COMPARATIVE ANALYSIS OF ATTENTION, MEMORY AND THOUGHT'S POTENTIAL OF STUDENTS

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Abstract
Carry out comparative analysis of attention, memory and mental potential of 2nd and 3rd year students of the medical academy. The "Cognitive Function Examination Card " was applied. The evaluation of cognitive functions was carried using 4 tasks aimed at assessing visual and auditory memory, voluntary attention and the level of generalization, one of the operations of thinking. Most students have better developed visual memory than auditory. Only 10.6% of students have a high ability to generalize. 45.2% of students have a low level of generalization.

INTRODUCTION

The relevance of the topic of our study is due to the need for an objective assessment of students' abilities to assimilate an ever-increasing amount of knowledge. This increases the load on cognitive processes (memory, attention, thinking), which provide a person with the opportunity to keep in mind, express in words the received information and transfer it to other people.

It should be noted that according to the results of the study by A.N. Borodina (2015), the coefficients of logical memory and memorization ability of modern students are lower than those of students in 1977. Modern students also need more repetitions to memorize the material. Thus, the average number of repetitions for memorization in modern students was 8.95 repetitions, while in students of 1977 it was 6.75. In addition to this, according to the study of A.A. Grekova (2020), modern students are characterized by the so-called "pseudopathological phenomena" of thinking, which were identified in 23% of judgments and are expressed in various variants of generalization distortion, generalization by latent features, lack of generalization, generalization by specific situational features, diversity, reasoning. Researchers associate such changes in cognitive processes among students with the development of information technology, the ability to use the global network "Internet" to search for the necessary information. According to International Data Corporation (IDC) forecasts, the volume of global data will grow from 33 Zettabytes in 2018 to 175 Zettabytes by 2025.

The purpose of the work: A comparative analysis of attention, memory and mental potential of 2nd and 3rd year students of the treatment department of the Tashkent Medical Academy to optimize the educational process.

MATERIALS AND METHODS

During the study, 104 students were tested, a half of them (52 students) was 2nd year students and others were 3rd year students of the Treatment Department. A total of 8 groups of students were examined. The "Cognitive Function Examination Card " was applied. The evaluation of cognitive functions was carried using 4 tasks aimed at assessing visual and auditory memory, voluntary attention and the level of generalization (one of the operations of thinking). The tasks were formed according to the book for students "Choose a profession" (E.N. Proshchitskaya, 1991).

The first task, auditory memory testing, was based on repeating two rows of 10 words each, read aloud by the researcher. The students were asked to memorize and write down as many of the 10 words as possible in the "Chart of examination of subjects for the study of cognitive functions". The words were chosen to be simple, varied and unrelated (for example: linden, scissors, mill, apple tree, river, glasses, fantasy, spoon, fire, law).

The second task, visual memory testing, was based on repeating two rows of 10 words each, written by the researcher on the black-board. Students were asked to visually memorize as many of the 10 presented words as possible within 30 seconds, and then write down the memorized words in the "Cognitive Function Examination Card".

The third task - testing the features of voluntary attention - was based on testing attention associated with a consciously set goal. Execution time - 1.5 min. The students were asked to rewrite the numbers in ascending order from the table on the left into an empty table. For example:

30	28	32	2	4					
24	9	14	31	36					
12	25	35	17	15					
1	33	20	10	13					
5	38	27	3	40					

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The fourth task - testing the features of thinking - was based on testing students' abilities to generalize. Execution time - 3 min. Stu-dents were offered 20 horizontal rows of words and for each row they had to find two words that are closer in meaning to the first generalizing word in the row. For example,

WAR: airplane battles soldier's guns' pistol
FURNITURE: chair table wood flowers metal

RESULTS

Assessment of the auditory and visual memory level was carried out according to the following indicators:

 More than 90% - excellent memory;

 50-90% - good memory;

 Less than 50% - a decrease in the ability to memorize.

Studies have shown that the majority of students have a high and good level of both auditory (93%) and visual (98%) memory. However, the number of students with a high level of visual memory (10 students) was 5 times higher than the number of students with a high level of auditory memory (2 students). The proportion of students with an average level of visual memory was only 2%, auditory - 7%.
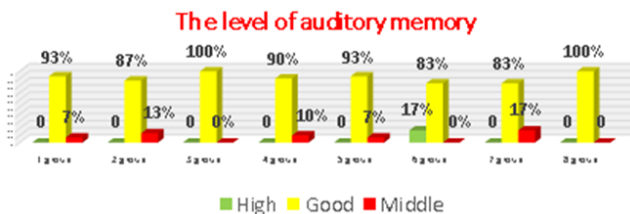
Picture 1. The level of auditory memory.
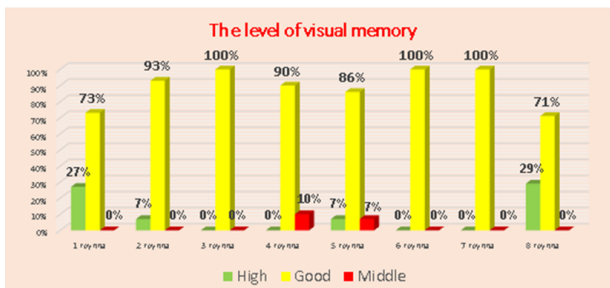
Picture 2. The level of visual memory.

The assessment of the attention level was carried out according to the following indicators:

 More than 14 digits - high score

 From 11 to 14 digits - average result

 Less than 11 digits - low result

The number of students with a high and average level of attention prevails (56.7%) over the number of students with a low level of attention (43.3%).

The assessment of the level of ability to generalize was carried out according to the following parameters:

 More than 17 rows - a very high level of generalization

 From 14 to 17 rows - high level

 From 10 to 13 rows - medium level

 Less than 10 rows - low level

In the study of the level of generalization, the lowest performance is noted. Depending on the levels of generalization, students were distributed as follows: 10.6% - high level; 44.2% - average level; 45.2% - low level of generalization.
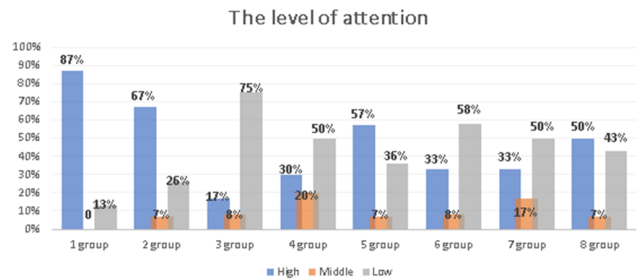
Picture 3. The level of attention
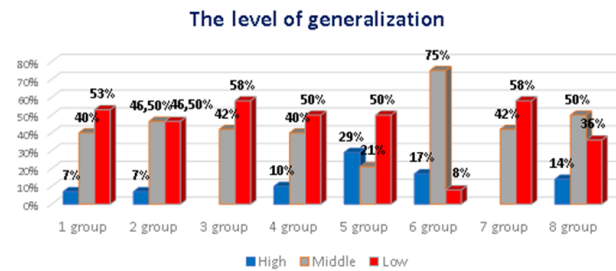
Picture 4. The level of generalization

To comparative evaluation of cognitive functions, students of the 2nd and 3rd courses were analyzed separately. The distribution of students of the 2nd and 3rd year, depending on the indicators of auditory and visual memory, as well as attention, did not have significant differences. Whereas the proportion of students with a high level of thinking in the 3rd year turned out to be 2.7 times more than the proportion of students with a high level of thinking in the 2nd year. We associate such a difference in the level of thinking with an increase in the scope of knowledge of 3rd year students, as well as the prevalence of learning topics based on clinical thinking.

CONCLUSION

The conducted testing is not an indicator of the learning ability of an individual student, because academic performance depends both on volitional qualities and on the desire to acquire new knowledge. It gives us a general idea of the intellectual capabilities of most students, their natural learning potential. On the basis of our research, we can make recommenda-

tions for improving the memorization of the lesson material, increasing students' attention to the topic, as well as increasing the effectiveness of applying the acquired knowledge in practice.

We have compiled the following practical recommendations for the submission of educational material. At lectures and practical classes, to use more visual materials, since the examined students showed a significant pre-dominance of visual memory over auditory memory. It is also advisable to use more widely the associations of academic knowledge with cases from practice, questions from the audience, voice techniques, gestures to attract attention.

To stimulate the ability to generalize and increase the level of thinking, it is desirable to give tasks not only for the assimilation of this or that material (that is, simple memorization), but also, based on the new knowledge gained, to stimulate the mental potential of students by solving situational problems, drawing up diagrams and algorithms, including number as homework. It is worth noting the influence of the latest technologies on the cognitive processes of modern students, in connection with which it is worth trying to recommend to students proven sources of information.

FINDINGS

Thus, analyzing the results of our research, we came to the following conclusions:

 Most students have better developed visual memory than auditory.

 The total number of students with a high and average level of attention prevails over the number of students with a low level of attention.

 Only 10.6% of students have a high ability to generalize. 45.2% of students have a low level of generalization.

 Comparative analysis of cognitive processes in students of the 2nd and 3rd courses showed the difference only in the level of generalization in the absence of significant differences in other cognitive processes (memory, attention).

 The prevalence of the level of generalization among 3rd year students in comparison with 2nd year students.

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