

## PROVERBS AND SAYINGS AS A PART OF NEUROLINGUISTIC TESTS

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### ABSTRACT

A group of clinical linguists at Kazan Federal University are developing protocols of speech assessment for the patients with neurocognitive diseases as part of the project titled "Neurolinguistic Aspects of Speech Disorders". The test includes qualitative estimation of the results of neurolinguistic tests. This paper covers those parts of the protocols which are associated with the selection of proverbs and idioms offered to the patient to determine his/her speech status.

We conducted a linguistic experiment in population (on subjects) without cognitive decline. 100 respondents of different ages were given a list of pre-selected proverbs chosen according to three criteria. The set of proverbs included 25 units.

The material received from the respondents was analyzed and summarized. The proverbs with multiple meanings were excluded. We received a list of proverbs and sayings that people without speech disorders can understand clearly. Other units were excluded out of the database.

Our findings further support and provide new ways in the development of neurolinguistic protocols. Our experiment helped to create tests which can be included into qualitative estimation of speech disorders in patients with cognitive decline. The results can be used in clinical work by neurologists, neuropsychologists and neurolinguists.

**Keywords:** neurolinguistic protocol, speech disorders, cognitive decline, proverbs and sayings, idioms

### INTRODUCTION

The neurolinguistic, imaging, neuropsychological and functional studies of proverbs and metaphorical sentences are very actual. A lot of attention is paid on the hemispheric involvement in the processing of idioms [1-3], the difference between single and extended metaphors processing [4]; the cognitive, cultural and linguistic aspects of proverbs usage are also in the focus of modern science [5, 6], there are case studies connected with proverbs, sayings and other metaphorical units [7], with embedded metaphors [8].

In neurological practice different tests, questionnaires and batteries are used for the diagnosis of speech and cognitive disorders. Diagnosis of speech impairments by the

estimation of patient's ability to understand the metaphorical meaning of utterances was introduced by A.R.Luria, the founder of Russian neuropsychology.

Luria conducted research on the understanding of the units with figurative meaning. He noted that the study of these units was always rightly regarded as one of the main methods of thinking investigation [9].

Luria's experiment was the following: the patient was asked to explain few proverbs, sayings, or idioms. If the patient had problems in performing the task, the interviewer proposed him or her the expressions of two types: some of them contain words similar to those that were used in the proverb, other expressions explain the meaning of proverbs or idioms in other words. The extent of violations in the brain activity was determined by the number of well explained phrases [9].

The lack of ability to understand the figurative meaning of proverbs and sayings is a significant symptom of cognitive decline. However, proverbs included into neurocognitive tests are often unclear or can be understood ambiguously, which complicates qualitative and quantitative estimation due to the absence of clear-cut criteria for interpretation.

Before including proverbs and sayings into neurocognitive protocols, it is necessary to test the material in population without speech disorders. There are such proverbs that are very difficult for a person with average education (for example, "*Сухая ложка рот дерет*", literally – "*A dry spoon tears up the mouth*"). Some proverbs have a lot of layers of figurative meanings and cause problems in quantitative estimation of right answers in the questionnaire.

Only when it is clear that a proverb can be understood by most of people without cognitive decline it can be recommended to be included into neurolinguistics aphasia tests and test for cognitive decline assessment.

## **METHODS**

100 respondents of different ages were given a list of pre-selected proverbs chosen according to the following criteria:

1. The proverbs should contain not less than two layers of semantics – the primary and the secondary. All the proverbs can be divided into two groups: the first group contains the units that have two semantic layers: allegorical and literal. In this paper we focused on proverbs with the presence of figurative meaning.
2. The proverbs should not be very difficult for people with average level of education.
3. The proverbs should not include outdated and obsolete vocabulary forms of words, as they may be incomprehensible to an average respondent.

The respondents were asked to explain the meaning of these proverbs and sayings. The set of proverbs included 25 units.

The sampling was carried out on the materials of the following dictionaries: V.P.Zhukov, "Dictionary of Russian proverbs and sayings", V.L.Zimin, "Proverbs of the Russian people. The Large Explanatory Dictionary" and a collection of V.I.Dal' "The proverbs of the Russian people".

The sample of respondents was random. They were given a list of several proverbs with a request to explain how they understand the figurative meaning of the units. As the result of responses analysis we have chosen the most understandable proverbs and sayings.

## RESULTS

As a result of our experiment we divided the proverbs into three groups.

1. *The first group* contains proverbs (8 units) that are strongly recommended to be included into neurolinguistic tests – either express or detailed.

For instance, the proverb “*Do not count your chickens before they are hatched*” (in Russian – «*Цыплят по осени считают*») was clear for 95% of the sample of respondents without speech and cognitive disorders. According to the Zhukov’s dictionary, this proverb has the following meaning: one should judge only on the final results. It is said to those who early talks about the results of something [9].

The respondents gave adequate explanations: “*It is necessary at first to achieve a result and only after that you can talk about it*”, “*Don’t try to guess ahead and talk on what you have not yet completed*”, “*At first do – then you can talk about the result*” and sometimes offered other proverbs and sayings with the same or similar sense: *Never sell the bear's skin before one has killed the beast* («*Не дели шкуру неубитого медведя*»).

The Russian variant of the regarded proverb does not correspond absolutely with the English version; it is translated verbatim “Chickens are counted in autumn”, and the word “autumn” makes this proverb a very good diagnostic tool. The lack of ability to understand figurative meaning leads to the situation when a person does not percept the inner (more difficult) semantic layer (idiomatic, metaphorical) – and shows it in his/explanation. Even in people without diagnosed disorders we can see the signs of it. For example, two respondents began to explain this proverb in its direct meaning: “*It is a proverb, I know. I don’t know the meaning exactly... I’m not very good at explanations... Well, in autumn it is time to count chicken: they are hatched during summer, and in autumn we can see how many of them have survived*” (female, 20 years old); “*I think that this proverb is about the harvest, everything ripens in autumn, so the chickens are counted in autumn, too*” (female, 19 years old). These two respondents evidently have problems with the understanding of figurative meaning because they are not able to recognize the inner layer.

In patients with cognitive disorders this feature progresses. Here are some examples:

– *What does it mean? Oh, simple, very simple. You have a hen. It hatches chickens. So count them in autumn – no problem. I understand all words, all of them* (patient B., male, 66 years old)

– *Oh... it means... count chicken in autumn. But in autumn they will grow up. Big chickens – how are they called... moment... – hens and their... husbands... male... cock! So why should we count them in autumn? I don’t remember when they are usually born. In summer? It was a wrong statement* (patient A., male, 75 years old)

2. *The second group* contains 9 units of average understandability; they are recommended to be included into detailed tests only, and an interviewer (a doctor, a

linguist, a psychologist) should take into account the relative complexity of their perception in people without speech and cognitive disorders.

For example, it touches upon the proverb “*Старый конь борозды не портит*» (the English analogues: *The old mule ploughs a straight furrow / An old ox makes (ploughs) a straight furrow*). This proverb means that an old experienced person will not spoil the work he undertakes to do. The respondents in general give the right answers but sometimes the important part of the proverb connected with age is not taken into account by them. Such answers as “*It is better to give the job to the experienced people*”, “*Experienced people know how to do the job*” and so on show that the experience is more respondents for respondents, but the proverb is connected with the age and wisdom of an old person, too. It is necessary to mention that this proverb has the second part which is not usually mentioned in the dictionaries of proverbs and sayings: “*but it will not plow it deeply*” or (as a variant) “*but it will not plow the new one*”. So this proverb has three variants and, consequently, more semantic layers than it is desirable for the neurolinguistic tests.

The proverb “*У семи нянек дитя без глаза*” (the English variant is “*Too many cooks spoil the broth*”, verbatim “*When a child has seven baby sitters, nobody takes care of him*”) is understood in different ways, too.

The first variant of answers was like this: “*When many people do one important job, each of them hopes for another. The result is that no one does anything*” (female, 40 years old).

The second variant of answers was connected with the concrete situation involving baby sitters and children: “*When there is one nanny, she takes care of the baby well, and when there are many, all rely on each other*” (female, 28 years old) or “*The more people looking after the child, the worse is the breeding up, as each shifts the responsibility to the other. The child grows up by himself*” (female, 47 years old).

The third variant, a small percentage (about 15%) of the respondents, explained this proverb in a completely different way. By “baby sitters” they understood excessive care of the child or excessive care in general. For example: “*If you strongly take care of the child, he grows dependent and will always need someone's help*” (female, 22 years old); “*The excessive care is not effective*” (female, 24 years old); “*The more attention a person has, the worse it is for that person*” (male, 20 years old).

Patients with cognitive decline or speech impairment usually have problems with the understanding of the expression “*без глаза*” (*without care*). The word “*глаз*” is homonymic: the first meaning, the more frequent, is “*eye*”, and the second meaning is “*care*”. So the patient often understands this proverb with the sense “*Seven nannies have the child without one eye*”.

3. *The third group* contains proverbs (8 units) that are recommended to be excluded from neurolinguistic tests. They are interpreted by people without speech and cognitive disorders in a different way.

The proverb “*Чем дальше в лес, тем больше дров*” (no English variant, the literal meaning is “*The further into the forest, the more firewood*”) in Zhukov’s dictionary has the following explanation: “*the further events develop, the more there are difficulties, surprises, complications, and it is harder and harder to find a way out*” [8].

A common mistake in the interpretation of the respondents was that they did not understand the negative semantics of the second part of the proverb.

The examples: "*The more you do, the more you begin to understand this*" (male, 32 years old); "*The more you read, the more you will know*" (male, 43 years old). In some cases, respondents explained terms the proverb in narrower sense: "*The more a person is lying, the more lies accumulated in his life afterwards*" (female, 24 years old).

The proverb "За одно битого двух небитых дают" (no English variant, the literal meaning is "*One beaten man is equal to two unbeaten*") in Zhukov's dictionary has the following explanation: "*One experienced man is worth two inexperienced*" [8]. This unit has caused the greatest difficulties in the explanation. Some respondents (10%) refused to comment telling that they did not understand the meaning. 35% gave the incorrect definition. For example, the respondent (female, 27 years old): "*The more you work, the more job you receive.*"

Others trying to explain the concept of experience in this proverb nevertheless explained it wrongly. For example, the respondent (male, 38 years old): "*Making mistakes, misdeeds and obtaining the punishment for them, the person gains experience.*" Thus, the negative connotation of the word "*beaten*" has been misunderstood by the respondent as a punishment. The same is reflected in the following response (male, 45 years old): "*Experience comes to a man together with the pain*".

The proverb "Лес рубят – щепки летят" (the English variant "*You can not make an omelet without breaking eggs*", verbatim "*When the wood is chopped, the flinders fly*") is explained incorrectly in most cases. This unit caused the greatest difficulties. Often at the first reading the respondents refused to explain it saying that they do not understand the meaning.

76% of respondents gave the wrong interpretations of the proverb, and these interpretations were very different.

24% of respondents explained the proverb correctly. For example, the respondent (female, 36 years old): "*When people do something important, they do not pay attention on the little things.*" One of the respondents (female, 46 years) meant a quarrel by the process of chopping, and under the flinders she meant its consequences. And she explained the proverb talking about the specific situation, when the principals are in a quarrel, and the subordinate people suffer as a result of this argument. This type of understanding is one of possible correct senses of proverbs. It should be noted that in this survey people explained the meaning with the help of different examples that were close to them: the relationship with the authorities, government policy, economic problems, etc.

The wrong explanations were the following:

a. The respondent (male, 24 years old) understood the first part of the proverb as a situation when people loudly discuss something and flinders as the signs of this discussion (for example, noise, active gestures). Perhaps this understanding has arisen due to the fact that the cutting process itself is accompanied by loud sounds, hence the association with the dispute, heated discussion.

b. A young man (20 years old), trying to explain the meaning of the unit, turned to the expression "*The wind had a quarrel with the boat, and the sea suffered.*" Here he meant

that a man who has no relation to the conflict can be hurt as a result of it. The respondent compares the process of chopping with a person undeservedly suffering because of someone's conflict.

c. In some cases, the proverb was comprehended close to the literal plan. For example, the respondent (female, 18 years old) said that this statement describes the process of hard work. People work hard cutting down trees so the wood splinters fly.

d. The majority of respondents of all ages understood the first part of the proverb (wood chopping) as the action and flinders – as its consequences. This explanation is incomplete, and it does not have a negative connotation. After all, as it is clear from the dictionary explanation, "errors, victims and mistakes" are meant under the wood flinders.

e. The respondent (male, 41 year old) explained the meaning of the proverb in a following way: "*One business leads to the fact that you need to do other things*". He comprehends chopping the forest as a big business, and the wood chips are associated with different little activities.

f. The interviewed man (27 years old) gave such an explanation: "*The better you do anything the better is the effect*". Here the respondent, as in the case above, understands the intense work by "*chopping wood*", and hence the meaning of the proverb turns out: *it is better to cut the more wood, there will be more flying flinders – this will help to achieve a better effect*.

g. The interviewed woman (44 years old) gave the right explanation to the first part of the proverb. But the second part was understood wrong: the flinders were perceived as gossip; in other words, any big deal is accompanied by a multitude of small gossip.

h. One of the respondents (male, 27 years old) explained this unit using a proverb "*Нем дыма без огня*" (the English variant is "*There's no smoke without fire*"). Perhaps such a wrong association appeared because a causal relationship is within both of these units. In the first example, the wood chopping is the reason, and the flinders are its consequences. In the second example, the reason is the fire, and the consequences are represented by the smoke. Having understood the causal relation, the respondent did not catch the meaning.

## CONCLUSION

25 proverbs were involved into the experiment, and only 8 of them presented good diagnostic material. 9 proverbs formed the group of supplementary units that should be used only in detailed diagnostics. It became obvious that if proverbs are explained differently by people without speech and cognitive pathology they should not be included into neurolinguistic and cognitive batteries, tests and questionnaires because they will make the process of result estimation practically impossible or very relative. We formed the list of 8 proverbs of this type.

The analysis of proverbs and sayings appropriate to neurolinguistic tests and batteries should be continued.

Our findings further support and provide new ways in the development of neurolinguistic protocols. Our experiment helped to create tests which can be used in

qualitative and quantitative estimation of speech disorders in patients with cognitive decline or aphasia. The results can be used and are already used in clinical work by neurologists, neuropsychologists and neurolinguists and general practitioners.

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