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Adaptive behavior of primary school students with visual impairments: The impact of educational settings

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ABSTRACT

This study explored the adaptive behavior of primary school students with visual impairments, as well as the impact of educational setting on their adaptive behavior. Instrumentation included an informal questionnaire and the Vineland Adaptive Behavior Scales. Participants were 36 primary school students with visual impairments. The educational setting had an effect on Daily Living Skills and Socialization. Students with visual impairments visiting special schools present worse adaptive behavior (higher developmental delay) compared to students visiting mainstream schools. Moreover, the educational level of parents influences the developmental delay on the Communication and Socialization. The higher the educational level of parents the lower the developmental delay.

1. Introduction

Adaptive behavior has been defined as "the performance of the daily activities required for personal and social sufficiency" (Sparrow, Balla, & Cicchetti, 1984), the "ability to meet daily living responsibilities and to respond to the needs of others" (Ditterline & Oakland, 2009). Examples of domains in which individuals strive for sufficiency include: self-help, interpersonal relationships, home-management, recreation, work, and community life (Ditterline, Banner, Oakland, & Becton, 2008).

One of the most popular instruments that can measure the adaptive performance of children is the Vineland Adaptive Behavior Scales (VABS, Sparrow et al., 1984; Sparrow, Balla, & Cicchetti, 2005), which was used in the present study. VABS measures total adaptive behavior (adaptive behavior composite) as well as adaptive behavior in the domains of Communication, Daily Living Skills, Socialization and Motor Skills (Sparrow et al., 1984).

Research shows that students with visual impairments may present difficulties in their total adaptive behavior (Bradway, 1937; Maxfield & Fjeld, 1942; Parsons, 1987) or in each of the sub-domains of Communication (Dodd & Conn, 2000; Douglas, Hill, Long, & Tobin, 2001; Douglas, Grimley, Hill, Long, & Tobin, 2002; Frame, 2000; James & Stojanovik, 2007; Kekelis & Prinz, 1996; Kekelis, 1992; van Bon, Adriaansen, Gompel, & Kouwenberg, 2000; Webster & Roe, 1998), Daily Living Skills (Hapeman, Ottowitz, & McLennan, 2008; Haymes, Johnston, & Heyes, 2002; Jan, Freeman & Scott, 1977; Lamoureux, Hassell & Keeffe, 2004; Lewis & Iselin, 2002), and Socialization (Celeste, 2006; Leyser & Heinze, 2001; Kekelis, 1992; Kekelis & Sacks, 1992; Kroksmark & Nordell, 2001; Lifshitz, Hen & Weisse, 2007; Mulford, 1983; Pring, Dewart & Brockbank, 1998; Rosenblum, 1998; Sacks, 2006; Tinti, 2003; Webster & Roe, 1998).

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Findings of a recent study (Papadopoulos, Metsiou, & Agaliotis, 2011), which included 46 children and adolescents with visual impairments, revealed that the effect of age on total adaptive behavior and on each of the domains of Communication, Daily Living Skills, and Socialization; the older individuals with visual impairments presented a higher rate of delay in comparison with younger individuals. In the same study (Papadopoulos et al., 2011), it was found that the ability of independent movement is a predictor of developmental delay on the Daily Living Skills and Socialization; the more independent the mobility of individuals with visual impairments is the lower the level of developmental delay. Moreover, the educational level of parents is a predictor of performance and developmental delay on the Communication and Socialization; the higher the educational level of parents the lower the developmental delay. Nevertheless, in the study of Papadopoulos et al. (2011) the educational setting was not used as a possible predictor of developmental delay since the sample was not appropriate for such an analysis.

Classification and placement of, as well as program planning and interventions for students with visual impairments are influenced by the difficulties in adaptive behavior (Meacham, Kline, Stovall, & Sands, 1987). The study of these difficulties, especially in reference to the students' age and educational setting, may offer valuable information as to the most appropriate interventions and measures for this particular group of school population.

A critical factor in the developmental course of social skills of students with visual impairments seems to be educational setting, as there is evidence that it can decisively influence social adaptation (Warren, 1994). McGuinness (1970) studied children who were blind from the fourth through sixth grade. It was found that the score in Vineland Social Maturity Scale (VSMS; Doll, 1965) was higher for the children attending general public schools than those attending a special school for blind children. However, there were also some students in the special school exhibiting high performance in VSMS.

Agbeke (2005) studied the influence of segregation and inclusive education on children with low vision in Ghana. Twenty children participated (10 from each program), their parents and their teachers. Data was collected with the use of a questionnaire and semi-structured interviews on the following domains: academic performance, daily living skills, orientation and mobility and social interactions. In the socialization domain, the children of the two schools stated that they joined actively school activities and participated in equal terms in the activities of the community and their families. They attributed their enhanced participation to the training offered in the school environment. However, the children in the inclusive school participated more effectively in these activities, as they moved more independently and they interacted better with their peers during holiday.

Phillips and Corn (2003) investigated the perceptions of 36 students who were blind about their educational placement in a special school. In general, students expressed mostly positive attitudes towards their educational setting. Specifically, they felt that the special school they attend is better equipped with trained personnel and resources they need (e.g., books and technology) in comparison with the local schools. Therefore, they consider that their academic needs are met better in the special school. In addition, some of the students enjoyed being around with other students with visual impairments. The concerns that the students raised focused on the opportunities for socialization and the 'real world' experiences a local school can provide.

2. Study

The aims of the present study were to examine: (a) the adaptive behavior of primary school students with visual impairments and (b) the impact of educational setting (mainstream vs. special school) on their adaptive behavior.

3. Method

3.1. Participants

The sample derives from the country's two largest cities (Athens and Thessaloniki), which have approximately 5 and 1 million inhabitants respectively. The researchers obtained from the Local Educational Authorities a list of primary school students with visual impairments, who attended either a special school for individuals with visual impairments or a mainstream school. Then the researchers contacted the parents/caregivers and the teachers of these students, explained them the aim of the study and asked them to participate in it. Prerequisite for including a student in the study was the absence of any additional disabilities, apart from the visual impairment. Prerequisite for including an adult was their capability of providing the researchers with accurate information on each child with visual impairments and their consent to participate in the research.

Twenty-eight primary school students with visual impairments (individuals who are blind or have low vision), who fulfilled the above preconditions finally participated in the study. The subjects aged from 6 years and 4 months to 15 years and 8 months old ($M = 10.47$, SD = 2.60). Concerning the type of school visited by the participants, eighteen of the participants were special school students and 18 were mainstream school students. These two groups were matched on the basis of age. Seventeen of the participants were boys and 11 girls. Eighteen of the participants were blind (visual acuity worse than 20/400), and 18 were individuals with low vision (visual acuity better than 20/400). For 25 participants the vision loss has existed since birth, in 6 individuals it occurred before they were three years old and in the remaining 5 participants the loss of vision occurred after the age of three. The majority of the children ($n = 29$) were living with their families, whereas some of them ($n = 7$) were living in residential facilities.