Teaching Strategies for Children Suffering From Rare Diseases and Sensory Hyposensitivity: Teachers' Perspective

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Introduction

Early sensory integration disorders may be noted as early as in infancy. Their manifestations may include problems with sleep and calming down, or a high or low level of the child's activity. If they go unnoticed or untreated, they may transform into pre-school age development disorders (DeGangi, Laurie, 1991). Studies carried out by Kinnealey, Oliver and Wilbarger confirm that sensory integration disorders affect children with learning difficulties, autism spectrum and schizophrenia. It is estimated that even 70% of students who were diagnosed with a disability suffer from disorders of this type (DeGangi; 364). This group also includes children with rare genetic syndromes, which often accompany intellectual and motor disabilities, autism spectrum disorders and difficulties with speech and communication.

Teaching Strategies of Children with Development Difficulties

The author of this paper adopted a classification of teaching strategies with the use of David Mitchell's classification. Taking the needs of children with development difficulties into account, the researcher distinguished 27 strategies. Based on the Mitchell's classification and analysis of literature tackling the problems of functioning of children with rare diseases and sensory integration disorders, the following classification was prepared in the discussed research project focused on the teaching strategies of children with rare diseases and sensory hyposensitivity. It covers application of the following strategies:

- behavioural,
- quality of premises aimed at creating optimum environment for students,
- personalised/ adjusted training of cognitive strategies,
- other, referring to individual modes of work with students based on the possibility of extra stimulation of a disordered mind.

The aforementioned strategies may also be applied in the process of teaching children with rare diseases and sensory hyposensitivity

Children who experience hyposensitivity with respect to certain sensory stimuli provide their nervous systems with frequent and/ or very intense stimulation. This is meant to help them use a specific sense (touch, hearing, sight, taste, smell or balance). As noted by Bill Nason, they may "feel separated from their own bodies, if they are not moving or hitting themselves or objects surrounding them" (Nason 2017, 212).

Table No. 1. Sensory hyposensitivity of selected senses

	Sense			
	Touch	*Sight*	*Hearing*	*Taste and smell*
Characteristic	The child: • needs a strong touch in order to feel it • tries to lift various items or touches them • continually wants to hold an item in hand • may touch too strongly • wishes to be touched, hugs strongly	The child: • is interested in visual stimulation, often stares at light • seeks intense visual stimulation • loves to turn the light on and off • loves mirrors, shiny objects, smooth surfaces reflecting light	The child: • speaks loud, • is very noisy • turns up the volume whilst watching television • constantly hums or makes noises • loves items/ activities that are related to sounds	The child: • wants to smell and taste everything • may search for intense smells and tastes • often recognizes people and items based on their smell • may put various items in mouth, smell hair of others and lick items

Source: Nason (2014), Charlecka (2017), Odrowska-Sałaciska (2016).

Methodology

The study relies on a quantitative strategy with the use of a diagnostic survey and questionnaire. The tool was author's questionnaire. The goal of the exploration was description of a teaching strategy for children with rare diseases and sensory hyposensitivity.

Research problem

The primary research problem was formulated as follows: which strategies are applied by teachers for a child with sensory hyposensitivity? Along with specific questions:

→Which teaching strategies are used by teachers for students with a rare disease and tactile hyposensitivity?

→Which teaching strategies are used by teachers for students with a rare disease and auditory hyposensitivity?

→Which teaching strategies are used by teachers for students with a rare disease and olfactory and taste hyposensitivity?

Participants/Sample

100 teachers working with children in kindergartens and primary schools (1 - 3 grades) in the area of Poland took part in the survey. Most of the respondents were women (W-96, M-4). Age and seniority of teachers were diverse. The most numerous group included persons aged 31-35 (26), 36-40 (23) and 46 years and older (23). The remaining respondents were aged 26-30 (14) and 41-45 (14). Most teachers worked in primary schools (60), in kindergartens (40), in cities with up to 50,000 residents (52) or cities where the number of residents ranges from 100,000 to 150,000 (48). All teachers who participated in the study had contact with children with rare diseases and sensory integration disorders in their professional work.

Sensory Hyposensitivity of Child With Rare Disease in Teachers' Opinions: Study Results

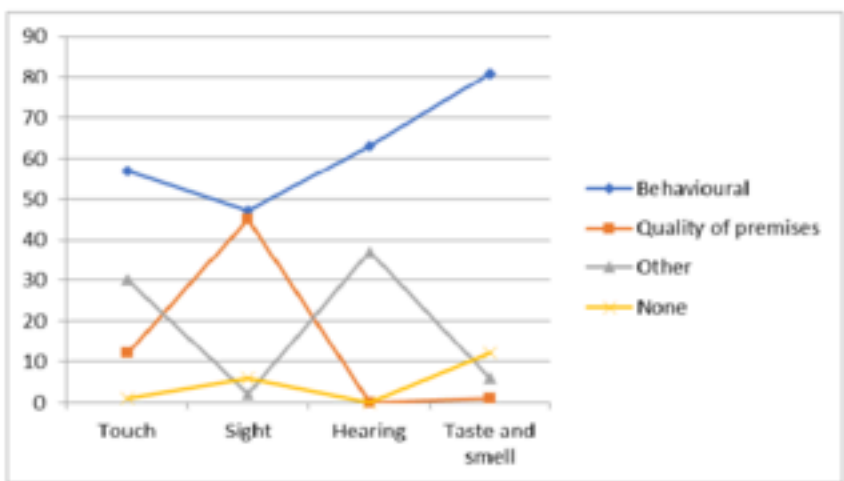

Fig. 6 Teaching strategies of children with sensory hyposensitivity in the opinion of surveyed teachers
Source: author's own study

Behavioural strategies were dominant among teaching strategies of children with a rare disease and sensory hyposensitivity (positive reinforcement, shaping).
As far as touch (3) and hearing (37) are concerned, the second type of strategy were "other", which most frequently were aimed at extra stimulation of the disordered brain. In the case of sight, these were qualities of the premises (45), whereas as far as taste and smell are concerned, there were no strategies.
Domination of behavioural strategies may stem from the fact that sensory hyposensitivity most frequently accompanies autism spectrum disorders. Thus, in the teaching process, the teachers focus on eliminating behaviour perceived as difficult and socially unacceptable.

Conclusions: One of the conclusions from the performed survey is the necessity of its continuation on a larger sample of individuals and places of residence (Will teachers working in cities above 250,000 residents who have access to a broader range of trainings, including non-directive methods of work, apply teaching strategies other than behavioural). Another issue is the necessity of including non-directive therapies for students with rare diseases and sensory hyposensitivity disorders in the training for teaching personnel, along with the current state of research on the aetiology and specifics of autism spectrum disorders.