Features of school-based anxiety of intellectually gifted adolescents in the modern educational system

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Abstract. The article analyses the concept “school-based anxiety” in terms of current trends and innovations in education. It describes the study of school-based anxiety of intellectually gifted schoolchildren. We revealed the prevalence of personal, situational and other types of school-based anxiety in gifted adolescents. Increased personal, situational and school-based anxiety is associated with high cognitive motivation and motivation to achieve. A high degree of awareness and reflexivity of senior pupils make the educational sphere significant (super-significant) for gifted children. The disharmonious development of various areas of the personality of an intellectually gifted child does not always allow us to correct anxiety with various strategies of coping behavior. Behavioral and emotional manifestations of anxiety often prevent an adolescent from realizing his own potential. According to the study results, it is recommended to teach intellectually gifted senior pupils special methods of emotional regulation, attention switching, and methods of correcting their behavior using special programs. Vacation and profile sessions should include not only profile classes, but also coaching programs of both individual and group forms for the all-round development of an intellectually gifted adolescent’s personality with the aim of harmonious preparing him for activities in a world of uncertainty.

The personal characteristics of modern schoolchildren have long grown out of generally accepted standards of the 20th century. All the changes and improvements that everyday come into our lives influence the intellectual and personal development of children and adolescents. Feldstein D.I. in a mass study of modern schoolchildren describes trends in the cognitive processes of children and schoolchildren. The personality sphere of children of the new breed is also changing. Living in a world of uncertainty changes the nature of relationships between people. Particular care of childhood and children development leads to an increase in the level of intellectual development of some children. But along with this the current educational system fails to keep up with the requirements of modern children and adolescents, which often leads to neurotization, an increase in the negative personal

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qualities of the most promising part of children – the intellectually gifted children and adolescents.

Researchers define anxiety as part of an adaptive behavior mechanism that contributes to mobilization of the body's forces and resources. However, it was revealed that many people are in a constant state of anxiety, which is becoming a stable personality trait. This condition can then interfere with a person, not allowing to fully reveal his potential, to realize himself [1].

In Russian psychology Levitov N.D., Prikhozhan A.M., Spilberger Ch.D., Khanin Yu.L., Hekhausen H., and others define anxiety as an experience of emotional discomfort associated with a presentiment of imminent danger, the expectation of ill-being [2]. Prikhozhan A.M. considers that anxiety is a form of experiencing emotional discomfort, which is associated with a presentiment of impending danger, ill-being or an undesirable event. The author also admits the manifestation of anxiety as an emotional state and as a personality trait or temperament [2]. Siljaeva E.G. considers that anxiety is a persistent negative experience, discomfort and the expectation of ill-being from the outside. From the point of view of Davydov V.V., anxiety is a psychological feature of a particular person, which is expressed in an increased tendency to feel concern in a wide variety of life situations.

School-based anxiety is a manifestation of fears and concerns about the school situation, subjects or relationships associated with school. School-based anxiety has many different designations in psychological literature: "didactogeny", "school phobia", "school neurosis", "didactogenic neurosis", but there are certain differences between them [3]. The phenomenon of "school neurosis" happens in case of neurotic processes that manifest at an unconscious level in the form of anxiety and somatic reactions (vomiting, headache, fever, etc.). The basis of school neurosis is an internal personality conflict before attending school.

Gurov V.A. believes that school anxiety is a mild form of a child's emotional distress and can manifest itself in unsystematic activities, which leads to a decrease in its productivity and quality. Klimov E.M. considers that success or failure of a student depends on the cognitive activity of a personality, which determines the student's level of assimilation of acquired knowledge, the level of its perception, and processing. From his point of view, school anxiety is the result of interaction of an individual with a situation. Miklyaeva N.V. and Rumyantseva T.V. believe that feelings of anxiety cannot be avoided at school age, since learning is always accompanied by anxiety, which occurs because of maladaptation and, in fact, has no objective reason for its manifestations.

As an object of study, we are interested in students with intellectual giftedness. Such adolescents, according to the observations of researchers, do not always have completely high rates in all development parameters. One of the manifestations of psychological difficulties in educational activity in highly intellectual adolescents is noted as an experience of anxiety. The works of domestic researchers – phenomenologists – Bozhovich L.I., Zakharova A.I., Kochubey B.M., Slavina A.S., Prikhozhan A.M. underline the negative impact of increased anxiety on the manifestations of cognitive and creative activities of students, their interpersonal relationships and self-understanding and self-esteem.

Miloslavsky M.A., Yurganov A.A. investigated the anxiety of students with various types of academic motivation and distinguished six types of learning behavior, for which various signs and manifestations of anxiety are relevant. Students with a high type of cognitive motivation, but a low level of achievement motivation, demonstrate the highest manifestations in a sense of shame, guilt and fear for the success of studying; such students even can develop psychosomatic conditions on an unfavorable background of self-awareness. In the group of students with the most favorable type of motivation - high

cognitive motivation, achievement and self-development motivation, the highest anxiety was revealed in all areas - attitude in studies, relationships with adults and other types. Presumably, a high degree of awareness and reflexivity of students with high motivation is associated with their anxiety in this area [4].

An increased level of anxiety in a highly intellectual child may indicate a lack of emotional adaptation for various academic situations. It often happens due to anxiety about the threat to his prestige, about real or imagined dangers. Such anxiety differs from a state of fear when a real threat is present. Personal anxiety is generalized and diffused; in this situation, it can manifest itself in a violation of productive activity. Personal anxiety is not a negative personality trait; its optimal level is a necessary and natural condition for personal activity that determines the behavior of a student. The anxiety of a highly intelligent child manifests itself differently. Whitmore J. distinguishes the following manifestations of personal anxiety of highly intellectual children – perfectionism, a sense of inferiority, hypersensitivity, the need for attention of adults, intolerance [5]. Freeman J., a researcher of highly intelligent children, emphasizes the role of gender. Girls often underestimate their abilities, which is associated with the formation of gender-role stereotypes by parents. Girls with equally high intellectual potential with boys are more prone to both personal and situational anxiety.

Thus, if the level of anxiety exceeds the optimum, this may indicate the lack of emotional adaptation to certain social situations. Highly intelligent children with such level of anxiety form a general attitude toward self-doubt. The pupil is afraid to make a mistake even in those tasks that he solved accurately. Self-doubt can be a factor in low self-esteem. The internal conflict gives rise to anxiety and depression in schoolchildren.

Methods and research procedure

Purpose: to study the characteristics of school anxiety of intellectually gifted adolescents. Object of the study: senior pupils with different levels of intellectual development. Subject of the study: school-based anxiety of intellectually gifted adolescents.

Hypothesis: 1) The personal and situational anxiety of intellectually gifted adolescents is higher than in adolescents with a mean level of mental development. 2) The structure of school-based anxiety in intellectually gifted adolescents differs from peers.

The sample group consisted of intellectually gifted schoolchildren (from 14 to 17 years old) (120 senior pupils), participants of the vacation school for gifted children “Nadezhda” in the municipal education system as part of the “Gifted Children project”, organized in accordance with the municipal program “Development of the educational system of the city of Rostov-on-Don” approved by the resolution of the Administration of Rostov-on-Don.

Children were selected for the program according to the following criteria:

- 1) The general level of student’s mental development;
- 2) The presence of outstanding achievements in various competitions, intellectual contests, conferences of All-Russian and regional levels;
- 3) Expert assessment of student’s intellectual sphere by schoolteachers.

The control group consisted of 120 schoolchildren – peers of 14-17 years old, pupils of school No. 24 of Rostov-on-Don. They were characterised by teachers as having average assessments of the intellectual sphere and academic performance “good”, “satisfactory”, not showing their interests in intellectual activities, but fond of sports, artistic, creative and other activities.

The following research methods were used:

- Methodology for determining the level of anxiety by Ch.D. Spielberg.
- Phillips test for school-based anxiety.
- Static processing was performed using the Student t-test method.

Results / Data Received

Methododology by Ch.D. Spielberg was used to determine the level of situational and personal anxiety among intellectually gifted schoolchildren and pupils of mean development level.

The empirical study results showed that in the group of intellectually gifted pupils the average value in the group is 24 points, while in the group with a mean level of mental development it is 8 points. The results of the empirical study identifying situational anxiety revealed that in the group of intellectually gifted pupils the average value in the group is 12 points, while in the group with a mean level of mental development it is 4 points.

In accordance with Student t-test statistical analysis, it was revealed that there are significant differences in the level of personal anxiety between a group of students with a high level of mental development and a group of students with a mean level of mental development ($t = 3.24$, with $a = 0.01$) /Table 1/. Significant differences were also found between the indicators of situational anxiety ($t = 2.76$, with $a = 0.01$). In both indicators, higher values are in the group of intellectually gifted adolescents.

Table 1. Average groups values according to the methodology by Spilberg

Groups	Personal anxiety (average)	Situational anxiety (average)
Group of intellectually gifted adolescents	24	12
Group of students with a mean level of mental development	8	4
Student t-test statistical criterion, with $a = 0.01$	3,24	2,76

This proves that the average value of personal and situational anxiety in the group of intellectually gifted adolescents exceeds the average value in the group with a mean level of mental development. This confirms our hypothesis that the level of anxiety in intellectually gifted adolescents is higher than in peers.

The Phillips School-based Anxiety Methodology has allowed us to identify both the general level of school-based anxiety and its components – school fears, from which this anxiety develops.

Students with a mean level of mental development demonstrate the active use of simple concepts, a developed ability to establish externally obvious causal relations, while complex operations of generalization and abstraction cause difficulties. These features of cognitive development are reflected in school fears and anxieties of adolescents. It is necessary to consider the structure of anxiety in children with different levels of mental development. For respondents – intellectually gifted adolescents – the level of school anxiety is significantly higher than for their peers in general by the integral criterion “General anxiety at school” ($t = 2.54$, with $a = 0.01$) (Table 2).

Table 2. Anxiety study results according to the methodology by Phillips

№	Scale	Group with a high level of mental development (average)	Group with a mean level of mental development (average)	Student t-test with $a = 0.01$
1	General anxiety at school	34	22	2,54
2	Social stress experiencing	13	10	2,45
4	Fear of self-expression	68	30	2,37
8	Problems and fears in relations	55	42	3,83

	with teachers			
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Analysis of the results of the methodology by Phillips demonstrates the predominance of indicators in intellectually gifted adolescents. Only the scale of knowledge testing situation is equivalent for schoolchildren in the group with a high level of mental development and the group with a mean level of mental development. According to the Phillips methodology scales, we observe differences in school-based anxiety of intellectually gifted senior pupils compared to their peers. So the first group has a higher scale “Social stress experiencing ($t = 2.45$, with $a = 0.01$). However, 13% of schoolchildren (intellectually gifted adolescents) and 10% (a group with a mean level of mental development) are experiencing social stress. Such data indicate that these students’ emotional state, against which their social contacts develop, is tense, negatively colored and possibly frustrating. It forms the background for the formation and development of concern, anxiety, and frustration because of social stress.

The fear of self-expression in the group of intellectually gifted adolescents – 68 points – significantly exceeds the similar rate in the group with a mean level of mental development – 30 points ($t = 2.37$, with $a = 0.01$). These data indicate a tendency for highly intelligent children to experience anxious emotional experiences in situations associated with the need for self-disclosure, self-presentation to others and demonstration of their capabilities, which in the future will impede the harmonious development of personality of a highly intellectual child and hinder his successful entry into society.

55% of schoolchildren of the first group (intellectually gifted adolescents) and 42% (group with a mean level of mental development) have problems and fears in relations with teachers ($t = 3.83$, with $a = 0.01$). Such data indicate that these pupils have concerns about injustice on the part of the teacher, excessive emotionality, and high demands. As a result, schoolchildren are stressed because they are afraid not to meet the expectations of teachers.

Thus, we can conclude that the group of intellectually gifted adolescents represents greater emotional and behavioral reactions associated with school-based anxiety. Increased school-based anxiety against the background of personal anxiety also complicates self-realization and self-development of a gifted child (Table 3).

Table 3. The structure of anxiety in adolescent groups

Adolescent group	Prevailing types of school fears
Group of intellectually gifted adolescents	1) Fear of self-expression 2) Problems and fears in relations with teachers 3) Fear of knowledge testing situation
Group with a mean level of mental development	1) Fear of knowledge testing situation 2) Problems and fears in relations with teachers 3) Fear of self-expression

In the first group, the fear of self-expression is in first place, problems and fears in relations with teachers are in second place, and fear of a knowledge testing situation is in third place. Presumably because of frequent participation in various events, contests and competitions the fear of being unsuccessful is fixed in them and it becomes dominant in the group of intellectually gifted children.. It is interesting that fear and problems in relations with teachers for all categories of children are in second place. The analysis of the results on school-based anxiety scales proves the second hypothesis that the structure of school-based anxiety in intellectually gifted adolescents differs from their peers.

The empirical data we obtained confirm the results of theoretical studies, which indicate a tendency to increased anxiety as a personality trait of intellectually gifted adolescents, which has a different nature and manifestation features compared to peers.

Discussion

Among highly intelligent children, a high level of anxiety is more common than among children with a mean level of intelligence. The fear of self-expression is leading among intellectually gifted adolescents, and social fears in relations with teachers and the situation of knowledge testing stand out as dominant fears. In adolescents with a mean level of mental development fear of knowledge testing is in first place, and fear of self-actualization is only in third.

The empirical study allows us to draw the following conclusions:

1) There is a connection between the level of mental development of pupils and their anxiety; pupils with a high level of mental development have higher personal, situational and school-based anxiety compared to their peers.

2) In intellectually gifted adolescents socially-induced school fears prevail: fear of self-expression, fear of teacher-student interaction, fear of knowledge testing situations. Most pupils experience negative emotions when they present themselves to others and reveal themselves. This is due to the fact that schoolchildren are overly critical of themselves. At this age adolescents often experience feelings and emotions that they do not understand and are ashamed of, hence they desire to "close" and hide their inner world from others.

3) Assessment by teachers and peers is an important criterion for adolescents as well. General anxiety at school is due to experiences associated with the possibility of a negative assessment of teachers. This suggests that students have emotional stress in communicating with teachers. In this regard, such children form an unfavorable psychological background, which impedes their personal development.

The modern education system faces the challenge of developing innovative technologies and training systems for intellectually gifted children and adolescents. In accordance with the results of the study, several forms of solving the problem of correction of anxiety in children with high mental development and the formation of an adaptive environment for their self-realization can be put forward:

- Creation of special schools or classes within comprehensive schools for children with a high level of mental development.
- Organization of specialized centers for psychological counseling of children with a high level of mental development, as well as their parents and teachers;
- School educational psychologists should regularly diagnose the level of anxiety in various groups of pupils and conduct focused educational work with parents to provide first aid to their child. The parents know their child better and can select a more acceptable methodology, strategy for relieving tension, fear, or try to resolve a conflict situation. The role of an educational psychologist will equip parents with these teaching methods.

Psychologists and teachers working with children with a high level of mental development need to use the following techniques: "Legalization" of feelings of anxiety, managing them in such a way as to minimize negative consequences; Teaching a child deep breathing skills that help to control oneself. Slow breathing has a calming effect and is an important skill that children can use in all situations when they need to calm down; Analysis of what the child says about his thoughts and fears. Building confidence in security and willingness to help him; Helping the child to be proactive. Brainstorming and throwing ideas to a child in resolving situations that will help him; Using role-playing games, etc.

The task of parents of a highly intellectual child is to provide assistance, to manifest their love and sympathy towards him. While the task of society and the state is to create the best conditions for our talented and gifted children for self-realization and promotion of science and practice.

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