VARlANTS OF INWARD DISORDER PATTERN AND SELF-AWARENESS FEATURES AMONG ELEMENTARY SCHOOL CHILDREN WITH DIFFERENT DYSONTOGENESIS FORMS

Tatiana Adeeva, Inna Tikhonova, Svetlana Khazova
Kostroma State University, Kostroma, Russia

Abstract
This study explored variants of inward disorder pattern (IDP) among elementary school children with different dysontogenesis forms. IDP is considered a complex integrative construct that affects I-concept development and is significant for an individual’s successful social adaptation. The sample consisted of 84 participants – elementary school children with visual, hearing, speech impairments, and mental development disorder. Their average age is 9. The interview was conducted individually.

We identified a number of specificities in IDP components content depending on a dysontogenesis form. These features are determined by both an impairment itself and component ratios where those between the physical-sensitive, cognitive, and motivational ones are of the greatest significance. Other IDP determinants are such complex self-awareness indices as a level of one’s traits awareness and self-perception in a context of social relationships. The study results suggest three variants of IDP for the moment.

Keywords: internal disorder pattern, visual impairment, speech impairment, hearing impairment, mental development disorder, elementary school children.

Introduction
Our choice for internal disorder pattern problem is justified by a number of minor aims. First, this topic involves self-awareness development and problems, which are of timeless relevance. Self-awareness is vital for a successful social adaptation, determines specificities of self-attitude and an attitude towards one’s environment, and affects an individual’s self-actualization and motives of activity. Current evolving international tendencies in our society encourage to identify factors of effective disabled people’s self-actualization and social adaptation. Disabilities are specific conditions for a personality development which this is likely to manifest itself in I-concept components and the IDP phenomenon occurrence.

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**Theoretical Justification**

Modern studies on the IDP phenomenon in the field of special pedagogy and psychology lack systematic approach. The phenomenon is mainly examined in terms of an individual’s reaction to their disorder. An IDP typology is based on the emotional component. Gaidukevich defines IDP as a significant factor in personality development in a situation of dysontogenesis and stresses that IDP features affect individual’s adaptive abilities. Though while analyzing research papers on personality development among disabled people, the author mainly focuses on their self-attitude and self-perception specificities depending on the dysontogenesis form they have (Cherepkova & Devitskaya, 2011). Other works spotlight I-concept and I-image. The analysis of the components in these constructs reveals features of disabled people’s attitudes towards their disorder. E.g., it is reported that self-esteem in children with delayed mental development are instable, intuitive, and often exaggerated. These children are hardly aware of their dreams and preferences, overestimate their traits, and try to compensate their disorders (Huurre, Komulainen, & Aro, 1999). Children with intellectual disorders have trouble self-characterizing and usually use basic descriptions when speaking of their individuality (Huurre, Komulainen & Aro, 1999). As a result of impeded reflection and critical faculties, they are susceptible to exaggerated self-esteem. Besides, children and teenagers often “implement a framework of social requirements” when giving their self-esteem, which manifest itself in prevalent positive personal traits and assessments (Bykova, Tikhomirova & Kins, 2017; D’yakov, 2014). However, according to the study by Bykova and Tikhomirova, children with mild intellectual disorders are aware of them, which can result in various forms of personal reaction: anxious fixation on a disorder causing a child’s vulnerability and self-isolation; a reaction of hypercompensation accompanied by aggression and boast (Bykova & Tikhomirova & Kins, 2017). The comparative analysis of I-concept in adults with Williams (WS) and Prader-Willi syndromes indicated a difference between the two groups in self-perception and attitude to the syndromes. Common indices of self-esteem in the both groups are lower than those in non-retarded individuals. However, the participants with WS gave a fuller description of themselves with a greater number of social and psychological categories. This group is characterized by a higher level of self-understanding and intense social activity. The both groups consider the syndromes relevant for their plans for future (Plesa-Skwerer, Sullivan, Joffre & Tager-Flusberg, 2004). Studies on IDP among children and teenagers with deficient dysontogenesis development seek to correlate IDP parameters with self-esteem variants, a level of one’s aspiration, and personal traits (Papadopoulos, 2014). A number of works prove the dependency of one’s self-esteem on the severity of their visual impairments (Koneva & Kuznetsova, 2015; Zhdanov & Rogozina, 2006). Some authors report that children with visual impairments demonstrate a lower self-esteem as compared to that of their non-retarded peers as well as a fall in it after a transition from elementary to junior high school (Petrenko & Vaishvilaite, 1993). The dependency of one’s self-esteem specificities and its consistency with reality on socio-demographic and personal factors is stressed (Koneva & Kuznetsova, 2015; Petrenko & Vaishvilaite, 1993; Pinquart & Pfeiffer, 2013). On the other hand, research results are quite controversial and require further investigation. Age specificities of self-awareness development can be identified (Gaidukevich, 2018; Fotiadou, Christodoulou, Soulis, Tsimaras, & Mousouli, 2014). Self-knowledge in children with cerebral palsy (CP), for example, is characterized by insufficient reflection caused by low social activity. When describing their individuality, CP children use “appearance” and “social roles” categories and only touch upon their abilities, talents, skills, and tempers.
and a lack of aspiration are prevalent characteristics of I-image in these group (Gaurilyus, 1995). Some studies emphasize the dependency of one’s I-image on the type of their physical disability, which, in any way, causes a lower self-integrity when I-ideal is inconsistent with one’s physical experience (Kozhalieva, 1995; Fotiadou, Christodoulou, Soulis, Tsimaras, & Mousouli, 2014; Nagornaya & Nagornyi, 2017). It results in self-isolation, passiveness, a sense of one’s inferiority and being neglected, and, probably, a fixation on a disorder. Akinina stresses the significance of self-attitude and particularly its emotional-evaluative component in people with hearing impairments. The author demonstrates a positive correlation between one’s self-confidence and various individual typological characteristics and identifies a crucial role of self-acceptance in one’s self-actualization. The environment’s positive attitude to an individual with a hearing impairment is a relevant factor in positive self-attitude development (Akinina, 2015).

Summing up our review on research papers in the field, we can say that the IDP phenomenon needs a deeper investigation in special psychology. Existing works mainly deal with the IDP emotional component and study an individual’s self-attitude and self-perception. IDP specificities are attributed to dysontogenetic development forms.

In our study we consider IDP a complex and integrative construct. Both a disease and a disorder involve not only one’s attitude to the phenomenon but contribute to a range of physical experiences caused by it, a system of knowledge about the causes of an individual’s health condition and opportunities to change it, ideas about self-actualization variants, and assessments of one’s life chances as well. This results in a greater number of IDP components being identified. The sensitive component involves a complex of feelings associated with a disorder. The physical component deals with an individual’s assessment of their physical activity and attributes. The cognitive component involves one’s knowledge about disorder causes, symptoms and their health limited opportunities. The emotional component is an individual’s attitude to their disorder. The motivation component characterizes a framework of one’s motives and its possible change caused by a disorder.

Being transformed in an individual’s mind, IDP becomes an internal factor in self-concept and self-awareness development process and, thus, affects one’s self-attitude, motives of activity, social relationships, and adaptation specificities.

**Research object:** internal pattern of disorder among children with various forms of dysontogenesis.

**Aim of the research:** to identify variants of IDP in elementary school children with different dysontogenesis forms.

**Participants of the research**

The sample consisted of 21 participants – elementary school children with visual impairments (17 participants are partially sighted with visual acuity ranging from 0,05 to 0,2; 3 participants are almost blind with visual acuity up to 0,04). Children with severe speech impairments (SSI) are 33 participants. Those with mental development disorder (MDD) are 15 children. The ones with hearing impairments are 12 people. The average age is 9. The interview was conducted individually.

**Research methods**

The technique “Tell Me about Yourself” (Shchetinina, 2000). This technique is used to determine specificities of I-concept components, a level and a type of one’s self-esteem, an
awareness level of one’s “self”. It provides indirect evidence on a child’s perception of an adult’s attitude. The conversation technique “The Study of Internal Disorder Pattern” (Adeeva 2019). It allows to determine specificities of IDP components. The children’s answers were processed using content analysis. Moreno’s Social Atom technique designed to study interpersonal relationships structure to describe the participants’ social activity level. The technique of “Paint yourself” (Prikhodzhan, Vasilyauskayte, 1990) that studies quality characteristics of children’s I-image and overall emotional-value self-attitude. Children’s Personality Factor Questionnaire by R. Cattell (adapted by E. Alexandrovskaya, I. Gilyashova, 1978).

Statistical analysis
Research data were calculated using 10.0 Statistica software. Mann-Whitney U-test and K-means cluster analysis were used to define divergences between the groups.

Results and Discussion
We explored the following self-awareness and IDP specificities in different groups of elementary school children. No divergences on the self-esteem parameter are identified in the groups. All the groups demonstrate a medium level, the children assess most aspects of their I-images positively and consider only few traits bad (or they are considered such by others). About 20% of the children have high self-esteem while about 10% show low ones. The most considerable divergences are identified in the group of elementary school children with hearing impairments. They demonstrate reliably lower indices on the traits awareness parameter in contrast to the children with visual (U=46.5 p<0.000), SS (U=63 p<0.000) impairments, and MDD (U=16.5 p<0.000). The awareness of one’s personal traits is an ability to give a full reasoned description of one’s individuality without or with little outside help. The children with hearing impairments have trouble defining the “My Skills” parameter. They mention a smaller number of their skills as opposed to those with visual impairments. Their answers consist of one or two verbs: “paint, run”, and often grammatically incorrect: “What can you do? – Football, PE”. These children cannot answer what skills they would like to learn, the answer “I do not know” is quite common. The specificities in the hearing impairment group can be attributed to their disorder and speech impediments.

The children with hearing impairments as opposed to those with visual ones demonstrate a better self-identification on the “I-boy”, “I-girl” (U=61.5 p<0.006) parameter and stress different appearance and interests. It can be related to speaking and thinking peculiarities caused by hearing impairment, which results in concrete thinking. Insufficient visual data among children with visual impairments is also of great importance since it affects their appearance assessments. The children with hearing impairments are more satisfied with their status in the families than those with visual disabilities (U=57 p<0.004). They have no trouble describing it (“a daughter, a son, a granddaughter”), give mainly positive assessments of their positions and their attitudes to it. The children with visual impairments give more diverse descriptions of themselves: “good, caring, kind, close”, and of their functions in the families: “help, clean, cook”, define other family members’ attitudes and actions towards them: “they love me, give me presents”. However, the general number of their answers is smaller, which can indicate specific family relationships.

The children with hearing impairment perceive themselves to be quite significant in a system of social relationships (they paint themselves large in a picture of a social atom). On the other hand, in a structure of interpersonal relationships they have a greater number of...
contacts in a family environment. They demonstrate a deeper closeness to their grandmothers, grandfather, other relatives, and siblings as compared to the other groups (figure 1).

![Figure 1. Features of social relations of children with disabilities](image)

These children also report fewer contacts in a non-family environment. They demonstrate a reliably lower significance of relationships with friends and classmates as opposed to the children with SSI (U=27 p<0.000 and U=90 p<0.004 relatively) and MDD (U=8 p<0.000 and U=36 p<0.000 relatively).

The hearing impairment group has a higher level of friendliness and openness in contrast to the other ones (to the visual impairment one U=82 p<0.03; to the SSI one U=119 p<0.05; to the MDD one U=39.5 p<0.01). They are gullible and socially quite well-adapted. Besides, this group demonstrate higher levels of self-confidence, stability, and calmness (in contrast to the children with visual impairments U=64 p<0.006; those with SSI U=90.5 p<0.006; those with MDD U=28 p<0.001). These indices suggest their good adaptability, emotional stability, and self-control. Finally, these children demonstrate a better performance on the comfort and initiative communication parameters (as opposed to the visual impairment group U=78 p<0.02; to the MDD one U=44 p<0.02). This data indicate a child’s ability to feel free and unembarrassed to make contact with adults (parents, teachers). We consider that this combination of the indices can be, on the one hand, attributed to the interview atmosphere. On the other hand, categorical thinking caused by one’s speech impediments can be relevant.

We identified a higher level of sensitivity and reliance in the visual impairment (U=6 p<0.007) and SSI (U=80 p<0.002) groups as compared to that of children with hearing disabilities. They are gentler, more gullible, susceptible, and seeking support.

The SSI children demonstrate a better performance on the diligence-responsibility parameter (in contrast to those with visual impairments U=220 p<0.0062; to those with hearing impairments U=88 p<0.005, to those with MDD U=125 p<0.007).

The study on IDP components content in children with different dysontogenesis forms provided us with the following results. We obtained a statistically significant divergence on the physical and emotional component parameters between the hearing impairment group.
and the others. The SSI and MDD children consider themselves strong and agile, those with visual impairments speak of themselves as slow. All the groups can describe their frightening feelings and fears: “I am afraid of darkness; when I am alone; I am afraid of loud songs; I am afraid of spiders”. As opposed to the children with visual impairments (U=35,5 p<0,000), SSI (U=74 p<0,000), and MDD (U=20,5 p<0,000), those with the hearing ones give a minimum number of physical component characteristics. They report their good health and describe themselves as strong. The emotional component also lacks content in the hearing impairment group as opposed to the visual impairment (U=38,5 p<0,000), SSI (U=54 p<0,000), MDD ones (U=17,5 p<0,000). The elementary school children can describe their individuality: “clever; handsome; I think in a different way; I play chess”. They can define what they like about themselves: “my hairdo; my eyes; my appearance”; and what they do not: “my temper, name, fear of light”. Some children mention their disabilities: “my eyesight; my health; I am slow”. About 40% of the children with hearing impairments speak of only one feature while the others find it difficult to point any out. This is likely to be attributed to the specificities of their disorders.

To categorize the participants’ IDP variants, we used K-means cluster analysis. The quantitative descriptions of the obtained clusters are presented in Table 1.

Table 1. Quantitative characteristics of selected clusters

<table>
<thead>
<tr>
<th>cluster</th>
<th>visual impairments (number of people)</th>
<th>speech impairments (number of people)</th>
<th>mental development disorder (number of people)</th>
<th>hearing impairments (number of people)</th>
<th>total (number of people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>10</td>
<td>11</td>
<td>9</td>
<td>4</td>
<td>34</td>
</tr>
<tr>
<td>II</td>
<td>3</td>
<td>8</td>
<td>2</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>III</td>
<td>9</td>
<td>14</td>
<td>4</td>
<td>0</td>
<td>29</td>
</tr>
</tbody>
</table>

The analysis results suggest 3 groups of elementary school children who share IDP and self-awareness specific characteristics.

Reliable divergences (p<0,05) on the physical, cognitive, motivational, and emotional IDP components (the Study of Internal Disorder Pattern conversation technique), on the levels of traits awareness (the Tell Me about Yourself technique), the relationships with one’s classmates (the Social Atom technique), the self-confidence, reliance, and anxiety parameters (Children’s Personality Factor Questionnaire by R. Cattell) were identified.

Based on these divergences, three IDP variants in the sample can be defined (figure 2).
The first variant (sensitive) is characterized by self-doubt, susceptibility to mood instability, and, perhaps, impeded adaptiveness to new conditions. These children are quite sensitive, gullible, and susceptible to outside influence. The group is marked by high levels of anxiety, fears of one’s failures, tension, and frustration. It suggests that the participants have troubles fulfilling their aspirations as they are not put into practice. Depressive and neurotic reactions to stressful situations can be typical for these children. The physical IDP component has maximum content in this group. This group mostly focuses on their feelings and physical discomfort. The children mention many different common feelings that they often consider frightening (“I feel scared when I feel a stomachache, queasy, ill” rather than only those caused by their disorders: “I am slow; I have poor eyesight”). The cognitive component has maximum content in this group too. However, the children’s knowledge of the disorder causes and preventive activities is reduced to standard advice: “not to watch TV, not to play tablet, to see my disability specialist, speech therapist”. Some do not acknowledge their challenges and limited opportunities. Others more often mention their studies among most challenging experiences where Russian and Math are considered most difficult subjects. The participants from this group share an adequate level of activity and motivation. When speaking about their dreams and aspirations, they can give both most common and expected answers: “I want to learn swimming; dancing; playing football”, as well as surprising ones: “immortality; good friends; to have dreams at night”. The emotional component is distinguished by moderate content as compared to the other groups. Interestingly, these children speak of their “health, temper” as their individuality most often than those from the other clusters.

The second variant is characterized by relatively low levels of self-awareness and activity. The IDP components have the lowest indices in the sample. The children neither experience any vivid physical sensations caused by the disorder, nor are fixated on them though they demonstrate some knowledge of their disabilities and challenges. When answering, they are most likely to agree with adults’ suggested definitions. The participants can hardly describe preventive activities. They mainly mention studies as most life challenging experiences but sometimes their answers have nothing to do with their routine: “cannot prop myself up on
my arms without support”. Significant characteristics, in our opinion, are a lack of content in the emotional and motivation components. The children cannot describe their qualities, individuality, and peculiarities caused by the disorder, they do not want to change. A common answer to the question: “What would you like to learn?” is “Nothing”. Curiously, this cluster has high levels of self-confidence and calmness. On the one hand, these indices can be attributed to disorder specificities. This cluster mostly consists of children with hearing impairments who have difficulties processing verbal information and, thus, give quite categorical answers. On the other hand, it can be interpreted as a result of one’s insufficiently differentiated emotions and poorly developed I-concept. A low level of traits awareness could be explained by disorder specificities as well as the family relationships and parent-child interaction ones. The lack of answers to the following questions implies it: “Do your parents feel pity for you? Why?”, “Do your parents scold you? Why?”. Some answer demonstrated a child’s neurotic reaction: “I do not like when I bite my fingers”. A reference to a pet as a significant subject is more often found in a structure of this group’s social relationships rather than in the others.

![Figure 3](image.png)

Figure 3. The average values of indicators of the Inward Disorder Pattern, personal and social characteristics in the three clusters of respondents with significant differences (p<0.05; n=87)

The third IDP variant is characterized by generally adequate levels of all the components. The children are distinguished by high levels of traits and disorder specificieties awareness, acknowledge their disabilities, can identify the causes, and understand preventive activities. They are aware of their challenges and limited opportunities and point them out: “It is difficult for me to skip” (a boy with a visual impairment); “I cannot play hide-and-seek – I am slow and not very good at finding people” (a girl with a visual impairment). Besides, they have highly developed motives, goals, and interests based on their disorders but involving activity and self-development (the motivational component). Physical sensations caused by a disorder are moderately expressed, sensitivity to one’s own state can be identified but is relatively low. This group gives a greater number of self-descriptions in contrast to the other ones. The descriptions themselves are various: “I do not like my behavior; my name; my height; my temper;”, “I like my brains; that I am quick; I am friends with everyone; I am handsome”. Classmates take a central role in a system of this cluster’s social relationships.
Conclusions
1. IDP specificities in the physical, cognitive, motivational components based on a disorder form are identified.
2. Our study suggests that IDP specificities can be determined not only by a disorder form but by the ratio of its components as well. The emotional component (despite the obtained theoretical evidence) does not affect IDP specific nature while physical-sensitive, cognitive, and motivational component ratios are of the greatest significance.
3. The study results reveal that IDP determinants can also be such complex self-awareness indices as a level of one’s traits awareness and self-perception in a context of social relationships.
4. The results suggest three IDP variants for the moment.

References


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Tatiana Adeeva, Inna Tikhonova, Svetlana Khazova
Kostroma State University, Kostroma, Russia

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Summing up our review on research papers in the field, we can say that the IDP phenomenon needs a deeper investigation in special psychology. Existing works mainly deal with the IDP emotional component and study an individual’s self-attitude and self-perception. IDP specificities are attributed to dysontogenetic development forms.

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Corresponding author’s email: adeeva.tanya@rambler.ru