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Mental States of Children with Hearing Disorders in a Forecasting Situation

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Abstract. This article describes the correlation and interdependence of mental states and forecasting capabilities of children of primary school age with hearing disorders and normotypic development. It reveals the specificity of the forecasting structure depending on the severity of mental states. Determining the modality of mental state involved the "Locomotive" method, the level of anxiety was measured using the "Anxiety Test" technique, and forecasting skills were assessed according to the method called "The ability to predict in situations of potential or real violation of social norms". It was found that forecasting of children with hearing disorders prediction in their communication with adults is determined by the state of anxiety. Forecasting of children without any hearing disorders is not directly associated the severity of a mental state. The modality of mental state and the level of anxiety determine the structure of forecasting.

1. Introduction

Emotional development of children with hearing disorders are characterized by various degrees of severity, variability. Children get limited information about emotions. They face difficulties in using emotional language means and verbalizing their states. Children of primary school age with hearing disorders experience difficulties in interacting with other people, in understanding their own emotional state because of features in their mental and speech development [1].

Children with hearing impairments are able to reproduce emotions according to verbal or graphic description with the help of facial expressions; they determine emotions by action or specific signs. Due to underdeveloped oral skills, they turn out to be somewhat isolated from verbal communication with other people which interferes with gaining social experience and cause difficulties in understanding their own emotions or emotions of other people [2].

The issue of assessing prognostic competence and its development in conjunction with mental states of children of primary school age with hearing disorders is still open for discussion. When a person receives some verbal information, he can anticipate its outcome, and then, based on one's own experience, model the future situation and act accordingly. But since the perception of oral speech in children with hearing disorders is impaired, they face difficulties in building a forecast based on perceived information and this leads to a decrease in understanding of this information [3].

The process of forecasting activity in children with hearing disorders requires more time than in children with no auditory pathologies. It is explained by the fact that schoolchildren with hearing disorders have difficulties in mental activities, socialization restrictions, and concomitant diseases [4]. It was also found that younger schoolchildren with intact intellect and a good level of speaking skills formulate forecasts in almost the same way as children with no pathologies [4].

2. Research Organization

The research involved children with hearing disorders, pupils of a boarding school for children with disabilities (15 individuals), as well as 15 school-age children with normal development. The research was conducted on an individual basis. Children were offered stimulus material and they listened to the

instructions. The duration of each meeting was approximately 15-20 minutes; researchers followed the changes in the state of children during the whole process. The following methods and techniques were used:

1. "Anxiety Test" (M. Dorkey, E. Amen, R. Tamml). The "Anxiety Test" (M. Dorkey, E. Amen, R. Tamml) helps to study the severity of children's anxiety. The severity of child's anxiety shows how well he is adapted to various social situations from emotional point of view and indicates the child's attitude to a particular situation.

2. "Locomotive" (S.V. Velieva). The "Locomotive" technique (S.V. Velieva) helps to determine the prevalence of positive or negative mental state in children.

3. "The ability to predict in situations of potential or real violation of social norms" (team of the Department of Defectology and Clinical Psychology of KFU). The "The ability to predict in situations of potential or real violation of social norms" methodology (developed by the team of the Department of Defectology and Clinical Psychology of KFU) helps to assess children's forecasting skills, the course of socialization and early signs of deviant behavior.

The data from two samples were processed and analyzed. We used correlation and structural analysis.

3. Analysis of the Results of the Study of Mental States in a Situation of Forecasting

Correlation analysis showed that forecasting activity of children with hearing disorders in their communication with adults is determined by the state of anxiety. Forecasting of children with no hearing disorders is not associated with the severity of a mental state and anxiety.

Next, we shall consider the forecasting structure of students with negative and positive mental states (refer with: Fig. 1,2).

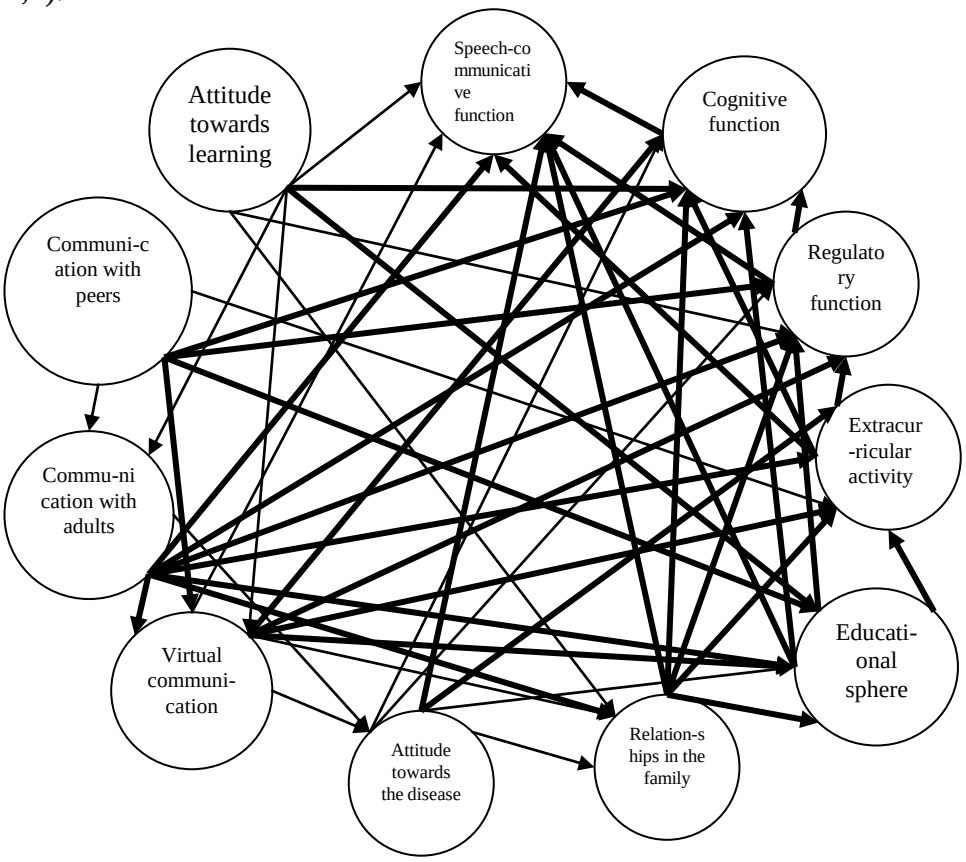

Figure 1. Forecasting Structure of School Children with Hearing Disorders with a Negative Mental State.

Children with hearing disorders who are more likely to experience negative mental states have a complicated forecasting structure—it contains many significant relationships between forecasting characteristics. Forecast is determined by cognitive and regulatory functions, educational sphere, the spheres of communication with adults and virtual communication.

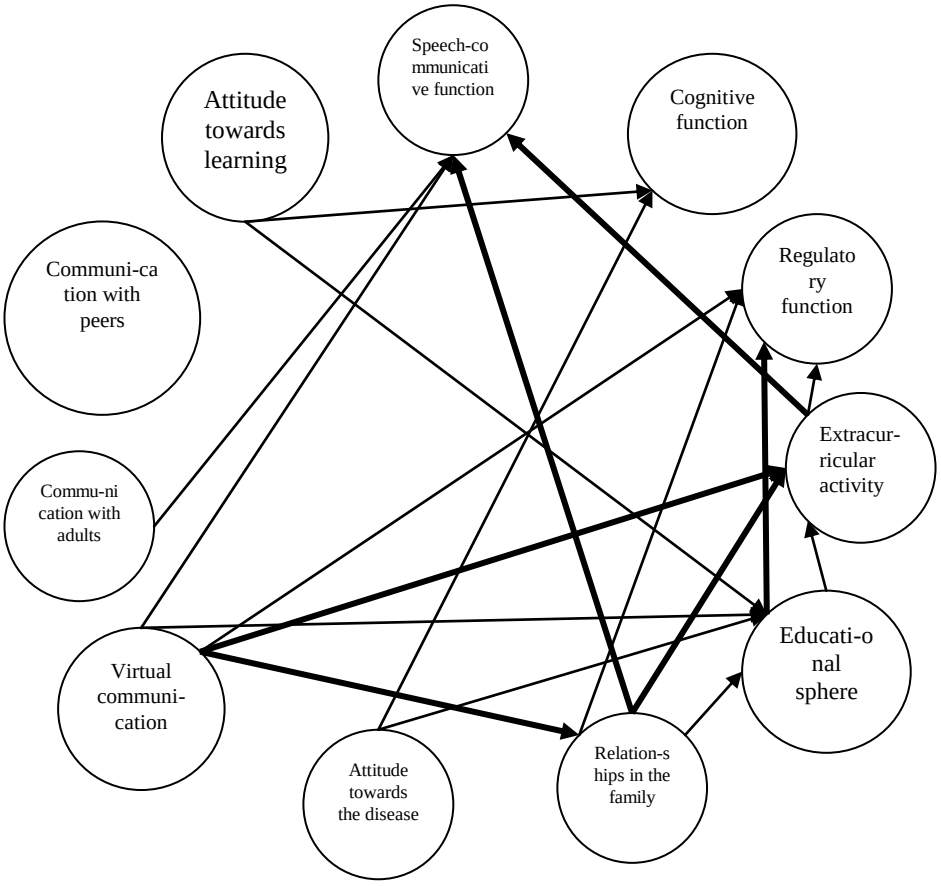

Figure 2. Forecasting Structure of School Children with Hearing Disorders with a Positive Mental State.

The forecasting structure of children with hearing disorders who are more often in a positive state is less organized. The forecasting processes are determined by the educational and extracurricular activities, as well as by the sphere of family relations and virtual communication.

Having compared the forecasting structure of children with hearing disorders depending on the modality of mental state, we revealed that the modality of mental state determines the structure of forecasting. Forecasting processes are built more easily without the inclusion in the process of numerous relationships of characteristics in positive mental states. It was also revealed that the leading characteristics of forecasting in positive and negative mental states are the areas of education and virtual communication.

Let us consider the forecasting structure in a subgroup of children with medium-level anxiety. The forecasting structure of children with hearing disorder with a medium-level anxiety is complicated and has interrelations of high level of significance. Forecasting processes are determined by attitude towards learning, educational and extracurricular areas, as well as by the speech-communicative function. It means that these areas and functions determine the specifics of forecasting if a subgroup of children with a medium-level state of anxiety.

Next, we shall consider the forecasting structure in a subgroup of children with a low level anxiety. Forecasting structure of children with low level of anxiety is less complex—it includes a small number of correlations of medium significance. Forecasting is determined by such areas as communication with

adults, virtual communication, extracurricular activities and cognitive function. These areas and functions determine the specifics of forecasting of a subgroup of children with a low level of anxiety.

The severity of anxiety determines the specificity of forecasting. With moderate anxiety, the forecasting process includes close interrelations of the characteristics of forecasting skills. With low level of anxiety, forecasting processes seem to be less complicated. We also discovered that both subgroups have a common indicator that acts as a structure-forming basis in forecasting—extracurricular activity. It is the area of extra-curricular situations in which forecasting can also determine the forecasting in other areas of life of children with hearing impairments.

Children with low level of anxiety have no problems in the educational sphere and they are more concerned about the sphere of communication with adults and peers. For children with a moderate level of anxiety, attitude towards learning, educational and extracurricular spheres are of decisive importance.

The research shows that educational sphere is critical for almost all subgroups of children (except for children with a low level of anxiety). It may be explained by the fact that educational activities at this age are the leading ones in the lives of children. The subgroup of children with a low level of anxiety includes children of the 1st grade and for them gaming may still be a predominant activity since the process of adaptation to school is incomplete.

The area of virtual communication is a structure-forming one in the forecasting structure of all subgroups, except for the children with an average level of anxiety. Perhaps it may be explained by the fact that modern life makes virtual communication more and more important (social networks, websites, chats and virtual groups etc.). Children can transfer the experience of interaction and their skills for predicting the development of relations in social networks to other areas which is confirmed by their importance (communication with adults, peers, relationships in the family). As for more anxious children and children with a predominance of negative states, the determining function for them is a speech-communicative function which determines interaction with other people, submission to social norms, recognition of emotions and states of other people.

4. Conclusions

1. The modality of mental state determines the structure of forecasting. Forecasting processes are built more easily in positive mental states without the inclusion in this process of numerous relationships of characteristics. In positive and negative mental states, the leading characteristics of forecasting are the areas of educational and virtual communication;

2. The severity of anxiety determines the specificity of forecasting. With a moderate anxiety, the forecasting structure includes close interrelations between the characteristics of forecasting skills. With a low-level anxiety, the forecasting structure is less complicated. It was discovered that both subgroups have a common indicator that acts as a structure-forming basis in a forecasting activity—the extracurricular activities.

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