUSSE-SR** questionnaire: **S**ocial **E**motional **-S**elf Awareness and **R**egulation created by **Bustin** (2007) (see Appendix E), contains 50 questions measuring self-awareness, self-regulation, social communication-socialization, adoptive behavior – skills of pre-school age children. The questions are simple and clear and their evaluation is based on the five answer Likert scale (1. Never to 5. Always). The dimensions follow the pattern below:

Self-awareness: Includes questions 10, 13, 16, 22, 23, 38, 40, 42, 45, 48 and grading ranges from 5 to 50 points.

Self-regulation: Includes answers 2, 6, 7, 11, 15, 17, 21, 24, 25, 31, 33, 36, 44, 46 and the grading ranges from 13 to 65 points.

Empathy: Includes questions 20 and 48 and total grading between 2 and 10 points.

Socialization: Includes questions 1, 3, 8, 12, 18, 23, 25, 26, 27, 30, 32, 33, 35, 39, 43, 47 and grades range from 16 to 80 points.

Skills: Includes questions 9, 14, 19, 28, 29, 34, 41, 50 and grading ranges from 8 to 40 points.

Higher scores indicate a higher level of socioemotional skills, in any case. This tool has been considered as reliable and has been used in multiple similar studies since it shows higher rates of Cronbach's alpha factor (Akelaitis & Malinauskas, 2018; Chinekes et al., 2014).

3.4.7 Questionnaire with parents regarding children's social skills

The evaluation scale of the SSIS (Social Skills Improvement System) questionnaire (see Appendix F), was designed by Gresham and Elliot, (2008) for the evaluation of the social skills and behavior of children and teenagers between the ages of 3 and 18. It was designed to replace the pre-existing SSRS questionnaire by the same researchers and it contains revised and updated rules, improved psychometric scales and introduces new subscales. The questionnaire includes 76 questions that examine 12 dimensions of social skills and problem behaviors. The present research makes use of 70 questions to examine 10 dimensions. The grading of the answers was based on the 4 answer Likert scale (1=Rarely...4=Very Often) and in the present research the 5 answer Likert scale was employed (1=Never to 5=Very Often).

The examined dimensions of the questionnaire are as follows:

- **Social Skills** included in questions from 1 to 7
- **Cooperation** included in questions 8 to 13
- **Maintaining position** included in questions 14 to 20
- **Empathy** included in questions 21 to 26
- **Interaction** included in questions 21 to 26
- **Self-monitoring** included in questions 34 to 40
- **Externalizing problematic behavior** included in questions 41 to 52
- **Bullying** included in questions 53 to 57
- **Hyperactivity** included in questions 58 to 64
- **Internalization** included in questions 65 to 70

The higher the scoring, the higher the levels of adoption of each examined question by the child. Gresham and Elliot, (2008) indicated the high reliability of the questionnaire which was verified by its frequent use and by other similar surveys (Elliot & Gresham, 2013; Gresham & Elliott, 2008).

3.5 Collection of data and Ethical considerations

Two groups participated in the present research. The first group (experimental group) included 24 children that participated in the intervention. The second group was the control group in which the children participated but there was no intervention of any kind.

Stage 1: Children, their parents and their teachers completed the questionnaire about inclusion (1st February 2022 and 10th March 2022). parents were also asked to complete the BUSSE-SR socioemotional questionnaire (Bustin, 2007) in order to describe their children perceived socioemotional condition, and also the SSIS questionnaire (Gresham & Elliot, 2008) to describe the perceived social behavior of their children. The teachers were asked to answer the questionnaire referring to the participation and well-being of their children (Laevers, 2005). Then, a series of activities was conducted. These activities constituted the intervention and were performed by the research group. The children who were part of the control group did not participate.

Stage 2: Collection of previous grading of both the research and the control group (10th June, 2022 and 20th of June, 2022).

Sampling method: census mode with the application of randomization on assigning the children in groups.

Data collection: Observation to complete quantitative data. The research was based on both quantitative and qualitative data.

3.5.1 Ensuring anonymity of participants

The anonymity of each participant was ensured by assigning a unique number to each child. The designation of a number made it possible for the parents to complete their questionnaires using the same number.

3.5.2 Providing information

All participants were informed regarding their participation and agreed on it, signing a written consent.

3.5.3 Delimitations

The children selected were aged up to five years old and had been attending lessons for at least a month.

3.5.4 Methods of statistical analysis

The methodology followed for the presentation of the answers to the research questions was aided with the use of qualitative statistical methods such as tables of frequency and bar charts. The analysis procedures in every case were conducted with the aid of the statistical SPSS V28, on significance level $p\text{-level}=0.05$.

3.5.5 Delimitations of the research and suggestions for future studies

The basic delimitation of the research was the small number of the examined sample and the one-dimensional representation of children. Thus, a similar future research is suggested to be conducted in a school with a higher population of children.

CHAPTER FOUR:

EDUCATIONAL PROGRAM FOR INCLUSION OF CHILDREN WITH A BACKGROUND OF MIGRATION BASED ON PHYSICAL EDUCATION AND OUTDOOR ACTIVITIES

4.1 Participation

The program was applied to children of pre-school age, attending two co-located kindergartens in Athens. The program was conducted as part of the curriculum in the period from March 11th to June 10th, 2022, for 3 sessions per week and each session lasted 30 minutes. The two groups chosen, bore similarities as to the number of boys and girls and the number of children of immigrational backgrounds. The teachers involved, were women, of middle age, of Greek nationality and with the same culture. Four teachers, 2 of each class, participated in the study. All children of both classes attended the same course in the Greek language.

Table 1. Participating groups

Characteristics	Experimental Group	Control Group
Boys	13 children	14 children
Girls	11 children	11 children
Total	24 children	25 children
Immigrational Background	9 children	8 children

4.2 Planning

An original and authentic intervention of physical activity was designed. Emphasis was placed on the implementation of outdoor activities.

Some of the activities derive from conventional games modified so they will be able to serve the purposes and aims of the intervention and some other activities come from the *Compasito*, a small compass (a guide for the education of young children in human rights, published by the European Council), <http://noiazomaikaidrw.gr/wp-content/uploads/2015/07/Compasito->

4.3 Purpose of the Educational Program

The planning of the intervention implemented involved the following objectives addressed to every child, emphasising on children with an immigrant background:

- Acquisition of a positive attitude concerning diversity
- Development of emotional skills: empathy, self-awareness, self-regulation
- Development of social skills: interactivity, cooperation, adaptability
- Enforcement of well-being
- Providing a sense of security for children with or without immigrational backgrounds
- Active and equal participation of all children
- Enforcement of trust
- Enforcement of respect and solidarity
- Active participation of parents in the education of their children

4.4 Methods, strategies, and tools of teaching

The program of physical education implemented in the experimental research, utilized a series of pedagogical methods, strategies, and tools with the purpose of fulfilling the necessary goals. As mentioned in the theoretical part, differentiation, cooperative learning, and project-based learning were among them. Regarding tools of physical education were used, indicatively: balls, hoops, scarves, video projectors and others.

4.5 Implementation

The educational program designed was conducted in the form of activities divided into three categories. They mostly took place in the school playground.

- ✓ Physical education activities implemented by the researcher and performed by children with or without a background of migration.
- ✓ Activities implemented by the teacher following the guidance of the researcher and performed by children with or without a background of migration.

- ✓ Activities implemented by the researcher together with the teachers on children with or without a background of migration and their parents.

The duration of the course was three months, while the project was designed and conducted in the period of March 1st to March 10th.

The program is presented in weekly sections (twelve) along with the activities which were implemented at the same period together with their objectives. These activities may have been performed more than once during the intervention.

The activities were performed by the class teacher of the experimental group in cooperation with the researcher. The researcher planned the activities and the class teacher implemented them.

The activities were conducted outside the curriculum as extra-curricular activities. They took place on two Sundays and in a period of three hours. The duration of the activities was three hours. The researcher cooperated with the teachers and the parents of the children with or without a background of migration.

The timetable and the objectives of the activities are presented in the following table:

Table 2. “Curriculum of notions, skills and attitudes”

Dates	Activity	Target
1. 11 March	1. The circle of trust	Positive interaction, contact
2. 14-18 March	2. The touch	Positive interaction, contact
	3. Small trains	Development of trust and self-awareness
	4. ICT dance	Well-being
3. 21-25 March	5. The journey of the swallow	Positive views about inclusion
	6. Choreography with the movements of the swallow	Positive views about inclusion
	7. Friends’ Day-Sunday dances, participation of parents with traditional dances of the country of origin	Active participation of parents
4. 28 March-1 April	8. Islands and castaways	Cooperation
	9. Blind man’s buff	Positive interaction

	10. Transporting the injured	Respect and solidarity
5. 4-8 April	11. Hide and seek	Cooperation
	12. The leap of the kangaroo	Self-regulation
	13. Human labyrinth	Self-regulation
6. 11-15 April	14. Traditional games	Positive views about inclusion
	14. Traditional games	Positive views about inclusion
	14. Traditional games	Positive views about inclusion
7. 3-6 May	15. Dishes of the world	Positive views about inclusion
	15. Dishes of the world	Positive views about inclusion
	16. Friends' Day-Sunday picnic	Active participation of parents
8. 9-13 May	17. Laughter	Well-being, positive interaction
	18. Sculptors	Emotional skills
	19. Fruit picking	Cooperation and adaptability
9. 16-20 May	20. Surfing	Cooperation and empathy
10. 23-27 May	21. The ball of responsibility	Cooperation and empathy
	22. The stations of respect	Cooperation and empathy
	23. Ships and rocks	Cooperation and empathy
11. 30 May-3 June	24. The big snake: game with rope	Self-regulation and self-awareness
	25. The fisherman's net	Self-regulation and self-awareness
	26. The big snake: game with rings	Self-regulation and self-awareness
12. 6-10 June	27. The centipede	Cooperation
	28. The tail of the kite	Cooperation
	29. The tickling tug of war	Well-being

4.6 Topics of the Program

The topics of the activities refer to physical development and the enforcement of social and emotional skills and cultivation of diversity.

4.7 Cross-connection of the Program's contents with other subjects.

The cognitive subjects connected were Language, Arts and Music.

4.8 The parts of the program

First section activities:

1. The circle of trust: a game of acquaintance.
2. The touch: a game of movement.
3. Small trains: a game of movement.
4. ICT dance.
8. Islands and castaways: a game of touch and movement.
9. Blind man's buff: a game of touch and movement.
10. Transporting of the injured: a game of movement and solidarity.
11. Hide and seek: a game of movement and exploration.
12. The leap of the kangaroo: game of movement.
13. Human labyrinth: a physical team game.
14. Traditional games from different origin countries.
17. Laughter.
18. Sculptors: a game played in pairs.
19. Fruit picking.
20. Surfing: game of touch and movement.
21. The ball of responsibility: a game with balls.
22. The stations of respect: a game of movement with balloons.
23. Ships and rocks: a team game of movement.
24. The big snake: a game with a rope.
25. The fisherman's net: a team game with movement.
26. The big snake: a game with rings.
27. The centipede: a game of movement.
28. The tail of the kite: a game of movement.
29. The tickling tug of war.

Second section activities:

5. The journey of the swallow
6. Choreography with the movements of the swallow
15. Dishes of the world

Third section activities:

7. Friends' Day – Sunday dance

16. Friends' Day -Sunday picnic

4.9 Planning the pedagogical situation

The aim of the current part is to give the pedagogical situation in which the intervention took place. In this part, examples of some activities of the intervention are presented. For the resume a characteristic activity is selected. The pedagogical situation recommended is following the scheme by Prof. Rozalina Engels-Kritidis, D.Sc. (Zhou Jiao, Xu Lu & Engels-Kritidis 2015, Cheng, Na & R. Engels-Kritidis 2016, and others).

4.9.2 The journey of the swallow

The activity "the journey of swallow" is based on the principles of intercultural and inclusive education. People with a migrant background are considered "swallows" because of their movements from one place to another. The swallow's journey can offer children the opportunity to understand the conditions of migration and familiarize themselves with the specific social phenomenon (Alivernini et al., 2019). Children 4-6 years old participate in the activity. The main educational directions were arts, play, cultural interaction, nature. Topic of the activity was learning about the journey of swallow.

Goals of the pedagogical interaction:

- a) goals of cognitive development (knowledge and notions)
 - getting to know about the swallows, nature, immigration
 - understanding that people like birds need to move from conditions that do not favor them to conditions that will benefit them.
 - to gain cognitive empathy for immigrants and their families
- b) goals of transferring of practical experience (skills):
 - physical exercise, developing fine motor skills
 - considering on the different way people live
 - empathy
- c) goals of stimulation of individual emotional experiences (attitudes and emotions):
 - understanding diversity
 - positive attitudes toward inclusion
 - focusing on relationality instead differences

The definition of goals is following the Engels-Kritidis, R. (2020). Inclusive approaches to pedagogical interaction with 4- to 7-year-old children (Foreword).

Methods of pedagogical interaction

Achievement of the objectives is based on the principles of intercultural education, and particularly the interaction of students that can help in the acquisition of cognitive empathy. The interaction takes place in the context of an artistic creation and expression. Art is considered an important tool in intercultural and inclusive education because of the free expression it offers to children (Hajisoteriou & Angelides, 2017). Furthermore, the method of dramatization in which the children take the role of the swallow is applied. In essence, through a kinetic game of dramatization, children can put themselves in the place of the swallows-migrants and experience their feelings and thoughts (Dimitriadou & Efstathiou, 2008).

Description in details of the main activity as part of the pedagogical situation

The teacher elaborates on the journey of the swallow as it migrates during the year. The children use cardboard to make a sparrow. In the initial part, the researcher along with the children discusses the swallows and the way they live. The life of swallows as migrants and the reasons why they move are highlighted. Children describe their experiences of swallows and their beliefs about them. Next, children are asked to make swallows using the materials available in the kindergarten.



Picture 2. Swallow

[swallows](#)

Children complete the activity, holding the swallows they made and move around the classroom pretending to fly to different places.

CHAPTER FIVE:

RESULTS

5.1 Opinions of parents regarding inclusion



Figure 2. Mean values of inclusion questions (parents) in decreasing order.

This section of the results contains the parents' answers. And more specifically, the average grading and typical variation of the 38 questions of inclusion. According to the results, the average grade that shows the highest frequency of application at school was "14: it is good to have children of different backgrounds at school..." ($Mean=4,12$, $SD=0,75$). Parents seem to appreciate the school unit, to feel safe, to recognize equality and collaboration in the school environment. Furthermore, the rate of trust regarding the teachers is satisfying. Also, bullying is not a problem for the resent school.

5.2 Self Awareness and Regulation, Social Relationships, Empathy and Coping Skills Scale



Figure 3. Mean values of BUSSE-SR questions in decreasing order

The results show the high average scoring and the scores which are higher than the critical value in almost all statements. Children present developed self-awareness and self-care abilities. Scores are quite high regarding obsession to school rules, collaboration with other children and adults, politeness, behavior and effective communication. Average frequency scoring was noted in the following statements: “31. He/she is able to prevent him/herself from being involved with other children in something they are not allowed to do” ($Mean=3.15$, $SD=0.615$), “8. He/she is able to find a solution when peers or friends disagree, without quarreling” ($Mean=3.1$, $SD=0.666$), “46. He/she is able to judge a situation before getting involved” ($Mean=3.07$, $SD=0.523$) and “17. He/she is able to listen to others without interrupting them.” ($Mean=3.01$, $SD=0.753$).

Finally, the lowest frequency scoring appeared in the statements: “11. He/she is able to control his/her frustration with no effect to the game.” ($Mean=2.96$, $SD=0.608$), “44.

5.3 Social Skills Improvement System Questionnaire

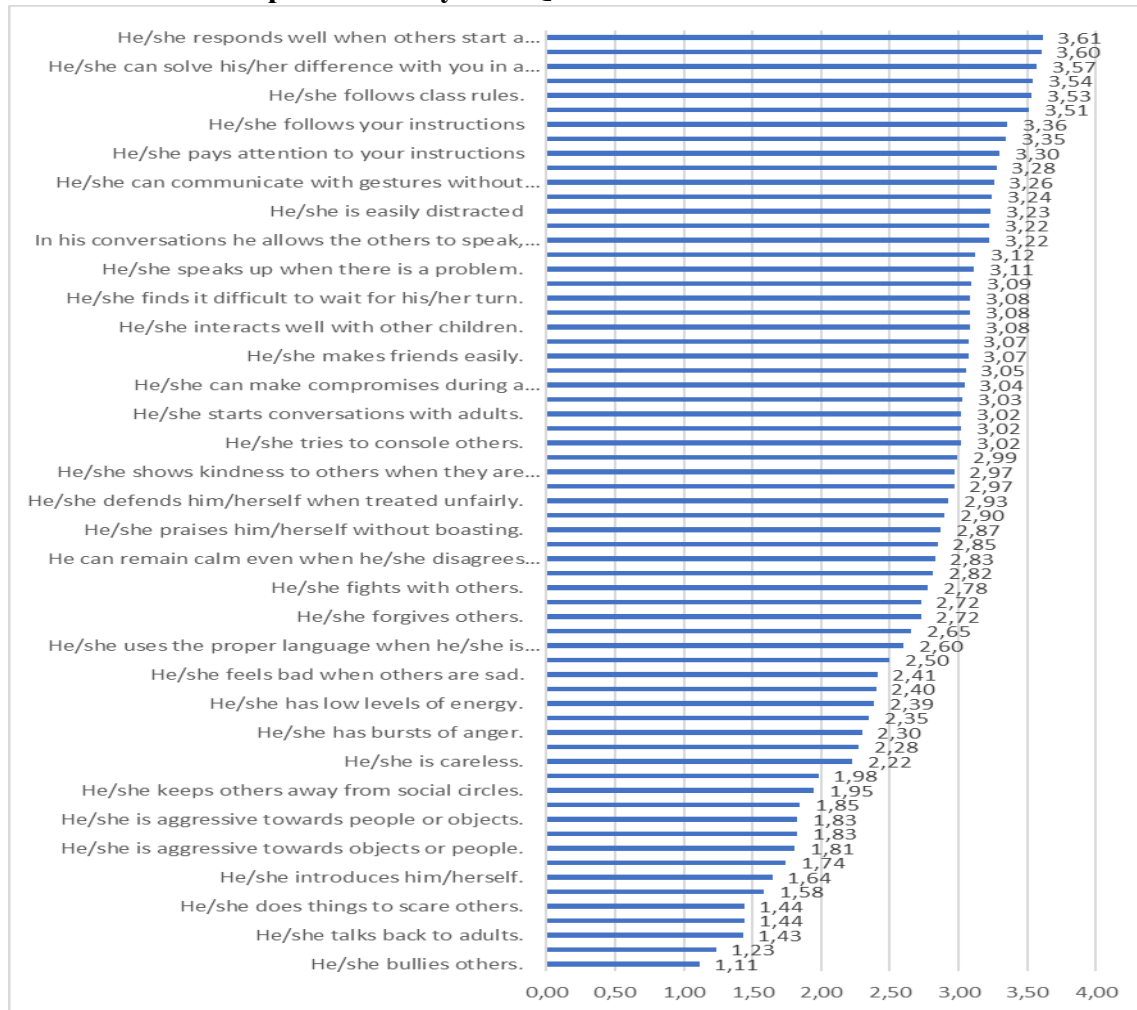


Figure 3. Mean values of SSIS questions in decreasing order

According to the results, the average medium scores vary between 3.61 and 1.11 showing low frequency application in the statements in question. Higher scores appear in statements are related to participation in conversations, communicating effectively by following certain rules and ability to follow instructions. Next are the scores regarding participation in class and reactions respectively to others behavior.

Table 6. Measures of central tendency and distribution of the resulting dimensions (Parents)

	Mean	Median	SD	Range	Min	Max
Inclusion (Parents)	2.96	2.95	0.356	1.47	2.39	3.87
Self-awareness	3.55	3.50	0.293	1.40	3.00	4.40
Self-regulation	3.23	3.25	0.298	1.36	2.43	3.79

Empathy	3.54	3.50	0.382	1.50	3.00	4.50
Socialization	3.46	3.50	0.305	1.38	2.75	4.13
Skills	4.03	4.13	0.243	1.00	3.50	4.50
Social Skills	3.28	3.29	0.355	1.86	2.57	4.43
Cooperation	3.21	3.00	0.429	2.17	2.33	4.50
Maintaining position	3.14	3.14	0.341	1.43	2.57	4.00
Sympathy	2.90	2.83	0.380	1.83	2.00	3.83
Social interaction	2.89	2.86	0.355	2.00	1.86	3.86
Self-control	2.94	3.00	0.439	1.86	2.14	4.00
Externalizing problematic behavior	2.00	1.92	0.344	1.58	1.00	2.58
Bullying	1.51	1.50	0.381	1.20	1.00	2.20
Hyperactivity	2.34	2.29	0.416	2.00	1.29	3.29
Internalization	2.55	2.50	0.468	1.83	1.67	3.50

After this, the indexes of inclusion were constructed, the dimensions of the BUSSE-SR Questionnaire, as well as those of the SSIS Questionnaire, according to the descriptions presented in the methodology. The measures of central tendency and distribution are presented in Table 6. According to these, there was high average grading in skills ($Mean=4.03$, $SD=0.243$), which was the highest average rate of all examined dimensions.

The average grading of the basic variable, which is inclusion, is equal to 2.96 ($SD=0,356$), an indicative fact of the average rate of inclusion of the children and parents who took part in the survey. This finding shows that parents are of the belief that the school their children attend has an average level of inclusion policy.

5.4 Effects of measuring sequence

Table 7. Effects of measuring sequence

Dimension	Measurement	N	Mean	SD	t	df	p
-----------	-------------	---	------	----	---	----	---

Inclusion (Parents)	Initial	49	2.89	0.366	-1.938	96	0.056
	Final	49	3.03	0.335			
Self-awareness	Initial	49	3.39	0.201	-6.447	86.332	<0.001
	Final	49	3.71	0.284			
Self-regulation	Initial	49	3.12	0.273	-3.852	96	<0.001
	Final	49	3.34	0.285			
Empathy	Initial	49	3.45	0.371	-2.299	96	0.024
	Final	49	3.62	0.375			
Socializing	Initial	49	3.34	0.256	-4.261	96	<0.001
	Final	49	3.58	0.304			
Skills	Initial	49	4.02	0.236	-0.622	96	0.535
	Final	49	4.05	0.251			
Social Skills	Initial	49	3.19	0.332	-2.457	96	0.016
	Final	49	3.36	0.361			
Cooperation	Initial	49	3.06	0.342	-3.527	88.498	0.001
	Final	49	3.35	0.461			
Maintaining position	Initial	49	3.03	0.242	-3.488	80.473	0.001
	Final	49	3.25	0.387			
Sympathy	Initial	49	2.80	0.320	-2.596	96	0.011
	Final	49	3.00	0.413			
Social interaction	Initial	49	2.81	0.299	-2.287	96	0.024
	Final	49	2.97	0.389			
Self-control	Initial	49	2.82	0.347	-2.896	86.681	0.005
	Final	49	3.07	0.488			
Externalizing problematic behavior	Initial	49	2.07	0.350	1.988	96	0.050
	Final	49	1.94	0.327			
Bullying	Initial	49	1.58	0.405	1.658	96	0.101
	Final	49	1.45	0.348			

Hyperactivity	Initial	49	2.41	0.422	1.787	96	0.077
	Final	49	2.26	0.401			
Internalization	Initial	49	2.65	0.470	2.199	96	0.030
	Final	49	2.45	0.448			

All dimensions had a positive context (except for Self-regulation, Externalizing problematic behavior, Bullying, ~Hyperactivity and Internalization) the average grading of the final measurements was higher than the initial scores thus, indicating the positive influence of the intervention.

Statistically, significant differences were noted in 11 of the 16 investigated dimensions. “Inclusion”, which was the variable of interest, did not present notable differences on a significance level 5% ($t=1.938$, $df=96$, $p=0.056$). Nevertheless, this marginal, non-statistical significance, is accepted on a significance level of 10%. Similarly, marginal non-significance was notable in “Externalization of problematic behavior”. ($t=1.988$, $df=96$, $p=0.050$).

5.5 Effects of measurement group

Then, there was an investigation of the groups being measured (both experimental and control group). The results appear on Table 8 and they indicate significant differences in 9 out of the 16 dimensions investigated. Based on the results, all dimensions with a positive context (except for Self-control, Externalization of problematic behavior, Bullying, Hyperactivity and Internalization) showed higher average grading of the control group when they were compared to the initial measurements, again indicating the positive influence of the intervention.

5.6 Effects of immigrational background

The immigrational background and its effect on the average scores was the final factor under investigation. The results of the examination of average grading are shown in Table 9 and they indicate a greater influence of this factor. More specifically, only 3 dimensions seemed to show minimal statistical differences of p-value at 5%, however, two of them were significant at p-value of 10%.

According to the findings, the parents without immigrational background, when compared to immigrant parents, showed greater average scores in the dimensions of positive context and lower scores in those dimensions conveying negative context.

Finally, the variable of interest “Inclusion”, indicated significant statistical differences of average scores ($t=9.920$, $df=96$, $p<0.001$) among parents without a background of migration who appeared to have a positive attitude towards inclusion compared to the parents of immigrant backgrounds. Nevertheless, the differences are small and the positive opinion of parents actually refers to a neutral opinion regarding inclusion while the opposing viewpoint indicates a slight disagreement.

5.7 Simultaneous effects on inclusion

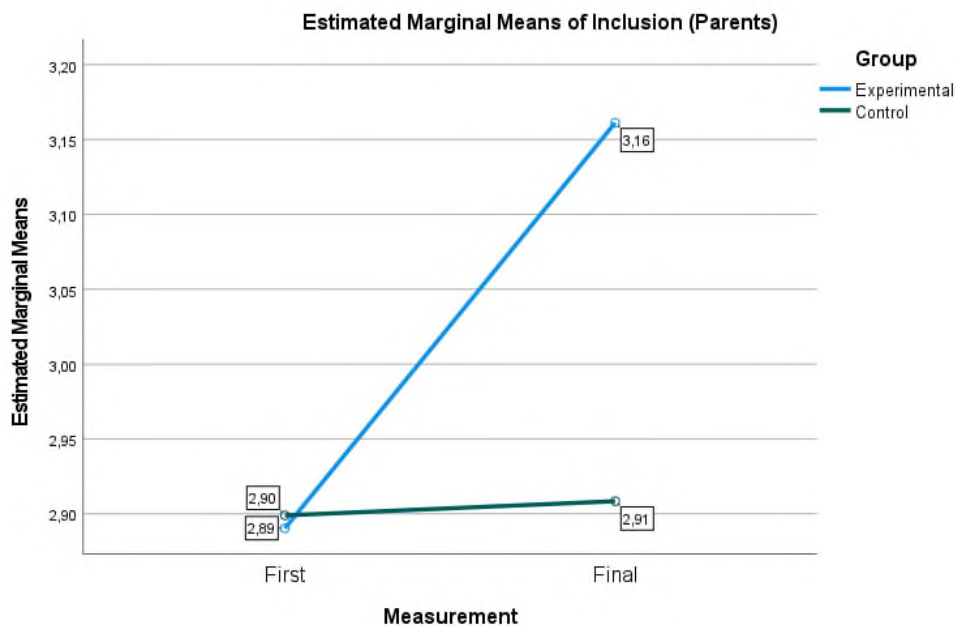


Figure 6. Inclusion per group and measuring order (Parents).

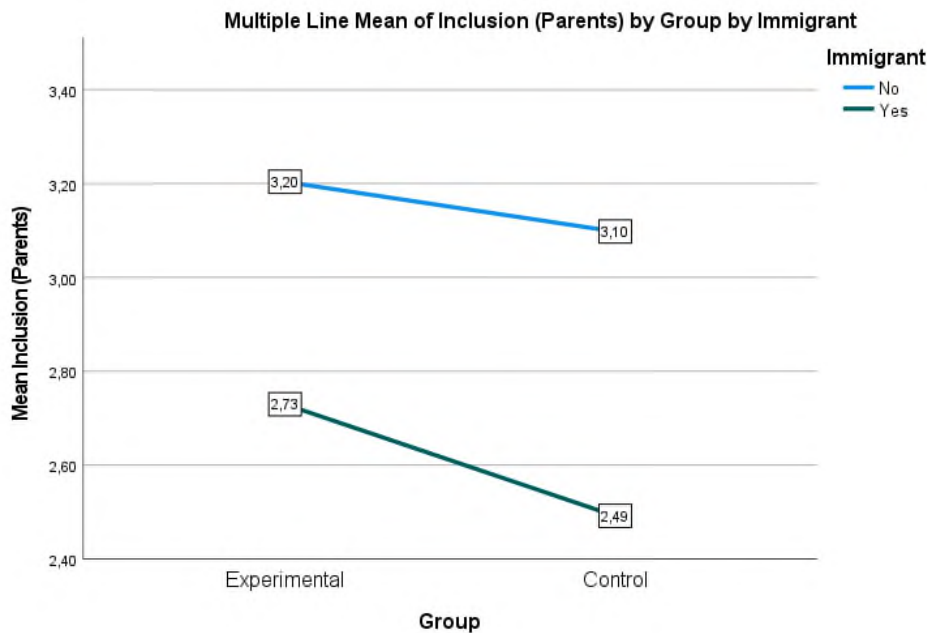


Figure 7. Inclusion per group and immigrant status

Following the independent investigation of factors came the careful examination of three factors, those of order of measure, group and immigrational background concerning inclusion. These were investigated with the aid of Factorial ANOVA and the results appear on Table 10 and Figures 6 and 7.

According to the results, all three examined factors become statistically important as does the mutual effect of order of measure and group ($F=10.511$, $p=0.002$). There is also evidence that the observed p-value of 10% indicates significant interaction between order of measure and immigrational background and also among all three factors.

Moreover, Figure 6 indicates that the intervention was successful since the average value of the experimental group as to inclusion increased as it transformed the parents' opinion from average negative to neutral. It is also worth mentioning that the intervention smoothed out the differences (from 0.61 to 0.47) between the two groups (experimental and control) regarding the parents' background.

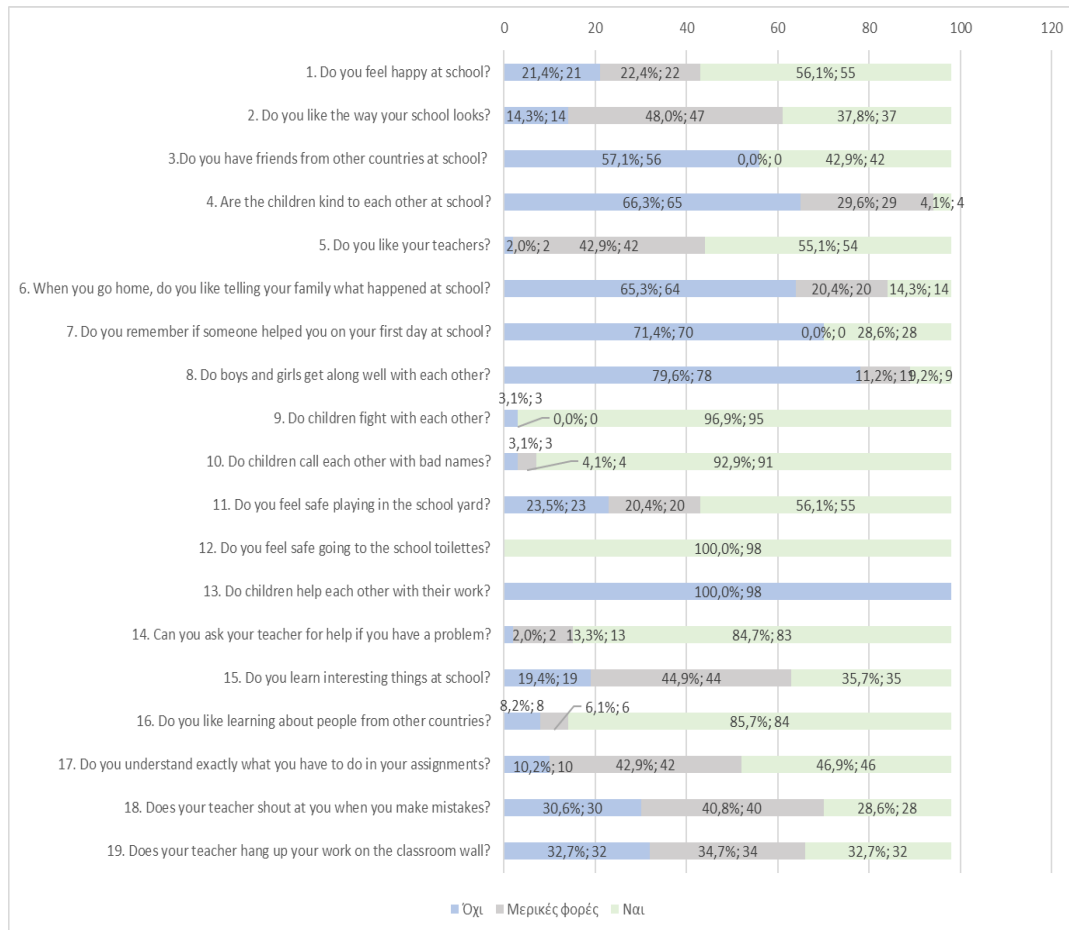
5.8 Relation between inclusion and other variables

The association between the dimension of inclusion and the rest of the dimensions was investigated in the final part of the analysis of the results concerning parents. The first part of this examination presents the correlation of these variables.

The rest of the findings indicated that Inclusion has a positive impact on all positive dimensions and a negative impact on the dimensions with a negative context. Inclusion was found to be mathematically represented in the model:

$$\text{Inclusion} = -0.490 \cdot \text{Hyperactivity} + \text{Socialization} - 0.165 \cdot \text{Internalization} + 3.350$$

5.9 Visualized opinions of children regarding inclusion



As indicated by the results, there was a greater level of agreement in the items: children fight with each other (N=95, N%=96.9%), they call each other with bad names (N=91, N%=92.9%), boys and girls get along well with each other (N=9, N%=9.2%), they like learning about people from other countries (N=84, N%=85.7%) and if they have a problem they can ask their teacher for help (N=83, N%=84.7%).

5.10 Results of quality data

The systematic, non-participatory observation conducted during the course of the present research, led to specific quality results. In order to accurately track and comprehend the changes taking place in the interaction among children, with and without immigrant backgrounds, as well as with their teachers, the results are presented on a weekly basis.

On the first week (11 March) and second week of the intervention (14-18 March), difficulties in the interactivity of children were observed. More specifically, children showed greater preference and participation in individual rather than team activities and thus, their interaction was very limited.

Difficulties in the interactivity of children were also observed during the third week of the intervention (21-25 March). The children exhibited their preference to team games but, with peers of the same origin. Actually, the children formed two separate teams of immigrant and native children, so as a result, they did not develop much contact with one another. Interactivity between children and their teachers also indicated some difficulties, especially when children with an immigrant background showed hesitation in addressing the teachers.

During the fourth week of intervention (March 28-1 April), it became evident that there was a lesser degree of difficulty in the interaction of children, however, only in the intervention group. The children of both immigrant and non-immigrant backgrounds began performing common team activities. However, these activities led to children fighting and talking badly to each other and, at the same time, they indicated problems in regulating and expressing their feelings.

On the fifth week of the intervention (4-8 April), these difficulties in the children' interactivity seemed to recede. The critical point in their behavior concerned the regulation of their emotions. The children were able to calmly express how they felt, especially when they felt bad and they stopped fighting with their classmates. There was also definite improvement in the way they interacted with the teachers.

On the sixth week of the intervention (11-15 April), children continued their interactivity by participating in group activities. The positive aspect observed during this time was the increase of participation among children with immigrant backgrounds.

During the seventh week (3-6 May), there was positive interactivity between children with and without immigrational backgrounds. The children talked to each other and they showed interest in acquiring information about the cultural background of their classmates.

In week number eight (9-13 May), the positive interactivity among children continued with children taking part in team games conducted as part of the intervention. Even children with immigrational backgrounds showed great trust to their teachers.

During the ninth week (16-20 May), there was notable development in the children's skill of adaptation. They started taking part in group activities without making distinctions and without the teachers' encouragement.

Over week number ten (23-27 May), the children, in their discussions, used positive comments to talk about their school and the activities performed there.

During the eleventh week (30 May-3 June), the children with a background of migration started discussing their origins freely and did not receive negative comments from their classmates.

In the twelfth week (6-10 June), the children participated in the same group activities, and they were able to settle their differences and resolve their problems themselves.

CONCLUSIONS

Evaluation of the program

All children (with and without immigrant background) experienced some difficulties before starting the program. However, after the intervention was completed, positive changes were evident in all children (with and without an immigrant background). This means that the intervention was successful because there were

positive effects in the experimental group who showed a significant decrease in the conflict scale and a significant increase in the security scale.

After the completion of the intervention, an increase in positive attitudes towards cultural otherness was observed. Most children reported having friendly relationships with peers from different cultural backgrounds. Additionally, it is necessary to emphasize that children's views on inclusion are more positive than their parents'. Parents without an immigrant background were more positive towards inclusion compared to parents with an immigrant background.

Teachers showed the most positive attitudes towards inclusion, compared to children and parents. The teachers who participated in the research emphasized that after the intervention the well-being and participation of the students in structured and free-choice activities had been enhanced.

The intervention led to the achievement of the main goal, namely the inclusion of this group of children in kindergarten. Students with an immigrant background developed positive feelings and perceptions of school while their well-being and participation were enhanced. Finally, the intervention was effective as it also benefited children without an immigrant background.

Confirmation of hypothesis

The first research hypothesis concerned that intervention with physical education and outdoor activities could contribute to the creation of a positive kindergarten/school environment which will offer security, acceptance of cultural diversity and a positive perception of kindergarten/school for both the children with an immigration background and to the children without. This hypothesis was confirmed by showing that the intervention contributed to enhancing the inclusion of students with an immigrant background and students without an immigrant background.

The second research hypothesis concerned the effects of the intervention on the emotional development of children with and without an immigrant background. This hypothesis was confirmed by showing that the intervention of physical education and outdoor activities led to the development of self-regulation, self-awareness, and empathy of all children, regardless of whether they have an immigrant background or

not. The statistical analyses performed showed the strengthening of these skills after the end of the intervention.

The third research hypothesis concerned the effects of the intervention on the social development of young children with or without an immigrant background. The hypothesis was confirmed by showing that the physical education intervention, aimed at inclusion, led to the development of social skills such as social interactions, cooperation, and adaptability. In essence, the children who participated in the intervention improved their social skills which are necessary building blocks of successful inclusion.

The fourth research hypothesis concerned the effects of the intervention on children's behavioral problems. It was examined whether the intervention of physical education and outdoor activities which are aimed at inclusion leads to the reduction of behavioral problems among children with and without an immigrant background.

The fifth research hypothesis concerned the intervention group and in particular the effects of the intervention on the well-being and participation of children regardless of the existence of an immigrant background. The hypothesis was confirmed by showing that children who participated in the intervention showed higher well-being and participation than those in the control group.

Limitations and future research

The first limitation concerns the duration of the program. The intervention implemented was short-term, which resulted in limited time to establish all the values of inclusion in the kindergarten. The second limitation is that only two kindergartens that were in the same urban area participated in the research. What is proposed is to conduct corresponding experimental research with the participation of more kindergartens from different parts of the city of Athens. The next limitation is related to the data collection tools. An interesting approach would be to use more qualitative means on children to obtain a comprehensive picture regarding their experiences and perceptions towards inclusion. Finally, it is proposed to implement an intervention program in which more activities will be implemented in public outdoor spaces of the community. In this way, inclusion can also be strengthened.

Final conclusions

In the experimental research, intervention of physical education and outdoor activities was applied to preschool children, bringing positive results. The positive results concern both students with an immigrant background and those without.

The intervention implemented was considered effective as it led to the formation of positive attitudes, strengthening safety and cooperation. Children who participated in the program developed positive perceptions and feelings towards school, inclusion, diversity, and their peers. This means that the intervention led to forming of the necessary school climate related to inclusive education.

Finally, the intervention program implemented was effective because it led to the enhancement of the well-being and participation of all students. The confirmation of the assumptions above highlights the benefits of physical education and the outdoor activities to the inclusion of students with migratory background to kindergarten.

All the children and mainly those who are treated from the school community as “foreign” have the need to find themselves in conditions that promote the interaction among them experiencing an atmosphere of acceptance and security from their peers and from the group of the teachers. In the program that was designed and implemented there have been attempts of ensuring that kind of atmosphere during the intervention as well as for its promotion to the whole kindergarten. As researcher I tried to develop a positive relationship with all the children and to communicate with the teachers in order to succeed in the inclusion. The focus on these fundamental concepts of inclusion I believe that operated positively in the confirmation of the assumptions and as a result in the success of the program.

AUTHOR'S CONTRIBUTIONS TO THE FIELD OF RESEARCH

The author's contributions as they arose during the review of the bibliography and the planning-implementation of the experimental research are the following:

1. Contemporary theoretical and research findings that indicate the important role that inclusion and intercultural education play in modern education systems worldwide have been collected, studied and recorded.
2. Highlighting and proving the importance of inclusion and the utilization of the psychopedagogical approach to inclusion in kindergartens. According to the literature findings, physical education activities and outdoor activities can be a means of applying the psychopedagogical approach to inclusion in preschool education. This thesis contributes on how these activities can be applied to kindergarten.
3. An original author's educational program for inclusion of children with and without a background of migration based on physical education and outdoor activities that positively affects their mental well-being in the short and long term.
4. Research tools for the measurement of inclusion in children, attending kindergarten were created.
5. To feature how the educational programme affect the behavior of children with and without immigrant background.

We succeeded to accomplish our research's aims and tasks. We may confirm that we successfully fulfilled all our initial intentions and would gladly confirm that we are satisfied with the results and the outcomes we registered.

The author of the thesis agrees to be responsible for the design and implementation of this thesis and research taking into account the principles of validity and reliability that accompany empirical scientific research.

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AUTHOR'S PUBLICATIONS ON THE TOPIC OF THE PHD THESIS

- Ntouska, V. (2022). The transition from a teacher-centered approach to constructivism in physical education interaction via ICT. In R. Engles-Kritidis (Ed.), *Anniversary National Scientific forum with International Participation, 140 years Preschool Education in Bulgaria: Achievements and Horizons, E' Part* (pp. 372-384). Sofia 23 & 24 June 2022. Sofia:"St.Kliment Ohridski" University Press. ISBN: 978-954-07-5471-0
- Ntouska, V. (2022). The role of physical education in kindergarten in the context of intercultural pedagogical interaction. In M. Krumova (Ed.), *Proceedings of a Scientific Conference: EDUCATION AND ARTS: TRADITIONS AND PERSPECTIVES, 2022, Proceedings of the Third Scientific-Practical Conference* (pp. 996-1003). Sofia 10-11 November 2022, Sofia:"St. Kliment Ohridski" University Press. ISSN 2738-8999
- Ntouska, V. (2022). Intercultural Education Via Physical Education in Preschool: The Greek Case. In *Proceedings of a Scientific Conference: EDUCATION AND ARTS: TRADITIONS AND PERSPECTIVES, 2023, Proceedings of the Fourth Scientific and Practical Conference* (pp.795-802), Sofia, 27-10-2023, Sofia:"St. Kliment Ohridski" University Press. ISSN 978-954-07-5061-3.
- Ntouska, V. (2022). Dance as an Intercultural Approach in Physical Education: A Pedagogical Situation in Preschool. In *Proceedings of a Scientific Conference: EDUCATION AND ARTS: TRADITIONS AND PERSPECTIVES, 2023, Proceedings of the Fourth Scientific-Practical Conference* (pp.803-810), Sofia, 27-10-2023, Sofia:"St. Kliment Ohridski" University Press. ISSN 978-954-07-5061-3.
- Ntouska, V. & Engels-Kritidis, R. (2022). Inclusive Intercultural Approaches in Preschool Education. In M. Krumova (Ed.), *Proceedings of a Scientific Conference: EDUCATION AND ARTS: TRADITIONS AND PERSPECTIVES, 2022, Proceedings of the Third Scientific-Practical Conference* (pp. 988-995). Sofia 10-11 November 2022, Sofia:"St. Kliment Ohridski" University Press. ISSN 2738-8999.