



Evaluation of the Three-Factor Model in the Case of the Effectiveness of the Institution of Parallel Support in the Socialization of Students with ADHD

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Abstract

The ultimate goal of this work is to investigate the opinions of general and special education teachers regarding the effectiveness of the institution of parallel support as a parameter to promote the social integration of students with Attention Deficit Hyperactivity Disorder. In more detail, the views of the teachers were studied at the level of planning, implementation as well as the results of the application of techniques and activities that promote the socialization of children with ADHD in the general school, while it is also examined whether there is an effect of their demographic characteristics on their views and actions in the above sectors. In addition, it was investigated whether the teacher of the parallel support is in a cooperative relationship with the teacher of the class, with other specialties and with the parents, for the planning of techniques and activities that promote socialization. At the same time, a key research question examined is whether the factor analysis (EFA & CFA) confirms the three-factor model in the case of the effectiveness of the institution of parallel support in the socialization of students with ADHD. Specifically, in this research, the method followed for its implementation is the quantitative one by administering a questionnaire to 137 teachers (72 general education and 65 special education). Regarding the results, it is concluded that the majority of teachers converge to have a positive orientation to promote socialization through the institution of parallel support in all scales of the questionnaire (design, implementation and effectiveness of techniques and activities). Finally, it is worth pointing out that all the research questions raised in this particular research work were answered.

Subject Areas

Special Education

Keywords

Special Education, Parallel Support, Integration Policies, ADHD, Disorder

1. Introduction

In recent decades, there has been an intense reflection of special and general education teachers regarding the practices of Special Education (SE), as well as the content of inclusive education through the institution of parallel support.

The application of the institution of parallel support has been established in the Greek educational system during the last years, which is the channel for the inclusive education of students with disabilities and/or special educational needs (SEN) in the general school. According to Law 3699/2008, people diagnosed with a disability and SEN, including those with attention deficit syndrome with or without hyperactivity (ADHD) are included in the S.E [1]. Additionally, in the same Law, regarding the pursuit of integration, students with mild learning difficulties attend general school with the parallel support of a special teacher [1].

Students with ADHD manifest intense impulsive behavior related to the socialization of the child, as there is a lack of inhibitions and limits in social interaction and social relationships, difficulty adapting to socially acceptable patterns and violation of social norms [2]. Therefore, parallel support aims to strengthen and integrate students with these characteristics into the educational and social process and has been judged to be the most ideal and effective based on research, as students come into contact with their typically developing peers and adopt socially acceptable behaviors [3]. Generally speaking, the creation of early interpersonal bonds with their social environment plays a significant role and therefore, it is necessary to support these students in practice through the design and implementation of techniques and activities to promote inclusion in mainstream schools [4].

Based on research, in terms of inclusion practice, a large percentage of teachers believe that segregation exists due to insufficient training in appropriate educational structures [5]. Various researches revealed teachers' feelings of insecurity regarding the education of students with ADHD due to the lack of training and infrastructure, resulting in a strong hesitation regarding its implementation [6]. However, recent research showed that the implementation of the inclusion policy in the classroom contributed catalytically to the elimination of stereotypes, stigmatization and social exclusion of these children [7].

Taking into account the literature review, it was found that there are no many relevant Greek researches that examine the opinions and attitudes of teachers who work in the institution of parallel support to promote the socialization of students with ADHD. By extension, it was deemed appropriate to conduct the relevant investigation. The ultimate goal of this master's thesis is to investigate

the opinions of general and special education teachers regarding the effectiveness of the institution of parallel support in promoting the socialization of students with ADHD.

More in detail, the main components of the thematic work were the investigation of the question of whether teachers plan and implement techniques and activities that promote the social integration of children with ADHD in the general context of the school, as well as their opinions regarding the effectiveness of their implementation.

In addition, a decisive parameter was the examination of the effect of their demographic characteristics on the three previous scales of the questionnaire, while at the same time, the level of the collaborative relationship of the parallel support teacher with the class teacher, with other specialties and with the parents for the planning was investigated techniques and activities to promote socialization.

Also, drawing conclusions contributes to the approach and improvement of a catalytic issue in the educational field, the institution of parallel support as a means of social inclusion. Subsequently, through the present research, new knowledge was added to the existing knowledge in the research field. This fact has as a consequence two components, on the one hand, the enrichment of the cognitive background and therefore, the adoption of more comprehensive views of the teachers on the subject and on the other hand, the trigger for new future research studies.

This work is structured in five parts. Characteristically, the first part presents the bibliographic overview with the theoretical and research background. Primarily, chapter 1 analyzes the definition of ADHD, while subsection 2.1 presents its diagnostic international diagnostic manuals and criteria. Then, in the following sub-chapters, an analysis is made of the epidemiological findings, its etiological framework, the effects brought about by the specific disorder as well as its correlation with the socialization of the individual, giving particular weight to the difficulties of developing this skill. Also, in the 2nd chapter, an extensive record is made regarding the implementation of integration education in Greece through its legislative framework and specifically, the institution of parallel support.

Then, the second part of the work is the research methodology that was followed, focusing on the purpose of the research and the research questions that will be investigated. In more detail, the 5th chapter mentions the method of the work, the sampling and the research tool that was used. Specifically, quantitative content analysis, non-probability sampling and specifically “convenience” sampling were chosen. In addition, the research tool is the questionnaire, which has been drawn from the literature [8], where the questions are appropriately structured for the collection, processing and analysis of data. The administration of the questionnaire was applied to 137 teachers (72 general education teachers and 65 S.E teachers. The chapter concludes with reference to the issues of validity and reliability and the ethical and ethical issues that govern this work, according

to the code of ethical conduct.

It is legitimate to mention that all seven research questions were answered. Below are the individual research questions that will be answered through this research study:

- 1) How do special education teachers act in planning techniques and activities to promote the socialization of students with ADHD in general school?
- 2) How do general education teachers act in planning techniques and activities to promote the socialization of students with ADHD in the general school?
- 3) What are the opinions of teachers (general and special education) regarding the results of applying techniques and activities that promote the socialization of students with ADHD in the context of the general school?
- 4) Does the factor analysis (EFA & CFA) confirm the three-factor model in the case of the effectiveness of the institution of parallel support in the socialization of students with ADHD?

In the third part of the paper, the analysis and discussion of the research data are presented (chapter 6) in a structured way through the categorization in thematic axes that are in correspondence with the seven research questions. Data analysis was performed with the Statistical Package for the Social Sciences (SPSS) statistical program. At the same time, the quantification of the findings in tables has been carried out. Each table presents a detailed description of the findings, with the ultimate goal that the readership can refer to the corresponding table to cross-reference the data directly and efficiently.

In the fourth and last part, the epilogue and conclusions of the research are reported through the findings and results obtained from the evaluation process and their correlation with empirical data of international research. Regarding the results, it is concluded that the majority of teachers tend to have a positive orientation towards the promotion of socialization through the institution of parallel support in all scales of the questionnaire (design, implementation and effectiveness of techniques and activities). Also, the limitations and potential proposals for future investigation of the issue are alluded to, in order to thoroughly examine the evidence regarding the socialization of students with ADHD. Finally, the Greek-language and foreign-language bibliography used in the specific diploma thesis is listed, as well as the posting of the appendices.

2. Theoretical Framework

2.1. Attention Deficit Hyperactivity Disorder

ADHD has undoubtedly been the subject of a variety of research on a global scale. Although a lot of research has been done on its clinical picture, causes and effects, a clear and universal definition has not been created. A widely accepted definition for ADHD is that of the American Psychological Association (APA), which states that:

“When children exhibit symptoms of inattention and/or impulsivity—hyperactivity to an extent that deviates significantly from their developmental level, ex-

erting a negative effect on important areas of their functioning, then they may be diagnosed with Attention Deficit Hyperactivity Disorder, or ADHD [9].

To begin with, according to researchers, it is concluded that children with ADHD show deficits in the ability to pay attention, to maintain it, as well as difficulty following instructions and rules to the end. In addition, there is an inability to pay attention to details and careless mistakes in the school environment. Typically, the child with ADHD has difficulty completing and organizing schoolwork or activities, and displays reluctance or aversion to engaging in tasks that require sustained mental effort (e.g., schoolwork, homework preparation). A frequent phenomenon is a distraction by irrelevant external stimuli and difficulty listening when spoken to. Losing items necessary for school activities, such as toys, pencils, and books, is a typical feature.

Subsequently, children with ADHD exhibit a lot of mobility in relation to the given situation they are in, making nervous movements of their arms and legs or squirming in their chairs (DSM-V, 2013). They have often been observed getting up from their seats in class or in situations where they have to remain seated, running uncontrollably or even climbing. Also, these children act like “moving machines”, since they are in a continuous overstimulation, a symptom that is not in accordance with their developmental age level [9]. Intense babbling with incoherent speech is another characteristic observed in their behavior.

According to the definition of APA [9], children with ADHD exhibit intense impulsive behavior. Impulsivity mainly refers to their difficulty waiting their turn and a tendency to interrupt others or interfere in conversations. Also, the impulsive reaction is observed in the continuous errors of inattention and recklessness, while they often give answers before even completing the question [10]. Finally, the trait of impulsivity is closely related to the child’s socialization, as there is a lack of inhibitions and limits in social interaction and social relationships, difficulty adapting to socially acceptable patterns, emotional disturbances, expression of opinions that may be offensive, lack of awareness of situations involving risks and violation of social norms [2].

In conclusion, therefore, it is observed that ADHD causes negative consequences in various areas of the individual’s functioning both in the cognitive, as well as in the family, social, emotional, behavioral and academic spheres of his life [11].

2.2. Epidemiology of Attention Deficit Hyperactivity Disorder

Generally speaking, regarding the epidemiology of ADHD, there are no accurate estimates and measurements. Nevertheless, it has been researched that 5% - 7% of the school community presents characteristic features of this (DSM-V, 2013). Taking scientific research into account, it has been established that ADHD has a higher frequency of occurrence in males than in females, which confirms its biological etiology. For example, ADHD occurs on average 6 times more often in boys, while this ratio decreases to 4:1 when conducting epidemiological studies [12]. According to the DSM-V diagnostic manual, it ranges from 2:1 for children

and 1.6:1 for adults [9].

This greater ratio of boys to girls is likely due to the expression of the disorder between the two sexes, as boys more often manifest behavior problems compared to girls, who more often show speech disorders, learning difficulties and anxiety, with the result that are not referred early for diagnosis compared to boys [13].

2.3. Causes of Attention Deficit Hyperactivity Disorder

Regarding the etiology of ADHD, it is legitimate to mention that there is no exact cause, but its etiology is multifactorial with the main factors being genetic, neurobiological, environmental and social [14].

More specifically, starting from genetic factors, research has revealed high heritability rates, which amount to 75% - 77%. A wealth of research on families, twins, adopted children, and half-siblings support that ADHD is a highly heritable and biological disorder, since the majority of samples tend to have a first- or second-degree relative with a history of ADHD [15].

Then, in terms of environmental factors, they mainly refer to prenatal and perinatal risk factors. More specifically, alcohol consumption and smoking during pregnancy, low birth weight, maternal stress, high blood pressure, and complications during childbirth, such as hemorrhage and premature birth, are key contributors to the etiology of ADHD [16]. In addition, environmental toxins and lead contamination may also enhance its progression [17]. However, adverse psychosocial conditions, such as severe early childhood deprivation and maternal hostility, have been shown to play a causal role in ADHD [17].

Various studies support that the causative factors are mainly neurological and related to the brain. Specifically, through the use of MRI (Magnetic Resonance Imaging) in people with ADHD, it was observed that the left temporal lobe of the brain was smaller than the right, thus revealing abnormalities in its development in the prefrontal areas.

These brain lesions correspond to deficits in the ability to pay attention and organize behavior and regulate emotion. For example, the brain volume of children with ADHD is 3.2% smaller compared to typical children, with the result that these structural brain differences significantly affect brain functionality [18].

2.4. Effects of Attention Deficit Hyperactivity Disorder

ADHD causes significant effects in a variety of areas of a person's life involving socialization, academic performance, intra-school and intra-family relationships, learning style, self-concept and psyche. For example, symptoms of inattention lead to low school performance, while impulsivity leads to difficulty in creating and maintaining social relationships [19].

More explanatory, a significant number of children with ADHD are catalytically affected in the area of socialization, which will be the focus of this paper. The child experiences behavioral problems, such as the development of conduct

disorders, the formation of an antisocial personality, and delinquent activities [20].

The above described behavior of children with ADHD ends up having a negative impact on their interpersonal relationships with those around them [21]. Therefore, they experience social rejection, victimization and labeling through school bullying.

Ultimately, this perpetual cycle of violence is continuously fueled by the social ostracism of children from their peers, which may also lead to criminal behavior in adolescence and adulthood [21].

It is worth pointing out that the effects of ADHD affect not only the child's life but also the people who come into contact with him, namely the family, peers and teachers. According to the literature, studies show that the children's parents experience anxiety, stress, depression, social isolation, self-mutilation or even intra-marital conflicts, as a result of which family ties are disrupted [19].

Also, due to the need for constant and close supervision of the child, other children in the family may be disturbed. As a consequence, stressful situations are created that can end up in the collapse of family life [19].

At the same time, ADHD also affects the financial sector, if it is taken into account that these people use the mental health system more often, such as medical, social and special education services. This need for medical care imposes a financial burden on the family environment [19].

Finally, it is worth mentioning that ADHD affects the school process to a crucial extent. More illustratively, low academic performance is a result of all three symptoms of the disease, which leads to severe learning difficulties and dropping out of school. Various studies show that the effects of the child's illness tend to affect him long-term and in adult life [22]. Adolescents are prone to delinquent behaviors, substance abuse and crime, while adults form poor social relationships [22].

2.5. Socialization & Attention Deficit Hyperactivity Disorder

At this point, it is worth mentioning that the "comorbidity" of ADHD plays a decisive role in the socialization of a child. Based on research, it is concluded that it presents high rates of comorbidity with Disruptive Behavior Disorders. Typically, 54% - 67% of children with ADHD are diagnosed with the oppositional defiant disorder and 20% - 50% with conduct disorder [23]. Additionally, anxiety disorders and affective disorders are comorbid disorders.

In more detail, the hyperactive and impulsive behavior of children in the classroom is a brake on the development of their socialization. Children show an inability to develop social skills that contribute to social interactions with their school environment, high levels of social involvement and aggressive behavior [24].

In addition, severe antisocial behavior manifests itself in different symptoms according to gender. For example, girls tend to display more verbal aggression towards their classmates than aggressive behaviors. On the contrary, boys show a

higher degree of aggressive behavior towards their classmates, intense hyperactivity, impulsivity and disobedience to classroom rules [20].

In addition, it is worth noting that children with ADHD experience social and emotional difficulties to a greater degree than their peers, which are due to the lack of self-regulation of their behavior [25] [26]. Additionally, a lack of insight and limited ability to use language for social interaction due to weakness in executive functions, results in social rejection [26]. Social and school inclusion of people with disabilities can be considered not only an educational but also a political phenomenon. Education can promote the dynamic changes that our society needs to adopt an inclusive perspective [27] [28] [29] [30] [31]. Moreover, parents' love and care should precede any parental aspiration and goals especially in the case of a child with ADHD [32].

In summary, it is understood that children with ADHD face serious problems in various areas of their lives, which catalytically affect their social relationships and in the long term [21].

3. Research Methodology

3.1. Method

Methodology is the starting point of all scientific research since it is defined as systematic, planned and deliberate investigation. As argued by Somekh & Lewin [33], methodology is the collection of methods through which a research is conducted, as well as the key principles and values of each research approach. The methodology consists of three main stages, the gathering, methodical processing and analysis of statistical data with the aim of drawing key conclusions using specific methods [34]. Methods, respectively, are "*the range of approaches used in educational research to collect data to be used as a basis for inference and interpretation, explanation and prediction*" [35].

Two types of scientific research are distinguished based on the measurement values for the coding, analysis and evaluation of data, quantitative and qualitative research [36] [37] [38]. The purpose of quantitative research is to discover the causes of change in social phenomena through their systematic investigation with numerical data and statistical methods. Its difference from qualitative research is found in a large number of people included. Data collection is done with structured protocols, such as questionnaires and scales, to derive valid results [38]. However, it is worth pointing out that there is also the mixed method, which is the combination of the quantitative and qualitative methods through triangulation [39].

Specifically, in the proposed research, the quantitative method was judged as the most appropriate research methodology which "can be interpreted as a research strategy, which emphasizes quantification in the collection and analysis of data, resulting in a productive approach to the relationship between theory and research which is given the emphasis the control of theories and has incorporated the practices and rules of the natural scientific model and especially of po-

sitivism” [40]. Therefore, through the quantitative method, the opinion of the social reality is reflected as an objective reality, since its cornerstone is the reliable statistical measurements of the total population [41].

Finally, at this point, it is worth mentioning that the preparation of scientific research is a difficult undertaking. Therefore, proper planning is of key importance [42].

3.2. Sampling

Sampling is a method that contributes to the inference of information about a population, so that researchers can more easily obtain high-quality information [34]. Regarding the sampling method followed, each researcher is asked to choose between a variety of available techniques. By way of illustration, it is worth mentioning simple random sampling or probability sampling, in which the sample is random according to the laws of probability, and non-probability sampling or otherwise purposive sampling, in which the sample is deliberately selected by the researcher. In addition, other methods are systematic sampling, where individuals are selected at short time intervals, and stratified sampling, where the study sample is obtained by taking samples from each stratum [43].

Cluster sampling uses sub-groups of the population as the unit rather than individuals, while quota sampling is very commonly used by market researchers [43]. Finally, convenience sampling is an easy technique, since participants have the option of choosing or participating voluntarily, while avalanche sampling is suitable for researching hard-to-reach population groups [44].

In the present research proposal, in order to serve the purposes of the research, non-probability sampling was followed, specifically “convenience” sampling which is also called opportunistic or coincidental sampling or convenience sampling as mentioned above [35]. The sample mainly consisted of people in the wider environment of the researcher and was not a representative part of the population [45]. In addition, convenience sampling aims to study a group of individuals with specific characteristics [41].

The participants in the research come from the field of education and in particular the sample consists of one hundred and thirty-seven (137) teachers who were given the questionnaire. In particular, 72 work in the field of general education, while the remaining 65 are in EA. It should also be noted that the sample of the present research is independent of gender and age.

3.3. Research Tool

Each researcher in quantitative research has to choose the research tool he will use to gather his data. In the proposed research, the research tool used is the questionnaire, which is attached in the appendix, as its questions are properly structured and configured for the collection of research data.

The use of a questionnaire was chosen as it has several advantages. The importance is due to its typical characteristics. The use of a structured questionnaire addresses large population samples and contributes to effective and correct

quantitative research [44]. Defining the research objectives and questions is key to creating a successful questionnaire. The questionnaire offers flexibility and adaptability in terms of the way the research questions are formulated. Its creation and use are easy and more economical. The standardization of the collected data and its processing in statistical methods of analysis contributes to the achievement of valid and scientific results [46].

In addition, the information collected by the questionnaire can be analyzed, classified and utilized with relative ease [47]. Even the respondents express themselves freely and the researcher cannot influence the answers. The questions are divided into open-type questions and closed-type questions with further subcategories. Subcategories include multiple-choice questions, dichotomous, graded scale, rating scale and additive Likert rating scale [40].

In the present research, the questionnaire was used, which has been drawn from the literature [8]; it has been tested for reliability, having a high reliability index Cronbach $\alpha = 0.856$ and has been modified to serve the needs of the specific research. During the early stage, questionnaire participants were asked to record their demographics. Specifically, they were asked to fill in their gender, age, marital status, the existence or not of a person with ADHD in their family environment, their educational specialty, the years of previous service in an SMEAE and finally, the years of previous service with the institution of parallel support for students with ADHD.

Subsequently, the questionnaire includes 35 closed-ended dichotomous (Yes-No, Male-Female) and ordinal 5-point Likert scale questions, indicating a different degree of agreement or disagreement from 1 (not at all), 2 (a little), 3 (somewhat), 4 (a lot), to 5 (very much), which are divided into three sections. Characteristically, Section A (15 questions) concerns the planning of techniques and activities to promote the socialization of students with ADHD attending mainstream school, Section B (11 questions) concerns the implementation of the aforementioned activities that promote the socialization of students with ADHD in the general school and Section C (9 questions) concerns the effectiveness of the application of techniques and activities that promote the socialization of students with ADHD in the general school.

The survey was conducted online by posting the questionnaire on a Web application-website with a general request for the respondents. Research through online tools has many advantages over conventional research, mainly the saving of resources, the absence of errors in data entry, the timely and valid collection of data [48]. In addition, the use of the questionnaire online contributes to the easy finding of people with the specific characteristics required, the impartiality of the researcher, the participation of people from geographically distributed populations and finally, the assurance of complete anonymity [48].

Finally, it is worth emphasizing that all personal data collected was used exclusively for the purpose of conducting the research and was not shared with third parties and for any other purpose than conducting quantitative analyses. Finally, the research was carried out during the period March 1—March 31,

2022.

3.4. Data Processing & Analysis

The entry, processing and analysis of the quantitative data collected from the questionnaires were carried out through the statistical program SPSS (Statistical Package for the Social Sciences), which has an easy-to-use way of entering data. SPSS is a widespread and friendly methodological tool for data analysis and processing. In particular, it provides the possibility of modeling and graphical representation of the data, as well as the possibility of various statistical research [45] [49].

More illustratively, for the sake of convenience and saving time, the classification and coding for analysis of the quantitative data was initially carried out in a data sheet of the Microsoft Excel package software. Then, the data was entered into the SPSS platform. Regarding the analysis process, an exploratory factor analysis (Explanatory Factor Analysis–EFA) was carried out, through which the variables are reduced and, at the same time, grouped into a smaller number of factors than the original [45]. Thus, the graphs were produced which will be presented in detail in the next chapter.

3.5. Validity & Reliability Issues

In a survey, there is always the question of the reliability and validity of the data. The concept of reliability is defined as the degree of consistency, stability and equivalence that an instrument measures a characteristic [45]. Validity is ensured through a reliable method that results in accurate data collection. In the proposed research, these issues are ensured through a large number of participants and the questionnaire, as it has been taken from the literature and tested for its reliability and validity. This ensures the validity, reliability and stability of the research results obtained.

4. Data Analysis & Discussion

This chapter presents the results obtained from the descriptive statistical analysis of the data using SPSS.

4.1. Results of Research Questions

4.1.1. Research Question 1st and 2nd

Then, regarding the fourth and fifth research questions, how do teachers act at the level of planning techniques and activities, it turns out that almost all of the answers have a positive pretext. In more detail, about the question about the cooperation with the other teachers in the class during the application of techniques and activities, 32.1% support that they cooperate “a lot”, 30.7% “quite a bit”, 21.2% “a little”, 13.9% “very much”, while only 2.2% “not at all” with a mean of 3.34 and a standard deviation of 1.03. Furthermore, regarding the question of cooperation with another teacher at the school, 32.1% answered that they cooperate “quite a bit” and 27.7% said “a lot”. However, it is worth mentioning

that 25.5% stated “a little”, while 7.3% “not at all”, a percentage exactly equal to the answer “too much” (7.3%), with an average of 3.02 and standard deviation 1.06.

Similarly, regarding the question about cooperation with classmates of students with ADHD when performing activities, the majority 41.6% stated that they cooperate “a lot”, 27.0% “quite a bit”, 18.2% “very much”, 10.2% “a little”, while only 2.9% “not at all”, with a mean of 3.62 and a standard deviation of 0.99.

Additionally, the question of teaching ADHD students’ social skills one-on-one is worth mentioning. Characteristically, 32.1% stated that they use this method “quite a bit”, 29.2% “a lot”, 21.2% “a little”, 10.2% “too much”, while 7.3% “not at all”, with a mean of 3.14 and a standard deviation of 1.09. Regarding the question about teaching social skills with the method through group games, the respondents had a positive attitude, since 34.3% answered that they use this method “a lot”, 27.7% “very much” and 21.9% “enough”. 12.4% said “a little”, while only 3.6% said “not at all”, with a mean of 3.70 and a standard deviation of 1.11.

Regarding the question about teaching social skills through social stories, 26.3% answered that they use this method “a lot”, 24.1% “quite a bit” and 22.6% “a little”. 21.2% said “a lot”, while only 5.8% said “not at all”, with a mean of 3.34 and a standard deviation of 1.21. Similarly, regarding the question about teaching social skills with the help of visual cues (images, photos, videos), the participants had a positive attitude, since 38.7% stated that they use this method “a lot”, 29.2% “quite a bit” and 17.5% “too much”. At the same time, only 8.8% answered “a little” and 5.8% “not at all”, with a mean of 3.53 and a standard deviation of 1.06.

Also, regarding the question about teaching social skills with the project analysis method, 38.0% said “quite a bit”, 24.1% “a little” and 21.9% “a lot”. At the same time, only 10.2% answered “not at all” and 5.8% “very much”, with a mean of 2.89 and a standard deviation of 1.05. Finally, regarding the question about the use of techniques to promote the socialization of students with ADHD, 38.0% stated that they use “a lot” teaching social skills, 32.1% “quite a bit”, 16.1% “a little”, 10.9% “very much” and only 2.9% “not at all”, with a mean of 3.38 and standard deviation 0.98. Regarding playing technique, 37.2% stated that they use it “a lot”, 30.7% “very much”, 20.4% “quite a bit”, 8.0% “a little” and only 3.6% “not at all”, with a mean of 3.83 and a standard deviation of 1.07. In addition, 38.7% answered that they apply the technique of creating a group of peer helpers “a lot”, 27.7% “quite a bit”, 19.0% “too much”, 9.5% “a little” and only 5.1% “not at all”, with a mean of 3.57 and a standard deviation of 1.06. At the same time, 27.0% stated that they use music-motor activities “a lot”, 25.5% “quite a bit”, 17.5% “too much”, 16.8% “a little” and 13, 1% “not at all”, with a mean of 3.19 and a standard deviation of 1.28. Finally, regarding the theatrical game technique, 25.5% answered that they use it “quite a bit”, 24.8% “a little”, 22.6% “a

lot”, 13.9% “not at all” and 13.1% “very much”, with a mean of 2.96 and a standard deviation of 1.25.

4.1.2. Research Question 3rd

Then, taking into account the sixth research question about teachers’ opinions about the results of applying techniques and activities that promote socialization, the majority of participants had a positive attitude. In more detail, regarding the question of whether the effective inclusion of students with ADHD in school is achieved through the teaching of techniques to promote socialization, 42.3% of respondents stated “a lot”, 33.6% “quite a bit”, 18.2% “too much”, while only 5.8% “a little”, with mean 3.73 and standard deviation 0.83.

Subsequently, regarding the question of whether the students with ADHD participate in all the activities of school life (festivals, excursions) after the application of techniques and activities, 40.9% stated that the students participate “a lot”, 32.8% “quite a bit”, 17.5% “very much”, while only 8.8% “a little”, with a mean of 3.67 and a standard deviation of 0.87.

Similarly, on the question of whether students engage in one-on-one games during recess after the implementation of techniques and activities, 46% claimed to participate “quite a bit”, 32.1% “a lot”, 11.7% “a little” and 10.2% “very much”, with an average of 3, 41 and a standard deviation of 0.83.

Additionally, regarding the question of whether the students participate in group games during the break after the application of techniques and activities, 39.4% emphasized that they participate “quite a bit”, 38% “a lot”, 14.6% “too much” and 8% “a little”, with a mean of 3.59 and a standard deviation of 0.84.

Furthermore, regarding the question of whether the students participated in group work in the classroom after the application of techniques and activities, 44.5% reported that they participated “quite a bit”, 30.7% “a lot”, 13.1% “a little”, 10.2% “very much”, while only 1.5% “not at all” with a mean of 3.35 and a standard deviation of 0.89.

Finally, regarding the question of whether students made friends after applying techniques and activities, 47.4% claimed to have made “quite a few” friends, 35.8% “a lot”, 10.9% “a few” and 5.8% “too much”, with a mean of 3.36 and a standard deviation 0.76.

4.1.3. Research Question 4th

Then, regarding the seventh research question of this paper, whether the factor analysis (EFA & CFA) confirms the three-factor model (Design, Implementation, Results) in the case of the effectiveness of the institution of parallel support in the socialization of students with ADHD, it was found according to the rule of eigenvalues ($\lambda > 1$) that the model of three factors does not work and the data of the 39 statements are identified by a set of nine factors, which in total interpret 68.6% of the of total variation.

More explanatory, it is found that the Kaiser-Meyer-Olkin statistical criterion is high (0.892) and therefore, the correlations between the data are quite high. Bartlett’s test of sphericity rejects the null hypothesis that the correlation matrix

is univariate (3065.7, $df = 703$, $p\text{-value} = 0.000$, therefore $p < 0.05$) and that there are no significant correlations. All of the preceding evidence confirms the suitability of the data for EFA (Exploratory Factor Analysis) factor analysis.

Characteristically, there are the values that express the variations of the factors and give data on the percentage of the variation of each variable, which is interpreted by the factors that have been extracted. When communalities lower than ± 0.3 or ± 0.8 are found, then the questions are either uncorrelated with each other or overlapping [44]. Values greater than 0.4 are considered satisfactory. In this particular case, all the statements have higher values than 0.5, which shows that the statements are satisfactorily identified by the extracted factors.

Next, the table with the structure of the matrix of the corresponding factors is listed, which certifies the above distribution of the elements exactly as they were distributed for the best study of the model. The individual nine factors are broken down as follows: The first factor explains 35.986% of the total variance and consists of questions BB01, BB07, BB08, BB09, BB10, BBQA, BBQB, BBQC, BBQD, BBQE (application section) and C5 (results section). The second factor explains 42.897% of the total variance and includes questions A04, A07, and A11 (planning module) and BB02, BB03, BB05, and BB06 (implementation module). The third factor explains 48.034% of the total variance and involves questions C1, C2, C3, C4, and C7 (results section). The fourth factor explains 52.816% of the total variance and includes questions A08, A09, A10 (planning module) and BB04 (implementation module). The fifth factor explains 56.684% of the total variance and includes questions A01, A02, and A03 (planning module). The sixth factor explains 60.227% of the total variance and includes questions A12 and A13 (planning module). The seventh factor explains 63.068% of the total variance and includes question C8 (results section). The eighth factor explains 65.874% of the total variance and includes questions A05 and A06 (planning module). Finally, the ninth factor explains 68.615% of the total variance and includes questions A05 and A06 (planning module).

4.1.4. Internal Consistency Reliability Analysis with Cronbach's Alpha Index

Concluding the inductive analysis of the results, it is right to allude to the reliability of the present research (Reliability), which concerns the degree of verification of the representation of the measurement results with the measurement quantity, revealing the correlation and coherence of the questions. At the same time, regarding the validity of research (Validity), the degree of adjustment of the measured concept is highlighted, which is not measured through the control (Reliability), since it measures the reliability index [43] exclusively. Nevertheless, the achievement of the criterion of validity of a research tool leads to the automatic achievement of the criterion of reliability, which does not happen the other way around [44].

More specifically, to measure the reliability of the scales, Cronbach's Alpha index is used to estimate the reliability of the internal consistency of each scale.

For a Cronbach's Alpha value to be acceptable, it should be $\alpha > 0.6$, from $0.6 < 0.7$ moderate, from $0.7 < 0.8$ good, from $0.8 < 0.9$ very good and from 0.9 and above excellent [45]. The higher the value of the Cronbach's Alpha coefficient, the more reliable the internal consistency index is considered [42].

In this specific work, to check the reliability of the three scales of the questionnaire, the Cronbach's Alpha index of internal consistency and reliability was evaluated, where for scale 1 (Design) was evaluated as equal to 0.864 and considered very good, for scale 2 (Application) it was evaluated with 0.929 and considered excellent and for scale 3 (Results) it was evaluated with 0.821 and considered very good.

4.2. Data Discussion

Regarding the opinions of the teachers regarding the results of the implementation, they are distinguished with a positive sign, as they argue that substantial inclusion is achieved. More explanatory, the participants respond positively to the participation of students with ADHD in all school life activities. Furthermore, they had an equally positive attitude toward their participation in group activities during the break.

At the same time, the image of the teachers regarding the acquisition of students' friends after the application of techniques and activities are judged at a high level, a fact that directly converges with the findings of Paschalidou's work [8]. Therefore, it is concluded that the institution of parallel support works as an aid for their socialization since it contributes to the development of friendly ties with their peers.

In addition, the main point of reference for this work was the opinions of the teachers on the reasons they consider to be making it difficult for the students to socialize. In more detail, the three dominant causal factors were the incomplete planning of educational policy in matters of socialization, the lack of appropriate teacher training and insufficient time for activities.

At this point, it is worth pointing out that the lack of training, educational training and specialization is one of the dark spots of Greek education that has been limping in recent years, a fact that is also confirmed in earlier research works [47] [48] [50] [51] [52] [53] [54]. In addition, the inadequacy of teacher training is evidenced by the neutral and moderate position they took on the question of whether they consider they have sufficient knowledge to teach social skills.

Characteristically, with regard to the first inhibiting factor, the incomplete planning of educational policy in matters of socialization, it appears that it is directly connected to the high percentage of teachers who tend to consult the Analytical Curriculum for students with ADHD. Therefore, it is concluded that the practical planning of educational and political culture in matters of socialization and the appropriate training of teachers in matters of inclusive education, play an important role, being a moral obligation of the respective state.

At the same time, the fourth reason that acts as an inhibitor is the non-existence

of a culture of cooperation among teachers, which is partially confirmed by the findings of this particular work. Characteristically, although the cooperative relationship of the teacher with the other educational staff and the special auxiliary staff for planning is at a high level, in contrast, the cooperation with the principal, speech therapists, occupational therapists, physical therapists, psychologists, with the school counselors of General and Special Education and with the KESY managers is at a neutral to the low level.

Finally, the fourth cause of the difficulty is the insufficient information of the school community on issues of socialization, while the last place is occupied by the lack of cooperation between family and school with a particularly low percentage, which is consistent with the findings of the work since the level of cooperation between teachers and parents and siblings of students is very high.

At this point, it is worth pointing out that the present research works as a helper for the scientific community and as a reinforcing factor for the institution of parallel support because the enrichment of the already existing knowledge took place as new data, opinions and attitudes came to light, that the specific subject, based on the bibliographic review, is quite limited in the Greek community.

Regarding the limitations and obstacles of the given work, it is fair to mention that due to conducting the research online by posting the questionnaire on a Web application-website and by placing a general request, it was not possible to achieve the exact supervision of each participant. For this reason, 160 questionnaires could not be collected and 137 were collected in total (72 from GE teachers and 65 from SE teachers).

Conflicts of Interest

The author declares no conflicts of interest.

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