



ESTRATÉGIAS DE ENSINO PARA ALUNOS COM TRANSTORNO DO ESPECTRO AUTISTA QUE TENHAM DEFICIÊNCIA VISUAL

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INTRODUÇÃO

- A pessoa com deficiência (PCD) é definida como aquela que apresenta: “impedimento de longo prazo de natureza física, mental, intelectual ou sensorial, o qual, em interação com uma ou mais barreiras, pode obstruir sua participação plena e efetiva na sociedade em igualdade de condições com as demais pessoas” (BRASIL, 2015).



INTRODUÇÃO

- O Transtorno do Espectro Autista (TEA) é um transtorno do neurodesenvolvimento caracterizado por:
- “uma série de padrões restritos, repetitivos e inflexíveis de comportamentos e interesses, iniciando na primeira infância” (World Health Organization, 2018).





INTRODUÇÃO

- O TEA requer atendimento especializado desde a mais tenra infância até a vida adulta, de forma a evitar prejuízos mais graves.
- Quando acompanhado de outras condições, passa a caracterizar uma deficiência múltipla.





INTRODUÇÃO

- Segundo o IBGE (2010), 18,6% da população possui algum tipo de DV no Brasil, o que provocou a ressignificação dos espaços de convívio;
- É necessário repensar se esses espaços estão adaptados a pessoas com TEA que tenham DV;
- Torna-se ainda mais importante o uso de Tecnologias Assistivas (TAs) para assegurar os direitos ao processo inclusivo de deficientes mediante quebra de barreiras arquitetônicas, comunicacionais e atitudinais.





OBJETIVO

Pesquisar e discutir Tecnologias Assistivas e outras estratégias de ensino utilizadas por professores para facilitar a aprendizagem de indivíduos com TEA associado a DV.





MÉTODOS

- Foram realizadas buscas nas bases de dados Lillacs, Scielo e ERIC com os descritores Autism e Visual impairment e Teaching e seus correspondentes na língua portuguesa;
- Três autores ficaram responsáveis pelas buscas e por analisar a relevância dos artigos; e dois autores pelo controle dessa filtragem inicial;
- Na base de dados ERIC foram encontrados 48 artigos;
- 6 foram selecionados.





RESULTADOS

- 1) Haegele e Lieberman (2016): os autores entrevistaram professores de educação física de escolas para cegos nos EUA e descobriram que, embora 50% dos participantes dissessem estar preparados para ensinar crianças que tinham apenas DV, somente 10% se sentiam confortáveis em trabalhar com crianças que também eram autistas.

The Current Experiences of Physical Education Teachers at Schools for Blind Students in the United States

Justin A. Haegele and Lauren J. Lieberman

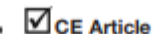
Structured abstract: **Introduction:** It has been well established that children with visual impairments tend to be less physically active and more delayed in motor skills than their sighted peers. As a result, there has been some research focusing on inclusive physical education for these children. However, there is a clear lack of research on the current status of physical education for children in residential schools. **Purpose:** The purpose of this study was to gain insight into the current experiences of physical education teachers at schools for blind students in the United States. **Methods:** A questionnaire was sent to 51 physical education teachers from 35 schools for blind students across the country. Data from closed-ended and short-response open-ended questions were analyzed descriptively, using frequencies and percentages, across four main areas: teacher characteristics, teaching practices, student populations, and facilities. **Results:** Most physical education teachers reported that their schools employ certified physical educators, use curricula that are tied to state or national standards, possess a variety of facilities for their students to use in physical education, offer a variety of sports (with the most common being wrestling), and teach a varied population of students. **Discussion:** A number of findings emerged from this study. Positive findings include: schools are hiring teachers who are certified in physical education or adapted physical education; they are utilizing curricula that are tied to their state and national standards; and they are offering a variety of sports after school. The few factors of concern are: the lack of validated assessments in the field of adapted physical education and, therefore, the limited use of validated assessments; and the need for additional training for teachers related to children who are deafblind and students with both visual impairments and autism spectrum disorder.





RESULTADOS

- 2) Probst e Walker (2017): realizaram uma intervenção com um sistema de mínimos procedimentos de comando, que se mostrou eficaz em promover a aquisição de habilidades de higiene pessoal de alunos com DV e TEA e para isso os profissionais da sala de aula devem ser capacitados.
- O sistema de comandos mínimos é usado quando o professor cria tarefas com comandos hierárquicos e avalia quantos níveis de comandos são necessários para que a tarefa seja cumprida.



Using the System of Least Prompts to Teach Personal Hygiene Skills to a High School Student with Comorbid Visual Impairment and Autism Spectrum Disorder

Kristi M. Probst and Virginia L. Walker

Structured abstract: *Introduction:* This study evaluated the effectiveness of a workshop and follow-up coaching sessions on the implementation of the system of least prompts procedure by classroom team members and explored whether this intervention resulted in personal hygiene skill acquisition by a male high school student with comorbid visual impairment and autism spectrum disorder. *Methods:* Implementation fidelity data were analyzed descriptively through visual analysis. A multiple baseline design across behaviors was utilized to evaluate the effectiveness of the system of least prompts procedure on student skill acquisition. *Results:* Implementation fidelity was high and increased over the course of the study: paraeducator 1: 93.9% (range, 70 to 100%); paraeducator 2: 78.2% (range, 11 to 90%); and special education teacher: 94.1% (range, 35 to 100%). In addition, the student's independent performance improved from baseline to intervention across each targeted skill, with Tau-U scores as follows: cleaning the augmentative and alternative communication device: 0.78; washing hands: 0.76; and brushing teeth: 0.92. Classroom team members found both the training procedures and the system of least prompts intervention to be of value and effective. *Discussion:* During intervention, classroom team members implemented the system of least prompts with fidelity and the student mastered each skill. These results are promising and add to the significantly limited literature on instructional interventions for students with comorbid visual impairment and autism spectrum disorder. *Implications for practitioners:* Classroom team members can effectively be taught to use the system of least prompts with students with comorbid visual impairment and autism spectrum disorder. Furthermore, the intervention might be used to increase independent functioning for students with these comorbid conditions.

Researchers have suggested that the prevalence of autism spectrum disorder in individuals with visual impairment may be higher (11.6%; Lund & Troha, 2008) than in the general population (0.6%; Centers for Disease Control and Prevention [CDC], 2012). However, the exact prevalence rate is difficult to determine





RESULTADOS

- 3) De Verdier e col. (2017): entrevistaram crianças suecas com TEA e DV, seus pais e professores. As crianças receberam uma carta em Braille com uma breve descrição do que iria ocorrer na entrevista. Os professores enfatizaram a motivação dos estudantes e insegurança em como avaliá-los. Estudantes e professores relataram que um ambiente calmo e pacífico era fundamental para concentração e aprendizagem. Segundo os professores, as estratégias pedagógicas mais eficazes foram descobrir qual canal sensorial funciona melhor com o estudante, divisão da aula em partes com objetivos bem definidos e claros, além de providenciar uma lista de todos os elementos que seriam usados pelo estudante, posicionados em locais fáceis de serem encontrados. Ficou evidente a necessária colaboração entre pais e especialistas em TEA.

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ORIGINAL PAPER

Challenges and Successful Pedagogical Strategies: Experiences from Six Swedish Students with Blindness and Autism in Different School Settings

Kim de Verdier^{1,2} · Elisabeth Fernell³ · Ulla Ek⁴

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Abstract The prevalence of autism in children with blindness is much higher than in the general population. There are many challenges regarding the school situation for children with this complex dual disability. This study explored challenges and successful strategies in school for a sample of six Swedish children with blindness and autism, with and without intellectual disability, through qualitative interviews with students, teachers and parents. All students displayed executive functioning deficits, and the teaching situation entailed several challenges. Our research points to the importance of adopting evidence-based practices for ASD, but adapted according to the students lack of vision. For this to be possible, close collaboration between teachers, parents and specialists in the field of visual impairment and autism is necessary.

Keywords Autism · Blindness · Children · School · Executive functions · Support · Education

Introduction

Blindness in combination with autism spectrum disorder (ASD) is a rare dual disability that entails many challenges for a child's development. The prevalence of blindness, in different parts of the world, varies between 0.3–0.4/1000 and 1.0–1.5/1000 children (Gilbert 2007). There is an increasing awareness that a large proportion of the population of blind children also has ASD. While the prevalence of ASD in the general child population is around 1% (Lazoff et al. 2010), research has shown that among children with blindness, regardless of etiology, at least 30% meet the criteria for ASD (Cass 1998; Hobson et al. 1999; de Verdier et al. 2017). Jure et al. (2016) reported even higher numbers; 50% overall, and in children with retinopathy of prematurity (ROP) and congenital blindness, 65 and 72%, respectively. The co-occurrence of blindness and ASD in specific etiological subgroups has been described in several studies. For example, in a Swedish population-based study of extremely preterm-born children with ROP, nearly two-thirds of the children with total blindness had ASD, and all of them also had an intellectual disability (ID) (Ek et al. 1998; Jacobson et al. 1998). Optic Nerve Hypoplasia (ONH) has also been found to be strongly associated with ASD (Ek et al. 2005; Garcia-Filion et al. 2008; Parr et al. 2010), as well as anophthalmia/microphthalmia, which has been reported to co-exist with ASD in genetic crano-facial malformation syndromes, including CHARGE (Blyth and Baralle 2011; Pashker et al. 2013). Consequently, autism is currently one of the most commonly reported coexisting developmental disorders in children with blindness (Ek 2010).

Blindness in itself has a significant impact on a child's development, and if the child has additional disabilities the situation is even more challenging. Children with blindness and ASD, with and without ID, have complex needs, and the

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RESULTADOS

- 4) Taylor e Preece (2015): descrevem o uso de uma adaptação da abordagem estruturada de ensino TEACCH (Tratamento e educação de crianças autistas com deficiência de comunicação) com alunos com TEA e DV em uma escola secundária para alunos com dificuldades severas de aprendizagem na Inglaterra.
- O TEACCH é baseado em organização ambiental, planejamento diário, sistemas de trabalho com comandos/ferramentas que mostrem o quê, como e por quanto tempo fazer. Os autores apontam que a percepção das crianças com DV, física e auditiva sobre o mundo é diferente da dos adultos, pois existe uma grande barreira de aprendizagem para eles.

Using aspects of the TEACCH structured teaching approach with students with multiple disabilities and visual impairment

Reflections on practice

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ABSTRACT This article reflects on how the first author has adapted aspects of the TEACCH structured teaching approach – developed for use with students with autism – in her work with students with multiple disabilities and visual impairment (MDVI) in a special secondary school for students with severe learning difficulties in England. A brief overview of the TEACCH approach and its distinctive components (physical structure, schedules, work systems and visual structure) is presented; and the reasons why and the ways in which aspects of structured teaching have been adapted and used with regard to three students (at different points on the MDVI ‘spectrum’) are described. The article identifies the impact on the students and on the first author’s teaching of using this approach during the past three years, together with the limitations and problems encountered. The article is written from the first author’s perspective throughout.

KEY WORDS *autism, MDVI, multiple disabilities and visual impairment, structured teaching*

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PRACTICE REPORT





RESULTADOS

- 5) Whitby, Kucharczyk e Lorah (2019): reportam o ensino de habilidades básicas de solicitação a uma jovem com TEA e DV através de um sistema de comunicação adaptada, aumentativa e alternativa, frequentemente utilizado com crianças com déficit de comunicação e discurso. Os autores frisam a importância de uma intervenção precoce para o desenvolvimento das crianças com TEA. Relatam que obtiveram sucesso em fazer com que a criança solicitasse itens preferidos usando um sistema de comunicação de troca de objetos com um profissional e sua mãe.

Practice Report

JVIB Journal of
Visual Impairment
& Blindness

Teaching Object Exchange for Communication to a Young Girl with Autism Spectrum Disorder and Visual Impairment

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SAGE

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Research on the effectiveness of interventions for children with autism spectrum disorder (ASD) continues to receive attention as the prevalence of ASD increases (Christensen et al., 2016). Reports and lists of evidence-based practices intended to inform the work of educators and researchers and knowledge of parents have been published (Wong et al., 2014, 2015). These reviews do not specify which studies included children or youths with comorbid conditions such as visual impairments. A review of the literature of intervention studies with people who have ASD and sensory impairments found only eight studies; of those eight, only four addressed the communication needs of people with visual impairments (Banda, Griffin-Shirley, Okungu, Ogot, & Meeks, 2014). Given the increased co-occurrence of ASD and visual impairment, it is critical that the effectiveness of evidence-based practices be assessed for children with both ASD and visual impairments.

Do and colleagues (2017) estimated the relative risk of ASD for visually impaired people as being 31 times higher than that of the general population. Along with increased comorbidity, a secondary concern is heightened severity of disability symptoms

experienced by those with co-occurring ASD and visual impairments. Mukaddes, Kilincaslan, Kucukyazici, Sevketoglu, and Tuncer (2007) found that individuals with visual impairments and ASD had significantly greater severity of vision loss than did those who were visually impaired only. Taking into account the likely increased comorbidity of ASD in children with visual impairments and the increased severity of vision loss with comorbidity, early intervention for development of skills associated with ASD characteristics is recommended in addition to treatments to address ophthalmological and neurological issues (Mukaddes, Kilincaslan, Kucukyazici, Sevketoglu, & Tuncer, 2007).

This practice report presents the study of a young girl with ASD and visual impairment who was taught basic requesting skills through an adapted augmentative and alternative communication (AAC) system, which

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DISCUSSÃO

- O uso de Tecnologias Assistivas na forma de recursos visuais como roteiros, checklists e organizadores gráficos é uma ferramenta de interesse a ser usada tanto na rotina da criança com TEA, quanto em atividades escolares (Barnett *et al.*, 2017).
- Estes suportes geralmente fazem uso de imagens acompanhadas ou não de texto para guiar e preparar o indivíduo para uma determinada atividade, como é o caso dos roteiros e checklists.
- Já os organizadores gráficos indicam representações concretas de alguma ideia, fazendo uso, p.ex., de tabelas e esquemas.





DISCUSSÃO

- Tal suporte mostra-se interessante para facilitar a aprendizagem de conceitos e estabelecer relações entre os mesmos;
- São recursos proveitosos no que diz respeito à educação para alunos com TEA, mas podem ser ineficazes caso também apresentem DV. Nessa perspectiva, faz-se relevante adequar tais estratégias para esses alunos, p.ex., por meio do uso de modelos táteis;
- Os roteiros e checklists podem vir acompanhados de audiodescritores ou serem impressos em Braille.





DISCUSSÃO

- O professor deve ser mentor e facilitador em sala de aula e não ter sua didática definida apenas com o objetivo de ensinar determinado conteúdo .
- Ele deve intermediar o acesso à informação, pois o processo de ensino estabelece uma relação diferenciada com o aluno, em que se observa uma trajetória de construção do saber em conjunto com o professor (Paiva et al., 2016; Brighenti et al., 2015).
- É pertinente que a metodologia aplicada possa ser adequada às necessidades dos alunos.
- Isso significa fazer com que o aluno com TEA e DV também tenha a oportunidade de desfrutar do ambiente escolar e ser incluído de fato no processo de ensino-aprendizagem em sala de aula.





CONCLUSÃO

- No TEA, a visão é um sentido muito forte e importante. Portanto, indivíduos com TEA e DV precisam explorar o ambiente e aprender através de outros sentidos, principalmente o tato e a audição.
- Ainda há poucos trabalhos que investigam como possibilitar aprendizagem a estes indivíduos e nem todos relatam as metodologias empregadas.





CONCLUSÃO

- Tecnologias Assistivas, submetidas a um bom planejamento, com detalhamento e clareza dos seus objetivos, enriquecimento ambiental, aliadas a uma atmosfera tranquila e ao estímulo adequado da comunicação, podem beneficiar a aprendizagem.
- Os ambientes educacionais precisam se beneficiar dos avanços tecnológicos, com a utilização de equipamentos de informática e tecnologias de informação e de comunicação, oportunizando maior autonomia e independência às pessoas com TEA e comorbidades como DV.





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