

DIFFERENCES IN SOCIAL AND ACADEMIC FUNCTIONING AMONG VISUALLY IMPAIRED CHILDREN IN SPECIAL, INTEGRATED AND INCLUSIVE EDUCATIONAL SETTINGS IN POLAND

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Abstract: *The aim of this study was to examine the differences in social functioning (status in peer group, child's satisfaction with peer relations), as well as in educational functioning (teachers' difficulties, child's satisfaction with academic performance) of students with visual impairment and their teachers in three types of school setting: special, integrated and inclusive. The sample consisted of primary school students with visual impairment (n=90) and their teachers (n=59). The measurement instruments used were the Polish adaptation (Szumski, 2010) of the FDI questionnaire (Haeblerlin, Blee, Moster and Klaghofer, 1989), with 45 self-report questions, a classic sociometric assessment technique, as well as a questionnaire with open-ended questions about the difficulties in teaching faced by the teachers. The data were analyzed in SPSS using descriptive statistics and one-way ANOVA.*

The results showed no significant differences among the three groups of children regarding their subjective opinions of school satisfaction. However, the sociometric status of visually impaired children in integrated and inclusive classrooms implies a small number of popular positions. Teachers reported difficulties in teaching children with visual impairments; these difficulties were categorised into two groups: those caused by the disability and those caused by inappropriate school functioning.

Determination and comparison of the school situations of students with visual impairment seems to be particularly important in the current state of fundamental transformations of the educational system. These results may contribute to the creation and improvement of programs for inclusion of visually impaired children into regular schools.

Keywords: *inclusive education, special education, visual impairment*

INTRODUCTION

Inclusive education in a European context has become the most popular way of special education, and at the same time it frequently triggers lively debate about its meaning and the effectiveness of teaching children with special needs in regular schools. Educational policies are differently geared towards practical solutions of including children with special needs. When it comes to special education, Poland has a multi-track approach, which represents multiplicity of the means of inclusion (Meijer et. al., 2003). They offer a variety of services between the two systems: mainstream and special needs education systems. In practice, there are at least three solu-

tions: regular mainstream schools providing inclusive education, integration classes in regular schools or integration schools, special schools and residential special schools for children with different disabilities. Under the terms of the Education Act 1991 and the implementing regulations, the Polish education system provides adjusted education for every child, appropriate to the age and the level of development reached, as well as adaptation of curricula, teaching methods, psychological and pedagogical support and special forms of teaching in all types of school. The need for special organisation of education is recognised by a public guidance and counselling centre, but the parents are mainly responsible for the selection of a school for their child.

Special education of visually impaired children in Poland

A visual impairment is one of many disabilities requiring special education due to the special educational needs it creates: the need for specialised skills as well as specialised books, materials and equipment for learning through alternate modes, the need for fulfilment in acquiring information through incidental learning, and the need for individualised instruction due to slower speed in technical reading and writing (AFB, 2000, Skrzetuska, 1999). All these needs should be addressed in every type of school in order for education to be successful.

The first option includes traditional special schools or residential special schools for the blind and visually impaired that are entirely designed and adjusted to the individual needs of children with this type of disability. Groups are smaller than in regular classes (8-10 students in every class), instruction is provided by professionals, who are thoroughly prepared and qualified in typhlopedagogy (i.e. education of children with blindness and visual impairment), and specialised services are available: books, materials, equipment and technology to assure equal access to the core and specialised curricula. Nevertheless, statistics show a decreasing number of students with sight disability attending special schools. In the school year 2007/2008, 9% out of all students with visual impairment were enrolled in special schools and 91% in mainstream ones (including integrated ones). In 2014/15, 7% of all students with visual impairment were in special schools and 93% in mainstream ones (GUS 2008, 2015). Unfortunately, the statistics do not show participation of students with visual impairment separately in integrated and inclusive education.

Integrated schools became popular in Poland in the early 1990s and are still booming. Parents of disabled children put their hope in integration as a chance to escape from social exclusion and marginalisation (Chrzanowska, 2015). In Poland, integration in education takes place in integration classes in mainstream schools or integration schools, where all classes are integrated. Integrated classes typically contain 15–20 students, of whom 3–5 have a disability, as well as an additional teach-

er who normally has had substantial training within the area of special needs. The basis for education of a student with a disability is an individual educational and therapeutic programme (IETP), which is developed following the requirements defined in the core curriculum and tailored to the individual capabilities and needs of the child. The specialist classes, called revalidation, are organised for children with a disability (i.e. orientation and mobility classes for blind and visually impaired children).

Inclusive education in its guidelines was supposed to be an improved form of integration, but current opinion still equates it with integration. However, inclusion differs from integration because it implies a restructuring of regular mainstream schools to ensure that every child, regardless of disability, is fully involved in a school's community (Hodkinson & Deverokonda, 2011). This construction of education is convergent with the social model of disability. In its "hardest" form, disability is viewed as a socially created problem. This rule applies to schools: organisation of education can create obstacles and difficulties and bring about special educational needs (Lindsay, 2003). Regular schools obliged to provide inclusive education are district schools where students with disabilities may study, but usually there are just one or two students with a disability per class. A regular school has the same responsibilities as an integrated school when it comes to the organisation of special support: IETP, specialist classes, psychological and pedagogical support, excluding additional teacher for children with visual impairment.

Academic performance of visually impaired children in different forms of education

It seems to be clear that the lack of vision significantly affects learning, inter alia, because vision is the primary sense upon which most traditional education strategies are based. Therefore, there are many reasons to expect better academic performance of students with visual impairment in special schools, in which adapted forms of teaching and learning are used on a daily basis. Research confirms that low academic performance of learners with visual impairment is a result of using teaching methods developed for learners with sight, which is more attractive to mainstream school teachers

(Penda et. al., 2015). Moreover, the provision of specialised vision aids and equipment in those schools is poor (Brown et. al., 2013). Children with visual impairment need not only adapted methods of teaching and special aids, but they also show a different rhythm of learning than their peers. As research indicated, poorer reading performance of children with low vision is mostly a matter of slower reading speed (Gompel et. al., 2003).

On the other hand, there are no inevitable barriers associated with vision loss. With modification of teaching methods or resources, academic success can be achieved in mainstream schools as well. Even children with blindness can easily assimilate more than 80% of the teaching and experience in a regular classroom if they are provided with the correct material in the proper form and at the right time (Mani, 1998). Dunkerton (1995) compared the results of the GCSE exam taken by visually impaired students from special and mainstream schools. The latter group performed better. Of the students placed in mainstream settings a larger percentage obtained grades A or B and a smaller percentage gained E or F grades. According to the author, the results do not mean that a mainstream setting is inherently better for a student with a visual impairment, but more likely reflects the trend to place academically able students in regular rather than special schools. This conclusion speaks to the notion of "school readiness" or, as some authors say, "integration readiness" defined as a set of abilities which ease the adaptation of the child into mainstream school settings (Magner and Więckowska, 1993).

Holbrook (1996) argued that placing children with a visual impairment in a regular classroom provides them with the opportunity to compete with sighted peers. In Polish research, it has been shown that there are no significant differences between children with visual impairment from mainstream (integrated) and special schools in the areas of literacy and maths (Palak, 2000).

Integration of a student with visual impairment may be a difficult experience for teachers in the mainstream school, as they often do not have sufficient training or qualification in typhlopedagogy (Brown et. al., 2013, Lacey, Porter, 2008). Because visual impairment is a low-incidence special educational need, it can be expected that in general education

many teachers have never taught a child with a visual impairment (Davis, 2001). This lack of experience and feeling of incompetence can be factors explaining Polish teachers' unwillingness to have children with a disability in their classes (Błęszyńska, 1992, Kosakowski, 2003). Similar results from studies in other countries have revealed that the majority of teachers hold neutral or negative attitudes towards the inclusion of students with special needs in regular primary education (Boer et. al., 2011). Nonetheless, teachers are still much more positive about the inclusion of children with sensory or physical impairments than about inclusion of those with emotional and behavioural difficulties (Mittler, 2000).

Social performance of visually impaired children in different forms of education

Sight disability affects social performance to a similar extent as it affects academic achievement. Hill and Blasch (1980) stated that almost 85% of what is learned socially is mediated through the visual sense. According to several studies, children with visual impairment have poorly developed social skills (Sękowska, 1985, Sacks et al., 1992, Caballo and Verdugo, 2007). Frequently, the repeated problems concern recognition and responding to social signals from others (Frame, 2000), reduced information about cultural artefacts important to make friendships (e.g. clothing, accessories, or pictures of idols) (MacCuspie, 1996), challenging behaviours (self-aggression, stereotyped movements, hyper-arousal) (Sharma et. al., 2002) or dependency on others in the process of integration of the external environment into a realistic concrete world (Warren, 1994). Difficulties may also arise due to lower self-esteem resulting not only from problems with achieving independence but also from stereotypical attitudes of the general population including other students, teachers, and members of the local community (Tuttle & Tuttle, 1996). Among prejudicial convictions about people with blindness, the authors distinguished such convictions as "inferior", "helpless", "pitiable", "unapproachable with comfort or ease", and "supernaturally endowed or compensated".

Thus, the school environment must be taken as one of the important factors influencing social performance of visually impaired children. Inclusive

or integrated education creates settings for social development totally different from special schools. On the one hand, non-segregated forms of education prepare the disabled child for participation in a diversified society and enable him to live and develop with family and in close relation to the community. On the other hand, disability may be treated as otherness by nondisabled peers and if so, it is not accepted. Research does not give unequivocal results about the influence of school environment on social performance of visually impaired children. Some of the research conducted by means of assessment of the child's sociometric status has found that the position of visually impaired children in integrated or inclusive education is less favourable than in special education (MacCuspie, 1990; Palak, 2000; Rosenblum, 2000), but other research has indicated that the sociometric status of students with a visual impairment does not deviate from the sociometric status of their classmates without visual impairment (Breurkens, 2006). Otherness in appearance, behaviour or way of learning can be a cause of stigma. Children in integrated schools, as provided with special assistance from an additional teacher, can be exposed to stigmatization (Gajdzica, 2013). Several research studies found that visually impaired individuals were affected by stigma (Chalifoux & Fagan, 1997; Deshen, 1992). Stigmatisation of visually impaired students in regular classes depends on the school climate and on teachers' attitudes toward inclusion – if they are positive, children experience lower stigma (Hess, 2010). Among adolescents with different types of disabilities, the ones with sensory impairments (visual, hearing) were perceived by their peers more positively than intellectually disabled persons (de Laat, et. al., 2013).

Social performance is also affected by behavioural problems (e.g. behavioural regulation, emotional control), which according to a study of Heryl and Hintermair (2015) appear to occur more frequently in children with visual impairment from special schools than in children from mainstream schools. There are at least two explanations for these results: special schools enrol children with additional disabilities (Heryl & Hintermair, 2015), or special residential schools deprive children of access to close contacts with family members (Palak, 2000).

OBJECTIVES AND HYPOTHESES

The conducted study had two main objectives. The first problem concerned the question of whether type of education (inclusive, integrated, special) determines the educational level of school functioning of students with visual impairment in the area of the child's satisfaction with academic performance. According to previous research (Błęszyńska, 1992, Brown et. al., 2013, Penda et. al., 2015) it is predicted that children with visual impairment from special and integrated schools have higher scores than those from inclusive schools (H1). Subsequently, teachers from special and integrative settings are expected to report fewer difficulties in including a visually impaired child into their class than teachers from inclusive schools (H2) (see Brown et. al., 2013; Davis & Hopwood, 2002).

The second objective of this study was to determine whether students with visual impairment attending regular, integrated and special schools differed within the social status in the peer group as well as the social integration they experience in their class, and if so, in what way. On the basis of earlier research in Poland (Palak, 2000; Czerwińska, 2011) and foreign studies (MacCuspie, 1990; Rosenblum, 2000), it is expected that students in non-segregated forms of education (inclusive, integrated) are less socially integrated than children in special schools (H3). The analyses of sociometric status in the group were possible only in children in integrated and inclusive schools, and the position of children with visual impairment is expected to be lower in children in integrated schools as they are stigmatised as a result of the permanent special assistance they receive (Gajdzica, 2013) (H4). In special schools consisting of only children with visual impairment, intergroup comparisons (the visually impaired vs the non-disabled) were impossible.

METHOD

Participants

Students with visual impairment attending primary special, integrated and regular schools across Poland were the focus of the study. The sample

consisted of 90 students (30 in each type of educational setting). Out of all students, 48% were girls and 52% were boys. They were between 8 and 12 years of age ($M=10.23$ and $SD=1.23$). On the basis of their visual impairment, they were classified as low-vision students (86%, $n=77$) and blind students (14%, $n=13$). According to WHO (2016), a person with low vision is one who has a visual acuity of 0.3 to 0.05 in the better eye with best correction. Blindness is defined by a visual acuity level less than 0.05. Students with additional disabilities or multiple disabilities were excluded from the sample. To answer the question about the sociometric status, non-disabled peers from integrated ($M=19$) and inclusive classes ($M=23$) also participated. Schools and classes were randomly selected from the list of all Polish schools where students with visual impairment attended according to the database of the Ministry of National Education. Permission for students' and teachers' participation was obtained. This research is part of a larger study conducted within a doctoral thesis (Papuda-Dolińska, 2017).

Instrument

Data were collected using the Academic Integration Questionnaire, which is the Polish adaptation of the Swiss questionnaire *Fragebogen zur Erfassung von Dimensionen FDI 4-6* (Haeberlin, Bles, Moster, and Klaghofer (1989), described by Grzegorz Szumski (2010). It consists of 45 items in three Likert-type scales. However, only two scales were used in the present study: motivational integration (e.g., "I can solve even very difficult tasks") and social integration (e.g. "I am often mad at my friends at school" – reversed scoring). The scales in this study had high internal consistency: Cronbach's $\alpha=0.88$ for motivational integration and $\alpha=0.89$ for social integration. Blind children completed the test with the help of an investigator who read the questions aloud. Tests in large print were completed individually by the children with visual impairment. The data were analyzed in SPSS using descriptive statistics and one-way ANOVA.

Another tool was Moreno's sociometric technique, which is designed to measure social relationships and to evaluate the extent and types of students' popularity within classrooms (Avramidis

& Wilde, 2009). Children were supposed to name three classmates who fit the sociometric criteria: positive (Who are the three students with whom you most like to spend your free time?) and negative (Who are the three students with whom you least like to spend your free time?). Some authors argue for the use of unlimited nominations for children with special educational needs included in regular schools, as this is likely to maximise the possibility that they will receive some nominations (Taylor et. al., 1987). Due to the comparative nature of the study, a three-nomination limit was necessary to determine the position of individuals in the informal structure of the group on the Sociometric Acceptance Scale (SAS) of M. Pilkiewicz (1973). This scale allows individual indicators to be relativized, so intergroup comparisons are possible. It also allows indexation of sociometric levels based on the values of Bronfenbrenner's critical sociometric status. The number of positive and negative choices concerning a particular visually impaired child were compared to SAS indicators, allowing assignment of the child to one of five categories: popular, average, controversial, neglected or rejected.

The third tool used in the research was a questionnaire consisting of open-ended questions, from which one was analysed in the present survey ("If you feel any specific difficulties in your didactic work with the visually impaired child, please describe them below"). Teachers ($n=59$) working with students with visual impairment were asked to complete questionnaires with open-ended questions about the difficulties in teaching they encountered and about the special needs of those children. Based on teacher's answers, two categories were created: conditioned by visual impairment and conditioned by school functioning.

RESULTS

Academic effects

This chapter presents analyses carried out with the aim of determining the academic functioning of children with visual impairment from special, integrated and inclusive schools. Table 1 indicates the descriptive statistics for the motivational integration scale of the Academic Integration Questionnaire.

Table 1. Descriptive statistics for motivational integration

Scale	Group	Min.	Max.	M	Sd
Motivational integration	Special schools	28	60	44.93	8.48
	Integrated schools	20	60	41.96	10.98
	Inclusive schools	24	59	42.80	10.10

The mean of students in special schools on the motivational integration scale was 44.93 (SD=8.48), and it is higher than the results of children in inclusive schools (M=42.80, SD=10.10) and children in integrated schools (M=41.96, SD=10.98).

For the second step of the analysis, motivational integration among visually impaired children attending special, integrated and regular schools was compared. Because data passed the Shapiro–Wilk normality test ($p > 0.05$), we used one-way analysis of variance (ANOVA) to determine whether there are any statistically significant differences among the mean scores in those three groups of students (Table 2). The assumption of homogeneity of variances was tested based on Levene’s F test $F_{(2,87)} = 1.52, p = 0.22$.

A one-way ANOVA was conducted to compare the effect of type of school (special, integrated, inclusive) on motivational integration defined as satisfaction with school achievements. There were

Table 2. ANOVA comparing motivational integration across the three educational settings

Motivational integration	SS	df	MS	F	P
Between	140.47	2	70.23	0.72	0.49
Within	8547.63	87	98.24		
Total	8688.10	89			

no overall significant differences among the three groups of children with visual impairment, $F_{(2,87)} = 0.72, p = 0.49$.

From the teachers’ perspective, several obstacles hinder the learning and teaching process of visually impaired students. Half (50%) of the teachers in special schools, only 14% (N=4) of the teachers in integrated schools and 8% (N=2) working in inclusive schools did not indicate any difficulties in working with visually impaired children. The others gave their opinions and most of these opinions fitted into one of two categories: conditioned by visual impairment and conditioned by school functioning (Table 3). One statement often encompassed two or more problems, so the percentage values refer to the proportion of teachers who mentioned a particular problem.

The problems mentioned most frequently were made by inclusive school teachers, especially concerning the visual impairment as a reason for teaching difficulties: sluggish working pace (64%), a specific way of acquiring information (54%) and low motivation (39%). In another category, reg-

Table 3. Teaching difficulties mentioned by inclusive, integrated and special school teachers (%)

Teaching difficulty	Inclusive (n=28) %	Integrated (n=25) %	Special (n=6) %
No difficulties	14	8	50
Conditioned by visual impairment:			
Sluggish working pace	64	56	33
Different way of acquiring information	54	36	-
Low motivation	39	36	-
Behavioural problems	25	48	33
Difficulties with reading and/or writing	18	16	-
Delays in skills because of deficits in earlier education	14	8	-
Conditioned by school functioning:			
Lack of teaching aids and special devices	61	56	-
Individualisation of teaching	39	52	-
Classroom environmental adaptations	32	16	-
Adjustment of teaching materials	25	16	16
Typhlopedagogical competence of teachers	11	12	-
Difficult peer relations	11	8	-

ular school teachers' responses revolved around one problem mostly: lack of teaching aids and special devices (61%). This difficulty was the most frequently mentioned by teachers in integrated schools as well (56%). Only two difficulties were mentioned more often among integrated school teachers than teachers in inclusive school: the necessity of individualisation and differentiation in teaching (52%) and behavioural problems (48%). Special school teachers experienced teaching difficulties the least often, with the exception of sluggish working pace (33%), behavioural problems of visually impaired students (33%) and adjustment of teaching materials (16%).

Social Effects

In Table 4, the results of the social integration measurement showed the highest mean in the group of children in special schools ($M=49.70$, $SD=9.02$). Students attending inclusive schools seem to be less socially integrated ($M=47.93$, $SD=10.28$), but the lowest mean was observed in the results of children in integrated schools ($M=46.43$, $SD=8.30$).

Table 4. Descriptive statistics for social integration

Scale	Group	Min.	Max.	M	Sd
Social integration	Special schools	23	60	49.70	9.02
	Integrated schools	21	57	46.43	8.30
	Inclusive schools	26	60	47.93	10.28

Since the data satisfied the assumption of homogeneity of variance based on Levene's test [$F(2,87)=0.83$, $p=0.44$], one-way ANOVA was used to examine differences in social integration among groups (Table 5).

Table 5. ANOVA comparing social integration across the three educational settings

Social integration	SS	df	MS	F	p
Between	80.27	2	40.13	0.43	0.65
Within	8091.33	87	93.00		
Total	8171.60	89			

Again, the results indicated that the three groups of visually impaired students did not differ signifi-

cantly from one another in satisfaction with peer contacts, $F_{(2,87)}=0.43$, $p=0.65$.

Lack of significant differences among the three groups of visually impaired children in subjective assessment of school peer contacts does not mean that these contacts are satisfactory from the external point of view. In the peer nomination approach of Moreno's sociometric technique, the visually impaired children were rarely accepted. Children were supposed to answer two questions, positive and negative, regarding one criterion. The number of nominations concerning visually impaired children was compared with the values of Bronfenbrenner's critical sociometric status. With three nominations allowed for each child, high status was defined as obtaining 7 nominations overall; mean status, 3 nominations; and low status, 0 nominations (Pilkiewicz, 1973). On the basis of Bronfenbrenner's critical values, status was assigned to one of five categories (Table 6).

Table 6. Categories of status based on critical values

Status	Number of nominations in one question
High (H)	7 or more
Above average (A+)	5,6
Average (A)	2,3,4
Below average (A-)	1
Low (L)	0

The same procedure was applied to negative nominations. The next step was to read the positions from the Sociometric Acceptation Scale (Plikiewicz, 1973), which is the resultant of liking and disliking nominations. For example, high status on the liking scale and low on the disliking scale is classified as prominent popularity (P_0), while low status on the liking scale plus below-average status on the disliking scale is classified as strong negligence (N_1). There are five sociometric status categories: popular (P), average (A), controversial (C), neglected (N), and rejected (R) (Table 7).

Categories in which visually impaired children were classified on the basis of liking and disliking nominations were similar between integrated and regular schools (Table 8).

Table 7. *Sociometric Acceptation Scale (Pilkiewicz, 1973:267)*

	-	Disliking scale - DS					
+ / -		DS	Low	-Average	Average	+Average	High
Liking scale - LS	LS						
	High		P0	P1	P1	C1	C0
	+Average		P2	P2	A	C1	C1
	Average		N2	A	A	A	R1
	-Average		N1	N1	A	R2	R1
	Low		N0	N1	N2	R2	R0

0= prominent; 1= strong; 2= weak

Table 8. *Students' position on the SAS scale*

Sociometric status category	School type			
	Integrated		Inclusive	
	N	%	N	%
Popular (P)	2	7	4	13
Average (A)	13	43	14	47
Controversial (C)	0	-	1	3
Neglected (N)	12	40	5	17
Rejected (R)	3	10	6	20

Proportions of students from integrated and inclusive schools in five different categories seem to be comparable, because differences were not statistically significant (Fisher's exact test, $p=0.21$). In both types of schools, the bulk of visually impaired students obtained the average status in their peer group (43% in integrated and 47% in regular). This means that they received an average number of positive and negative nominations. The difference is seen in the number of neglected children, which is higher in integrated schools (40%) than in inclusive ones (17%), but still it is not significant. Neglected children received few positive or negative nominations. They are not especially liked or disliked by peers, and tend to go unnoticed (Vasta et al., 2004). By contrast, in inclusive schools there were more rejected students (20%) than in integrated ones (10%), though this difference was not significant. These children get few positive nominations and many negative ones. They seem to be disliked in the group. Not many students gained popular status in the group in integrated schools (7%) or in inclusive schools (13%). These are children who received many positive nominations and few negative ones, which means that they tend to be liked by their peers.

DISCUSSION

This research has shown that the subjective assessment of social integration and school performance accomplished by visually impaired children attending special, integrated and inclusive schools were comparable. The lack of significant differences in these aspects of the study does not support hypotheses about better academic (H1) and social (H3) situation perceived by students from special schools. These findings are in line with results from studies by Haeberlin et al. (1989) and Szumski (2010), which showed that there are no significant differences between children with learning difficulties from special, integrated and inclusive schools in the aspect of perceived social integration. Nevertheless, in those previous studies, students attending special schools obtained slightly better scores in the first semester, and with the passage of time their social integration became significantly higher (in the second semester) (Szumski, 2010). Our research does not support an explanation of more positive attitude towards social relations among children with visual impairment in special schools than among students from non-segregated forms of schooling, as posited by such theories as the social labelling theory (Rist, 1977). In this perspective, visually impaired children are subjected to impairment-based labelling. Since they learn in a different manner, while using different devices, and with support of special assistants, they may be seen as "different" by their peers. This process by definition cannot occur in special schools, where all the students are visually impaired. Even if it happens in integrated settings, children with visual impairment seem not to take it into account while assessing their social situation.

Other research suggests that direct contact can encourage more positive intergroup attitudes in children (Allport, 1954; Aboud, Mendelson & Purdy, 2003). However, this effect cannot be generalised to all members but happens on an individual level. Hewstone and Brown (1986) distinguished two types of contact (interpersonal and intergroup) and reported that only intergroup contact may reduce biases. Visually impaired children could be identified as part of an out-group of disabled children in the mainstream class. Effective school-based interventions in promoting children's positive intergroup attitudes by extended contact may reduce prejudices lastingly (Cameron & Rutland, 2007), which is more likely to happen in integration or inclusion systems in regular schools, where division into "in – group" and "out – group" is distinctly marked. In special schools, where everyone is with disability, contacts with sighted representatives of the out-group occasionally occur and do not influence the perceived social situation of visually impaired children at school. According to the present research, whether children with visual impairment from inclusive or integrated schools experience prejudices is unknown. It can be deduced that there are no different mechanisms underlying their perceived social situation among sighted peers, regardless of type of school. The situation of children in special schools is more puzzling because we do not know their social self-perception among non-disabled peers.

Interesting conclusions emerge from our observation that visually impaired students in integrated and inclusive schools show relatively good satisfaction with their peer contacts, yet have rather average sociometric status in the class. These results are consistent with the findings of other researchers examining social status of visually impaired children in non-segregative educational systems (MacCuspie 1990, Palak 2000, Rosenblum, 2000). Subjective satisfaction of social functioning in the class may be an effect of having a friend with whom children feel accepted or liked. As a result, they may not be aware of wider social relationships in the class. According to Furman and Robbins (1985), peer acceptance and friendship should be conceptualised as separate constructs. In the study of Asher and Parker (1989), over half

of poorly accepted children had at least one friend. Hypothetically, visually impaired children are satisfied with their closest relationships but they are not aware of other children's attitudes or are not troubled by them.

The comparison of sociometric status of visually impaired children in inclusive and integrated schools does not support the hypothesis about the worse social position of children from integrated schools (H4). In both types of schools the most frequent category was "Average".

According to Szumski and Karwowski (2014), the lack of differences in the social integration of students in classes with special assistance (integrated) and without extra teacher's support (inclusive), may confirm the assumption that comparison with class peers, rather than the stigma of disability, determines peer relation ratings.

Scores in social and motivational integration were slightly lower for students from inclusive as well as integrated schools than for children from special schools. This may be an effect of having different frames of reference as an explanation of the academic self-concept level (Möller et. al., 2009). In regular or integrated schools, children may compare their academic performance with that of non-disabled peers, who work faster and more efficiently. In special schools, all children work at a comparable pace. The more able their peers, the less likely they are to get the position of the best student in class. Nevertheless, these theories are applicable to the results of this study only to a minor extent since the global differences among the three groups of students were not significant.

Even if students do not see specific difficulties in their academic performance, teachers admitted to struggling with obstacles in the teaching process. As predicted, teachers working in inclusive schools showed more concerns about working with visually impaired students than those who work in integrated schools or special schools (H2). The apparent explanation seems to come from an insufficient training or poor competencies in typhlopedagogy of regular school teachers, a problem pointed out by researchers in other countries as well (Porter, Lacey 2008, Brown et. al., 2013). Teachers in inclusive schools may feel overwhelmed by duties resulting

from teaching children with special educational needs if they do not have special assistance from other teachers. In the Polish system of education, such assistance is provided only for students with autism spectrum disorder or with multiple disabilities in regular schools. More worrying, however, is the fact that teachers see the specific problems of visually impaired students' working pace and way of acquiring information as difficulties that affect their work. This may be the result of not only insufficient training but also of incorrect understanding of the special needs. As other researchers have indicated, training in inclusive education is as essential as the experience and contact with people with disabilities (Loreman et. al., 2007).

These findings do not resolve the problem about which form of schooling is better for visually impaired children. Schroeder (2004) underlines that there is no one form of school or particular type of program placement that is best for children with visual impairment. All models and all systems will inevitably succeed with some children and fail with others. Students with visual impairments need an educational system that meets their individual needs. As long as regular schools, teachers and peers are not ready for diversity, the other two options of schooling should be available and taken into account.

LIMITATIONS AND CONCLUSIONS

Potential problems with the study were the small sample of children identified with a visual impairment. Visual impairment is a low-incidence

disability, so small samples are unavoidable, especially when children with additional disabilities (e.g. autism and intellectual disability) were excluded.

Another limitation concerns the sociometric method, against which researchers have expressed several reservations. Firstly, sociometric method does not answer the question why some children are preferred over others (Söder, 1990). Secondly, the assumption underpinning sociometry is that children with atypical friendships or social patterns need to be normalised, and "isolation" and "rejection" are seen as the result of children's own social skills deficits; sociometry does not take into account the environment, and it creates artificial social statuses such as "neglected" and "rejected" (Child & Nind, 2012). These issues do not mean we have to avoid sociometric methods; peers' perspectives are important in assessing social relations. What is necessary is that we take these reservations into account while interpreting the results: a small number of positive nominations or several negative ones may not be related to the visual impairment at all.

Further research involving a larger group of participants and a wider repertoire of variables (e.g. school climate, intellectual, emotional and behavioural functioning of children with visual impairment) may help to gain a better understanding of the mechanisms underlying the academic and social performance of students with visual impairment in different types of schools, especially inclusive classes.

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RAZLIKE U SOCIJALNOM I AKADEMSKOM FUNKCIONIRANJU IZMEĐU DJECE S OŠTEĆENJEM VIDA U POSEBNOM, INTEGRACIJSKOM I INKLUZIVNOM ODGOJNO-OBRAZOVNOM OKRUŽENJU U POLJSKOJ

Sažetak: Cilj ovog istraživanja bio je ispitati razlike u socijalnom funkcioniranju (status u skupini vršnjaka, djetetovo zadovoljstvo interakcijama s vršnjacima) te u obrazovnom funkcioniranju (teškoće nastavnika pri poučavanju, djetetovo zadovoljstvo akademskim postignućima) učenika s oštećenjem vida i njihovih nastavnika, u trima vrstama obrazovnih okruženja: posebnom, integracijskom i inkluzivnom. U istraživanju je sudjelovalo 90 učenika s oštećenjem vida i 59-ero njihovih učitelja. Podaci su prikupljeni korištenjem FDI upitnika (Haeblerin, Blees, Moster i Klaghofer, 1989) od 45 pitanja, adaptiranog za poljski jezik (Szumski, 2010), primjenom klasične tehnike sociometrijske procjene te upitnika za nastavnike s pitanjima vezanim uz teškoće s kojima se susreću u poučavanju djece oštećena vida. Podaci su obrađeni na razini deskriptivne statistike te korištenjem jednosmjerne analize varijance u programu SPSS.

Rezultati pokazuju da među trima skupinama djece nema razlika u zadovoljstvu školom. Međutim, sociometrijski položaj učenika s oštećenjem vida u integracijskim i inkluzivnim uvjetima odgoja i obrazovanja upućuje na mali broj popularnih učenika. Učitelji izvještavaju o teškoćama pri poučavanju učenika s oštećenjem vida, koje su kategorizirane u dvije skupine: one koje su posljedica djetetovih teškoća i one koje su posljedica neprimjerenog funkcioniranja škole.

Utvrđivanje i usporedba uvjeta i okolnosti odgoja i obrazovanja učenika s oštećenjem vida čini se posebno važnim sada kada obrazovni sustav prolazi kroz razdoblje transformacije. Ovi rezultati mogu doprinjeti kreiranju i poboljšanju programa inkluzije učenika s oštećenjem vida u redovne škole.

Ključne riječi: inkluzivna edukacija, specijalna edukacija, oštećenje vida