STUDY OF VISUAL CAPABILITIES OF PERSONS WITH RESIDUAL FORM VISION

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Abstract

The article analyzes the features of visual perception of blind children with form (object) vision. It provides the examples of interpretation of visual information received by blind people. The article substantiates the necessity of teachers and rehabilitologists knowledge of visual abilities of persons with profound visual impairment having form (object) vision when forming compensatory skills which constitute the basis of social-adaptive behavior.

Keywords: visually impaired children, compensatory skills, persons with residual form (object) vision, methods of using residual form vision.

1. INTRODUCTION

Central form (object) vision begins to develop after the establishment of a stable central fixation when the child begins to recognize people close to him by their appearance at the age of four-six months, in some cases later. Recognition of vital objects, such as the mother's breast can occur at an earlier stage - from two to three months, as evidenced by the reflex sucking movements of the child. Geometric shapes (cube, pyramid, cone, ball) are differentiated by the child later, after seven months, while painted images of objects can be differentiated even later, at the age of two or three.

According to Russian pedagogical classification, people with visual acuity from 0.01 to 0.04 are referred to the blind with residual form (object) vision.

2. METHODS

When conducting the study, we analyzed more than 30 responses of visually impaired people on the use of residual form vision whose visual acuity ranged from 0.01 to 0.04. The age of the respondents was from 25 to 40 years. The answers were analyzed considering not only a low visual acuity, but also the state of other visual functions (color vision, field of view, state of light sensitivity).

Let's take a look at the examples.

3. RESULTS AND DISCUSSION

Example 1. "I have an object vision, but I do not distinguish colors, that is, I suffer from achromatism. Experts say I see the world in the same way as a person with normal vision sees a black and white movie. Since childhood, I use special marks on shoes (for example, in the form of numbers), on clothes (for example, in the form of stripes of different shapes), so as not to confuse my clothes with someone else's. In order to find my place in the concert hall or in the theatre, I do not count the rows, because the first row sometimes turns out to be zero and I don't try to discern the numbers at the inscriptions. I just reach the row with a spectator sitting at the edge and ask him the number of his row, so I count from it."

This example illustrates that the presence of a form residual vision extends the use of visual information as it delivers more visual cues than other forms of residual but lower vision.

Profound visual impairments are peculiarly reflected in the manners of human behavior. At the same time, the visually impaired are unaware of the external manifestations of the consequences of their impaired vision. Medical books, as well as the methods of teaching the blind literature provide illustrations showing the deformation of vision field but almost no examples of how the deformation of the vision field impacts the behavior of the blind with residual vision. However, these manners often require correction and can "tell" teachers, parents and rehabilitologists the features of viewing field deformation, so as to take into account this knowledge in the process of organizing and performing various activities.

Example 2. Blind specialist - foreign language teacher of a higher educational institution was educated, intelligent, comprehensively developed but moved in a very bizarre way: walked without a cane, and at each step turned his head alternately to the right and left. When asked about it, he said he had never noticed it before.

This is the illustration of a half-blurred vision field loss (hemianopsia). The fact is that when, for example, left halves of the viewing field of both eyes fall out, the viewing field of blind people with form residual vision becomes "striped". Moreover, the vertical stripes in which a person let fuzzy, but can see large surrounding objects, alternate with vertical dark stripes, in which the person sees nothing. Therefore, a person is forced to turn his head at every step to scan the hidden areas of space behind the dark stripes and make a more complete picture of the world as a puzzle.

Example 3. "The woman working at the computer when reading constantly drives the head from left to right?" This is caused by the vision field impairment. She has a tunnel vision, i.e. the world is seen in the same way as if she was looking into a narrow tube. It allows to see only a few letters. In order to read the entire line you have to move the "tunnel" along the line, sequentially reading the next letters. Externally it looks like: a person is holding a readable text exactly in front of the face and at the same time making head movements from left to right and back.

Example 4. "A girl has a partial atrophy of the optic nerve, concentric narrowing of the vision field. She feels insecure when she goes by an unfamiliar path, constantly bends down to look at her feet. And her mother is always making remarks like "Hold back, don't slouch, don't lean". And it is impossible for a girl not to look under her feet in an unfamiliar space because she sees the world in a "narrow tunnel" and without looking down (on the floor, on the road) does not see obstacles."

Sometimes people with normal vision do not understand the visually impaired, even if they are loving parents.

Vision field disorders often constitute the cause of a "weird" behavior of the visually impaired. It is often the external manifestations of the consequences of visual impairment that are perceived by people with normal vision as "weird manners" of blind people or even as manifestations of intellectual insufficiency. Many blind people suffer either from photophobia (violation of light adaptation) or from violation of dark adaptation.

Example 5. "A first-year student when coming to classes to the institute refused to remove the headdress, despite the remarks of his teachers." The reason for such behavior was photophobia, which arose after

mechanical damage of the vision organ as a result of a contact with a foreign body. Photophobia is a painful reaction of the eyes to sunlight or artificially created light. In medicine, this state is called photophobia.

Example 6. "Young man with a tunnel vision could see significantly worse or did not see in the twilight at all."

People with tunnel vision often have peripheral vision impairments and a dark adaptation appears. Even if during the day they are quite easy to navigate with the help of vision, they need to learn orienting with a cane because in cloudy weather and in the dark they will not be able to move without assistance.

Peripheral vision allows to notice moving objects faster comparing to central vision which is why children with peripheral vision impairment (dark adaptation disorder) should be taught to cross the road with extreme caution, not relying on their defective vision only.

It should be noted that there are techniques that allow to move quickly at busy routes and without a cane during the day.

Example 7. "In the crowd I usually follow a person (a 'leader' in the terminology of blind athletes) moving in the direction I need and with a speed that suits me. I learned to choose a leader (and change if necessary) very quickly. It is walking behind the leader that allows you to move quickly and safely enough because a person with normal vision will bypass both puddles and other obstacles. Meanwhile, it is very important to respond quickly to changes of this person's behavior, that is, to continue to follow him and not lose sight of him."

4. CONCLUSION

The analysis of various options for the use of residual visual form by persons with profound visual impairment shows that when interpreting visual information, the blind with different forms of residual vision have specific possibilities of its use. In the process of interpretation of visual cues, a large role is assigned to thinking, so it is very important to develop logical thinking in blind people since childhood.

Low vision is used more effectively if the person's, including a child's ideas about the world are better developed. It can also be a representation of different modalities. However, the development of children with residual form vision is accompanied by continuously increasing opportunities for the use of defective vision, which is most frequently used in the process of social, household and spatial orientation.

The scope of the article did not allow to perform a more detailed analysis of the examples proving that the spatial orientation of blind children with residual form vision is substantially different from the spatial orientation of both sighted and blind people with deeper visual impairment. However, the aforementioned examples are a clear evidence that the methods of teaching the blind to orient in the space should be multioptional and consider the individual features of residual vision.

After analyzing the aforementioned examples, we can draw the following conclusions.

Blind children with residual form vision often misidentify objects based on existing visual and social experience.

The task of teachers and rehabilitation specialists is to teach the student to choose from several visual cues those which allow to solve the existing problem (objective) in the most reasonable manner. The ability to use available visual information reasonably attests to the level of rehabilitation of a person with a profound visual impairment.

The variety of factors affecting visual capabilities of blind children with residual form vision leads to the emergence of individual differences in the methods of its use.

The study of the experience of using residual form vision in cognitive and everyday activities, as well as in blind people's orientation shows that there is a certain dependence between the depth of visual impairment and the quality of visual perception. Children and adults who are not taught to use defective vision use it far below their capabilities, worse than those people who have lower vision, but are trained to analyze and interpret the visual information received.

The analysis of visual perception of blind people with residual form vision allows to categorize it not only as insufficiency, but also as an active process of progressive development of visual perception, which proceeds in a peculiar way, in the conditions of purposeful correctional and pedagogical influence.

REFERENCE LIST

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