

ANTICIPATION IN THE CONDITIONS OF INTELLECTUAL AND MENTAL DISABILITY

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ABSTRACT

The article presents the developed analysis of anticipation problem and that of probabilistic forecasting at good health as well as at mental disability, schizophrenia, neurosis, speech pathology etc. The author proceeds from the understanding that all the Gnostic and motor activity of a person is regulated by anticipatory-prognostic process. The prognostic processes are based on the probabilistic structure of the past experience and information of the present situation. The previous experience and external situation serve as the basis of hypotheses about the upcoming future. According to the prediction, preparations for appropriate actions are made. Based on the theoretical analysis of the developed problem of anticipation in norm and pathology we come to conclusion that probabilistic forecasting has adaptive - maladaptive character, and anticipatory incompetence is observed at intellectual or mental disability.

Keywords: anticipation, probabilistic forecasting, anticipatory competence, process of mental reflection, ontogenesis

INTRODUCTION

Due to the adaptive-maladaptive psychological nature of probabilistic forecasting, the problem of foresight and anticipation was worked out enough in normal development as well as in mental disability, schizophrenia and neuroses [1, 2, 3, 4, 5, 6, 7, 8, 11, 13, 14, 15, 16, 17, 23, 24, 27, 28, 26, 30]. The research results show that at mental or intellectual incompetence anticipatory incompetence is also observed.

In psychological studies of human activities and the activities disorder in schizophrenia I.M. Feigenberg developed the idea of anticipation as the process of probabilistic forecasting. In any activity a person foresees the most likely possibilities for further development of events, including the most likely outcomes of their own actions. Thus, without probabilistic forecasting any human activity would have been impossible [11]. The author points to the source of forecasting occurrence in activities, which is analysis of relevant information coming through the analyzers and its comparison with the past experience.

Applying his model of probabilistic forecasting to analyze the mental and intellectual disabilities I.M. Feigenberg considered violation of the probabilistic forecasting mechanism as schizophrenia peculiarity. In his view this feature is found in various types of schizophrenic disorders: in violation of thinking and emotional response. I.M. Feigenberg noted that healthy people store the past experience in memory in the probabilistic organized form. This means that one does not only keep traces of events occurring in the

experience of a person, or just temporary connections, associations between events, but also information on how likely the event occurred. The orderly use of the past experience in memory allows us to implement probabilistic forecasting and be prepared for action in the projected situation (presetting). In schizophrenic defect probabilistic forecasting and presetting are violated. Patients act as if while keeping in their memory events from the past experience, information about the likelihood of these events is disorganized. Hence the inability of a decision making, based on correlation of the present situation with the past experience that gives rise to pathological forms of probabilistic forecasting, and as a consequence, pathological forms of activity [11].

Clinical analysis of psychopaths' behavior, held by V.V. Gul'dan and V.A. Ivannikov [13], revealed that psychopaths and healthy people have significant differences in performance with the use of probabilistic forecast, based on the past experience [13]. Healthy people adapt to the environment with changing statistical structure by means of restructuring subjective forecast. For patients under study direct submission to a situation is characteristic, where the past experience is not dominant in the regulation of their own actions. Characteristic is inadequacy of forecasting and the decreased ability to use the past experience to regulate their actions in meaningful situations.

METHOD

Method was based on the theoretical analysis of the developed problem of anticipation in norm and in pathology.

RESULTS AND DISCUSSION

The research results of the probabilistic forecasting in the state of neurosis, carried out by V.V. Solozhenkin and G.G. Noskov [26] show the relationship between the nature and extent of forecasting violations and the form of neurotic disorders [26].

According to D.N. Menitsky, in neuroses there appears the strategy of probabilistic indifference, the simplified strategy of forecasting activities [18].

In recent years Mendelevitch V.D. proposed, supported and tested on the adult contingent anticipatory concept of neurosis-genesis mechanisms [15,16]. Within this concept neurosis-genesis is considered as a result of the individual's inability to anticipate the course of events and their own behavior in frustrating and subjectively important situations, due to the premorbid personality characteristics of the so-called "potential neurotic", named anticipatory incompetence unlike anticipatory competence (predictive competence) of the so-called "neurosis resistant personality".

Personality, prone to neurotic disorders either excludes undesirable events and actions from their anticipatory activity, focusing only on the desired ones, or adequate prediction is dissolved in a variety of unlikely projections. Finding himself in an unpredictable, unfavorable and forced out in this regard from the "situational scenario" life conflict, a person is under time pressure for the application of coping - behavior. And even if the system of his psychological compensation is functioning normally, in terms of differences between the forecast and reality and at severity of extreme emotional distress (resentment, frustration, bewilderment) associated with this prognostic error, a person can fail to use the potential for coping with the situation and can give neurotic reaction. There are two neurosis-producing types of probabilistic forecasting: monovariant and polyvariant one unlike sano-genetic mechanism of norm-variant forecasting.

In her thesis D.A. Mukhametzhanova provides an assessment of anticipatory parameters and probabilistic forecasting in healthy children and those with neurotic disorders, their impact on etiopathogenesis of children's neurotic disorders, the study of factors affecting the formation and possible retardation of

abilities for probabilistic forecasting during the child's development for the purpose of early prevention of neurotic disorders [22].

On the basis of these results D.A. Mukhametzyanova proved that these children were brought together by rigid strategy of focusing on predicting events only for one course of events selected in the process of learning [22].

Lack of knowledge about the features of overcoming stressful situations in normal conditions and in different types of mental disorders has been a source of problem research identifying relationships of anticipatory competence, various types of psychological defense and coping-strategies of a person on the example of mentally healthy people and those suffering from psychosomatic and neurotic disorders [1,2]. The author has revealed the relationship between anticipatory competence, psychological defense and coping-strategies of a person both in norm and in psychosomatic and neurotic disorders. It is proved that mentally healthy people have a competence for such coping-strategies as confrontational coping, planning of problem solving, positive re-evaluation; taking responsibility; distancing and self-control. They use adaptive coping-strategy of "optimism" more frequently than mentally disordered patients.

The experimental - psychological study of the relationship of thought, creativity and anticipatory activity features of healthy individuals and patients with schizophrenia has showed that personality - situational component of anticipatory activity of healthy individuals is higher than that of patients with schizophrenia, and temporal and spatial components have equal value. T.V. Ryabova and V.D. Mendelevitch have noticed a tendency: the higher a personal - situational component of anticipation is, the higher the rate of flexibility in the structure of creative thinking of schizophrenics.

The presence of fluency and flexibility of thought among mentally healthy people promotes prognostic competence and availability of original thinking does not favour to efficiency of anticipatory activities [25].

Significant contribution to the study of the probabilistic forecasting features of healthy children and those with pathology is made by L.I Peresleni [23].

The author has carried out a comparative research of probabilistic forecasting in 8-9 year old healthy children and intellectually disabled children. The study of children of the senior pre-school age and of primary school age is of particular importance due to the fact that at the beginning of schooling the difference between normal development and mental disabilities is revealed quite clearly. L.I. Peresleni clearly showed that children with normal intelligence, good achievers in regular school, show pronounced ability to probabilistic forecasting. Children with psych-physical, mental retardation, as well as those with intellectual disabilities show the process of probabilistic forecasting insufficiently [23].

Held by V.D. Mendelevitch and E.V. Makaricheva analysis of the specific character of anticipatory incompetence and accentuations forms underlying eating disorders, overvalued interests, sexual misdemeanors and communication violations showed that adolescents with deviations in their behavior observe anticipatory incompetence significantly more frequently than healthy teenagers.

Teens under study were significantly less able to predict the behavior of others, to anticipate their actions and statements, and also to plan their own behavior. In addition, the patients were characterized by an inability to plan and structure the time and coordinate their own movements [17].

The research of anticipation, probabilistic forecasting and social intelligence was conducted in patients with mental retardation, the interaction of these parameters between one another being analyzed along

with their dependence on the patients' IQ and age [30]. They examined 65 patients diagnosed with mild to moderate mental retardation. The majority of patients studied showed a reduction in ability for anticipation (58.5%) and probabilistic forecasting (63.1%). A significant relationship ($p < 0, 05$) between the probabilistic forecasting and decreased intelligence (the lower intelligence is, the lower the ability to the probability forecast) is established, but a significant relationship of anticipation with intelligence could not be detected.

It is logical to think that verbal behavior like other types of behavior also relies heavily on the probabilistic forecasting.

Of great interest is the study of probabilistic forecasting at different types of speech pathology. Thus, in a number of studies it is shown that in different types of speech behavior in norm (e.g. in perception and processing of speech information) a person relies on a speech forecast and "in human speech mechanism there exists a certain organization of words by frequency" [12, 9, 21].

It is shown, for example, that at schizophrenia there is a significant violation of the probabilistic forecasting of speech activity. A patient with aphasic speech disorders, on the contrary, does not come to the destruction of the probabilistic organization of speech experience on both phonemic and verbal level [12].

Akhmetzyanova A.I. in her studies carried out a comprehensive and systematic development assessment of such psychological phenomena as anticipation and probabilistic forecasting in preschool children with general speech underdevelopment and assessing the relationship between these two parameters. It is revealed that the prevailing group of children with general speech underdevelopment shape adequate forecast of events at a slower pace, with lots of "distraction mistakes", using irrational strategies, which allows us to consider the above-mentioned phenomena as the differential-diagnostic criteria for assessing the level of speech development [3,4,5,6,7,8]. Diagnostics of the personal-situational parameters of anticipatory competence in children with general speech underdevelopment indicates a pronounced deviation of these parameters from the norm, which is manifested in the inability for communicative prediction of the events, behavioral responses of others and their own actions. Results of the study revealed the presence of a number of chronometrical component features of anticipatory competence in violation of speech development. The results of research and analysis of indicators of children's with general speech underdevelopment adaptation to the social environment suggest a lack of anticipatory competence development of these children. The latter becomes apparent in the increased conflictness, reflecting the child's inability to anticipate the events and their own behavior in frustrating and subjectively important situations [3, 4, 5, 6, 7, 8].

Solobutina M.M. made an attempt to study the speech forecasting both at normal under the stress negative influence state and in neurotic disorders [27, 28]. Her research has allowed her to expand ideas of rehabilitating processes in their relation with the anticipatory competence in norm at healthy individuals and at patients with neurotic disorders. It was assumed that the impaired ability to predict determines social maladaptation as anticipatory abilities of an individual are a factor of a psychologically healthy, resistance to stress, able to overcome life difficulties personality.

Korn C.W., Sharot T., Walter H., Heekeren H.R., & Dolan R.J. conducted a study of anticipation in patients suffering from major depressive disorders (MDD) [14]. It is well known that healthy people show an optimistically biased updating pattern, taking desirable information more into account than undesirable information. However, it is unknown how patients suffering from major depressive disorder (MDD), who express pervasive pessimistic beliefs, update their beliefs when receiving information about their future. This research tested whether an optimistically biased information processing pattern found in healthy

individuals is absent in MDD patients. MDD patients (n=18; 13 medicated; eight with co-morbid anxiety disorder) and healthy controls (n=19) estimated their personal probability of experiencing 70 adverse life events. After each estimate participants were presented with the average probability of the event occurring to a person living in the same sociocultural environment. This information could be desirable (i.e. average probability better than expected) or undesirable (i.e. average probability worse than expected). To assess how desirable versus undesirable information influenced beliefs, participants estimated their personal probability of experiencing 70 events for a second time. The results showed that healthy controls expressed an optimistic bias in updating, i.e. they changed their beliefs more toward desirable versus undesirable information. Overall, this optimistic bias was absent in MDD patients. Symptom severity correlated with biased updating: more severely depressed individuals showed a more pessimistic updating pattern. Furthermore, MDD patients estimated the probability of experiencing adverse life events higher than healthy controls. Authors' findings raise the intriguing possibility that optimistically biased updating of expectations about one's personal future is associated with mental health.

There is an interesting study of anticipation of individuals suffering from social phobia. Anticipatory processing is an anxious style of repetitive negative thought associated with social anxiety (SA) that was proposed by Clark and Wells. Considerable research has examined factors of Clark and Wells' cognitive model of SA1 (e.g. attention, interpretation), but few studies have examined anticipatory processing, which is hypothesized to interact with other components in the model. In the current study, individuals high in social anxiety symptoms (HSA; N = 56) and control participants [Normal Control (NC); N = 52] engaged in an anticipation or distraction task prior to a threatened social interaction. HSAs who anticipated had higher self-focused attention than NCs who anticipated and HSAs in the distraction condition, suggesting an important relationship between anticipation and self-focus that is specific to HSAs. Those who anticipated endorsed more negative interpretations than those who engaged in distraction, regardless of SA status. However, this relationship was mediated by self-focus. Implications in the context of Clark and Wells' model and future directions are discussed.

Sustained anxiety about potential negative future events is an important feature of anxiety disorders. In the study a novel anticipation of shock paradigm was used to investigate individual differences in functional connectivity during prolonged threat of shock [10]. The correlates of between-participant differences in trait anxious affect and induced anxiety, where the latter reflects changes in self-reported anxiety resulting from the shock manipulation were examined. Dissociable effects of trait anxious affect and induced anxiety were observed. Participants with high scores on a latent dimension of anxious affect showed less increase in ventromedial pFC-amygdala connectivity between periods of safety and shock anticipation. Meanwhile, lower levels of induced anxiety were linked to a greater augmentation of dorsolateral pFC-anterior insula connectivity during shock anticipation. These findings suggest that ventromedial pFC-amygdala and dorsolateral pFC-insula networks might both contribute to regulation of sustained fear responses, with their recruitment varying independently across participants. The former might reflect an evolutionarily old mechanism for reducing fear or anxiety, whereas the latter might reflect a complementary mechanism by which cognitive control can be implemented to diminish fear responses generated due to anticipation of aversive stimuli or events. These two circuits might provide complementary, alternate targets for exploration in the future pharmacological and cognitive intervention studies.

Minullina carried out the research of the family influence and that of personal specific features of parents on the formation of anticipation inconsistency of drug addicts [20]. A theoretical analysis of the concepts of the anticipatory competence, predictive competence, predictive abilities and stochastic forecasting was carried out. The empirical research carried out within the anticipation concept of neurogenesis by V.D. Mendelevitch provides results of predictive abilities (anticipatory competence) of drug addicts and their

parents [15]. It was stated that the strategy of parents forecasting is one of the factors of predictive competence formation in children. It was also revealed that a stable pathogenic pattern determining the maladaptive forms of behavior (including the dependent ones) exists in the families of drug addicts.

CONCLUSION

Thus, the problem of anticipation as it permeates all the problems of psychological science. In one form or another it arises in the study of both mental processes and mental states, and mental characteristics of a person.

Based on the theoretical analysis of the developed problem of anticipation in norm and in pathology it can be concluded that the probability forecasting has adaptive - maladaptive character, and at intellectual or mental disability anticipatory incompetence is also observed.

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