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# THE RELATIONSHIP 'EMOTIONAL IDENTIFICATION – INDIVIDUAL SOCIAL BEHAVIOR' IN HEARING IMPAIRED CHILDREN INTEGRATED INTO A GENERAL EDUCATION ENVIRONMENT

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**Abstract**. The article focuses on the relationship between emotional identification and individual social behavior in children with hearing impairment who are integrated into a general educational environment. This suggests a study of the specific characteristics of emotional identification and strategies of individual social behavior in children with hearing impairment and their hearing peers. The study involved 32 children of preschool age (N=32, 5 – 7 years of age), educated in general kindergartens. The experimental group included 14 children (heterogeneous group according to auditory status), and the control group – 18 hearing children. The following methods were used: Emotional Faces and Individual Social Behavior. The results showed that the hearing children did better in terms of basic assessment of other people's emotions than the children with hearing impairment. It was found that negative emotions were better identified by children with hearing experience compared to their deaf peers. Moreover, the hearing impaired children, compared to the control group, are more likely to seek a peers' attention, follow them in their activities, join their play and express positive emotions towards them. The relationship between the characteristics of emotional identification and the categories of individual social behavior was confirmed. Differences were found in the structure of the relationship between the characteristics of emotional identification and the categories of social behavior in hearing impaired and hearing children.

*Keywords*: emotional identification; individual social behavior; children with hearing impairment; integration

## Theoretical context of the research

The problem of emotional identification is particularly topical in preschool children because it is extremely important for the formation of social interaction skills. Emotional identification is a construct involving three aspects: emotional perception, emotional

comprehension, emotional recognition (Buck 1980). from the mother's face and the close adults is formed between 3rd and 6th month (Marcel 1983). As it goes through different stages of development, the perceptual process reaches its high degree of internalization, an internal model is formed – a permanent and orthoscopic perceptual image. In this way the child actively learns the sensory standards of the object world, the characteristics of non-verbal behavior, including the facial expression of emotional states. Consistent with the Dimberg's concept of the mechanism for decoding expressive information emotional comprehension is a specific human ability to distinguish patterns of facial expression and identify them as signals of certain emotional states (Dimberg 1988). Recognition of emotions is defined as a comparison of an emotional object, after its perception and understanding, with an emotional pattern which is developed in the ontogenesis as a result of one's own experience and perception of this emotion (Gray et al. 2007). Of essential significance is the differentiation between these two closely related concepts: 'emotional recognition' and 'emotional identification'. The recognition of emotions appears as soon as the child is born, while the identification refers to the comparison of the emotional object with an emotional pattern already existing in the child in order to get to know the object in the context of the generalized emotional meanings (Buck 1980). The role of the generalized emotional standard is performed by individualized notions of emotions as a system of knowledge about the causes and manifestations of emotions (the cognitive scheme of emotions) obtained through emotional experience. The complexity of the emotional identification process stems from the fact that the structure of the emotional standard changes depending on the modality of the emotional state. This complexity could be alleviated by identifying the leading component of expressive behavior included in the structure of each emotional standard – facial expression. Despite the polysemy and the high individualization of facial expressions changes in humans, the identification of the emotions of the other communicative partner is completely adequate because of their rich expressive content: facial expressions, gestures, behavior, speech and voice nuances, vegetative changes, etc.

The level of cognitive development is at the core of the ability to identify emotions. Undoubtedly, emotions are better identified by individuals with developed nonverbal intelligence, emotionally mobile, more focused on the environment than on themselves.

A number of studies have been devoted to the problem of identifying emotions by hearing impaired individuals (Ziv et al. 2013; Rieffe 2012; Most & Michaelis 2012; Peterson & Slaughter 2006). The authors present evidence that children with hearing impairment, as a heterogeneous group, are characterized by a specificity in the identification of emotions arising from concrete-image thinking, which in preschool dominates over abstract thinking.

Many researchers emphasize the influence of human emotions on their social life (Aznar & Tenenbaum 2013), as well as the influence of the social environment on

the ability to identify emotions (Bosacki 2007; Kennedy & Pigott 2012). The skills for recognizing the emotions of the communicative partner are formed in preschool age in the process of interaction of the child with adults and peers. Children's ability for emotional identification is an important prerequisite for their social adaptation and a condition necessary for communication (Kennedy 2013). Without an adequate assessment of the emotional state of the interlocutor, which serves as a kind of feedback in the process of interaction, it is impossible to build effective communication with the partner. Children who have difficulty understanding and regulating their emotions have problems in their social relationships with others (Aznar & Tenenbaum 2013). The identification of emotions is an essential component of interpersonal interaction, which facilitates or, conversely, prevents the establishment and consolidation of social contact. Data on the relationship between emotional identification and social behavior in preschool children can be found in the existing literature (Öhman & Dimberg 1984). There is a positive correlation between the popularity of certain children among peers and the degree of manifestation of the ability to understand and recognize nonverbal behavior (Guralnick 1990; Buck 1980). Some partners in communication, without any effort, create a good attitude towards themselves while coming into contact with others, others, due to negative behavior, bring tension in the communication, provoke negative emotions (Black & Hazen 1990). The increased capacity to recognize emotional signals catalyzes the development of social skills, expands the perspective of initiating and maintaining social contacts with the peers (Kennedy & Pigott 2012). The ability of children to identify their emotions and the emotions of another person is the key to adequate understanding of the interlocutor and therefore to successful social behavior. For this purpose, appropriate social and educational environment is needed to meet the needs of children, to contribute to their wellbeing and development. The main litmus test is “the personalization of emotional and evaluative attitude towards the world and themselves” (Boyadjieva 2015). As Shivacheva-Pineda rightly points out in her publications, the social climate is an essential factor in educational processes and should be given special attention in educational policy, research and teaching programs (Shivacheva-Pineda 2019). Obviously, the researchers focus not only on academic achievement, but also on the development of children's character, prosperity and happiness (Tsokov 2017).

In summary, *main aims* of the current study were:

(1) to investigate the characteristics of emotional identification in hearing impaired and hearing children of preschool age;

(2) to investigate the peculiarities of individual social behavior in hearing impaired and hearing children of preschool age;

(3) to examine the relationship between emotional identification and the individual social behavior patterns in hearing impaired and hearing children of preschool age.

**Methods**

The study involved 32 children aged 62 to 75 months (M = 68.6, SD = 3.71), who were differentiated into two groups: experimental and control. The experimental group included 14 children (5 female and 9 male) with hearing impairments. They had moderate-to-severe hearing loss (>60 dB; N = 5) and severe to profound level of hearing loss ((>90 dB; N = 9). The beginning of the hearing impairment at 10 children covered the pre-linguistic period, while in 4 children it occurred in the time after the speech and language development. Deafness was diagnosed immediately after its occurrence in 11 individuals. All children used hearing aids. 18 children wore a personal hearing aids, 6 – cochlear implants (in the better ear, prior to implantation), that worked successfully. Preschool hearing and speech rehabilitation courses were attended by 9 of the participants in the empirical study. The children received the services of speech-language pathologist. Five of the children preferred to communicate in BSL (Bulgarian sign language). The main communication code of 8 children was spoken Bulgarian. Four of the children had hearing impaired parents. All children were integrated in four general education kindergartens. A group of 18 children (9 female and 9 male) were recruited as controls from four local general education kindergartens in the Central of Bulgaria. All children were native Bulgarian speakers, and according to their teachers, had no diagnosed psychologically and physically disabilities. Non-verbal IQ scores were obtained for both groups (in the normal range – IQ > 90) using the Raven's Coloured Progressive Matrices (CPM) test.

The assessment battery comprised two measures: a measure of emotional identification and measure of Individual Social Behavior. Regarding the test for emotional identification, gender bias was controlled in all tasks by utilizing an evenly balanced presentation of male and female stimuli (photographs). Test stimuli and questions were presented verbally to the speakers and the hearing group and were presented using BSL (Bulgarian Sign Language) to the signers. The methodology designed to study the individual social behavior of children in interaction with peers, is based on the coding of videos of free games of the child in the peer group using a special scale. The scale for assessing social interaction was created by Guralnick (1987).

A series of 6 close-up color photographs (15 × 21 cm), comprising facial expressions of six emotions, was used to assess children's emotion identification ability in two tasks: labeling and pointing. The photographs each depicted happiness, sadness, anger, fear, disgust, and surprise. In the labeling task, the experimenter then presented the 6 photographs in random order, one at a time, and asked the child to label the emotion depicted in each photograph. An incorrect answer received a score of 0, a partially correct answer received a score of 1, and a fully correct answer was scored 2, yielding a possible range of 0 to 12. Next, in the pointing task, the examiner placed six photographs at a time in front of the child (one selected

randomly for each emotion). The examiner asked the child to point to each of the emotions following her verbal or signed request (e.g., "Show me the sad child"). A correct response was scored 2 and an incorrect response received a score of 1, yielding a potential range of 0 to 12. To assess children's understanding of these six basic emotions, there were presented a series of 6 color illustrations (15 × 21 cm) showing typical situations that elicit each emotion: one situation per emotion. Each child was presented with 6 illustrated situations, one at a time, and was first asked to describe the situation in order to ensure understanding of the depicted event. The child was then presented, via spoken or sign language, with the test question: What does the child in the picture feel? An incorrect answer received a score of 0, a partially correct answer was scored 1, and a fully correct answer was scored 2, yielding a possible range of 0 to 12.

To study the social behavior of the child, a video was made of 10 minutes of free interaction of the child with peers (3-6 children attend the video) and then the behavior of each child was analyzed using a special scale. Individual Social Behavior scale (ISB) includes 20 items describing individual behavioral patterns: 1) Gains the attention of a peer, 2) Uses peer as a resource, 3) Leads peer in activities-positive, 4) Leads peer in activities-negative, 5) Model, 6) Follows the lead of peer-positive, 7) Follows the lead of peer-negative, 8) Follows peer's activity without specific directions to do something (joining and following others), 9) Refuses to follow a peer or ignores positive the lead of peer, 10) Refuses to follow a peer or ignores negative the lead of peer, 11) Responds to a request for help from a peer, 12) Ignores a request for help from a peer, 13) Imitates a peer, 14) Expresses affection to peer, 15) Expresses hostility to peer, 16) Competes for the attention of an adult, 17) Property protection, 18) Takes someone else's property without permission, 19) Verbal competition, 20) Shows pride in product or attribute to peer.

For each item, the coding protocol described in detail the specific actions and manifestations according to which the behavior can be attributed to one or another pattern. The researcher determined what patterns of behavior according to the scale the child had demonstrated for a certain period of time and recorded them in a special form. Such a form was filled in for each child. In this way, the most commonly used types of social behavior of the child were identified. After completing the video analysis, the total scores for each behavior category were calculated. The analysis of a child's behavior through the video took an average of 1.5-2 hours. For further analysis, the general indicators for the total number of manifestations of each of the behavioral patterns were used.

The study was divided into two stages. In the first stage, the test for emotional identification was applied. The experimenter held individual sessions with each child, 1 month apart, in a quiet room at the child's kindergarten. Each session lasted approximately 25 min. The experimenter presented the tasks in sign language to

those children who used the same language cods. Communication with all the other participants was through spoken Bulgarian. At the beginning of each session, the examiner checked the sensory aids of the hearing impaired children to ensure that they were functioning properly. In the second stage, the individual social behavior of the children was studied. A video of the free children's game according to the ISB methodology was held in the rooms of the kindergartens, after which the behavior of each child was analyzed in accordance with the scale. Each videotape was reviewed a second time to examine more global measures of social participation and cognitive play.

**Results**

The descriptive analysis of the results obtained from *the identification of the six emotions* revealed the same high-level indicators (100%) in the two research groups in the recognition of happiness and sadness. In relation to other emotions, however, the analysis suggested that, hearing impaired children's performance on emotion identification was significantly different from that of the hearing control children. The identification of the emotion 'fear' was significantly higher in hearing children (M=51.09, SD=1.12) compared to the children with hearing impairment (M=45.90; SD=1.06). There was a statistically significant difference between the two groups ($p<0.001$). When perceiving facial expression of anger, a statically significant difference was also registered between the children from the experimental group (M=10,50, SD=0.6) and the control group (M=15.53, SD=0.64) in favor of the control this one ($p<0.001$). The recognition of disgust expression significantly dominated in hearing children (M=88.27, SD=2.70) compared to their hearing impaired peers (M=73.83, SD=2.33). The mean values in the two populations determined the statistically significant difference between them ($p<0.001$). A different tendency was found in the perceptual component of surprise emotion. Definitely, in this context the children with hearing impairment (M=54.64, SD=0.84) were superior in the result ($p<0.001$) than the hearing children (M=47.82, SD=0.84). Obviously, the negative emotions were perceived better in the control group than in the experimental group. No such regularity in positive emotions (happiness) and sadness was found.

The processing and interpretation of the results were related to the three main characteristics: "Perception of expression", "Understanding emotions" and "Recognition of emotions", building the content of the Emotional identification construct. Three levels of the individual components development were differentiated. A statistically significant difference between the children in the experimental and control group was found in the development level of "Perception of expression" ($\chi2=5.793$, $p=0.055$). No statistically significant differences were found in the components "Emotional comprehension" ($\chi2=0.683$, $p=0.705$) and "Emotional recognition" ($\chi2=2.862$, $p=0.235$).

The study of social-behavioral patterns in children from the experimental and control groups was carried out through ISB methodology. The analysis of the results showed that the same categories of social behavior were presented with different frequency in the experimental and control group. Significant differences were observed in the behavioral pattern "Gains the attention of a peer" ($p=0.037$) in the children from the experimental ($M=7.9$, $SD=4.14$) and control group ($M=13$, $SD=9.28$). This significant difference is mainly due to the need and willing-ness of hearing children to enter into social contact with other communicative partners. In this context, hearing impaired children do not express such a strong preference for social connection. Another statistically significant difference was ascertained between the experimental ($M=10.7$, $SD=4.55$) and control group ($M=19.3$, $SD=7.04$) in the category "Follows peer's activity" ($p=0.001$). From the data it became clear that hearing children have a significantly greater readiness for shared behavior in a group of people than the readiness of hearing impaired children for joint play. The verification for differences between the respondents from the two groups was also performed in the category "Expresses affection to peer" ($p=0.001$). It was established that the children in the experimental group ($M=1.4$, $SD=2.68$) have significantly more limited expression of positive emotions to their peers compared to the participants in the control group ($M=4.6$, $SD=5.15$), who showed as more emotionally educated in this regard. No statistically significant differences emerged in the other categories of social interaction. A general trend in the study was the lack of preferred behavioral patterns among children in both populations: "Refuses to follow a peer or ignores negative the lead of peer", "Responds to a request for help from a peer" and "Ignores a request for help from a peer".

The main research thesis was related to establishing the relationship between the different categories of behavior in children from the experimental and control groups with the characteristics of emotional identification: perception of expression, emotional comprehension, emotional recognition and combining them into certain behavioral strategies applied by the children. Factor analysis was used for this purpose. The method of the main components with varimax rotation was applied. The variables were: perception of emotions, emotional comprehension, emotional recognition and all items except "Competes for the attention of an adult". This category was not evaluated because no adult was present in the observed videos. When applying the factor analysis, behavioral patterns reported in no more than one child in both groups were excluded. In the experimental group, these were the following items: "Refuses to follow a peer or ignores negative the lead of peer", "Responds to a request for help from a peer", "Verbal competition", "Ignores a request for help from a peer".

After the analysis, four factors were identified, combining different variables in the children from the experimental group.

*The first factor*, termed "Reactive type of social behavior", explained 25.4% of the total variation (70.5%). The factor integrated the following indicators of social behavior: "Property protection" (0.922), "Emotional comprehension" (-0.848), "Takes another's property without permission" (0.864), "Expresses affection to peer" (0.840), "Perception of expression" (0.726). The content of the items reflected the relationship between emotional identification and individual behavioral strategies in the context of disorders in social interaction. Weighting factors took high values.

*The second factor*, specified as "Adaptive type of social behavior", explained 19.4%. of the total variation. The factor cooperated the variables: "Expresses hostility to peer" (0.872), "Model" (0.707), "Emotional recognition" (0.616), "Follows the lead of peer-positive" (0.578). The content of the items was aimed at measuring the relationship 'emotional identification – individual social behavior' in the context of the ability to adapt children to new conditions, people, rules, etc. Weighting factors gravitated around the medium and high values.

*The third factor* is "Passive type of social behavior". The factor was defined by medium and high factor weights in the items "Follows peer's activity" (0.823), "Imitates a peer" (0.630), "Shows pride in product or attribute to peer" (-0.557), "Follows the lead of peer-negative" (-0.523), "Follows the lead of peer-positive" (-0.503). The content of the items was focused on clarifying the correlation of 'emotional identification – individual social behavior' in the context of the indifferent acceptance of objective reality. The factor explained 14.4% of the variation.

*The fourth factor* is referred to "Controlling type of social behavior". The percent-age of explained variance was 11.3%. The factor was characterized by three items: "Leads peer in activities-positive" (0.648), "Leads peer in activities-negative" (0.616), "Emotional recognition" (-0.599). The semantics of the items was related to revealing the connection 'emotional identification – individual social behavior' in the context of the dominant position over the communicative partners, regardless of the degree of awareness of their own actions. Weighting factors were presented with medium to high values.

When applying the factor analysis, the control group did not include the categories: "Refuses to follow a peer or ignores negative the lead of peer", "Follows the lead of peer-negative", "Responds to a request for help from a peer", "Expresses hostility to peer", "Ignores a request for help from a peer". The analysis of the results in the control group allowed to identify other factors combining different variables.

*The first factor* that explained 23.3% of the total variation (64.7%) was "Positive-neutral type of social behavior". This factor included the items: "Emotional comprehension" (0.705), "Leads peer in activities-positive" (-0.571), "Emotional recognition" (0.688), "Model" (-0.637), "Follows peer's activity" (0.630), "Ignores the lead of peer-positive" (-0.571), "Expresses affection to peer" (0.532). The content of the items revealed the connection 'emotional identification – individual

social behavior' in the context of the ability to create a positive environment and conditions for effective activity of other partners in the interaction. Weighting factors ranged from medium to high.

*The second factor*, termed "Non-adaptive type of social behavior", explained 18.6% of the total variance. Its structure included the items: "Shows pride in product or attribute to peer" (0.833), "Gains the attention of a peer" (0.679), "Verbal competition" (0.533), "Follows the lead of peer-positive" (-0.488), "Emotional comprehension" (-0.480), "Emotional recognition" (-0.459). The content of the categories announced the connection 'emotional identification – individual social behavior' in the context of social adaptation. Weighting factors were characterized by sufficiently high values.

*The third factor* "Uncertain type of social behavior", that explained 12.0% of the variation, combined the items: "Perception of expression" (-0.624), "Property protection" (0.581), "Follows the lead of peer-positive" (0.574), "Leads peer in activities-negative" (-0.512), "Ignores the lead of peer-positive" (0.416). Their content is focused on clearing the interaction between emotional characteristics and behavioral strategies in the context of striving to build a behavioral model based on other people's opinions and judgments. Weighting factors varied between medium and high values.

*The fourth factor* "Imitating type of social behavior" included the indicators: "Verbal competition" (0.629), "Imitates a peer" (0.534), "Follows peer's activity" (0.532), "Leads peer in activities-negative" (-0.459). The content of the items reflected the discussed relationship in the context of imitation as a way to integrate into society. Weighting factors approached the high values. The percentage of variance explained was 10.8%.

**Discussion**

In the presented research the peculiarities of the emotional identification and the individual social behavior in hearing impaired children, integrated in the general educational environment (kindergartens) were studied.

There were examined three aspects of emotional identification – perception of expression, emotional comprehension, emotional recognition – among two groups: children with hearing impairment and hearing children. The findings portrayed a rich picture. The kindergartners from two groups exhibited comparable abilities in comprehension facially expressed emotions (photographs) and emotional recognition. Regarding perception of expression the listeners showed significantly higher performance than the children with hearing impairment. Differences across the six different emotions studied were noted in the two groups. First of all, it must be emphasized that as in previous studies on both hearing children and hearing impaired children, happiness and sadness were easier to identify, whether through facial expressions or in typical contexts, than were the other emotions (Gray et al. 2007).

The overall impression was that both the hearing impaired and hearing groups made most errors in identification the more complex emotions of disgust and fear, consistent with studies in hearing impaired and hearing children (Widen 2013). In both studies, children with hearing impairment were significantly poorer at identify disgust than hearing controls. The hearing impaired children may have a less well-developed concept of disgust as a result of differences in opportunity to discuss and overhear conversations about emotions, impacting their emotion recognition (Widen & Russell 2013). Disgust is similar to anger in intensity and has similar perceptual features, such as furrowing the brow and raising the upper lip, arguably making it difficult to disambiguate. The researchers also noted that discourse on disgust is less prevalent than discourse on other emotions (Gray et al. 2007). Disgust is often the last emotion for typically developing children to accurately label, and so it is logical that this emotion would pose the most difficulty for hearing impaired children (Widen 2013). The hearing impaired children made more errors than the hearing peers in identifying another complex emotion – fear. Fear is a borderline emotion and can also be identified with anger – anger and fear faces convey messages of "threat" (Springer et al. 2007), which is why the hearing impaired children encountered many difficulties in performing diagnostic tasks. There was a opposite trend in the emotion of surprise – the hearing impaired children did definitely better than the hearing peers, although 'surprise', like negative emotions, was difficult to recognize. Previous studies suggested interesting interpretation for the greater difficulty in understanding surprise. They explained surprise as a complex emotion that comprises understanding of the basic emotion of happiness as well as understanding of expectations or beliefs that were not realized (Golan et al. 2006). This study is consistent with other reports that have also found that the performance of hearing impaired children (with CIs) was better than hearing children in terms of identifying certain types of emotions (Rieffe et al. 2015). These findings might suggest that CIs are giving better access to sound and therefore greater access to conversations about emotions. However, it is important to highlight there appears to exist wide variability in the effectiveness of CIs for hearing impaired individuals (Niparko et al. 2010). Moreover, considering that the order of accuracy in hearing impaired children's labeling of emotions matches that of typically developing children, it can be suggested that this provides evidence for the role socialization and language in the gradual emergence of the ability to accurately categorize emotions (Widen 2013). This may indicate that the visual and contextual cues are sufficient for hearing impaired children to recognize emotions when using ecologically valid stimuli in the domain of emotion identification. For instance, younger native signing hearing impaired children (5 – 7-year-olds) with early access to language have been shown to have comparable emotion recognition to their hearing peers (Ziv et al. 2013). While hearing impaired children's BSL (Bulgarian sign language) receptive vocabulary might not directly relate to their

emotion recognition performance, differences in early discourse with parents about emotions, for example, may be more explicitly related.

The data subjected to factor analysis allowed combining the emotional identification characteristics and the individual social behavior categories in four factors in the control and experimental group. The following types of social behavior were generated in the hearing impaired population: Reactive, Adaptive, Passive, Controlling. In the group of hearing children emerged: Positive-neutral type, Non-adaptive type, Uncertain type, Imitating type.

Behavioral strategies typical of children with impaired auditory modality corresponded to the factors presented in the experimental group. Children's behavior, that is largely described by the first factor (reactive), implies a high level of perception of expression and at the same time – a low level of comprehension skills. This means that children do not strive for empathy and understanding of the communicative partner's emotions, but are interested in how safe he/she is for their safety. Suspicion is permanently fixed in their attitudes toward others. The results of this study were supported by other research data, according to which the main reason for the mentioned patterns were language delays (Rieffe 2012; Peterson & Slaughter 2006). The hearing impaired children born to hearing families are more vulnerable to language delays. The potential mismatch of communication modalities used between hearing impaired children and their families could be linked to this (Moog & Geers 1985). On the other hand, the hearing impaired children are able to experience positive emotions towards their peers, which is largely determined by the attitudes and beliefs of hearing children and what may mediate this (Most & Michaelis 2012). The high indicators in the categories of "property protection" and "takes someone else's property without permission" confirmed that in their behavior these children are guided by their own motives and often their actions do not correspond to the emotions and feelings of others. The children whose behavior was assessed by the second factor as adaptive are able to identify other people's emotions. They are highly adaptable in the integrated group. They can serve as a model for the peers and take their own initiatives. Analogous encouraging results have been found in earlier research dedicated to the issue of social development and friendships with hearing peers (Bat-Chava et al. 2005). The researchers postulated that early diagnosis of hearing loss, the more efficient interventions, with high quality hearing aids and the use of cochlear implants, may be associated with better communication outcomes. Improved oral communication skills may facilitate social interactions with hearing peers and make better children's perceptions of their hearing impaired peers, thereby leading to improved friendships and increased socio-emotional benefits for hearing impaired children. These comments are relevant today. It is important to note also that it is not excluded that some representatives of the mentioned behavior type may show hostility towards other children (in the form of personal disaffection, physical barrier to their actions, etc.).

This could be due to the still poor social experience. The passive type of behavior, best described by the third factor, reveals an indifferent attitude to the other's emotions. This part of the children do not signify understanding to the interlocutors, approach their emotional world with indifference and, therefore, do not join the play of the children in the group. Their game models were primitive – secluded or characterized by an elementary imitation of the peers' actions. In general, their game is at a low level of development. The most obvious reason for this playful behavior type of hearing impaired children was that they were not selected as play partners as frequently as were other non-handicapped children (Guralnick 1990). Without a shared understanding of events, activities, rules, and so forth, with their peers, connectedness and therefore competent social exchanges are not possible. Behavior, which is largely described by the fourth factor (controlling), is characterized by a low degree of emotional identification. To ensure their own safety without trying to assess the situation, these children impose their own rules, which helps them structure reality. The root of these behavioral expressions is in the specific way of forming their identity under the influence of the appropriate parental upbringing style. The described profile of social behavior is evidence of an authoritarian parenting style. Children subject to this parenting style have not gone through the process of individualization. They identify with the parents and internalize their attitudes and values (Noller 1994), exactly – do not take into account and comply with the needs and wishes of communicative partners, do not compromise, do not explain their decisions.

The behavioral strategies that emerged in the children from the control group were consistent with the other four factors. First of all, the children with positive-neutral type of behavior, belonging to the descriptive model of the first factor, had a high level of understanding of their communicative partners' feelings, a good activity in the interaction and positive emotional charge. However, they had no ambition to lead and win universal favor of peers. This can also be considered as a effective strategy for achieving harmony with the peers (Black & Hazen 1990). Children are frequently confronted with the task of entering into already existing groups of children in order to participate in ongoing activities. This is a circumstance that occurs repeatedly in preschools as children shift from one activity to another. The second factor (non-adaptive) confirmed behavior that was distinguished by a low comprehension ability of the resulting emotional events. Interest aroused the fact that these children, unlike the hearing impaired children, who demonstrated a controlling type of behavior, did not seek to determine their own rules and control over the situation, but preferred less radical ways of interaction, such as: gaining peers' attention, initiating games, expressing undisguised pride in personal achievements and successes. The third factor (uncertain type) outlined behavior involving a poor ability for emotional perception. The lack of confidence in these children is a barrier to adequate assessment of the current emotional state of peers,

which determines their discomfort in the group. In some cases, the appearance of behavioral patterns that do not comply with generally accepted norms and rules is even possible. Obviously, reliable mechanisms for coping in a certain social context have not yet been developed, and it is difficult to establish friendly relations with peers. Contrary to expectations, it was difficult for these children to establish friendly relationships with their peers. The establishment of positive peer relations is crucial for children's global socio-emotional development, advancing emotional regulation and expression, while simultaneously fostering communication skills and aspects of cognitive development, such as perspective taking (Kennedy 2013). Children's behavior, which is assessed mainly by the fourth factor (imitative), is not related to the emotions of others. It is very likely that in the dynamic interaction process with peers, their actions are stimulated by the desire and interest to imitate the activities of other children, without this means a purposeful emotional response and an in-depth understanding of the situation. Similar results have been found in previous studies aimed at clearing appropriate strategies for extended social contact with peers (Corsaro 1981; Dodge at al. 1983).

The analysis led to the summary that hearing and hearing impaired children had such strategies of social behavior that did not based on emotion comprehension of their communication partners. Despite the similarity between the two groups, it should be noted that the behavior of hearing impaired children was related to their active participation in the specific event. They sought to control the situation and did not allow anything to happen that was beyond their personal comfort zone. No such effect was found among the listeners. Moreover, when they had difficulty decoding the peers' emotional patterns, they tried to imitate their external behavior and follow them in the actions.

**Conclusion**

The focus of the present study was to examine the relationship 'emotional identification – individual social behavior' in hearing impaired and hearing children of preschool age, educated in the integrated groups of kindergarten. In connection with the characteristics of emotional identification it was proved that the hearing children did better in terms of basic assessment of other people's emotions then the hearing impaired children. It was also found that the negative emotions were better identified by the listeners compared to their peers without hearing experience. Moreover, the hearing impaired children, compared to the control group, were more likely to gain a peers' attention, follow them in their activities, join their play and express positive emotions towards them. The relationship between the characteristics of emotional identification and the categories of individual social behavior was confirmed. Differences in the structure of the relationship between the characteristics of emotional identification and the categories of social behavior in hearing impaired and hearing children were

found. As a result, four different types of individual behavioral strategies typical of both populations were generated.

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