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## Study Anti Vital Activity as the Propensity to Suicidal Behavior

In order to diagnose anti vital activity of young people (mental and behavioral activity, aimed at the reduction and/or termination of their own social and biological functioning) an association test to study the reaction time of young people to the words-stimuli relevant to the theme of death was used. 90 persons aged 16 to 19 years were examined according to the standard technique. The results of the study show that the median time of reaction to the word-stimuli relevant to the theme of death is more ($p < 0.01$) than the median time of reaction to the neutral words-stimuli, which proves that there are unnatural trends against life inside the individual (that start to actively function under certain conditions). As an auxiliary method the closest prototype of the association test – the Beck Scale for Suicide Ideation – was used. It allowed detecting that all the suicidal risk factors (isolation, expected fatality, final actions) were present in all age groups that took part in the mini-research. The scores on this scale show high intensity of suicidal intentions in young people. Based on indirect evaluation of the reliability of the two above methods by the Rorschach Comprehensive System the following peculiarities, which can be appraised as indicators of anti vital activity were detected: expressed pessimistic in thinking, emotional distress caused by excessive overload with negative emotions, inefficient style of problem solving, excessive level of reflection.

**Key words:** self-destructive behavior, suicidal behavior, vital activity, anti vital activity, associative thinking, association test, a complex of death.

### Introduction

In the last years the Republic of Kazakhstan makes the top three by number of suicides among East European countries and former Soviet states. According to the data of the World Health Organization for Year 2010 Kazakhstan ranks third in the number of suicides in the world [1].

Suicidal behavior is determined by us as a form of self destructive behavior, specific violence of the individual against himself/herself that is fundamentally absonant to the human nature.

Psychological evaluation of suicidal behavior shows that suicidal action is the result of adopted decision to commit suicide. Suicidal decision is the nearest factor related to suicidal action. Suicidal decision like any other decision is determined by various factors, and the awareness of such factors and probability estimate of their aggregate impact could increase the effectiveness of suicidal risk assessment. Therefore, we should foresee the emergence of such decision in the consciousness of young people and detect unconscious aspects of further suicidal behavior.

Suicidal behavior is based on principal defeat of the vitality (vital activity) of young people before the forces of disintegration and death (antivital activity). Antivital activity or activity aimed at the reduction and/or termination of own social and biological functioning is major danger to the human life in the event of affective disorders.

Freud for a long time did not dare to admit the existence inside a human being of tendencies directed against the life instinct. When he admitted their existence he wrote: "… I do not understand now how we overlooked the ubiquitousness of the non-erotic aggression and destructiveness and did not take into account the part belonging to it in life interpretation" [2]. It is generally thought that his work *Beyond the Pleasure Principle* marked the beginning of development of the death drive theory [3].

To diagnose suicidal behavior suicidal activity questionnaires (such as the Suicidal Risk Rating

Scale, the Rating Scale for Suicidality and Difference in Real Suicidality and Demonstrative Suicidality, the Suicidal Ideation Rating Scale, the Rating Scale for Pre-suicidal Syndrome and Suicidal Intentions) are actively used. In addition, other psychodiagnostic procedures that may be useful to indirectly assess probability of suicidal actions are applied for clinical findings. They include questionnaires (for instance, MMPI, the Buss-Durkey Inventory) and projective tests (TAT, the Rosenzweig Picture Frustration Test). However, the use of the above procedures is not practically helpful in dealing with the problem of effective diagnostics of suicidal risk among young people because the above procedures take considerable time and inapplicable to large audience. The reasons for this are as follows: the factor of social desirability, defensive trend, extra-test attitudes, intrapsychic defense, and short pre-suicidal period in some cases.

**The purpose of the article**: study of antivital activity of young people by using the association test;  quantitative evaluation of suicidal activity (suicidal ideation) by using accessory procedure, that is the Beck Scale for Suicide Ideation, and  indirect evaluation of validity of the above two procedures on the basis of the Rorschach Comprehensive System.

**Methods of the research** are based on the leading principles of modern science – anthropocentrism and humanism. According to anthropocentrism, social processes, universal structures of human life arise from the human being himself and close on him, the whole social universe revolves around the human being. Anthropological approach to the problem is understood as worldview, epistemological, theoretical and practical orientation of preventive work with young people to reduce antivital activity as factor of suicidal behavior.

Works of home and foreign researchers were studied. They are philosophers (Seneca, M. Montaigne, I. Kant, D. Hume, A. Camus, A. Schopenhauer, K. Jaspers , N.A. Berdyaev, B.G. Judin), sociologists (M. Halbwachs, J. Gilinskiy), lawyers (A.F. Kony), physicians (C. Lombroso, M. Ferry, N.I. Kozlov, A.D. Nikitin), psychiatrists (J.-É.Esquirol, A.R. Ratinov, E.G. Trainina, S.V. Borodin, E.M. Vrono, A.E. Lichko). Further consideration of works of Freud [2,3], C.G. Jung [4], V. Frankl [5] and practical aspects of suicidology as developed by Y.R. Vagin [6], N.V. Kononchuk [7], N.Y. Ivanov,

Y.V. Popov [8], etc., form empiric and experimental basis for our study.

Methodological conceptions of the study are association psychology, psychoanalytic theory of personality, conception of problem solving behavior.

**Materials and methods**

The major research method is the association test consisting of three blocks of words-stimuli. We justify the use of this method by the reason that associative thinking based on associations is essential component of human mind enabling it to generalize and abstract. The particularity of associative thinking is its ability to identify common features of things, i.e., to generalize without carrying out logical analysis. Hence the association test is an important tool for studying processes that are not controlled by consciousness and more frequently unconscious.

For the first time the association test was used to study unconscious and concealed psychic contents by C.G. Jung. He suggested that words-stimuli related to the complex of emotionally significant perceptions caused increase in time of reaction [4]. Among our contemporaries Russian researcher Vagin J.P. attempted to diagnose antivital activity. He developed a version of the association test to increase objectivity of the method and make it possible to diagnose early and latent forms of pathological antivital activity [6]. The diagnostic technique developed by him is designed predominantly to detect risk factors and to assess risk of suicidal actions with their aid. However, his patent invention appertains to medicine, in particular to psychiatry and physiotherapy. Whereas, we used it to detect antivital activity in mentally sane young people.

In addition, the Beck Scale for Suicide Ideation which is the closest prototype of the association test as method of quantitative assessment of suicidal activity (suicidal ideation) was used as accessory method [9]. The scale includes 15 different factors of risk of suicidal actions: isolation (if there is anybody closely or not), possibility of intervention of strangers, precaution against such intervention, final activities (gifts, distribution of things), suicide notes, expected fatality, seriousness of intention to die, etc. Each factor is assessed by three points scale. For instance, expected fatality is assessed as "0" at the thoughts of death undesirability, as "1" at the thoughts that death is possible, but not obligatory, and as "3" at the thoughts that death is possible and

obligatory. The score on all factors allows estimating intensity of suicidal intentions. The shortcoming of this scale consists in subjectivity of assessment because many of the above risk factors can be assessed only by reliance on subjective interpretation of the individual himself.

Indirect evaluation of validity of the above two procedures was carried out on the basis of the Rorschach projective test [10], in the frame of the Exner scoring system (also known as the Rorschach Comprehensive System) because the latter allows to use the former for detecting considerably subtle and deeply latent disorders in various spheres of psychic activity. Theoretical basis of the Rorschach Comprehensive System is the experimentally-confirmed conception of problem solving behavior. In accordance with this conception when the method is used as part of the study various complicated problem situations are simulated and solutions of such problem situations by the subject are recorded. As the subject's decisions reflect various aspects of his personality it may be said that with regard to its validity the Rorschach technique is generator of information on various aspects of functioning of the individual's personality in problem situation. It follows thence that the structural measures of the Rorschach technique allow to create a theoretically substantiated model of the psychological functioning of the subject in various situations. At that the above measures of the technique shall be structural components of the model, and interrelation between them shall be system and functional relations inside the model. Effectiveness of interaction with a problem situation is closely linked to the level of psychic adaptation of the subject. Therefore, within the above approach the Rorschach technique estimates adaptive characteristics of functioning of the personality. That is distinctive feature of data received by using the technique. The measures of the technique reflect not just personal characteristics of the subject but those particular ones that directly affect the process of decision making and adaptation to a problem situation. Therefore it possible to project the functioning of an individual in various problem and stressful situations on the basis of data received.

The Rorschach Comprehensive System provides for three phases: administration of the test, test protocol processing and interpretation of the results of the study. Stimulus material of the Rorschach test contains ten standard images reminding symmetrical inkblots. From them five images are unicolorous and five are multicolored. All stimulus cards are numbered with Roman numerals from I to X.

Below is the brief description of the major phases of our study in which we used the Rorschach Comprehensive System as developed by J. Exner [11].

Before the start of the testing the main points of the forthcoming study are explained to subjects, i.e., that the images on stimulus cards should be consecutively presented to them, and they should write down what they see on each card.

Then the subjects listen to the briefing on the study that consists of one sentence: "What might this be?". Simultaneously with the instruction they are presented with card I. After the subjects give all their responses to the first card they are presented with the next successive card, and so on to the last card. All responses, comments and questions of the subjects during testing are written down verbatim. When the subjects present their last responses to card X inquiry is carried out. During the inquiry localization of each response, its contents and particulars of a blot that affected response are ascertained.

Notes of responses of the subjects during testing form the protocol of the study. Major attention during the study is paid to getting a valid protocol. The valid protocol is a protocol containing at least 14 responses of each subject (there should be at least 1260 responses available in our study) as well as containing fully-valid and correctly gathered inquiry material that shall be used in the processing phase.

Test protocol processing includes coding of responses and scoring. The coding process is notation of each response with a formula consisting of a few symbol categories. The categories reflect characteristics of the subject's response related to the structural peculiarities of the stimulus blot to which the response was given. Each category has its set of symbols for coding. A number of categories are formalized by using special charts that are charts to determine commonly and uncommonly selected details, the form quality of the response and the degree of mental organizing activity involved in producing the response. The list of main categories and their brief description are in table 1 below.

The use of each symbol should strictly comply with special rules and algorithms of coding. After all responses are coded with respective symbols, formulas of responses are transferred to the special sheet of the formalized protocol. After the comple-

tion of the formalized protocol calculations are performed. During this procedure all the symbols of each category are summarized at first. Then this summarized data recalculated on the basis of special formulas in values of scales that are directly subjected to interpretation. These scales are ratios, percentages, derived and complex indices; each of them also has its own symbol for indication.

Results of calculations are reflected in the structural psychogram consisting of three parts. The first part named "Basic Data" reflects composite scores of the symbols from the protocol. The values of the interpretation scales calculated on the basis of special formulas are reflected in the low part "Ratios, percentages, derivatives". This part of the psychogram has cluster structure because all the interpretation scales of the Comprehensive System are clustered; the clusters describe main areas of psychic activity. The third part "Complex Indices" reflects complex indices calculated on the basis of combined scores of a few scales.

Interpretation of the results of the study consists of a few consecutive stages.

First of all, the Suicidal Constellation Scale is scored due to its particular importance for our study. It shows probability of committing suicide by the subjects.

Then the sequence of interpretation of the clusters containing the test scales is determined. The se-

quence of interpretation of the clusters is determined to detect the most important clusters and to streamline the interpretation process. Significant clusters contain nuclear information on the subjects' behavior that is a basis for development of the comprehensive pattern of the psychic activity of the subjects. The first three clusters in every given sequence are the most significant. The sequence of the clusters is established based on the scores of so called key scales.

There is a key scale in every cluster. It reflects psychological characteristics that are most important regarding their influence on adaptation effectiveness. For each key scale a particular sequence of clusters is beforehand determined which starts from the cluster appropriate for this scale. The key scales are ranged according to their significance. There is a threshold level for every key scale. When a sequence is developed a special algorithm is used, the key scales are scored in accordance with their significance. A sequence of clusters appropriate for the most significant key scale which score is above the threshold level shall be chosen.

The Comprehensive System has more than 90 scales for interpretation which are grouped in clusters corresponding to main areas of psychological activity of a personal. It is possible to distinguish eight major clusters and a group of clinical scales. Brief description of the clusters of the adapted version of the Comprehensive System is in table 1.

**Table 1** – The Characteristics of the clusters of the Rorschach Comprehensive System as developed by J. Exner

| № | Name of cluster | Diagnostic orientation of cluster's scales |
|---|---|---|
| 1 | 2 | 3 |
| 1 | Behavioral style | Style of problem solving behavior |
| 2 | Structuring | Strategy of attention distribution, motivational aspects, adequacy of organizational activity, level of analytico-synthetic activity. |
| 3 | Identification | Adequacy of identification, level of perceptual distortions, identification of social conventions, conventionality of perception, nonconformity level |
| 4 | Conceptualization | Level of involuntary thinking activity, withdrawal into day dreaming, level of thinking clearness, meaning-making. |
| 5 | Emotional sphere | Level and character of negative experience, state of emotional distress, attitude to emotional stimuli, level of control over emotional expression, level and character of complexity of emotional experience. |
| 6 | Self-perception | Level and character of self-focusing, level of negative self-perception, somatic concern, level and character of self-reflection and introspection, characteristics of personal identity. |

| 7 | Interpersonal sphere | Deficit of social maturity, vigilance level, ability to establish emotionally close relations, proneness to oral dependence, level of social interest, character of social perception, existence of difficulties in empathy expression, cooperation and assertiveness capacity, proneness to social passivity and avoidance of responsibility, proneness to authoritarian protection, situational adequacy of social behavior, proneness to social isolation. |
| 8 | Control over behavior and stress tolerance | Level of control over behavior, condition of coping resources, level of frustration experience, impact of social stress |

In addition to the clusters indicated in the table above, the Comprehensive System contains a few personal style scales and clinical-and-psychological scales. The personal style scales are the Hypervigilance Scale and the Anancastia Scale. The clinical scales of the Comprehensive System are the Depression Index, the Perception and Thinking Index and the Coping Deficit Index. Besides, in the System's structure there is a suicidal complex, its scores allow to determine probability of committing suicide by the subject with a high accuracy level, which is the most important in our study.

The scales of the Comprehensive System describe persistent style characteristics of the subject's behavior. Therefore, analysis of the research data by using the Rorschach Comprehensive System allows to predict the effectiveness of the problem solving behavior and adaptive reactions of the subject in various situations including situations of stress and depression that are pre-suicidal ones.

**Diagnostics**

90 persons aged 16 to 19 years were examined by using the above methods and procedures.

To carry out the association test the following words were selected: those related to the theme of death (abyss, darkness, coldness, night, chasm, sunset, blackness, poison, destruction, etc.); words related to the theme of life (dream, happiness, gladness, warmth, day, dawn, blossom, birth, etc), and neutral words related neither to the theme of life nor to the theme of death (sofa, collar, door, parquet, mast, etc.). Each of the three groups included 20 words as the result. The total number of the words in the test is 60.

The subjects sit within earshot in relaxed postures with closed eyes. The text of the instruction is uttered: "Now you will be offered a range of simple words. Your task is to give association for each of

them in the form of any other word, which will come uppermost. Try to respond as soon as possible." After confirmation is received words-stimuli are pronounced clearly and distinctly in the strictly defined order. At that, words related to theme of death alternate sequentially with words related to the theme of life and neutral words. The reaction time is defined as a period from the moment when utterance of the words-stimuli is finished to the moment when the subjects start writing down their words-responses.

The median time of reaction to the neutral words is accepted as 100 %. Then the following percentages are calculated: the percentage of median time of reaction to the words related to the death theme to the median time of reaction to the neutral words, and then the percentage of the median time of reaction to the words related to the life theme to the median time of reaction to the neutral words. Then these two ratios are compared: the ratios of vital and antivital activities.

Received differences were statistically processed by using Student's criteria [12].

The Beck Scale for Suicide Ideation helped detect 15 various suicidal risk factors in the subjects. The scores with regard to all the risk factors allowed evaluating intensity of suicidal intention.

The Rorschach Comprehensive System developed by J. Exner allowed to double check the data of the two techniques mentioned above. Assessment of the scores obtained through the application of the Rorschach test was carried out by determining frequency of matching of the obtained results to the reference range on every scale of the Comprehensive System.

Results of the study in the frame of the association test are indicated in the form of time of reaction to the words-stimuli related to each of the three themes (Graph 1).

We found out that the median time of reaction to the words-stimuli related to the death theme was

more (p<0,01) than the median time of reaction to the neutral words-stimuli. Significant difference between the median time of reaction to the words related to the life theme and to the neutral words was not found out. This shows that healthy young people aged from 16 to 19 years have unconscious death drive (antivital activity) despite positive life moments awaiting them (love, learning, career, etc.). According to the historgram below the mean time of reaction to the words-stimuli related to the death theme is 2,1 sec., and it is somewhat longer than the median time of reaction to the "vital words".
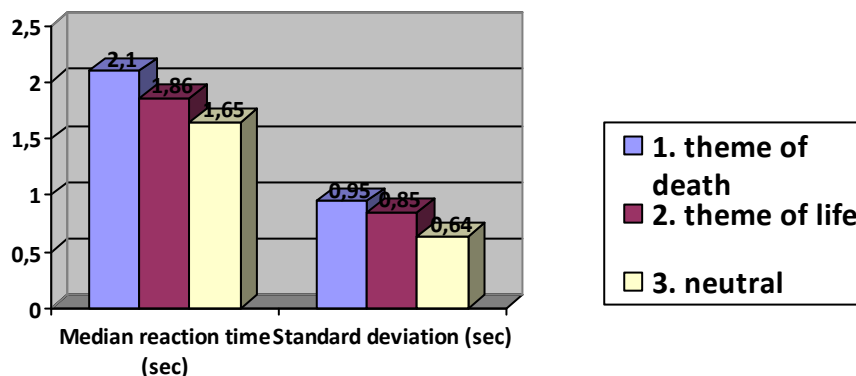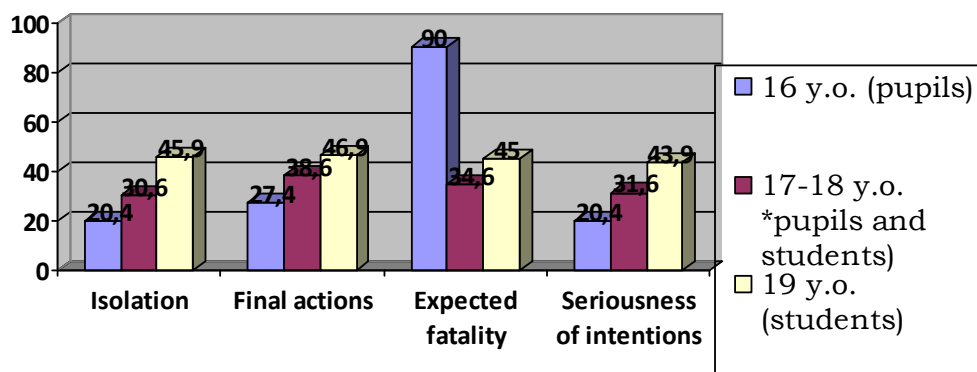


**Graph 1 –** Median time of reaction to the words-stimul in the association test
(sample – 90 persons aged from 16 to 19 years)

Quantitative evaluation of suicidal activity (suicidal intention) on the Beck Scale for Suicide Ideation is shown as four major risk factors of suicidal actions on Graph 2.

**Major factors of risk of suicidal actions**



**Graph 2 –** Quantitative evaluation of suicidal activity on the Beck Scale for Suicide Ideation

As the histogram data shows all suicide risk factors are found in the all age categories of the subjects that took part in the mini-research. At that, the Expected Fatality Factor in schoolchildren of 16 years old is detected in 90 % of the subjects; i.e., fear of future, prediction of own early death (not necessarily suicidal one), a kind of anti vital activity on conscious level are detected in almost all of the schoolchildren under test. Besides, such serious suicide risk factors as final actions and seriousness of intention are represented by fairly high percentile (from 20,4% to 46,9%)..

As a reminder, the results of the Rorschach test applied to mentally sane young people (sample – 90 persons) were assessed by determining frequency of matching of the obtained scores to the reference range on every scale of the Comprehensive System.

Analysis of the test protocols of the subjects shows that all 90 protocols of schoolchildren and students contain negative values that fall outside the normal ranges.

In particular, a few pathopsychological characteristics are detected:

1) in social sphere they are social passivity (58%, $p<0,001$); dependency seeking (33%, $p<0,01$);

2) in self-perception area they are lack of self-reflection competency (50%, $p<0,001$), negative egocentrism (33%, $p<0,05$), narcissism (11%, $p<0,05$), excessive level of reflection (42%, $p<0,01$);

3) in the emotional sphere they are condition of emotional distress, caused by excessive overburden with negative emotions (67%, $p<0,05$), significant emotional control reduction of (58%, $p<0,05$);

4) in the area of style behavior: it is ineffective style of problem solving (67%, $p<0,001$);

5) in cognitive sphere they are increase in level of cognitive activity ($p<0,01$) in combination with more expressed signs of cognitive immaturity (50%, $p<0,001$), expressed nonconformity in behavior (92%, $p<0,001$) in combination with defiance of social conventions (42%, $p<0,01$), increased level of motivational strain (42%, $p<0,01$), proclivity to excessive day dreaming (33%, $p<0,05$), expressed pessimism of thought (42%, $p<0,01$).

One can see from the results that the characteristics that may be considered as indicators of antivital activity are expressed most brightly: expressed pessimism of thought (42 %), emotional distress caused by excessive overburden with negative emotions (67%), ineffective style of problem solving (67%), excessive level of reflection (42%).

In general, the results on each scale of the Rorschach Comprehensive System show high level of anxiety and low level of adaptiveness of the subjects in stressful and problem situation.

### Conclusions

The association test including the groups of words-stimuli was conducted for the sample of 90 persons. The sample consisted of schoolchildren and students. The test showed that the median time of reaction to the words-stimuli related to the theme of death was more ($p<0,01$) than the median time of reaction to the neutral words-stimuli. Significant difference between the median time of reaction to the words related to the theme of life and to the neutral words was not found out.

Quantitative evaluation of suicidal activity (suicidal intention) on the Beck Scale for Suicide Ideation shows that all suicide risk factors were found in the all age categories of the subjects that took part in the mini-research.

On the basis of the Rorschach Comprehensive System the following characteristics that could be considered as indicators of antivital activity were detected: expressed pessimism of thought, emotional distress caused by excessive overburden with negative emotions, ineffective style of problem solving, excessive level of reflection.

The results we obtained allow to make a conclusion that mentally sane young people aged from 16 to 19 years (who learn at schools and tertiary institutions) have a group of unconscious ideas related to theme of death, i.e. a death complex.

We assume that increase in time of reaction to the words-stimuli related to the theme of death may indicate actual though unconscious increase of antivital activity in youngsters and may give occasion to early detection of such syndrome for further prophylaxis of suicidal behavior (determined by us as violence of the individual against himself due to unnaturalness of the death complex to the man).

### Prospects for research

Society reproduces itself biologically and socially through the younger generation; that is, in a way young people represent the future of their country, and therefore the behavior and well-being of the young generation is a specific barometer measuring the overall moral, ideological, political and socio-psychological climate in such society. Unfortunately, the death complex detected by us attests that all is not well with our society.

We also cannot ignore the negative influence of suicidal attempts on the morale of surrounding persons: family, friends, and acquaintances. Every suicidal act becomes in this respect a specific psychogenic factor temporarily reducing the level of optimism and activity of society members. Taking into account that suicide survivors are unable to work for a certain period of time causing direct economic losses to the public production, our country needs a long-term strategy to develop

positive attitudes in young people. In future we are going to work out a complex strategy of prophylaxis of suicidal behavior based on the development of positive thinking and vital activity of young students in accordance with the results of the conducted study.

Despite a tinge of negativity carried by this issue, mixed feeling of the society on the issue and complexity of its study we think it possible by combining efforts of specialists (psychologists, educators, valeologists, health workers, etc) to implement such strategy in the nearest future.

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