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Engineering sciences

Технические науки

UDC 04

Formalization of the Problems of Marketing in Managing the Implementation of Industrial Innovation Projects

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Abstract

The article, basing on statistical datas from Data Mining Cup (www.dataminingcup.de) and described the algotithm for data analysis of coinnovation projects. This algorithm can help to find a decision for modernisation of products groups' production and plane future modernisation of manufacture adapted for product lines.

Keywords: management; innovation; project; levels of management; on-line store; market; Naive Bayes algoryth.

Introduction

During the last decades we have seen the establishment of a new scientific discipline – management of innovation projects – part of the theory of socio-economic systems, in which methods, forms, and ways of the most effective and efficient management of innovation are being studied.

At this point you can not give a precise definition of the discipline. In essence – it is a complex of interrelated activities aimed at achieving the goals within a specified period of time and under budget established during test and refine the idea of creating a new product, including a forecast of its market appeal.

The most common purpose of the innovative project is to obtain confirmation of the technical, technological and commercial options for further planning of the business, ie

justification of the business plan of the investment project of production, sales and after sales service of the developed product [8].

The concept of "innovation project" is used in several ways:

• as a business, activity, event, suggesting a complex implementation of any actions that achieve certain goals;

• as a system of organizational-legal and settlement of financial documents required for the implementation of any action;

• the process of innovation.

In general, the innovative project is a complex system of measures, interdependent and interconnected by resources, time, and by performers and aimed at achieving specific goals.

Each innovative project, depending on the tasks can be classified differently (Fig. 1).

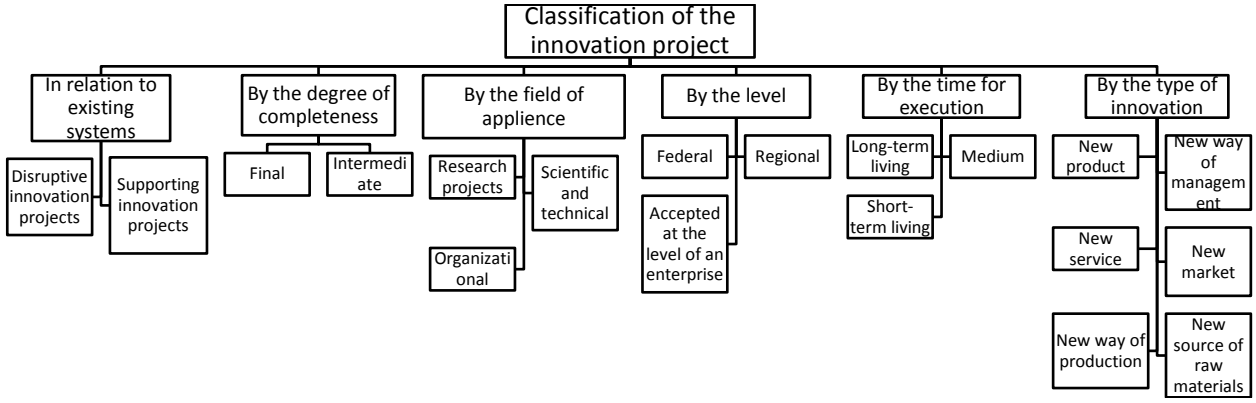


Fig. 1. An estimated classification of innovative projects

It is important to identify the most characteristic features of the innovation project:

1. Each innovation project goes through the cycle "science-production-consumption". The idea of the innovative project is based on scientific research and marketing, as well as production in the market adjusts to the consumer and relies on modern technology.

2. The difficulty of predicting outcomes, and as a result – increased risks. The emergence of the new is always associated with multiple risks (public – rejection process; technological – underdeveloped industrial base, niche – the immaturity of the market, etc.).

3. The development and implementation of innovative projects is a creative and unique challenge. That is why much depends on the enthusiasm and personal interest of performers, on the organization of the project participants. The presence of free will and high motivation of participants of the project makes the usual organization of labor and the creation of labor discipline inappropriate. Therefore, we need an adequate approach to selecting managers' management style.

4. The absence of the usual standards for the innovative project. Even the most clear-cut concept of the project may undergo major changes during development.

An innovative project has different ways of describing and urgent objectives depending on stage at which it considered to be, and the level of management (Fig. 2).

Fig. 2. clearly shows that every innovative project throughout its life goes through several major phases. The first few steps can be considered together as a phase of establishment of the project. In addition, at each stage it has its own problems, formulation and correct solution of which is an important factor of success of the project. If to consider the product innovations according to the ISO classification, products can be divided on the following life cycle stages that will have its own specific characteristics [9]:

1. The formation of an innovative idea (the concept).

On the one hand, the innovative idea is the basis of innovative projects that is reflected in the formulation of a general (ultimate) goal of the project; on the other hand, by the formation of an innovative idea a conceived plan of actions is considered, ie, methods or ways of achieving the project objectives.

Simultaneously with the formation of innovative idea of the project, market researches is being held in order to:

• to analyze the possibilities and economic feasibility of replacing the products with new types of target products;

• set of possible consumers of the target product of the project;

• examine the structure of industries, providing the project with raw materials, energy, components, etc.;

• to analyze the economic and social impacts of the project.

2. Development of the project.

It is a process of finding solutions to achieve the ultimate goal of the project and the formation of interconnected by time, resources, and performers complex of tasks and actions to implement the project. At this stage, a comparative analysis of different options for achieving the objectives of the project is being held and the most viable project for implementation is being selected. In the development of any project it is important to take into account such properties as competitiveness, economic and strategic validity, legal protection of the project, cause the further viability of the project is being estimated by this factors (Fig. 3).

Then, the plan for an innovative project implementation is being developed, the problems of a special organization for the work on the project are being solved, a competitive selection of potential performers of the project is being held and contract documentation is being issued.

3. Implementation of the project.

It is a process of implementing the goals of the project. At this stage the control of schedules executing, resource consumption, the adjustment of arising deviations and operational control of the implementation of the project are being held.

4. Completion of the project.

This is the process of commissioning of project results to the customer and of closing of contracts (agreements). It is a complete stage of the life cycle of the innovation project

5. Warranty and after sales service.

It is evident that the development and management of innovative project is a quite voluminous and multi-faceted set of tasks, only the successful solution of which in each stage leads to a successful implementation of the project.

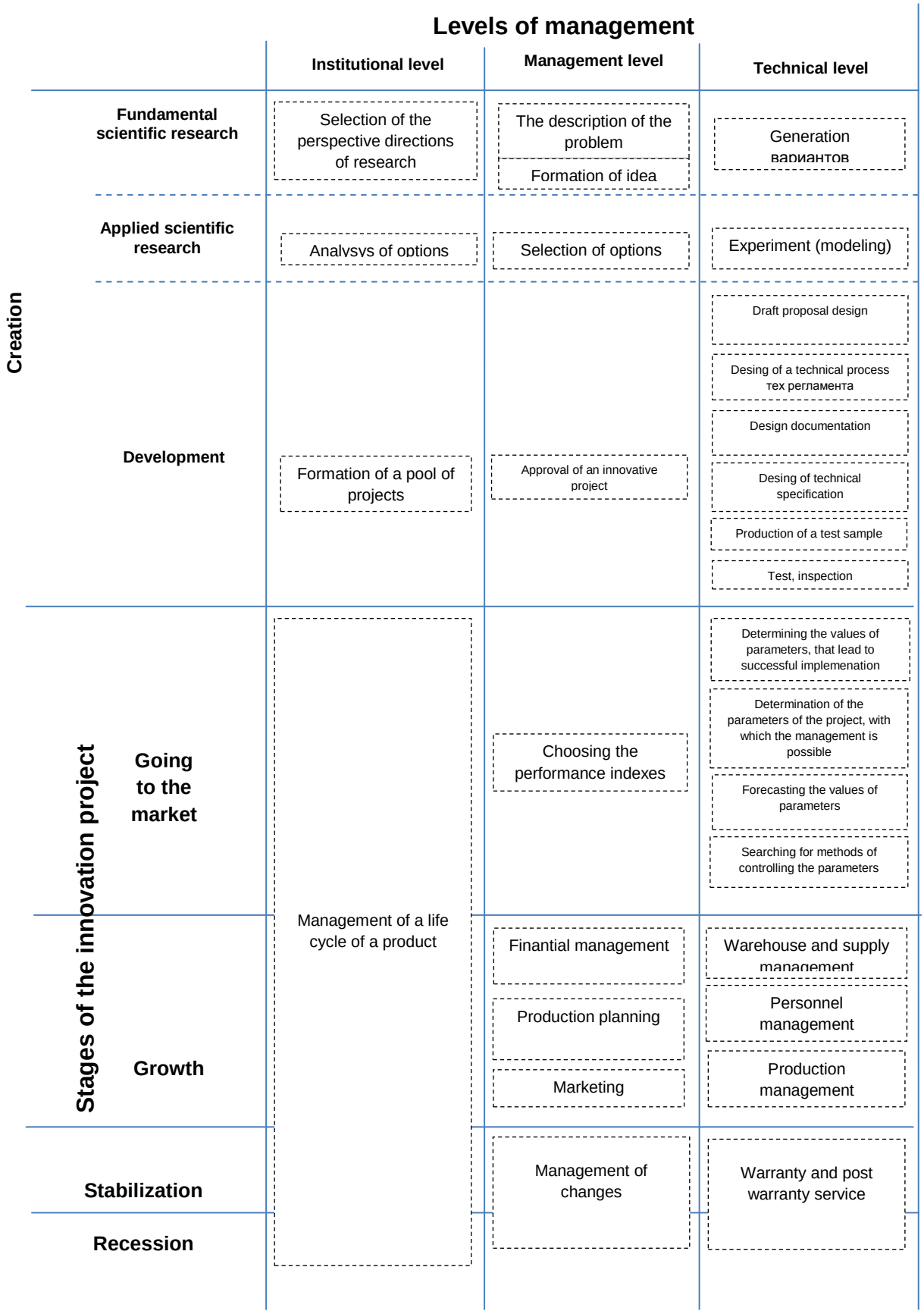


Fig. 2. Classification of problems solved by the implementation of innovative projects, depending on the stage and level of management [6]

Any project, depending on the application area can be described by the set of parameters. This parameters can be divided into several groups:

- financial (income, credit, income from sales, deduct – charges on loans, salary, cost for implementation and modernization of production);
- technological (the parameters that describe the processes occurring in the workplace);
- technical / physical (product specification);
- other options (possibilities in terms of supply of components or materials, the wishes of consumers, etc.).

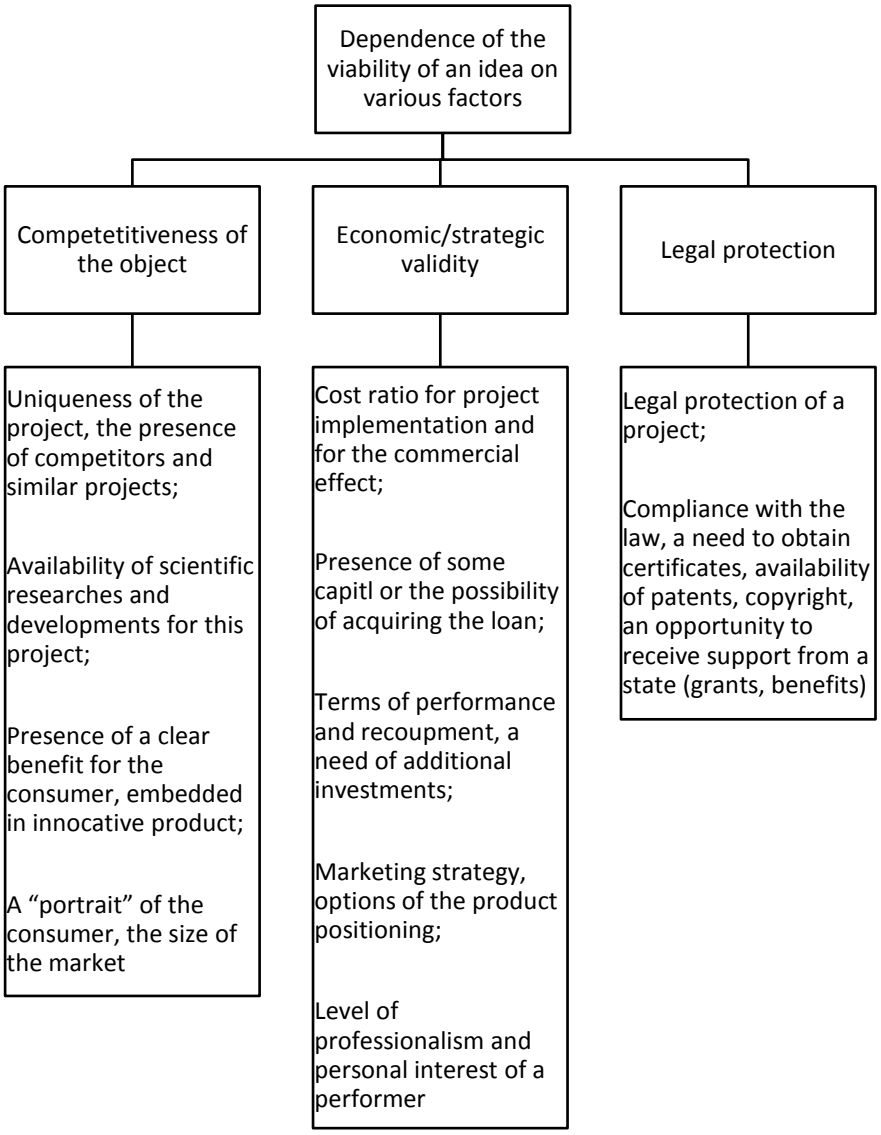
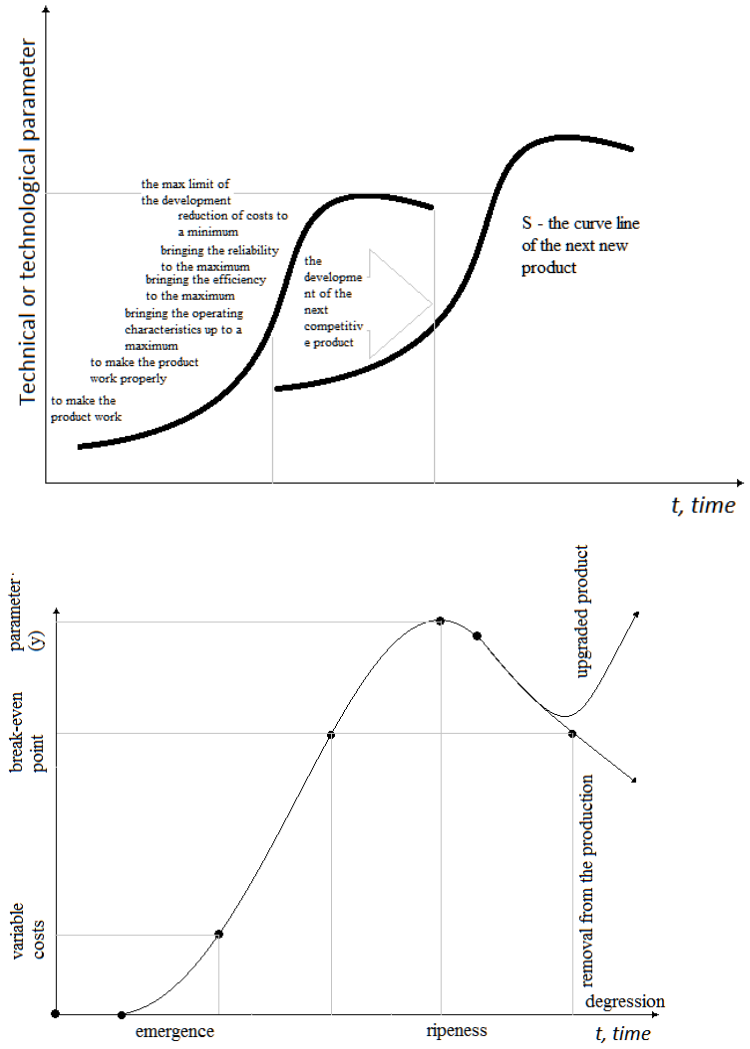


Fig. 3. Criteria for evaluation of innovative projects in selecting the concept for their implementation

In the process of project development, each parameter goes through a few steps of its development. Therefore, by selecting the most important (in the meaning of the final draft) parameters and by estimating the stage, on which each parameter is, we can estimate its growth potential and prospects of development of the project. If one can take into account the mutual influence of the parameters of the project, it will work out solutions that lead to progress on the set of parameters describing the project. Thus, the problem of generation of possible solutions is reduced to the problem of optimal search of groups of parameters' values of the project.

Below, the unified curve of the development of an innovative project [1] by one of the parameters is shown.



a) *b)*

Fig. 4. The innovative curve: a) the transition from one project to another [3], b) stages of the innovation project on innovation curve [2, 4]

As we can see in Figure 4, on the curve, there can be distinguished four stages: the emergence of the idea, entering the product to market, growth, maturity and decline. This stages matches to the stages according to the ISO classification system, shown above.

In general, each innovative project is going through several stages of development, which are described either through innovation curve (economic parameters: income, sales, place in the market, which takes a firm or product, the number of competing products or firms, the number of people involved in work on the project, product quality, etc.), or by using an S-shaped curve (technical and technological parameters: the cost of developing or implementing of the new technology or process). This curve shows the level of technology development and prospects for its modernization. Each parameter of an innovative project may be on it's stage of development, and can be described by it's functional connection.

Thus, the problem of management of innovation projects is reduced to the problem of evaluation of the development potential for each of the options and making decisions that leads to progress on the set of parameters.

In order to consider the system as a project, one or more options that will pass through all the steps can be distinguished. Such indicators or parameters are determined depending on the purpose of the project (an effect that is expected to receive).

Solving the problem of marketing. One of the problems which solution is required at all stages of the innovation project is the problem of marketing. However, the formulation of this problem differs depending on the stage. Thus, at the stages of scientific research and entering the market the main question is whether there will be a demand on goods in the market. At the stages of implementation, stabilization and decline the task of stimulating sales becomes the main problem. Despite the fact that this tasks are conceptually very similar, they may have different mathematical formalization.

1. Assessment of the prospects of product innovation.

In order to assess the prospects of the product, the market reaction to similar goods can be considered.

In order to take into account the preferences of customers, there exist methods based on surveys or expert assessments, but these estimates are subjective and can not take into account the subjective factors that influence the decision for an individual user (shop in which there are sales, product name, brand, etc...) All of these factors in combination may be considered only on the basis of statistics without isolating each factor in a separate assessment.

The accumulation of such statistics became possible with the advent of online shopping, where, on the basis of such information, the groups of goods displayed on the screen for a specific user are being formed. These techniques are now also being transferred into off-line sales.

Despite its apparent remoteness from the production, this approach allows to identify products that sell well together, to forecast their demand and on its basis to draw up plans for production volume of products and sets of products, that are useful to produce.

Lets analyze the data analysis process of buying goods in the online store. Suppose, the data contain information about the sequence numbers of sessions (which can be roughly considered as buyers), about purchased laid in the basket, and viewed goods. To solve the problem of selecting the closest (of interest) goods the principle of similarity of goods is being used, which is regarded as the similarity of the corresponding operations made with goods with respect to different users.

Thus, suppose that it is given the array of the form [Session Number | item number | type of operation], which is a text file consisting of rows of the specified type. Then the data set can be transformed into a matrix (Table 1).

Table 1: The statistical matrix of the actions of the buyer from the internet store

№ session	Item 1 ($\vec{T}_1$)	Item 2 ($\vec{T}_2$)	Item 3 ($\vec{T}_3$)
1	*a*	*a*	*c*
2	*a*	*b*	*a*
3	*b*	*c*	*c*

In Table 1 coefficients a, b and c indicates: "*a*" - items viewed, "*b*" - items, which were putted in the basket, «c» - purchased items.

Numerically, the coefficients for each operation can be calculated as the ratio of the number of operations in the array corresponding to the number of operations on goods in the array.

Then, to determine the similarity we use the cosine of the angle between the vectors formed by the columns of values for each product (simplified representation of item-to-item algorithm) [5]:

$$S = \cos(\vec{T}_1, \vec{T}_2) = \frac{\vec{T}_1 \cdot \vec{T}_2}{\left|\vec{T}_1\right| * \left|\vec{T}_2\right|}$$

where $\vec{T}_i$ vector (columns), corresponding to the goods.

On the basis of these calculations the table of commodities can be filled. The greatest numerical value of the cosine is between goods that are sold, or placed in the basket, or reviewed together most often.

It should be noted that similar items can be viewed as so-innovations. This products will fall into one or complementary groups of goods and have similar innovation curves. This allows us to

combine this curves, consider a group of two products as one. Another possibility is to use data from the curves of similar products in the tasks of planning a new production.

So at the stage of entering the market we can have an idea of what will be our level of sales, thus defining for itself performance parameters.

2. Stimulation of demand.

At the stage of growth and stabilization we will consider the task of stimulating the demand. Here we can identify the most influencing (on the success of the project) parameters by estimating the percentage of sales, changes in demand over time, and so on. Let's consider this problem on the example of stimulating the demand for on-line store.

We evaluated a variety of arrangements and the probability of their success (ie, the probability of payment by the buyer of goods). Statistics was derived from a variety of different parameters, not all of which eventually actually influenced on the final result.

While developing the algorithm there were used the parameters with which the probability of non-payment was more than 10%. The greatest probability of non-payment (31.94%) is when the parameter «cookie» matches for the last 3 days. The other parameters were not displayed because they didn't have the sufficient impact on the final result and could give it only being aggregated (that could make the algorithm more complex. As a result we have a list of parameters, which cause the biggest influence on the systems behavior. So, by using them we can predict the possibility of how successful the sale will be.

Nowadays there are a lot of ways to analyze the gained statistics. Each of them provides the best accuracy in the special conditions of the problem. For example the problem can be solved by building the math model, based on fuzzy logic, neural network, mathematical regressions. In this case, we have a rather specific information, so we can use a fairly simple and therefore very accurate method of data analysis - the method of Naïve Bayes.

The point is to make the formation of rules for making decisions on the basis of several independent variables. The name Naive comes from the "naive" suggestion, that all variables are independent from each other. In the real life it is not always acceptable, but it can be applied for our problem.

The possibility of belonging of the object i_j to the class $c_r (y = c_r)$ will be defined as $P(y = c_r)$.

The event corresponding to the equality of independent variables to certain values will be denoted as E, and the probability of its occurrence as $P(E)$. The idea of the algorithm is to calculate the conditional probability of belonging of the object to the c_r , when independent variables are equal to certain values. From the theory of probability it is known, that it can be calculated by the formula:

$$P(y = c_r|E) = \frac{P(E|y=c_r)P(y=c_r)}{P(E)}.$$

In other words, the rules are formed, in which all independent variables are compared with the corresponding possible values. The final part contains all the possible values of the dependent variable:

if

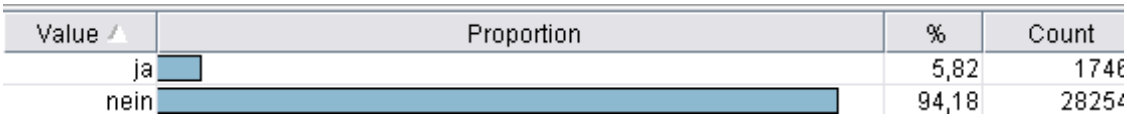
$$x_1 = c_p^1 \text{ and } x_2 = c_p^2 \text{ and } \ldots x_m = c_h^w,$$

then

$$y = c_r.$$

For each of these rules the probability is determined (Bayes formula). In order to calculate the probability of possibility of a given event, you should first compute all the conditional probabilities $P(E|y = c_r)$.

Examples of data analysis. But, in order to use this method, at first the data have to be analyzed. It has to be decided, which parameters it is necessary to take into account (which can influence on the final result), and which parameters are useless. In order to do that each parameter must be analyzed separately. A part of this analysis we can see below.



Value	Proportion	%	Count
ja		5,82	1748
nein		94,18	28254

Fig. 5. A percentage of failed sales among all sales

The total number of non-payments - 1764 of 30,000 (5.82%)

TARGET_BETRUG	B_EMAIL	Record_Count
ja	ja	1153
ja	nein	593
nein	nein	5444
nein	ja	22810

Fig. 6. A percentage of failed sales when the field "e-mail" is not filled

As it is seen in the Fig.6.
If the field "e-mail" was filled, the possibility is = 1153/30000
If the field "e-mail" wasn't filled, the possibility is = 593/30000
The percentage of non-payment of all those who have "e-mail" - 5.05%
The percentage of non-payment of all those who do not have "email" - 10.89
Considering it, we should first take into account the possibility of non-payment among those, who didn't fill the "e-mail" field.

	TARGET_BETRUG	B_TELEFON	Record_Count
1	ja	ja	141
2	ja	nein	1605
3	nein	ja	4366
4	nein	nein	23888

Fig. 7. The connection between sales success and a filled graph "telephone number of a customer"

As it is seen in the Fig. 7:
If there is a phone, then the probability is 141/30000, if not, then it is 1605/30000.
The percentage of non-payment among all those who have a telephone number - 3.23%.
The percentage of non-payment among all those who do not have a phone number - 6.72%.
As we can see, this parameter does not make a big influence on the result, so it may not be taken into the account.

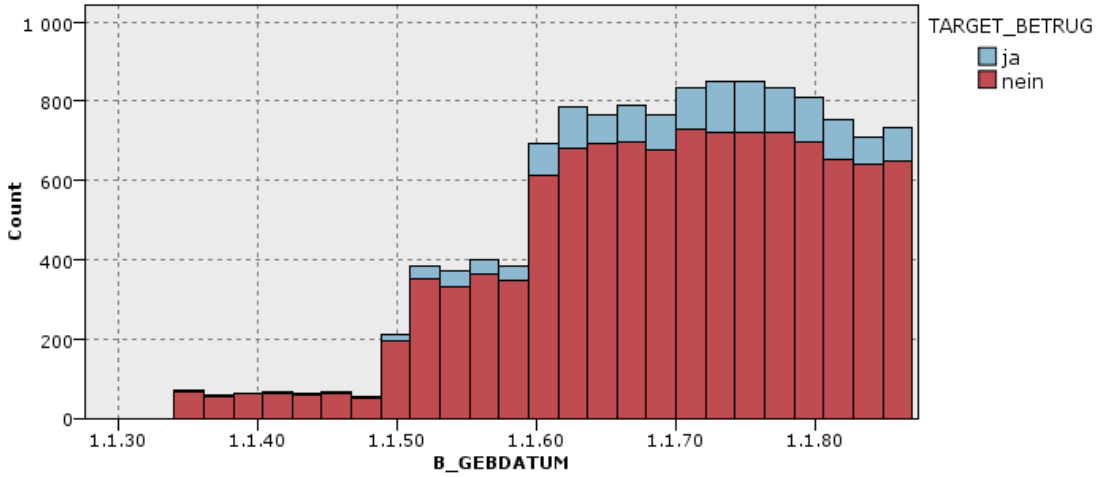
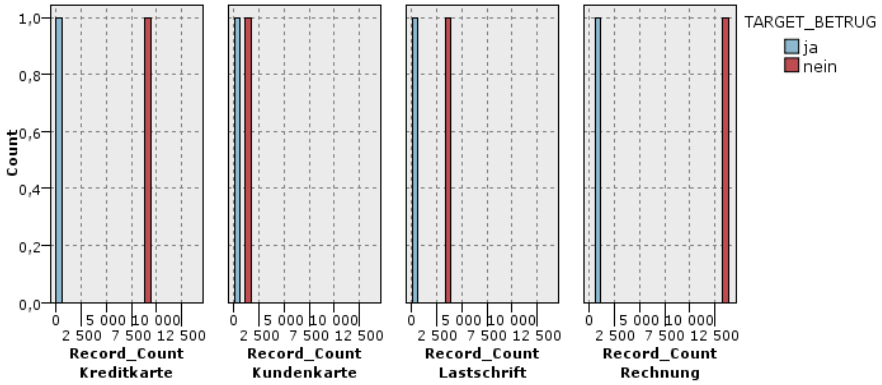


Fig. 8. The possibility of success in sales depending on the customers age

Depending on the age of the customer.

If the customer's date of birth is less than 1950, then the probability of non-payment drops sharply. (At the same time the number of customers with the year of birth before 1950 in the total mass is small. The probability of non-payment increases significantly among those, who are 25-35 years old, ie born in 1970-1980. It reaches an average of 16.5 %). So we may take to the account the customers with the age from 25-35.



	TARGET_BETRUG	Z_METHODE	Record_Count
1	ja	Kundenkarte	19
2	ja	Lastschrift	223
3	nein	Kundenkarte	1531
4	ja	Kreditkarte	528
5	nein	Lastschrift	3623
6	ja	Rechnung	976
7	nein	Kreditkarte	9268
8	nein	Rechnung	13832

Fig. 9. Possibility of non-payment depending on the way, how it meant to be payed

When Kreditkarte (1) the probability = 9268/30000 (5.69%).
When Kundenkarte (2) the probability = 19/30000 (1.24%).
When Lastschrift (3) probability = 223/30000 (6.16%).
When Rechnung (4) the probability = 976/30000 (7.06%).

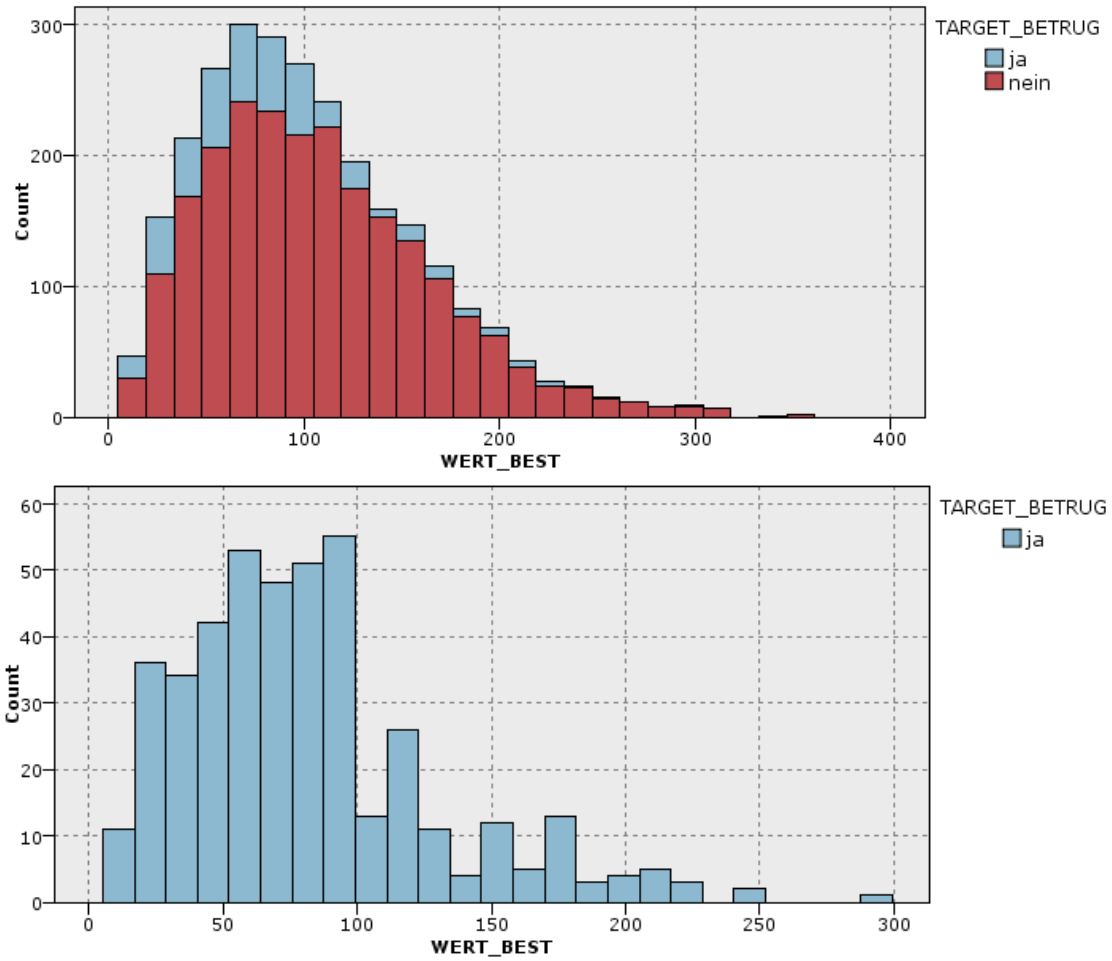


Fig. 10. The possibility of non-payment, depending on the total cost of the order

The highest probability for non-payment when the total cost of an order is 93 euros, special attention should be given to goods which are in the price range of 20-100 euros).

Conclusion

As a result of this work, we can conclude that, considering the current marketing problem, as the problem of applying humanitarian ideas, it can be formalized and the possible solutions can be calculated with a high degree of reliability. This confirms the prospects of the chosen approach. Thus, in the course of further research detailing the problem of marketing of innovative projects and its formalization in the form of algorithm will be continued.

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Software and Hardware Complex of Experimental Plant for Pulp and Paper Production

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Abstract

This paper describes the process of developing the software and hardware complex in the programming environment LabVIEW for study and identification of plant operation modes that simulates the real manufacturing process of preparing paper pulp. The specific feature of the developed software complex is its connection with the technological process of the experimental plant by a programming logic controller.

Keywords: Physical model; experimental plant; programming logic controller; block diagram; front panel.

Introduction

The technological cycle of paper production is distinguished by large branching and a great number of inter-related parameters [1]. The quality of the products depends on each parameter. Since it is not appropriate to conduct experiments by means of existing equipment, the investigation of the technological operation modes of production processes, with the construction of physical models has been proposed [2].

The object of software and hardware complex construction is the development of a physical model and building the laboratory plant on its basis.

The developed experimental plant simulates the operation of the local loop control of the pulp preparing process in pulp and paper production.

The laboratory plant consists of five tanks, connected to the piping system in sequence. The tanks simulate the technological pools of real technological section for pulp preparation. The piping system contains four pumps with frequency controlled electric drive, manual and controlled valves with an electric drive, tubular heater, sensors of the main technological

parameters - flow, pressure, concentration. All the tanks are equipped with level sensors, overflow protection system and are connected to a drainage system of mass draining through manual valves [3].

Materials and Methods

To provide experimental works in a laboratory plant the software and hardware complex is required that would allow the researchers to implement different modes and functions to control the plant, and also would ensure the reception and investigation of various static and dynamic characteristics. The designed software and hardware complex at its early stage of development will perform the simple functions of mode control of the plant operation and ensure the acquisition, storage and processing the experimental data.

In order to construct the educational and experimental complex of technological process control of the experimental plant a software package application from National Instruments LabVIEW has been proposed [4].

The package LabVIEW is based on graphical programming environment, which is now widespread among experts and researchers in this area. It enables the users to implement engineering and scientific development in the systems of measurement, testing, controlling and automation of scientific experiments [5].

By development of software complex for experimental plant control and data acquisition it is necessary to create a user-friendly, visual interface. Package-based tools make it possible to implement data mapping and program control. Thus, the necessity of third-party packages usage for data visualization is eliminated that allows users to perform acquisition, analysis, processing and display of data in a single application without the problems of format compatibility. In addition, LabVIEW can be turned into a full SCADA-system with an optional module - Datalogging & Supervisory Control Module (DSC), designed for graphical development applications of monitoring and control [6].

Block diagram of software and hardware complex of the experimental plant is shown in Figure 1.

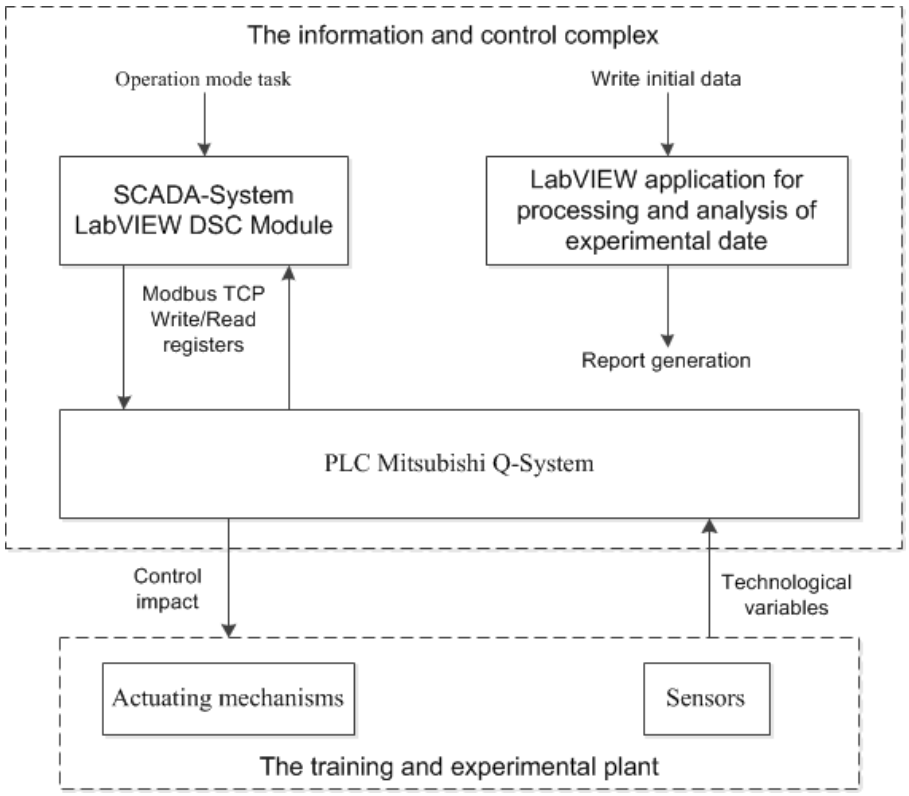

Fig. 1. Block diagram of software and hardware complex

The software and hardware complex consists of two control levels. In the middle level there is a programmable logic controller (PLC) Q-System of Mitsubishi Electric, which collects data from the sensors and control the actuating mechanisms of the plant. The main components of PLC are base unit, power supply module and the central processing unit module (CPU). Additionally, the controller is equipped with input and output modules of analog and digital signals, as well as with the line of communication modules (Ethernet, Modbus TCP, CC-Link). A special program implementing the connection between the PLC and the upper level is recorded in the PLC [7, 8]. In the upper level, a project of the dedicated SCADA system based on LabVIEW DCS Module and the application for processing and analysis of experimental data have been developed. Since the considered PLC is equipped with a Modbus TCP module and LabVIEW has the linked Modbus libraries it has been decided to connect the controller to the existing Ethernet network available at the faculty department and to share data with LabVIEW environment using the protocol Modbus.

Discussion

Let`s consider the development process of the block diagram in LabVIEW, which will implement the functions of collecting and processing the data. The block diagram consists of several parallel cycles. Each cycle performs certain functions.

Figure 2 shows two cycles in the block diagram of the program LabVIEW used for reading data from Modbus registers and OPC / DDE-server and for displaying the data on the front panel.

On the left the first cycle is designed to read the parameters from the sensors. The functional blocks Read Holding Register to read Modbus registers (liquid level in the tanks, pressure, temperature) from the library previously connected to the LabVIEW are included in this cycle [9]. To access the Modbus registers first it is necessary to make a TCP connection specifying IP-address and port of the PLC. In this cycle the obtained values are put in an array and in order to filter noise the average values are taken from 5 points. To output the data in the SI units on the front panel the transformation operations are performed and data are put into local variables. Also in this cycle the flow rate values are read from the OPC / DDE server of IM-2300 heat and energy controllers by means of operation functions with the DDE mechanism.

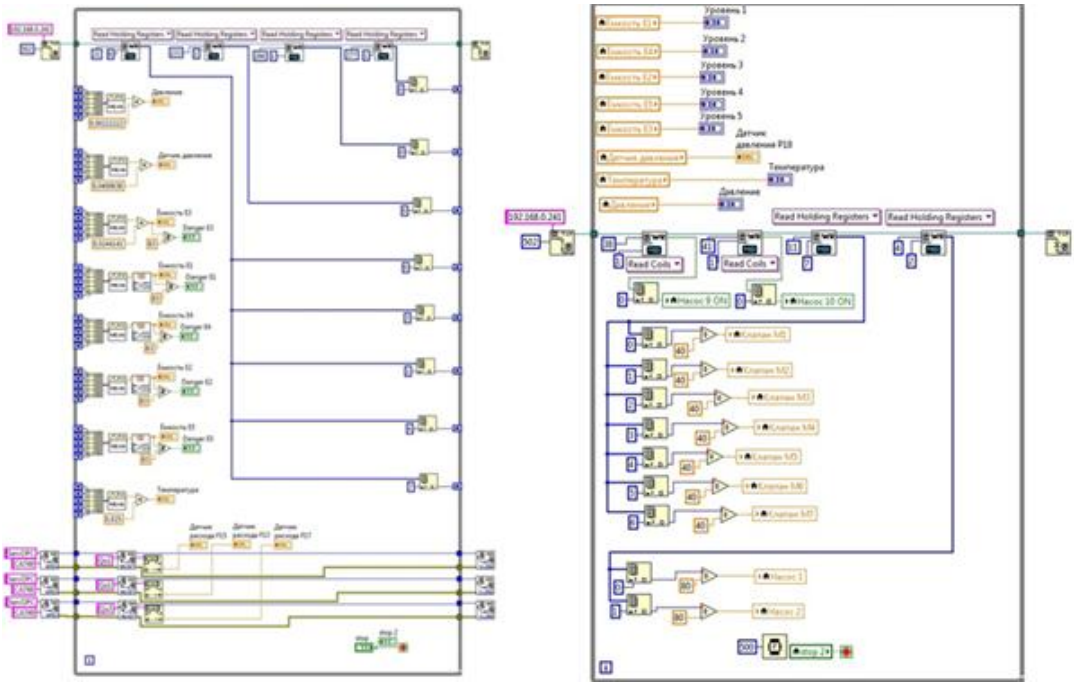

Fig. 2. Block diagram of data reading and visualization

The second cycle shown in Figure 2 on the right, is designed to display the data on the front panel, as well as to read the state of the actuating mechanisms (pumps and valves) and includes a time delay in 500 ms. Similar to the above cycle the functional blocks Read Holding Register to read the valve positions and pumps rotation frequency as well as the blocks Read Coil to read

boolean state variables for pumps are located here. For data visualization the local variables created in the first cycle are read, and they are written in the appropriate indicators on the front panel.

Figures 3 and 4 show the block diagrams of cycle control and event handling of the experimental plant. In this cycle a special structure of LabVIEW Event Structure to handle the events is placed. The above figures show the same cycle, but they present two different events on changing the element state or value on the front panel. For the example Figure 3 indicates a block diagram for handling the event of pressing the button to turn on / off the pump. The functional unit Write Single Coil to write a pump state bit into the register Modbus is placed here. Figure 4 shows the block diagram of event handling to change the task for opening / closing a valve. With the help of the functional block Write Single Register and simple conversion of entered values into controller units the set valve state is written into the register Modbus. Similarly to reading cycles and data visualization for communication with PLC the TCP connection is made and closed after the cycle implementation.

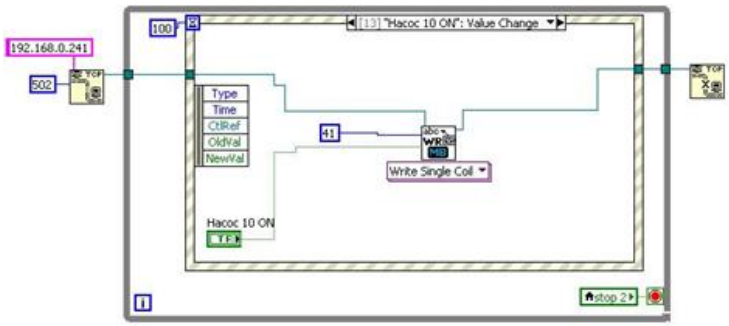

Fig. 3. Block diagram of event handling as an example of the pump switching

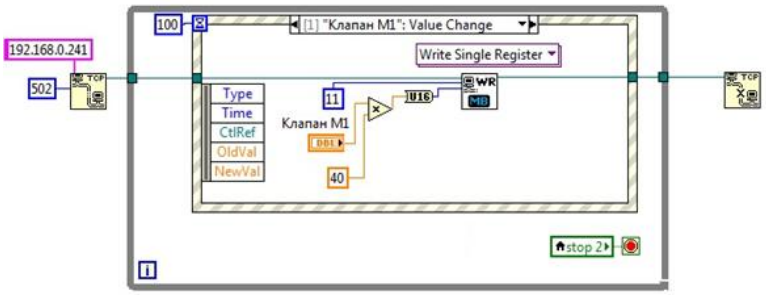

Fig. 4. Block diagram of event handling as an example of the valve position

Figure 5 shows the block diagram implementing the construction of a transition process graph of changing the level for the selected tank. Data for the graph construction are obtained from a reading cycle presented in Figure 2. By plotting the graph the specific period of placing the measured values on a graph using the temporary delay in the cycle can be set. The cycle has several selection structures (Case Structure) allowing the users to start or stop the procedure of graph construction, as well as to select the tank to display on the graph. Simultaneously with the graph construction in the cycle the data are recorded in the *. xls file format.

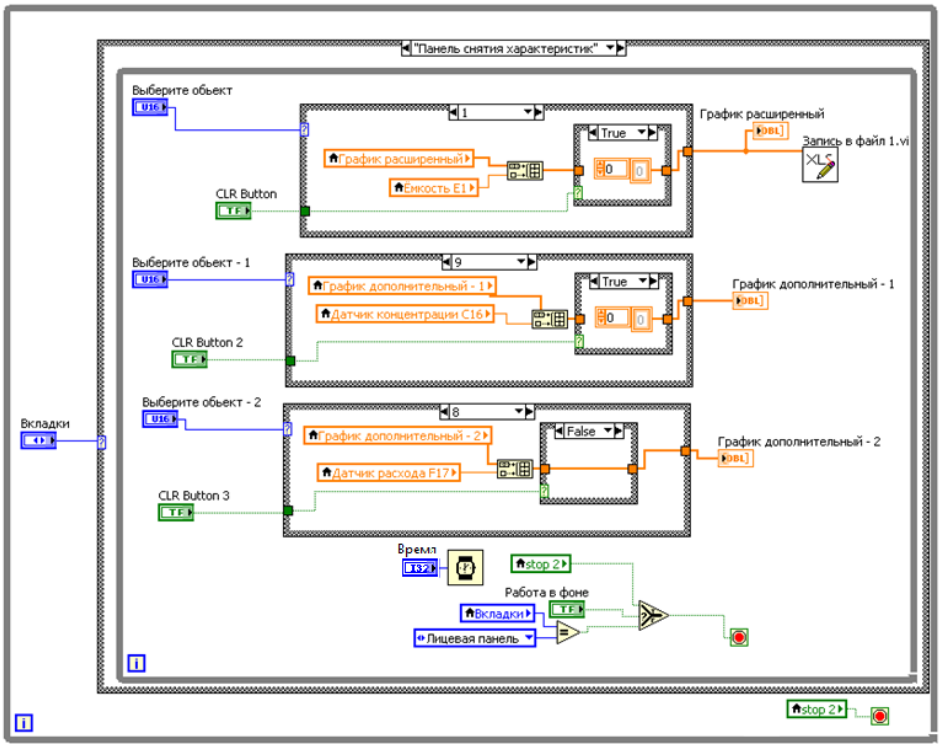

Fig. 5. Block diagram of graph construction and saving the data in a file

As result of our development the front panel of the software environment is produced in the form of a mnemonic diagram of the technological plant process and contains the elements required to control the actuating mechanisms as well as and the visualization of various technological parameters [10]. As shown in Figure 6 the user interface of the software complex is implemented in LabVIEW environment using the DSC module components.

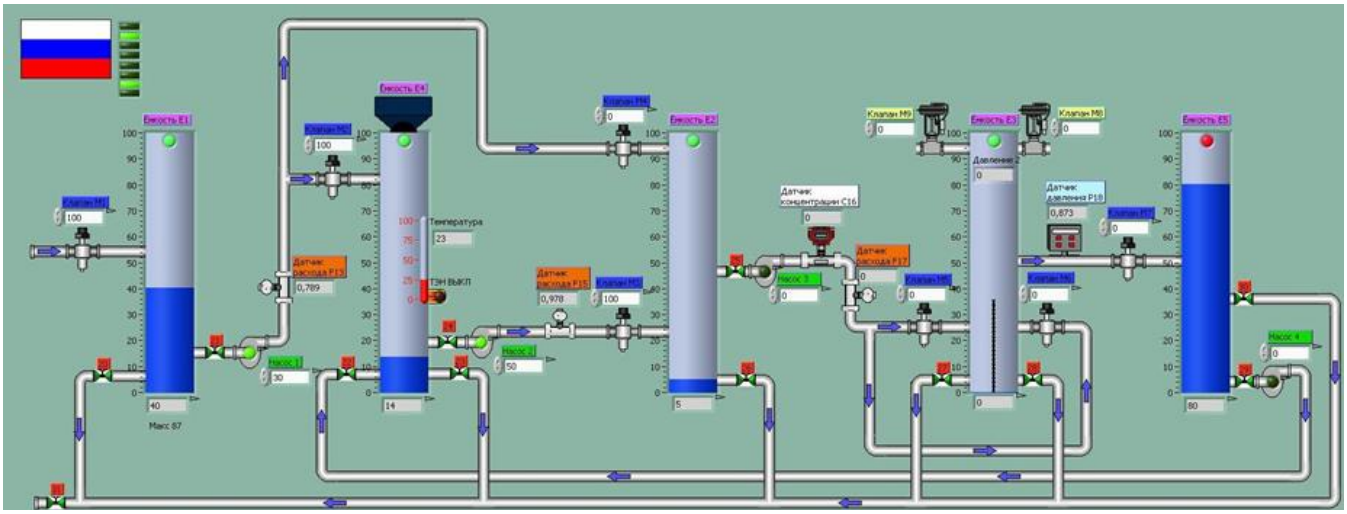

Fig. 6. Front Panel of software complex for the experimental plant

On the front panel there are technological plant tanks connected by a piping system, pumps, adjustable valves and values displayed from all the sensors. The user interface of the software complex is clear and simple to operate. The users select the investigated section of the technological process and set the parameters (the level, flow rate, pressure, etc.). For example, one of the local automation tasks is to maintain a given level of the mass in various technological tanks. For the synthesis and calculation of the level controller it is necessary to perform the procedure of

control object identification and to read static and transient response from the object. Let`s consider the graph reading procedure of filling the first tank. To conduct the experiment it is necessary to set the control action to open the valve. Further reading the selected characteristics is taken place at the same time during the testing process users can simulate the disturbing action, switching on the pump, evacuating mass from the tank.

As an example, Figure 7 shows the graph of the transient response of the level variation received as a result of filling the E1 tank with water up to 80%. According to this characteristic one can evaluate the nature of the transition process and use the information obtained in the process of the synthesis and calculation of the controller level.

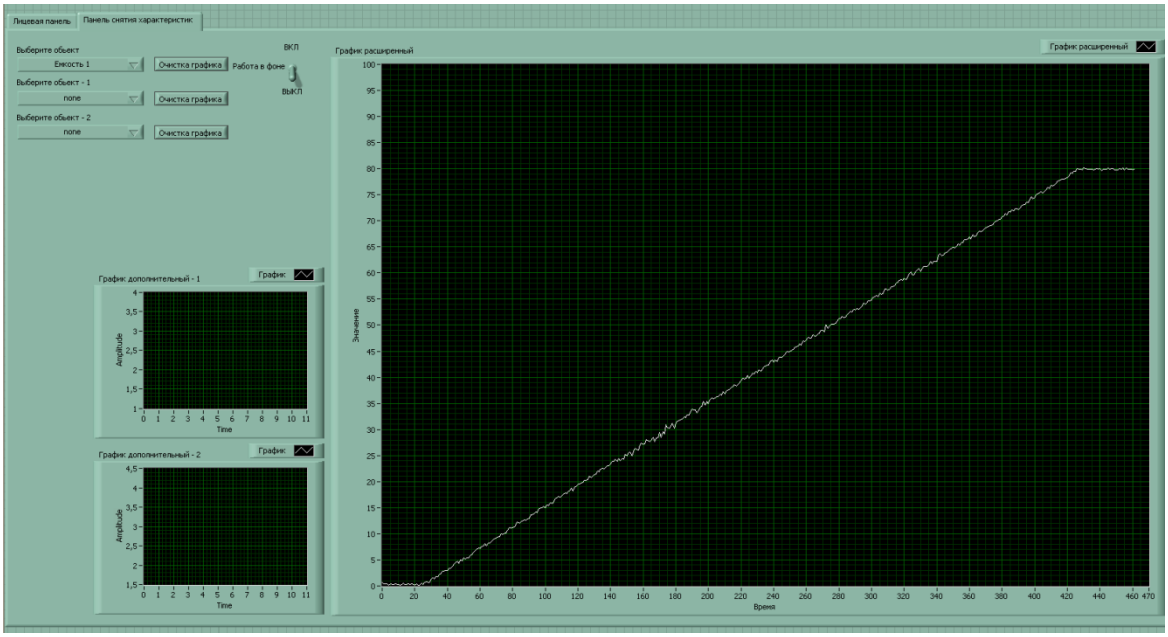

Fig. 7. Graph of the transition process of tank filling

It should be stressed that software and hardware complex considered in the paper is an integral part of the intelligent automated control system of the physical model for the pulp and paper industry.

Implementation of the software and hardware complex for the experimental plant will allow the researches to carry out a number of experiments on technological process investigation as well as setting and optimization of the control system.

The problem solution of the criteria-based comparison according to the similarity theory of hydrodynamic processes will enable one to focus the experimental data on the real technological process for pulp and paper production [11].

The possibilities for analysis and adjustment of CAM projects proposed by the complex design allow us to develop software in the laboratory environment and to reduce project costs and implementation period.

In addition, this complex can be presented also as a virtual simulator to master the desired abilities, knowledge and skills of the students and engineering staff. Created in the LabVIEW environment the project is a training tool for laboratory work with students. It is rather easy to understand and it includes all the basic elements of control and visualization of the technological processes in order to display information, graphics, animation, linked to real data obtained from sensors.

In conclusion it should be mentioned that the next step in the program development is module working out for the synthesis and setting the individual local control loops of the technological parameters for the experimental plant.

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UDC 33

Human Trafficking and Commercialization of Surrogacy in India

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Abstract

The Supreme Court of India, In Baby Manji Yamada versus Union of India & Anr. [2008] INSC 1656, popularly known as Manji Case, declared that Commercial Surrogacy is legal in India. As we know that, India is a developing country and here, most of the peoples are very poor and illiterate. Recently, human trafficking was increase with an uncontrollable rate in the entire world. In addition, making Commercialization of Surrogacy legal had already give birth to a new form of trafficking. Where, illiterate women from poor section is trafficked to run the reproductive industry of the Surrogacy. As we know that the traffickers, they used to trafficked girls/women for prostitution but now after the legalization of Commercial Surrogacy, they will trafficked girl/women for the reproductive industry as a raw material. The Immoral Trafficking Prevention Act (ITPA), 1956 and Sections 366(A) and 372 of the Indian Penal Code, 1860 are the existing laws of India, which deals with human trafficking. However, none of these provisions contains any solution, to deal with this new serious issue of trafficking of women/girls for the purpose of Commercial Surrogacy in reproductive industries. These existing laws as well as the pending draft bill of Assisted Reproductive Technologies (ART) Regulation Bill, 2010 needs an amendment to check this crime against women once again to protect the rights and health of the women.

Keywords: Human Trafficking; Genetic parent; Commercial Surrogacy; Legalization; Prostitution.

Indroduction

The American Law Reports* defined the term "Surrogacy" in the following manner:

"...a contractual undertaking whereby the natural or surrogate mother, for a fee, agrees to conceive a child through artificial insemination with the sperm of the natural father, to bear and

* American Law Reports, *ValIbidity and Construction of Surrogate Parenting Agreement*, 77 A.L.R. 4 70. (1989)

deliver the child to the natural father, and to terminate all of her parental rights subsequent to the child's".

According to the Black's Law Dictionary, "surrogacy means the process of carrying and delivering a child for another person"[*].

Black Law Dictionary[†] divides surrogacy into two categories:-

1) Gestational Surrogacy - Here the genetic mother and father gives her eggs and sperms to another women (surrogate mother), which after fertilization is inserted into the womb of the surrogate mother and she carries the fetus till birth.

2) Traditional Surrogacy - Here the eggs belong to Surrogate mother and by artificial insemination, fertilization took place. In addition, she will carry the fetus until birth the of child.

We all know that, a family is complete when there is a child. A child is a gift of god, upon whose arrival the entire family celebrates with joy. However, not all couple in the world is so lucky to have their own child. So, what they can do to have their own Child? The answer is Surrogacy, a new modern technique i.e. Assisted Reproductive Technique of reproduction for having one's own baby. In nonprofessional language surrogacy is a process by which one can carry the baby of others until the birth of the baby with the help of modern medical facilities. Surrogacy can be of two types as the types given by Black Law Dictionary:-

1) Traditional Surrogacy: - Its process by which the sperm of the donor or the sperm of the father is artificially inseminated in the women. By this process, the women get pregnant and she carries the fetus for 9 months. Here in this process, the woman is the biological mother of the child because it is her egg, which was fertilize with the sperm of the donor or the sperm of the father.

2) Gestational Surrogacy: - Here in this case, the fertilization is done through In Vitro Fertilization in short through IVF. In this process, the egg and sperm of the intended parents is collected for artificial fertilization i.e. through IVF. Once the embryo is formed, then it is transfer to the surrogate mother by the use of Assisted Reproductive Technique. The surrogates' mother carries the baby until the birth of the child. Here, in this case the surrogate's mother is not the biological mother of the child because the egg that is use for the fertilization does not belong to her.

Now a day most of the couple who are medically unfit and want to have their own baby goes for Gestational Surrogacy, because the baby here will not be genetically attached to the surrogate's mother. As, both the egg and sperm used for the fertilization belongs to the biological parents or one of the gametes may belong to the intended parents and the other gametes from the donor but not belonging to Surrogates mother. Moreover, Countries like India; Ukarine allows Gestational Surrogacy on Commercial basis and are legal there. Some countries like Netherlands, France, and Canada, Australia they do not allow Commercial Surrogacy and its illegal there.

Commercial Surrogacy is a written agreement between the Genetic parents and the Surrogates mother. Dealing with the terms and conditions to be applied during the whole course of pregnancy till delivery of the baby.

Commercial surrogacy in India

In 1978, October 3, India become the world 2nd nation to use IVF(in vitro fertilization) procedure to give birth to a baby girl named Kanupriya alias Durga at Calcutta, that also after the birth of the first baby boy through IVF named Louise Joy Brown born in Great Britain in the year 1978, July 25.[‡]

It was after the use of IVF procedure by the fertility Clinic, **Assisted Reproductive Technologies** become popular among couples who are medically unfit for giving birth of their child.

In India the first child born through gestation was at Dr. Nayna Patel's Akanshka Fertility Clinic in Anand, Gujarat in 2004, where Rhadha Patel aged 47 years, became surrogates mother for her UK based daughter. After that case, the Dr. Nayna Patel's Akanshka Fertility Clinic was highlight in media there by attracting numbers of foreign Couples.

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[*] Law Commission of India in Report No-228, *Need For Legislation To Regulate Assisted Reproductive Technology Clinics As Well As Rights And Obligations Of Parties To A Surrogacy*, August 5, 2009 http://lawcommissionofindia.nic.in/reports/report228.pdf

[†] Ibid.

[‡] Ibid.

It was after the case of **Baby Manji Yamada versus Union of India & Anr. [2008] INSC 1656**[*]**,** where by Supreme Court in its judgment mentioned that Commercial Surrogacy is legal in India and asked the Legislature to pass a Law to govern the Surrogacy. According to that, Legislature has prepared a bill called **Assisted Reproductive Technologies (ART) REGULATION Draft Bill 2010,** which is still pending for its approval.

It was mentioned in the Report No-228 of Law Commission of India[†], that the price fixed for the Commercial Surrogacy Agreement, between the Intended parents and the surrogate mothers in India, is near about $25,000-$30,000 that is around 1/3 from the other countries[‡].

Only because of this low cost, Modern medical facility and with no strict laws to regulate this Reproductive Industries and of course because of easy availability of surrogate mother India becomes the favorite destination for the foreign couples. Thus, the income of the ART Clinics is increasing. India becomes the favorite destination for Commercial Surrogacy for foreign couples where Commercial Surrogacy is not legal.

Commercial surrogacy and human trafficking

In a recent study done by the National Rapporteour On Trafficking In Human Beings of Dutch[§], and also the report submitted by the same, raised a question about the Commercial Surrogacy, that whether the women for commercial surrogacy were coming voluntarily or forcefully to become a Surrogates mother?

"Jyotsna Gupta, a senior lecturer in gender studies and diversity at the University of Utrecht, argues that Indian surrogate mothers are usually under enormous pressure from their husband and family"[**].

In countries, where most of the population belongs to poor society, rights of women's from that society were infringed and violated by the intermediary and the clinics for the money which was agreed to be paid to the Surrogate mother for the purpose of Commercial Surrogacy. Because most of the money which she is about to receive from this surrogacy agreement were taken by the Reproductive clinics and the broker.

In fact, we can say that, For Commercial Surrogacy, the illiterate surrogates mother from the poor background are in danger. Because brokers and the clinics exploit their rights and even sometimes they are force to become the surrogate mother or egg donor.

Dr. Roel Schats[††], chief medical officer of the IVF centre of the VU Medical Centre, argued against Commercial Surrogacy, "It is a form of modern slavery to use an Indian woman as a breeding machine without the benefit of any form of care". Moreover, slavery system is the violation human rights.

It was submitted in the report[‡‡] that in case of Commercial Surrogacy, if a woman was forced, Coerced and exploited to become Surrogates mother in that case it will be considered as a crime. Thereby, it will fall under trafficking.

There is a huge demand of Surrogate mothers in the Medical Clinics or in the Reproductive Industries, by the needy couples for the Gestational Surrogacy as well as for Commercial Surrogacy. As the demand of surrogates mother and egg donor is too high in the current scenario, for the Reproductive Industries, so to meet the demand, supply of the surrogate's mother and the egg donor is required in the same ratio. Thus, it will increase the trafficking of women in the global

[*] Kari Points, *Commercial Surrogacy And Fertility Tourism In India The Case Of Baby Manji*, INSTITUTION IN CRISIS, https://web.duke.edu/kenanethics/CaseStudies/BabyManji.pdf

[†] Law Commission of India in Report No-228, *Need For Legislation To Regulate Assisted Reproductive Technology Clinics As Well As Rights And Obligations Of Parties To A Surrogacy*, August 5, 2009 http://lawcommissionofindia.nic.in/reports/report228.pdf

[‡] Ibid. at11

[§]National Rapporteur on Trafficking in Human Beings, *Human trafficking for the purpose of the removal of organs and forced commercial surrogacy*, THE HAGUE: BNRM, 2012, at.18 http://www.dutchrapporteur.nl/reports/organ-removal-forced-commercial-surrogacy/

[**]Ibid., at 19

[††] Ibid. at 20

[‡‡]National Rapporteur on Trafficking in Human Beings, *Human trafficking for the purpose of the removal of organs and forced commercial surrogacy*, THE HAGUE: BNRM, 2012 http://www.dutchrapporteur.nl/reports/organ-removal-forced-commercial-surrogacy/

black market of Reproductive trade to meet the demand of Surrogates mother and egg donor as well.

In a Article published by Prof. Rita Biswas[*] in **Human Trafficking – A Burning Problem In India ,** mentioned that near about 80% of the human trafficking used to be done for sexual exploitation and the remaining portion for forced slavery and India is considered to be the highest crime rate ratio in trafficking in Asia. According to the definition of the United Nations, "trafficking is any activity leading to recruitment, transportation, harboring or receipt of persons, by means of threat or use of force or a position of vulnerability"[†].

So, if a woman is forced to become Surrogates mother or forced to donate her eggs in that case it will be a crime and will fall under human trafficking as per the definitions of United Nations. The report which was submitted by National reporter[‡]said that, if a woman is forced to become a Surrogates mother then in that case it will comes under trafficking and it will be a crime. We can consider the reports submitted by National Reporter for the amendment of our existing trafficking laws as well as for making new laws.

Ranjana Kumari,[§] Director of Center for Social Research said that, in most of the cases relating to Commercial Surrogacy, it was found that, the surrogate mothers were exploited.

According to Akanksha Patel[**], "Legislation should be there so that this wonderful procedure can be supervised and it is being done by the right people for the right people".

Due to absence of law relating to Commercial Surrogacy in India, in case of death of surrogate mother or miscarriage due to any complication, the hospital authority and the genetic parent are not liable. In India, no one is liable for the misery of the Surrogate Mother.

The UNODC Model Law against Trafficking in Persons is develop by the United Nations Office on Drugs and Crime (UNODC) to assist States in implementing the provisions contained in the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing that Convention.[††] And here they had suggested to include "the use of women as surrogate mother[‡‡]" under exploitation. Moreover, we know that exploitation of human beings come under violation of Human Rights.

Even it was found that, in case of any complications during delivery, the Doctors tried to save the life of the unborn baby first and after that the life of the mother. Since, the fixed money was for the unborn baby and not for the mother. Only because of this reasons the life of the unborn child have first priority over mother's life.

Cases of human trafficking and views for commercial surrogacy

1. In absence of surrogacy law, women in India are subject to many sufferings both mentally and physically. And there was a case in India, where a girl from the orphanage of Haryana, sold out for two times within 3 yrs.[§§]

2. Another incident of human trafficking in 2011 was report, where 14-15 Vietnamese women were rescue from Thailand and they were trafficked and forced to become Surrogate mother for Commercial Surrogacy by a company named BABY 101.[*]

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[*] Rita Biswas, *Human Trafficking - A Burning Problem In India*, 2(4) ONLINE JOURNAL EPISTEME, (March, 2014), http://www.bharatcollege.in/PDFs/human-trafficking---1394774411.pdf

[†] Ibid.

[‡]National Rapporteur on Trafficking in Human Beings, *Human trafficking for the purpose of the removal of organs and forced commercial surrogacy*, THE HAGUE: BNRM, 2012 http://www.dutchrapporteur.nl/reports/organ-removal-forced-commercial-surrogacy/

[§] Nita Bhalla , Manshi Thapliya*, India seeks to regulate its booming' rent-a-womb' industry*, (Mon Sep 30, 2013, 1:01 pm) REUTERS, http://www.reuters.com/article/2013/09/30/us-india-surrogates-IbidUSBRE98T07F20130930

[**] Ibid.

[††] United Nations Office on Drugs and Crime*, Model Law Against Trafficking in Persons,* at. 1 http:// www unodc.org/documents/human-trafficking/UNODC_Model_ Law_on_Trafficking_in_ Persons.pdf

[‡‡] Ibid. Sec.2(f) at 28

[§§] Vrinda Marwah, *Commercial Surrogacy In India*, GENEWATCH, http://www.council forresponsiblegenetics.org/GeneWatch/GeneWatchPage.aspx?pageIbid=350&archive=yes

3. In the year 2009, another case of Commercial Surrogacy involved with trafficking known as Romanian Scandal[†] was exposed. In that case, eggs from the minor girls were trafficked by the Israeli Doctors in one of the clinic named SABYC Clinic in Romania. Even a girl of 16 years was rescue in a serious condition, left after the eggs removal procedure.

3. Even in the article published by Debesh Banerjee,[‡] he mentioned that, while making the famous documentary movie, filmmaker Ishani K Dutta, first did research for her documentary film "Womb on rent". The movie was based on Surrogacy. While doing her research she found that, even though it is in the ICMR guidelines that, a girl below 18 years could not donate her eggs. However, in reality it is opposite. Because while doing research for her film, she found that girls below 18 years were also donating eggs. In addition, a girl of 17 years, died in Mumbai after the two days of eggs removing procedures. She expressed her fear that by this way, girls after attaining her puberty will become a machine for printing money for others. She also found that, the conditions of surrogate mothers in India are not good and they were exploited by the moneymaking fertility Clinics.

4. Again, in an article published by Kathleen Sloan[§], he said that, In Surrogacy process, surrogates mother acts like a Commercial Industry and the product of this Industry, is the baby born through this process. Women from the poor section were exploits, and there health is on risk throughout this process. The European Parliament in the year 2011 declared that the process of surrogacy violates the human rights of the women.

5. In India, a 26 years woman named Yuma Sherpa from Delhi, died during the egg removal procedures and a 17 years Girl named Sushma Pandey from Mumbai, died after two days of egg removal procedures. Because of the absence of law and guidelines regarding how many eggs can be removed from the body at a time and the dosage of injection **Gonadotropin** that is used for producing multiple of eggs has increased a great concern for the doctors, lawyers and Human rights activist in respect of the health and life of the women.[**]

6. Recently, the Thailand Military Government[††], after the case of BABY GAMMY, has given approval for a drafted bill by which Commercial Surrogacy in Thailand will amount to be a criminal offence and there by making it banned. Because of the problems related to Commercial Surrogacy.

Violation of article 19, 21 and 23 of indian costituton

According to **Article 16.1 of the Universal Declaration of Human Rights 1948**, "men and women of full age without any limitation due to race, nationality or religion have the right to marry and found a family"[‡‡]. In India also, the reproductive right is a basic human right given under **Article 21 of the Constitution of India**. The Andhra Pradesh High Court in **B. K. Parthasarthi v. Government of Andhra Pradesh, AIR 2000 A. P. 156**, ruled that reproductive right is a human right and its comes under right to privacy and also they agreed with the decision of the **US Supreme Court in Jack T. Skinner v. State of Oklahoma, 316 US 535** which characterized the right to reproduce as "*one of the basic civil rights of man*[§§]". Nevertheless, my question is Does this right allow exploitation of the basic human rights of other?

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[*] Weena Kowitjwani, *Thai Organization Involved in Trafficking in Vietnamese Surrogate Mothers Uncovered*, ASIANEWS.IT (Mar. 2, 2011) http://www.asianews.it/news-en/ Thai-organisation-involved-in-trafficking-in-Vietnamese-surrogate-mothers-uncovered-20916.html

[†] Hedva Eyal, *Reproductive Trafficking* ,GENEWATCH http://www.councilforresponsiblegenetics.org/genewatch/GeneWatchPage.aspx?pageIbid=313

[‡] Debesh Banerjee, *A Surrogate Story*, THE INDIAN EXPRESS, Mar. 21, 2014 http://www.geneticsandsociety.org/article.php?Ibid=7631

[§] Kathleen Sloan, *Inconvenient Truths about Commercial Surrogacy*, TWIN CITIES, Apr.1, 2014, http://www.geneticsandsociety.org/article.php?Ibid=7663

[**] Womens eNews, *Donor Deaths In India Hightlight Surrogacy Perils*, THOMSON REUTERS FOUNDATION, (Jun. 16 2014, 09:16 GMT), http://www.trust.org/item/20140617101347-iu0x4/

[††] Reuters in Bangkok, *Thailand To Band Commercial Surrogacy In Wake Of Gammy Scandal*, THEGURDIAN (Aug. 13, 2014, 20.01 BST), http://www.theguardian.com/lifeandstyle/2014/aug/13/thailand-ban-surrogacy-gammy

[‡‡] The Universal Declaration of Human Rights, http://www.un.org/en/documents/udhr/index.shtml#a16

[§§] Law Commission of India in Report No-228, *Need For Legislation To Regulate Assisted Reproductive Technology Clinics As Well As Rights And Obligations Of Parties To A Surrogacy*, Aug. 5, 2009, at 12

Because, from the above discussion, we have found that Commercial Surrogacy is a gift of Science and Technology to the infertile or medically unfit couples to have there own baby. Moreover, on the other hand it has a very strong negative impact in the Society as we can found that how the Surrogate mother were treated in India. There is a great violation of women rights under Article 21, which grants "No person shall be deprived of his life or personal liberty except according to procedure established by law"[*], Article 19(1) (a) which grants "Freedom of Speech and Expression"[†] of the Constitution of India and Article 23 which grants "Prohibition of traffic in human beings and forced labour"[‡]. In addition, they are not getting the proper money for there work also. The society where we are staying in India is a male dominating society. Moreover, women had no rights to do even what they wanted to do in there life. In addition, for this reason the women from Poor Indian society were in great risk. Poor women were forced by there husband for the money paid, to become surrogates mother and sometimes for the donation of there eggs. This is great violation of the Article 21 and 19(1) (a). Even the hospital authority they do not allow the surrogates mother to stay with there family during the pregnancy and they had to stay in the Hostels or the accommodation provided by the Reproductive Clinics under there observations. By this also, there right get violated under Article 21. In addition, they had no right to express there feelings which is again Violation of Article 19(1) (a). As they were, force to become surrogate mother, so there rights were, violated under Article 23 also. Even if there is any complication during the delivery of child, the life of the unborn child used to give more importance by the Reproductive Clinic and not the mother life, which is again a violation of the Reproductive Rights of Article 21.

Costitutional right is to ensure freedom and not exploitation

Sugession

The following are the suggestion by which we can control the trafficking related to commercial Surrogacy in India:

1) There is a need of Strong Uniform International Law to control the trafficking related to Commercial Surrogacy in the entire world to protect the rights, life and privilege of women.

2) The pending **Assisted Reproductive Technologies (ART) Bill, 2008** has to pass immediately.

3) Unmarried woman should not be allowed to become surrogate mother as well as egg donor.

4) Special Act and Amendments is needed in the existing Immoral Trafficking Prevention Act (ITPA), 1956 and in the Indian Penal Code, 1860 for trafficking in Surrogacy.

5) All the surrogates mother must be provided with compulsory life insurance policy, failing of which the clinics or the genetic parents will be punished accordingly.

6) Before signing of the surrogacy agreement, information regarding the reproduction process through surrogacy should be disclosed in full entirety by the Clinics and doctors responsible for the same.

7) In case of any complications, the health of the surrogate mother should be considered first.

8) Every reproductive clinic must have a team of counselors capable of providing a good counseling to the surrogate mother and to check whether she is coming willingly or not for surrogacy and the person, forcing her to surrogacy must be punished.

9) Government should motivate the couples to go for adoption.

10) Only those couple be allowed for Commercial Surrogacy who is medically unfit to have there own child and not those who already have a child of their own.

11) The hospital authority in case of Commercial Surrogacy process should not entertain any intermediary.

12) Amount for Commercial Surrogacy should be fixed by the Government, which is to be paid to the surrogate mother by the intended parents along with the terms and conditions in the surrogacy agreement.

[*] O.P Rai, *The Constitution of India,* 30, (Orient Publishing Company, 2nd ed, 2014)

[†] Ibid. 31

[‡] Ibid. 39

13) Uniform law and guideline should be there across the World regarding the dosage of **Gonadotropin injection or any synthetic hormone,** which is used in the process of egg removal**.** And also the number of human eggs and its limits for its donating and the time interval between the first and second donation.

14) According to section 26(8) of ART Bill, 2010, a woman can donate her eggs for not more then six times in her entire life and the interval between each donation should be three months. However, nothing is mention about the number of eggs that can be removed at a time.

15) General Awareness is to be spread with the help of the media regarding the risk of the process of human eggs donation.

16) Only a relative, friend or known person should be allowed to act as surrogate mother or egg donor for Commercial Surrogacy in order to check human trafficking.

17) We can consider the reports submitted by National Reporter* for the amendment of our existing trafficking laws as well for making new laws.

18) Forced Surrogacy should also be considers in trafficking and the person who does so should be punished accordingly.

19) Only those couple be allowed for Commercial Surrogacy who is medically unfit and not those who already have a child of their own.

20) In India, only the top few Hospitals be allowed to practice Commercial Surrogacy and not all the Clinics. So that, the Government should be able for periodical inspection of the hospitals to find out that whether the surrogate mothers were willingly coming or they are coming by forced or by trafficked. If the number of hospitals will be less then it will be easy for the Government to check the Hospitals also.

21) To prevent the exploitation of surrogate's mother in the hand of medical clinics and brokers, the Government should fix the amount for the Surrogacy Agreement, which the Genetic/intended Couples directly pay to the surrogate's mother, excluding the medical expenses.

22) General Awareness is to be spread with the help of the media regarding the risk of the process of human eggs donation as well as the risk of the life of the Surrogates mothers and its future side effects.

Conclusion

From the above discussion, we have found that Commercial Surrogacy is a gift of Medical Science and Technology to the infertile or medically unfit couples to have their own baby. Moreover, on the other hand it has a very strong negative impact in the Society, when we consider about the health, life and rights of the poor Surrogates mother. In the absence of Uniform International Law to regulate the Reproductive Industries, the black market of organ trafficking for the supply of Surrogate mothers and eggs for Commercial Surrogacy, the Industries is flourishing day by day with the increase of trafficking of women and minor girl in Indian market as well as in the International market. To deal with the present scenario, uniform International Law is to be passed to control the trafficking in the places like India. Last but not the least, in order to conclude the above discussion I would like to suggest that meaning full and stringent laws should be framed at both National and International Level and at the same time it should be strictly implemented by the state ensuring the protection of rights of women in the society, there by achieving the object of an ideal political state.

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The Association of Russian Banks (ARB) and Banking Community: the Practice and Prospects of Cooperation

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Abstract

The article discusses the peculiarity of the formation and basic directions of activities of the Association of Russian Banks (ARB) as the leading corporate establishment of domestic financial business. ARB consistently provides innovative projects aimed at improving the native system of credit agencies, the development of their interaction with the state, developing the ties with the international financial institutions.

Keywords: The Association of Russian Banks; corporate culture; financial business; credit policy; national banking system of Russia.

Introduction

The relevance of the topic due to the theoretical and practical need of Russian economic science and society in the study of the institutional experience of the innovative construction of the banking community in the context of contemporary policies of modernization of Russia.

Materials and Methods

The article used the documents of the Association of Russian Banks, the materials corporate forums and business press. The research is carried out on the basis of General scientific and special, economic, historical and sociological technology research.

Discussion

Present-day Russia features the constantly growing role of the banking sector, which is becoming a significant factor of the innovative development of economy and business. It significantly influences the development and improvement of the society's social structure. In addition, the role of the state, which conducts the organizational and regulatory functions in the financial sphere, thus providing the increase of its qualitative and quantitative features, is also increasing.

The Association of Russian Banks (ARB) is acting as integrator uniting the system of native credit establishments strategically aimed at promoting the process of developing in the Russian

Federation the effective, institutionalized and innovative national banking system. ARB creates the new social look of the banking system, introduces positive corporate culture in the banking society.

The developing constructive dialog between the state and financial business-structures has become an important factor in the development of the native banking system: due to the positive interaction between the state controlling authorities and management of the banking sphere and financial business-structures, the perspective projects are approved and implemented, the financing of the innovative axes of R&D is improved and the business banking culture is enhanced.

On 12 December 2013, President of Russia V.V.Putin in the annual Message of President of the Russian Federation to the Federal Assembly of the Russian Federation stressed the importance of conducting consistent activities to improve the investment situation in the Russian Federation: 'Two years ago in cooperation with the business-society we started the systematic work on the improvement of the business climate in Russia. Thus, in the next year we will launch the national rating of the business climate state in the regions of Russia' [1. P. 4]. President of Russia V.V.Putin also stressed that for further successful development of the business it is necessary to achieve the high level of its transparency, strict observance of the law including the banking organizations, which significantly determine the successful innovative development of economy and industry.

President of Russia V.V.Putin has repeatedly noted the importance of the strengthening of the national banking system potential, institutions of the development and stock market, necessity of implementing the strategic infrastructural projects in the financial sector of economy: 'The ups and downs in the global financial markets have taught us: our modernization must be financed, first of all, by us... To take a decision on increasing the opportunities of investing the national assets. We will develop the national banking system to provide the increase of the availability of the credit for the real sector and the decrease of the rates'[2].

Prime Minister of Russia D.A.Medvedev in his activities pays significant attention to the development of the banking system and financial sector of the country in the context of the industry and business modernization and implementation of the innovative technologies. On 28 November 2013, D.A.Medvedev conducted a special meeting dealing with the perspective of the development of the Russian banking system. The main objectives in the area included the increase of the transparency in the work of the credit establishments; in addition, from 1 January 2014 the new requirements to the identification of the banks capitals and minimal standards of its reasonableness were introduced. According to head of the government, these measures must provide the additional stability to the financial system of the country. In addition, D.A.Medvedev has reminded about the document developed by the Cabinet of Ministers to increase the effectiveness of the mechanisms of the deposits insurance: 'I will mention that the draft law aimed at improving the system of the deposits insurance, provides the differentiation of the banks' payments to the system. It is suggested to move to the more differential model according to the risk level, respectively, this must also add the stability and avoid the actions, which endanger the stability of the system taking into account that for one's actions, respectively, risks will be paid by ruble'[3].

The United Russia party in the program documents stresses the importance for the successful implementation of the project of modernizing the Russian economy and society the development of the banking sector, which is to provide the financial support of the business (including large, medium and small), introduction of the technological innovations in the production, R&D and development of the venture capital. In addition, the interbank cooperation, development of the cutting-edge financial infrastructure, constructive activities of the banking social corporate establishments is becoming a significant factor in the development of the native banking system, as well as contributing to the improvement of the investment climate.

At present, the banking system of Russia is at the stage of transformation, which strategically aims at developing the modernized financial sphere of modern type corresponding to the world quality standards [4. P. 5].

In the context of developing the new banking business culture of the modernization social and economic transit period the Russian Federation began to feature the professional corporate organizations of the Russian banking business-society including the one with the one of the leading places - the Association of Russian Banks (ARB) aimed at the world improvement of the native financial sphere, development of the banking world as an important integral part of the institutionalized business and economy system.

The development of the new-type banking structures focused on the financial activities within the market liberal economy has been in the late period of the existence of the soviet system, when the Perestroika ideas in the business sphere and public sector have begun to dominate changing the very structure of the economic system. In August 1989, the USSR established the Moscow banking Union, which was one of the first corporate public organizations of the Russian banking businesses. In 1990, the native financial society established the Russian Banking Union with headquarters in Perm. On 27-28 March 1991, Moscow hosted the Meeting of the commercial and cooperate banks of RSFSR conducted on the initiative of the Moscow Banking Union and Leningrad Association of Banks, which decided to re-organize the Russian Banking Union into a new structure – the Association of Russian Banks (ARB). By the moment of its establishment, ARB has united 65 commercial and corporate banks. It also included the leading audit companies – Interbank Financial House, Moscow Audit Chamber, International Center for Taxation, as well as the Russian subdivisions of the international companies – Arthur Andersen, Deloyt and Tush, etc.

The special importance for the development of the new Russian business world had the fact that ARB acted as its significant backbone factor having become the leading institutional basis of the native banking society. The Association of Russian Banks has united more than 75% of the banking institutions, which included more than 90% of the joint capital of the acting financial organizations, as well as about 90% of all assets of the native banking system.

At present, ARB involves 713 members including 507 credit organizations. The total number, taking into account the associated members, of ARB participants includes 952 establishments, including 615 financial and credit organizations. The Association of Russian Banks in its program and activities expresses the interests of the native banks of wide spectrum: ARB includes 30 leading Russian banks featuring the large proportion of the capital and medium and small banks featuring significantly fewer assets. About 15% of the banks involved in ARB feature the registered capital within 30 mln rubles, and at the same time 51% of the banks features the registered capital from 30 to 300 mln rubles.

On 19 December 2013, the Association of Russian Banks included new participants: Dzhast Bank LLC (Moscow), Tikhookeansky Vneshtorgbank JSC (Yuzhno-Sakhalinsk), Konnekt LLC (Vladimir), Zeb/Rolphes.Shyrenbek.Associates LLC (Kiev, Ukrain), rep office of Popolare di Vitsentsa - Socheta cooperativa per atsone (Moscow, Italy), subdivision of the Expirian CIF Limited company (Moscow), Sapient Naitro LLC (Moscow). Thus, from the moment of its establishment the Association of Russian Banks has accumulated the significant financial resources. Their total capital is equal to 470 bln rubles.

The Association of Russian Banks also includes the banks with foreign participation in the registered capital or those under the complete foreign control, This extends the types' spectrum of the credit organizations acting in the Russian financial world. Among the banks involved in the ARB structure, 36 of them have the 100-% foreign capital and 10 banks – more than 50-% foreign capital. The Association of Russian Banks also included many of the foreign banks, including the leading ones ABN AMRO bank, Societe Generale – East, Austria's bank, Chase Manhattan bank International, China's Bank, etc. In 1995, the amount of the membership fees of the ARB participants was from 4 to 16 bln rubles (depending on the amount of the paid equity fund).

The Association of Russian Banks includes all participants of the Big Auditing Four, as well as 13 rep offices of the leading foreign banks. The factor of taking into account the peculiar social and economic conditions being the place of the development of the native banking sector significantly influences the effectiveness of the operation of the Russian banking system [5. P. 87].

Due to the consistent activities of ARB the process of instituting the native financial sector has been intensified: the Association of Russian Banks acted as founder or co-founder of the Moscow Interbank Exchange Market (MIEM), National Association of Participants of the Mortgage Market, Moscow Clearing Center, National Bureau of Credit Histories and other banking and financial structures.

ARB is a member of co-founders of the Moscow Interbank Exchange Market, Interbank Center of Management Issues Fund, Moscow Clearing Center, Institute of ARB Banking, International Moscow Financial and Banking School, Center of the Information Support of Banking and Business of ISISS RAS, Club of Heads of the Banking Services on Public Relations and Advertising, the Blago non-state pension fund.

The supreme control body of the Association of Russian Banks is the Congress, which is considering the necessary issues of its organization and activities.

The exclusive competence of ARB includes:

– the right for making amendments to the Association's Charter;

– the approval of the new Charter;

– taking the decision on the re-organization and elimination of the Association;

– electing President, members of the Assembly and members of the Revision Commission of the Association, early termination of their powers;

– the approval of the annual report of the Association;

– defining the principles of developing and using the property of the Association;

– considering the statements of the members on the appeal against the Assembly's decision to exclude them from the Association.

President of ARB or (on his order) one of Vice Presidents of the Association governs the Assembly. Between the sessions of the Assembly, the supreme management body over the Association is the Council, which solves the current organizational and information issues, provides the interbank cooperation and etc. The ARB Council is formed from the candidates proposed by the Association's members, as well as the included in it in accordance with the post heads of regional banking associations - members of the All-Russian council of the regional banking associations. The re-election of the Council members is conducted each 5 years. President of ARB is in charge of the Council. Between the sessions of the Council, the issues connected with the competence and activities of ARB are solved by the Presidium of the Council headed by President of ARB. The issues connected with financial and economic, information or any other activity of ARB, which is not included to the exclusive competence of other management bodies of the Association are solved by the Board, which is the permanently acting collegial executive body of the Association of Russian Banks and is accountable to the Assembly and Council.

The Board of ARB is headed by President of the Association and involves executive Vice presidents, Financial Director and etc., including heads of specialized working bodies of ARB. Heads of structural subdivisions of the ARB Board can participate in the sessions of the Board with the right of advisory vote.

President of ARB is elected by the Assembly for a 5-year term and has the one-man executive power, represents the interests of the Association in relations with legal entities and individuals both in the Russian Federation and abroad, concludes the contracts and agreements with the native and foreign business partners, conducts the supreme management over the organization, defines its perspective policy, principles of the relations with the state authorities and other corporate public organizations.

The organizational structure of ARB includes the following committees and working groups:

- The Committee on the monetary policy and banking supervision
- The Committee on the banking law and legal precedents
- The Committee on the payment systems and settlements organization
- The Committee on the international activities
- The Committee on the mortgage crediting
- The Committee on the information policy and public relations
- The Committee on the information and Internet technologies
- The Committee on the AML/ TF and compliance risks
- The Committee on the information security
- The Committee on the development of the time market
- The Committee on the precious metals
- The Coordination Committee on the quality standards of banking activities
- The Committee on the evaluation activity
- The Committee on the development of the financial and credit mechanism of the small and medium business
- The Committee on the personnel policy
- The Committee on the Basel II standards and risks management
- The working group on the improvement of the legislation on the enforcement proceeding

- The working group on the development of the mechanism of accounting the pledged vehicles
- The working group on the preparation of proposals on the establishment of interaction of the banks – members of ARB operating in the market of the precious metals
- The working group on the improvement of the legislation on the mortgage
- The working group on the improvement of the currency legislation
- The working group on the improvement of the legislative and regulatory base of the organization of the letter of credit payment method
- The expert and methodical center of the banking security at the Association of Russian Banks

The effective form of organizing the activities of the expert society of the banking world, dialog between heads of the banks and state authorities controlling the native banking system are the permanent ARB assemblies, which discuss the problems and perspectives of the Russian banking sector development. On the XVI ARB Assembly the Strategy of increasing the competitiveness of the national banking system has been adopted.

On 3 April 2013, Moscow, the Pillar hall of Unions hosted the XXIV Assembly of the Association of Russian Banks with more than 1000 participants including the delegates and guests. The agenda of the Assembly was Banks and society: the role of the credit organizations in the social and economic development of Russia [6]. The Assembly along with the generally social issued discussed a lot of important issues of the applied activities of the credit organizations, particularly, connected with increasing the requirements on the booking.

On 2 April 2014, Moscow, the Pillar hall of Unions hosted the XXV Assembly of the Association of Russian Banks aimed at discussing the project on the perspectives of the banking system of Russia: a view of the banking community. The reports were presented by ARB President G.A.Tosunyan and Chairperson of the Bank of Russia E.S.Nabiullina, as well as by many representatives of the system of the state authorities of Russian and banking community: heads and representatives of the Federal Assembly of the Russian Federation, Russia's Government, ministries and agencies, bankers and financial experts, academics, members of the international financial institutions. The ARB Assembly stressed that at present the banking system of the country has become one of the main driving forces of the native economy and the most important factor of its consistent and dynamic development. The banking system of Russia also faces the new goals: modernization institutional reforms, improvement of the banking service quality, entering the international financial market [7].

The Association of Russian Banks has been always conducting the meaningful interaction with the state authorities and business - management of the Russian Federation in the field of financial and credit policy and investment development, providing the expert support to many state structures dealing with the development and implementation of the cutting-edge innovative financial programs. At present, the importance of the banking system for the development and improvement of the real sector of economy is constantly growing, respectively, the role of the state management of the financial sphere of economy and business is also increasing [8].

On 16 December 2012, the Association of Russian Banks held the session of the Public and consultative council on the establishment and interaction of the Moscow Government with the native banks.

The ARB activities significantly influence the development by the state authorities and heads of the leading banking structures the inter-Russian financial policy: the ARB structure includes 23 committees, 1 section and 6 working groups dealing with the R&D works on the major axes of the banking business [9. P. 25].

On 20 December 2013, the Federation Council of the Russian Federation conducted the session of the Inter-regional banking council at FC CF of the Russian Federation held by Chairperson of the Federation Council V.Matviyenko on the topic: the improvement of the legislation to prevent criminal risks in the banking activities as a condition for the effective development of economy and social sphere [10. P. 15].

The Association of Russian Banks relying on the conducted R&D and expert work, presented perspective financial and credit innovative projects to the authorities of the Russian Federation: the Federal Assembly of the Russian Federation, Central bank, state expert commissions and etc.

[11. P. 227-228]. In particular, the scientific developments on the improvement of the national payment system of Russia prepared by the financial specialists of ARB have been used by the Bank of Russia during the modernization of the native payment system in the context of implementing the technological innovations and improving the level of its security [12].

A significant direction in the activities of the Association of Russian Banks is the legal protection and representation of the business-interests of the financial organizations in the state authorities of the Russian Federation, state structures managing the financial sector of the country – the Central Bank of Russia, parliamentary commissions, state authorities for controlling the banking sector, structures of the perspective state planning of the economy and business development, as well as legal law-enforcement and tax structures dealing with the development and implementation of the banking financial and credit policy. The organizational, R&D, expert and information activities of ARB have intensified the dialog between the state authorities and banking community, thus creating favorable conditions for improving the investment climate, implementing the cutting-edge financial technologies and extending the state and private partnership in the banking sphere.

On 23 December 2013, Executive Vice President of ARB V.Kiyevsky participated in the meeting of the heads of a number of the native banks – market leaders in consumer crediting, with Chairperson of the Bank of Russia Elvira Nabibullina. The meeting discussed the perspectives of developing the consumer credit technologies in the Russian Federation. The session included 11 heads and their deputies of 7 banks: OTP Bank JSC, KhKF Bank LLC, TKS Bank (ZAO), Svyaznoy Bank (ZAO), IKB Sovkombank LLC, KB Renessans Kredit LLC, Bank Russky Standart (ZAO). During the meeting, Elvira Nabibullina stressed that already for a year the Russian banks have been working in the conditions when the Central Bank of the Russian Federation with the help of booking and other mechanisms regulates the consumer market in the direction of its 'cooling' [13]. The adopted Federal Law on the consumer credit, which will enter into force since 1 July 2014, will also make particular corrections into the banks' activities specializing in the consumer crediting. The meeting included first deputies and deputies of Chairperson of the Bank of Russia A.Yu.Simanovsky, K.V.Yudayeva and M.I.Sukhov, as well as Director of the Banking Regulation Department A.A.Lobanov [13].

The ARB Board conducts meaningful cooperation with the Central Bank of Russia, regularly participating in the meeting with its Chairperson Elvira Nabibullina. On 7 November 2013, on the initiative of ARB the meeting of heads of the banks with the management of the Bank of Russia was held. The participants were discussing the issues of regulating the activities of the credit organizations by the Bank of Russia, particularly, the adoption of the law on the consumer credit, implementation of the Provision of the Bank of Russia No.254-П on the development by the credit organizations of the reserve for possible losses on loans and similar debts, on the transition to Basel III and possible differential approach on the payments to the deposits insurance system. The reports on these issues were presented by Chairperson of the State Duma Committee on Financial Markets Natalya Burykina and First Deputy Chairperson of the Bank of Russia Alexey Simanovsky. During the meeting the following persons addressed their reports to heads and specialists of the credit organizations, as well as participated in the discussion: Deputy Chairperson of the Bank of Russia – Director of the Legal Department Sergey Golubev, Director of the Banking Regulation Department of the Bank of Russia Vasily Pozdyshev, Director of the Monetary and Credit Policy Department of the Bank of Russia Igor Dmitriyev, Director of the National Payment System Department of the Bank of Russia Timur Batyrev, Deputy Director of the Accounting and Reporting Department of the Bank of Russia Vladimir Volkov, Deputy Director of the Banking Supervision Department of the Bank of Russia Olga Podstrekha, Director of the Financial Monitoring and Currency Control Department of the Bank of Russia Ilya Yasinsky, Deputy Chief of the Main Inspection of CO of the Bank of Russia Yelena Senchenko, Deputy Head of the Formation of the Lombard List Sector of the Summery and Economic Department of the Bank of Russia Kirill Tolchin.

As the moderators of the sessions acted President of the Association of Russian Banks Garegin Tosunyan, executive vice presidents of ARB Yuri Kormosh and Vladimir Kiyevsky. In one's speech Garegin Tosunyan stressed that such annual meetings are the important part of the strategic cooperation of the Association of Russian Banks and the bank of Russia. They have

exclusive meaningful character and their importance to the bankers community and management of the Central Bank is evident.

The Association of Russian banks thanked Chairperson of the Central Bank of Russia Elvira Nabibullina for holding the meeting of the management of the Central bank with the banking community, as well as highlighted the positive rope of participating in the annual event of ARB Chairperson of the State Duma on the Financial Market Natalya Burykina and representatives of the Bank of Russia.

On 7 November 2013, President of the Association of Russian Banks G.A.Tosunyan in his speech at the meeting of heads of the banks with the management of the Bank of Russia noted that the Russian banking community must build its activities strategy in accordance with the state program on the development of the banking sector: '... Being the banking community we can and must become the co-participants of the process of developing such new approaches. The Association is working on its strategy, which must be improved taking into account the new requirements imposed to the credit organizations. And I think that our strategy will correspond to both the strategy of the Central Bank, its new standards and, respectively, the interests of all market participants' [14. P. 2].

Due to the conducted by ARB large-scale work on preparing the complex of R&D and expert materials on the development and improvement of the financial sector in present-day Russia, the backbones of the long-term Strategy of promoting the Russian banking sector has been developed. On 5 April 2006, the XVII Assembly of the Association of Russian Banks adopted the National Banking System of Russia for 2010-2020 Program.

The National Banking System of Russia for 2010-2020 Development Program defines the quantitative and qualitative growth parameters of the native system of the credit organizations both for the medium and long terms, as well as formulates a set of measures necessary to achieve the goal. At the same time, the Program presents the interests not only of the banking community: it is strategically oriented on solving both economic issues of the country as a whole and social issues of each citizen of Russia: a businessman, pensioner, agricultural entrepreneur, scientist, student, etc. Thus, the implementation of the set by the Program goals is in the context of the implementation of the general aim of the macroeconomic development of Russia.

A significant innovation in the banking business sphere has become the implementation of the EvaBeta Russia&cis program supported by ARB, which promotes the development of new opportunities for investors and managers while evaluating the quality of assets, which they have and manage. EvaBeta is an independent company having the cutting-edge technologies for evaluating and managing the risks. It offers the Russian commercial structures the specialized innovative technologies and methods of measuring and evaluating both financial and non-financial business-risks, which contributes to the improvement of the Russian financial market and increase of its qualitative and quantitative characteristics.

In March 2005, on the initiative of the Association of Russian Banks on the basis of the Federal Law on the credit histories, the National Bureau of Credit Histories JSC (NBCS JSC) being the present-day leader in the Russian financial market was established. Under the order of the Federal service on the financial markets No. 06-341/пз-и dated 21.02.2006 NBCS JSC was included into the national registry of credit history bureau; the registered capital of NBCS JSC is equal to 126 bln rubles. The base of the credit histories of individuals and legal entities of NBCS, developed as the result of cooperation with more than 6000 companies from all Russia's regions, is much bigger than the similar indicators of the rest credit bureaus rolled into one. NBCS is working with all 10 leading banks of the country, as well as other credit organizations having the high banking rate.

The business style of NBCS JSC has the high-level management, desire to promote meaningful partnership relations, conduct joint search of solving the issues of technological development of business processes. The partners of NBCS JSC are TransUnion (USA), CRIF (Italy) и Fair Isaac (USA) being the world leaders in the development of information solutions, which provide the clients with the most advanced and agreed offers. Due to the long-term cooperation with the given organizations, NBCS is ahead of other Russian credit bureaus on the quality of the provided services corresponding to the highest world standards.

In the context of the ARB projects aimed at developing and structuring Russia's banking world, establishing the positive business environment of the financial community, the National

Banking Club providing the conduct of meetings of interests, establishment of new business ties, performance of business-projects presentations, etc, was established in 2008. At the same time, the action plan of NBC includes the conduct of cultural events: gala concerts, sports competitions, corporate and family VIP-tourism, personal assistants help and so on.

ARB acted as one of the initiators of developing in 1991 SB AMULET LLC having become one of the leading companies providing the professional security services to the Russian banking community.

Within the framework of the innovative projects of ARB, the National Payment Council was established. It is aimed at joining the participants of the native market of payment services and increasing the effectiveness of making payments via the implementation of the latest world practices and adoption of the cutting-edge financial technologies.

The perspective project of ARB has become the establishment of the Institute of Bankers on its initiative in 1996. To date the Institute of Bankers has become the leader in the sphere of providing the banking educational services. Its activities have been internationally recognized. IB was included as the full-fledged member into the European Bank Training Network (EBTN) [15].

The Association of Russian Banks stands for extending the interbank partnership at the world level considers it reasonable to develop the high-quality banking structures in the Russian Federation, particularly – the International Financial Center in Moscow [16. P. 18-24].

On 22 October 2013, President of ARB G.A.Tosunyan in cooperation with the Italian business partners headed by chief of the Italian tax service (the Internal Revenue Service of the Italian Republic) Attilio Befer met with Chairperson of the Bank of Russia Elvira Nabibullina. At the meeting, head of ARB submitted for approval of the management of the Central Bank of the Russian Federation the new joint Russia-Italy project developed in cooperation with the ARB and SOSE company specialists – the implementation of the Automated system of evaluating the financial state of the small and medium businesses into the Russian banking system to provide the opportunity of increasing the banks' trust to SMC and simplifying the development of credit factories for the small and medium businesses, thus contributing to the decrease of the interest rates on credits [17]. The management of the Central bank expressed the readiness to consider the results of piloting the adopted for the Russian financial market version of the program on the implementation of the given system into the Russian banks. They also noted that in present-day situation the issues of managing the risks connected with the re-funding of the banks portfolios, formulated on the credits of small and medium companies are very topical [17].

The following participants took part in the talks: First Deputy Chairperson of the Central Bank Alexey Simanovsky, Deputy Chairperson of the Central Bank Nadezhda Ivanova, Deputy Director of the Internal Revenue Service of Italy Marco Di Kapua, President of SOSE Dzhnpietro Brunello, President of EvaBeta Edoardo Narduzzi, Chairperson of the Board of Directors of the Inteza Bank Antonio Fallico, Chairperson of the Board of Directors of EvaBeta Alexander Gorin, Chairperson of the Board of Directors of the Uniastrum Bank Georgy Piskov, Chief of the Atlantic Department of ARB Sergey Grigoryan [17].

The Association of Russian Banks in cooperation with the ARB-TV Banking TV company established the channel on financial literacy aimed at increasing the level of financial literacy and awareness of people about the types of financial service, possibilities of getting the credit, technologies of the banking services. The PhingramTV contributes to the increase of the business and economic activeness of the Russians, intensifies the exchange of business information between the regions, and promotes the adoption of social liability principles of the native credit and financial establishments.

The effective project of ARB has become the development of the PriceFree national discount system introducing instead of the multiple club discount cards the only banking card Visa or MasterCard by PriceFree giving the right to get discounts and any other benefits for services in the hotels, restaurants, beauty salons, showrooms, malls, clubs, etc. The project has a wide geographical coverage: Moscow, St. Petersburg, Perm, Rostov-on-Don, Samara, Novosibirsk and other Russia's cities.

The Association of Russian Banks actively develops the interbank business cooperation via the institute of agency relations contributing to the signing of agreements between the large and medium capital and regional banks having the financially stable regional credit organizations in the context of promoting the latest banking products and programs to the regions on the commission

basis. ARB supports the development of a new direction – search of business-partners by the credit organizations, as well as development of interbank partnership within the framework of the MP Interbank Payment System (IPS) program. The implementation of the given program will give the opportunity to the Moscow banks to disperse the financial flows on the territory of Russia and provide the regions with the wide-spectrum banking services. As the result of implementing the given project of ARB and activities of the institute of agency relations, the regional banks get the opportunity to adopt new technologies, preserve financial self-sufficiency and consistently increase its resource base and capitalization.

The Association of Russian Banks participates in the implementation of the Fellowship Program named after A.A.Kozlov established jointly with the Central Bank of the Russian Federation and MDM-Bank. The Fellowship was conceived as a reward for talented students of economic departments of the native universities, who showed excellent knowledge in finances and banking. The ARB Charity project presupposes the provision of the support by the banking community to the people in a difficult situation and those in need.

In 2013, the Association of Russian banks in cooperation with the All-Russian quality organization started to implement the best banks of Russia program in accordance with the general project of ARB President G.A.Tosunyan and AQO President N.P.Voronin.

The management of ARB pays significant attention to the development of the interbank business-cooperation aimed at presenting and coordinating the business interests in the relationships between the banks-partners, as well as relations between the banking business structures and non-banking sector organizations, which provide service support to the credit organizations: the Agency for promoting credit activities, National bureau of credit histories, Arbitration Court, Amulet security service, VEK legal advisory board, etc. On 7 October 2012, during the 1st All-Russian Session of the banking associations the General agreement on consolidating the efforts of the banking associations on the development and strengthening the banking system of the Russian Federation, which is supported by 71 participants at present.

Within the framework of the initialized by ARB direction 'the interbank cooperation' the agency relations between the capital banks and regional financial organizations contributing to the promotion in Russia's regions of joint financial innovative programs, are developing. In the context of the ARB activities permanent meetings of the management of the Association and specialized committees with the representatives of the regional credit organizations are conducted: on 12 September 2003, Barnaul hosted the joint meeting of the Bureau of the banking associations of the Russian Federation and ARB Committee on the regional policy and interaction with the regional banking associations; on 21 June 2004, Khanty-Mansiysk hosted the joint meeting of the All-Russian council of the regional banking associations (the All-Russian banking council) and the Council of the Association of the credit organizations of the Tyumen region; on 22 June 2006, Vladimir hosted the joint meeting of the All-Russian banking council and ARB Committee on the regional policy. On 27-28 June 2012, Kaluga hosted the joint session of the All-Russian council of the regional banking associations, ARB Committee on the development of financial and credit mechanism of the small and medium businesses and ARB Committee on the regional policy. On 18 December 2012, Moscow hosted the joint meeting of the All-Russian banking council and ARB Committee on the development of financial and credit mechanism of the small and medium businesses.

The topical issued of developing the up-to-date banking system of Russia are considered at the sessions of the All-Russian banking council.

The corporate events, as well as scientific disputes, presentations of perspective financial development projects are conducted by the Club of heads of the banking services on public relations and advertising. On 16 October 2012, the office of the Association of Regional Banks of Russia hosted the meeting of the representatives of the Bankir.Ru agency and members of the Club of heads of the banking services on public relations and advertising

Vice President of the Association of Regional Banks of Russia and chief editor of the Bankir.Ru agency Yan Art said about the plans of developing Bankir.Ru and agency's services – the first financial photo bank in Russia, Bankir-TV project, Bankir.Ru – Ipocredit.ru – 123Credit.ru united center of on-line applications for credits. In addition, Yan Arts confirmed the readiness of Bankir.Ru to provide information and advertising support of the banks' charity on the non-commercial basis.

The Associations of Regional Banks of Russia, State Duma Deputy Anatoly Aksakov urged the banks to participate in the PR-promotion of the common interests of the banking community more actively – lobbying for the laws promoting the effective development of the banking sphere, increasing financial literacy, developing the mutual understanding with the society and business [18].

Alexander Zagryadsky, head of the Club of heads of the banking services on public relations and advertising and Center of public relations of the Agency on the deposits insurance, stressed that the banking branch needs more effective communications with MMS, particularly, in the banking PR sphere [18]. Within the framework of the meeting, the presentation of the marketing researches the Key indicators of effectiveness of the specialist on public relations in the financial market: the peculiarity of the branch and topical tendencies has been conducted by the Vyazemsky Zaplsky communications bureau with the help of the Bankir.Ru agency [18].

ARB actively develops the international ties. In 1997, ARB became the member of the Banking Federation of the European Union as an associated member, thus significantly expending the possibilities of the Russian banks in the integration into the world financial space, contributing to the establishment of the communicative ties with the foreign banks. (The Banking federation of the European Union unites more than 3000 European banks).

Since 2010, ARB became the associated member of the International banking federation, which includes the leading banking entities of the European Union, USA, Canada, Australia, India, China, South Korea, Japan and SAR.

The activities of ARB played significant creative role in the development of the positive look of the Russian financial business world both in the corporate public opinion of the international community and the Russians – the potential clients of the developing innovative national banking system. Последовательная деятельность The consistent measures of ARB have contributed to integration of the Russian banking business to the world economic and legal space, development of the positive innovative climate in Russia, implementation of the international quality standards of the banking activities. During the whole period of its operation, ARB has been conducting the meaningful, multi-axes activities on the development of the credit policy and improvement of the financial state in the country; due to a number of ARB initiatives the national banking business implements the latest technologies and methods of financial activities.

ARB has been playing significant organizational and expert-advisory role in overcoming the financial crises of 1998, 2004 and 2008-2009. At present, ARB in cooperation with the institutes of political departments of the Russian Federation conducts creative policy of the development and improvement of the banking business [19. P. 2].

Within the framework of the specialized ARB Committee, the documents on the Basel III standard and risks management were developed, particularly, on the validity, technique of reasonable modeling (stress-testing), general issues of organizing the internal evaluating of the capital sufficiency [20].

The expending of the interaction of the Russian business community with the foreign financial partners, conducted due to the consistent policy of ARB, both opens the new perspectives of integrating the Russian banking capital into the world financial space and provides the flow of the foreign investments into the native economy.

Being the corporate organization of the native financial business, ARB acted as a significant system-building factor of the development of the new banking business-culture, which includes both the innovative technological methods of credit and financial activities and the new business culture based on the world standards of business ethics [21. P. 4].

On the initiative of ARB and personally its President G.A.Tosunyan, the Code of Banking Ethics has been developed and adopted. It became the act of self-regulation of the activities of the banking community in Russia on the basis of the business ethics principles, It also became an integral part of the unified system of the legal and moral and ethical provision of work of the native credit organizations. Particularly, the Code states: 'The credit organizations of the Russian Federation realize that the development of the native banking system, increase of its prestige in the society and role in solving the economic issues, effectiveness and culture of the banking business are depending on the activities of each credit organization, which makes necessary the full-scale usage for achieving the set goals of ethical norms and principles as one of the leading, along with the rule of law, means of self-regulation of the activities of the Russian business community' [22. P. 1].

Within the framework of developing in present-day Russia the business consciousness, the management of the business community defines the following principles of the business ethics:

'The credit organizations conduct their professional duties on the following basis:

- understanding of their civic and professional duty before the individuals and legal entities, society and state;
- recognizing the equality of the participants of the civil turnover involved in the sphere of the banking business, respecting their rights and legitimate interests;
- strengthening the interaction in the banking community, full-scale increase of the role of the association and other entities of the credit organizations in protecting the rights and legitimate interests of the banking community and its single members;
- maximal transparency of their professional duties with the absolute reliability in protecting the confidentiality of the information and date covered by bank secrecy;
- improving the corporate management and mutual control for the conscientiousness of the participants of the banking services market;
- unconditional compliance with their obligations and guarantee of the high-quality services provided;
- providing reasonable risking of the conducted operations;
- completeness of liabilities for the quality and results of their work;
- fair competition, active countermeasure to the unconscious participants of the banking activities, disclosure of the facts of violating the Code's provisions by procedures defined by the Commission on the control for complying with the Code's provisions;
- active participation in counter measuring of legalizing (laundering) the revenue gotten due to the criminal actions, terrorism financing and other illegal activities in the banking business sphere;
- refusing the voluntary cooperation with the legal entities and individuals with unsavory business reputation отказа;
- establishment and development of the international professional ties on the basis of mutual respect, mutual help and mutually beneficial cooperation' [22. P. 7].

During the whole period of 1990-2014, the activities of ARB were focused on the development in Russia of the new business culture in the sphere of the banking business, which includes the adoption of the principles of mutual trust between the participants of the native financial market, expand of the business cooperation among heads of the credit organizations and specialists of the banking sector, increase of prestige of the banking establishments, development of the information exchange within the financial world and etc. Since 2205, ARB focuses its attention on the implementation into the native banking business and real sector of economy of the high-tech knowledge-intensive industries, as well as venture capital. A significant attention is paid by ARB to the establishment of the information support of the banking business. The Association edits the printed body – the Bulletin of the Association of Russian Banks (is published 2 times a month) – which is sent to its participants. The Bulletin of ARB publishes the materials covering the activities of the Association of Russian Banks: assemblies' documents, minutes of sessions of the Council and Presidium of ARB, information on the participation of the representatives of the banking community in the parliamentary hearings and meetings of the committees of the State Duma, Federal Assembly of the Russian Federation, meetings and talks with heads of the legislative and executive authorities of Russia, foreign guests and business partners, texts of the signed agreements and contracts, etc. The Bulletin of ARB publishes separate editions as the appendixes, which are sent to the Association's members, as well as thematic collections of various profiles, specialized magazines and newspapers, advertising materials, etc.

ARB publishes scientific journals, brochures, handbooks and training manuals that contain valuable methodological information for bankers, auditors and other professionals of the financial sector. The Association of Russian Banks offers its participants the opportunity to use the publishing activities for creating their business image, as well as offers a variety of options for participating in such publishing projects.

The information support to the participants of the Association and all the specialists in the field of the banking business is provided by the Banks and Technology specialized magazine edited by ARB.

In 2004, on the initiative of ARB the National Banking Journal (NBJ), which has become the leading edition of the Russian financial and credit branch, was established. The establishment of NBJ has been defined by the internal needs of further development of the national financial and credit system, as well as need for improving the banking legislation, implementing the new principles of control over the credit organizations by the Central Bank, tasks of transiting to the international financial reporting standards, etc.

The Association publishes the Annual Reports on its activities containing the materials of the Assemblies of ARB, general date: the GDP dynamics, macroeconomic indicators, results of the development of the financial sector and others. The Annual Reports of ARB also analyze the results of foreign and regional activities of the Association, implementation of new technologies in the banking activities, the working results of the ARB experts in the legal field.

The corporate public organization of the Russian financial community the Association of Russian Banks contributes to the extending of the sphere of influence of the banking system in the social space – ARB has become a significant factor of establishing the civil society contributing to the implementation of a number of the social development programs, and others.

One of the most important directions of the expert activities of ARB is the R&D and legislative work on preparing the draft legislative and normative acts, making amendments to the legislation in force and others. ARB takes expert and organizational efforts to gain the approval of the given projects by the Russian Federation Government, State Duma of the Russian Federation, Bank of Russia and other structures of the state executive and legislative authorities, bodies of managing and controlling the banking activities.

ARB conducts sufficient work on the development and improvement of the tax legislation. Within the framework of ARB, the specialists on the international financial law render legal assistance to the native banking structures and credit organizations with involving both the native and foreign experience in the given sphere, which contributes to the enhancement of the general legal culture of the banking community.

Within the framework of ARB, a significant R&D work on the development in Russia of the financial market, institutionalization of the banking system, development of the legal basis of investments and others are conducted. The important direction of activities of ARB is the conduct of expert evaluation of the perspective innovative economic projects, social models and investment programs. It is also involved in providing its members with advisory services, expert supporting of the perspective innovative projects, conducting R&D work in the sphere of the banking business.

The information and analytical assistance provided by the ARB specialists to the native banking structures contributes to the increase of the Russian banking system transparency, general improvement of the banking management.

In 2010, on the initiative of ARB the 1st in the Russian Federation institute of financial ombudsman was established [11. P. 12]. Due to the active support of ARB the National Currency Association and National Association on the Payment Cards have been established in Russia.

ARB regularly organizes and conducts conferences, seminars, symposiums and exhibitions devoted to the topical issues of the monetary policy and banking activities, where there is an exchange of experience between heads of financial institutions, specialists and experts in the field of the banking business, scientists, economists, technologists in the field of information programs and others. On 19 August 2009, Smolensk hosted the joint meeting of the All-Russian banking council, ARB Committee on the regional policy and business community of the Smolensk region. The participants of the session exchanged their opinions on the prospects of the development of the financial and economic situation both in the central area of Russia and in the regions: the participants discussed the state of the financial and banking segment of economy, prospects of the banking business diversification, development of the innovative financial technologies [23. P. 235-236].

On 18 June 2012, headed by Chairperson of the European trust Bank A.Krysin the session of the ARB Committee on the mortgage crediting was held. The participants discussed the topical issues of the mortgage market development under the present-day social and economic conditions.

The representatives of the Ministry of Economic Development of the Russian Federation, Sberbank of Russia, VTB 24, VTB Kapital, Rosbank, Bank of housing financing, GPB-Ipoteka, Vostochny Express Bank, FORA-Bank, URALSIB, Vozrozhdeniye Bank, Deltakredit Bank, Rosselkhozbank, Investtorgbank, Avtogradbank, Association of the mortgage companies, Samara

Regional Fund of the housing and mortgage etc. took part in the discussion. The meeting was also attended by the representatives of AHML: Chairperson of the Supervisory Council Ilya Lomakin-Rumyantsev, Deputy Director General Andrey Semenyuk, Executive Director oo Finances Natalya Koltsova, Director of information policy department Viktor Kochetkov , Director of the legal department Anna Volkova, and Chief of Staff of the Supervisory Council Irina Yegorova.

On 19 December 2013, the Arbat cultural center hosted the IX Award Ceremony by the Golden Lion National Banking Award conducted by ARB.

A significant role for the improvement of the present-day banking management has the qualified methodical assistance rendered by the ARB specialists to the native financial organizations.

ARB conducts the organizational and scientific and expert support of the banking structures (both of the state-controlled banks and privet commercial establishments) within the consolidation of the financial resources, development of the investment strategy and implementation of the innovative development programs.

Conclusions

So, one can conclude that since its establishment and till present times the Association of Russian Banks takes active and qualified participation in the development of the Russian banking business, effectively contributes to the enhancement of its quality standards.

Due to the meaningful activities of ARB, there is the extending of the business cooperation of the Russian financial and credit organizations with the foreign banks and international financial corporate organizations – associations and entities.

The consistent and creative activities of the Association of the Russian Banks promotes the development of the highly effective innovative national banking system, which is a significant organizational and intellectual contribution to the rise of the Russian economy till the level of the leading industrial countries of the world.

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The Influence of Selected Exercises on Level of Explosive Strength of Lower Limbs of Pupils in Volleyball Preparation

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Abstract

Aim of survey was to verify influence of selected compilation of exercises in sport preparation of pupils in volleyball preparation VK TatranBanská Bystrica on their explosive strength of lower limbs. We tried to use measurements with device Myotest to see how it affects on level of development of explosive strength of lower limbs by selected specific compilation of exercises. Our experimental group was consisted of 14 male pupils between ages of 12 to 15 years. Between input and output evaluation our research group participated on total of 84 training units, of which 56 were classified as training exercises from our compilation of exercises. Result of application of created sports training on pupils in VK Tatran Banská Bystrica is total increase of level of explosive strength of lower limbs in our research group, but it was not statistically significant in some parameters which underlie listed determinant.

Listed partial discoveries are included in the grant: VEGA no. 1/0376/14 Intervention as physical activity as health prevention of Slovak population.

Keywords: Volleyball; Explosive strength; Lower limbs; Older pupils.

Introduction

Need for physical activities is natural for humans being, which is carried out at different levels and ways as well in sport, acting on individual areas of personality. One of these sports is also

volleyball, which affect on us comprehensively in all its form. Without distinction of sex and age, which does not belong to financially demanding collective sports.

To primary determinant of quality performance in volleyball belongs as well high-quality sports training, just like in other sports, which builds on development of technics of individual sport activities, whether on development of physical ability with intention to dynamic and explosive characteristics. Those are in the game reflected mainly in hitter's and blocker's jumps, quick starts, movements and falls.

Dynamic strength is base of vertical jumping, which is main building pillar of collective game - volleyball (Vavák, 2011). Authors Choutka, Dovalil (1987), Sýkora et al. (1995), Zemková, Hamar (2005), Doležalová, Lednický (2006), Šimonek (2007) and others consist that explosive strength is is characterized by muscular exertion, in which we are trying to create as much power as possible per unit of time. It is the ability to give your own body or subject highest acceleration. In this case it is about various jumps, reflections, throws, etc. In volleyball it is used for start and reflection and for active hit to ball. Vavák (2011) says that eccentric contraction, active stretching is changed in shortest time with concentric contraction. Just bigger production of power due to use of the elastic-reflective mechanisms of the musculo-tendinous system points to necessity of as fast as possible transition from tension to contraction. Otherwise, there is reduction of strength generation. Sedláček, Lednický (2010) list that explosive strength create muscle performance, where cycle of tension and subsequent contraction of muscle causes increase of power impulse, which depends on speed of muscle contraction, level of maximum strength and its flexibility, which are given to body or its individual parts over high acceleration. According to Vanderka (2008) not only in terms of speed of execution, but also mechanism of individual muscle groups participation in so-called myofasial loops have in terms of increasing speed-power manifestations considerable importance, and therefore have so-called complex multi-joint, weight-bearing exercises better system effect with impact on larger number of muscle groups.

Reflection can be divided into two phases, which Šimonek (1980) describes as a amortization and active phase. First amortization phase begins with pad contact and ends with crease of limb. Muscle tension increases and occurs muscle flexion sharing of limb unbend. Second active phase begins with crease and ends with full extension of limb. Jumping load varies considerably depending on player's positions, not only in time, but also in frequency note Vavák (2011). Highest jumping load achieve opposite players, who have on average up to 32,4 jumps per set (Lenhert, 2007).

Most significant improvement of jumping abilities can be achieved in so-called sensitive period. It moves in age range from 9 to 18 years (Šimonek, 1989), while speed component (speed of rebound) improves until 12 or 13 years, while later involved particular strength component (strength of muscles which unbend lower limbs) on increase of explosive strength. It is necessary to include 2 to 4 times in week training focused on development of explosive strength in training process in second part of preparation period (Přidal, Zapletalová, 2010). Major role in development of explosive strength has intensity of loading, which must be maximal (Choutka, Dovalil, 1987; McNelly, Sandler, 2007). Šimonek (2007) lists that we can choose different methods for increaising explosive strength level (increasing of muscle mass, improve of intermuscular coordination, intramuscular coordination and increasing of energy supplies). To primary methods in development of explosive strength include repeating methods, eccentric - with small additional load (up to 5% of own body weight), dynamic efforts and plyometric methods (Choutka, Dovalil, 1987; Sedláček, Lednický, 2010). However, in practice, most used methods are listed plyometric method, speed, isokinetic and contrast methods, which also declare articles of several authors (Matavulj et al., 2001; Kutz, 2008; Horička, 2009; Perič, Dovalil, 2010; Lenhert et al., 2010; Přidal, Zapletalová, 2010; Sedláček, Lednický, 2010. Vavák, 2011). In connection with listed, it is important to point on natural development of explosive strength of lower limbs, which runs during seventh until the eighteenth year of life, with intention to most outstanding changes in age from 11until15 years (Nováková, 1993; Čillík, 1997; Krížová, 2003; Zemková, Pelikán, Dzurenková, 2004). However, some authors disagree with use of plyometric method at this young age for a number of objective reasons, where Faigenbaum (2006) states that if an individual is able to accept councils and also adhere them under vocational supervision, risks are minimalist, similar to normally performed physical activity. Expertly planned and implemented plyometric training unit directed towards significant increase of kinetic performance of youth (Dobrý, 2007).

Aim. Aim of survey was to verify influence of selected compilation of exercises in sport preparation of pupils in volleyball preparation VK Tatran Banská Bystrica on their explosive strength of lower limbs.

We assume that our selected exercises compilation will change level of explosive strength of lower limbs.

Materials and methods

Our experimental group was consisted of pupils from volleyball preparations VK Tatran Banská Bystrica, 14 boys (n = 14) in older school age, whose average decimal age was 13,64 years, with an average body height of 172,1 cm and the average body weight 58,1 kg.

Research was realised in several stages. In first phase (4.9.2013) we have realised input measurements of monitored parameters with respect of all elements with the consequent application of exercises compilation, which are listed in attachment A. Exercises have been applied within sports training in preparatory period by two coaches (L.K. and J.H.) in ZŠ Spojová gym every Monday and Wednesday, mostly at the end of training unit within time period of 15 to 20 minutes approximately. During one micorcycle had pupils 3 training units (Monday, Wednesday, and Friday) at time of 90 minutes and 2 matches on Saturday with a duration of approximately 180 minutes. Consequently, we have performed output measurements (24.3.2014) of monitored parameters. Our experimental group participated at 22 matches and 84 training units. From 84 trainings during our survey used trainers exercises from our exercises compilation in 56 trainings.

Experimental method – field research, pedagogical, one group, one factor with application of experimental multiplier, which was exercises compilation selected by us aimed at changing level of explosive strength of lower limbs.

Measurement method – basic somatic characteristics such as body height, body weight. *Plyometry test* - (Benedek, Leuciuc, 2010) with measuring instrument Myotest, which we used for detection of lower limbs explosive *strength level*.

Plyometry test. Starting procedure: adept must have solid shoes with hard soles, test must be carried out on floor, adept must be warmed up and limbered up well before measuring and tested person is first informed with movements of exercise without gear. For higher accuracy of measurements we take every jump five times. After test results are automatically displayed on device display, which shows average of three best performances. After setting device and pin on left side of belt on adept we begin to carry out test.

Aim: measurement of contractionary abilities of lower limbs muscles (flexibility, rigidity or stiffness), reactivity and properties of lower limbs muscles coordination. These values provide us information about explosive qualities, affecting on power of impulses relating to the floor.

Test description: to handle onset of this test adept must be in good shape, without pain of knees or back. Start in a standing position, arms on your hips, head straight forward and motionless position. On signal of device jump directly from stand and consecutively jump from the floor five times, so that you have jumped as high as possible, but to achieve as low as possible time of contact with the ground. At all times arms remain on waist and we jump without bending the knees (fig. 1).

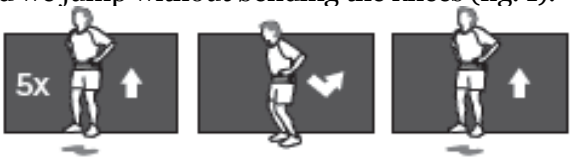

Figure 1: Plyometry test
(http://www.videoanalyza.cz/myotest/testy/80-myotest-skok-plyometrie)

Remove of possible occurring errors: contact time with the floor must be short, significantly shorter than the time spent in the air.

Results: Number of repetitions, height – amount of jump stated in centimetres, Time of contact – the time of contact with the floor stated in milliseconds, Reactivity - if time of contact is shorter, than index of the reactivity is higher, Stiffness - commonly referred as muscular rigidity stated in kilo newtons per metre.

Methods of assessing facts. We have processed qualitative and quantitative data with mathematical statistics methods, supplemented by tables and graphs: *arithmetic* average,

frequency analysis, differential, maximum, minimum, variation margin, median and Wilcoxon signed-rank test. Signifikantnce of each changes between input and output evaluation of monitored tests parameters with intention to the level of lower limbs explosive strength we found on standard used level of significance (α = 0,01, α = 0,05).

Research results and discussion

Based on partial aim and tasks, we present part of results, which are subject to further monitoring and treatment presented in tab. 1 and 2. Table 1 shows average, minimum, maximum, median and variation margin of jump height and contact time with floor in plyometry test and in table 2 same mathematical and statistical values of reactivity and muscle rigidity in plyometry test. Since reactivity is closely related to time of contact with floor, we decided to not evaluete graphically this test parameter. Acquired data were therefore evaluated in Figures 2 to 4, in wich are recorded intra-individual results of variation in level of jump height, time of contact with floor and muscular rigidity in plyometry test.

In Table 1 we can see that there was an overall improvement in height of jump in ankle bounces, as evidenced by average value of improvement between input and output evaluation of individual pupil performance by 3,5 cm (increase of 17,1%). We can say that we saw statistically significant changes ($p < 0,05$), thus demonstrating effectiveness of our chosen compilation of exercises on reference determinant, which participates in level height of explosive strength of the lower limbs.

Table 1: Jump height and time of contact with floor in plyometry test (n = 14)

	Jump height (cm)				Time of contact (ms)			
	Input	Output	Difference	%	Input	Output	Difference	%
Average	27,5	31,0	3,5	17,1	144,3	141,6	2,7	1,1
Minimum	14,7	21,2	-7	-20,8	114	106	-49	-41,5
Maximum	38,1	41,3	10,6	72,1	176	179	28	17,5
Median	29,3	30,4	4,35	16,2	141,5	137	8	6,45
Var. margin	23,4	20,1	17,6	92,9	62	73	77	59,0

In Figure 2 we can see results of jump height in plyometry test. The most significant improvement recorded pupil M.J., which could improve his performance over input test by 10,6 cm (improvement of up to 72,1%). We note, however, three deterioration in performance. Biggest reduction recorded K.L., which is worsened by 7 cm (decrease of 20,8%).

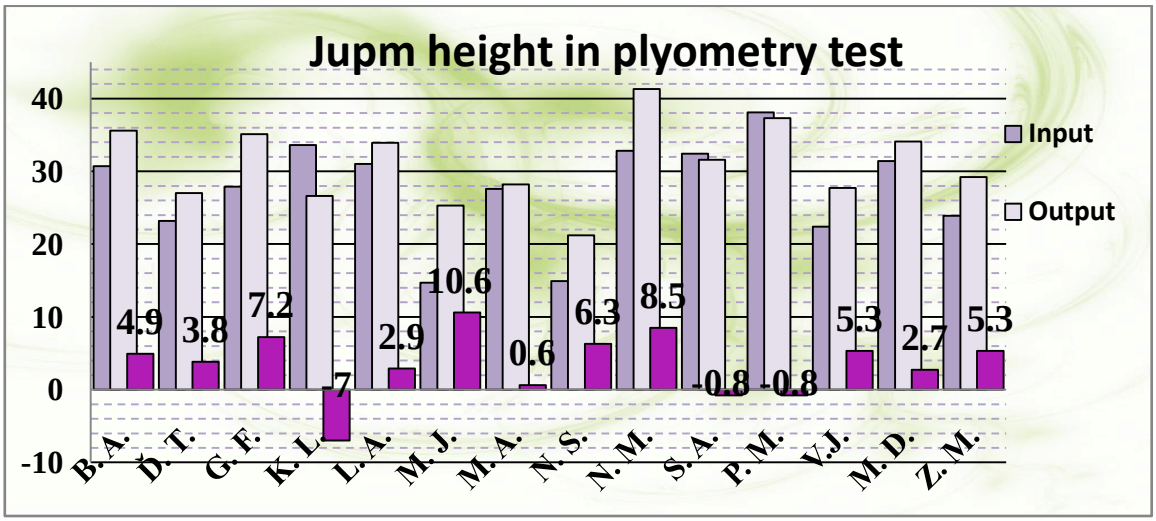

Figure 2: Intra-individual graphic representation of variation in level of jump height in plyometry test (n = 14)

As we can see in table 1, there was also an overall improvement in time of contact with floor at ankle bounces, but this time it was not so considerable. In average, the time of contact with floor in team VK Tatran Banská Bystrica decreased, but we can say that with value of 2,7 ms (change of 1,1%) we did not occur statistically significant changes ($p > 0,05$), thus we did not confirme effectiveness of our chosen compilation of exercises on monitored determinant, which participates in level height of explosive strength of lower limbs.

In Figure 3 we present intra-individual results of the parameter, from which it appears that the largest improvement observed Z.M. He was able to reduce duration of time of contact with floor by 28 ms (17,5% reduction). The most significant extension of time of contact with floor was recorded in M.J., which worsened his performance by 49 ms (41,5%).

In average team VK Tatran Banská Bystrica increased reactivity index of 0,05, increase of 2,1% (table 2). As mentioned earlier, reactivity is closely related to time of contact with floor, so we can not say anything other than again not reaching statistically significant changes ($p > 0,05$), thus we did not confirme effectiveness of our chosen compilation of exercises on monitored determinant, which participates in level height of explosive strength of lower limbs. The most significant improvement in this parameter recorded N.S., which increased its reactivity index of 0,4 (change of 18,3%). The largest negative difference between input and output measurement was found in P.M. He worsened by -13,1%, representing decrease of reactivity index of 0,45.

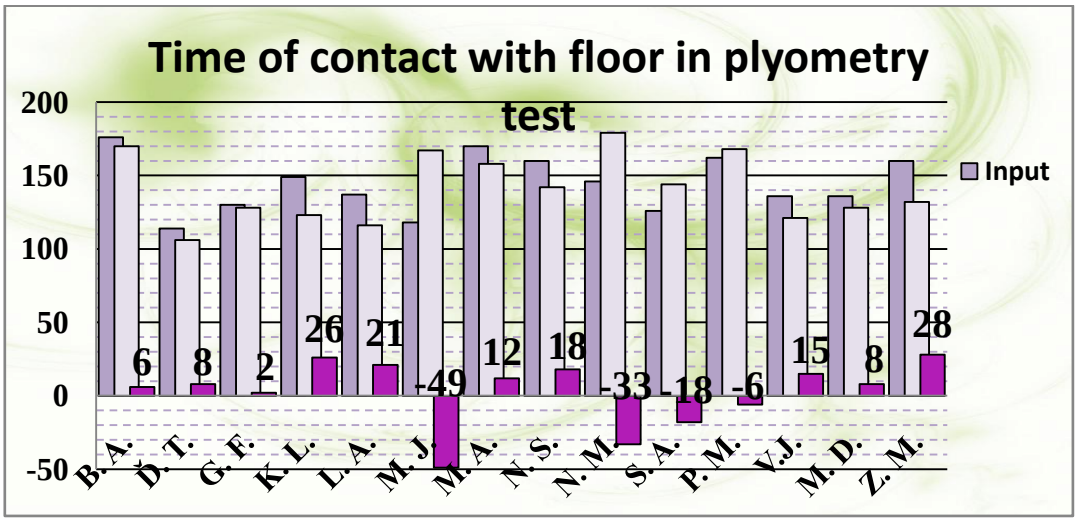

Figure 3: Intra-individual graphic representation of variation in level of time of contact with floor in plyometry test (n = 14)

In team VK Tatran Banská Bystrica was level of muscle rigidity in plyometry test increased in average of 4,7 kN/m, resulting in positive level increase of 11,3% (table 2). When comparing level of input and output measurements of muscle rigidity we observed statistically significant changes ($p < 0,05$), thus we reaffirm effectiveness of chosen compilation of exercises to develop listed parameters involved in height level of explosive strength of lower limbs.

Table 2: Reactivity and muscle rigidity in plyometry test (n = 14)

	Reactivity				Muscle rigidity (kN/m)			
	Input	Output	Difference	%	Input	Output	Difference	%
Average	3,3	3,3	0,05	2,1	38,0	42,7	4,7	11,3
Minimum	2,19	2,59	-0,45	-13,1	26,8	19,6	-7,2	-26,9
Maximum	4,08	3,97	0,4	18,3	66,4	71,5	14,1	36,8
Median	3,45	3,24	0,14	4,13	33,7	39,75	4,45	10,3
Var. margin	1,9	1,4	0,9	31,4	39,6	51,9	21,3	63,7

As we can see in figure 4, the most significant decline in level of muscle rigidity occurred in pupil P.M., namely of 7,2 kN/m (change of -26,9%). The biggest positive change between input and output evaluation was recorded in B.A., which improved level of his muscle rigidity of 14,1 kN/m (change of 36,8%).

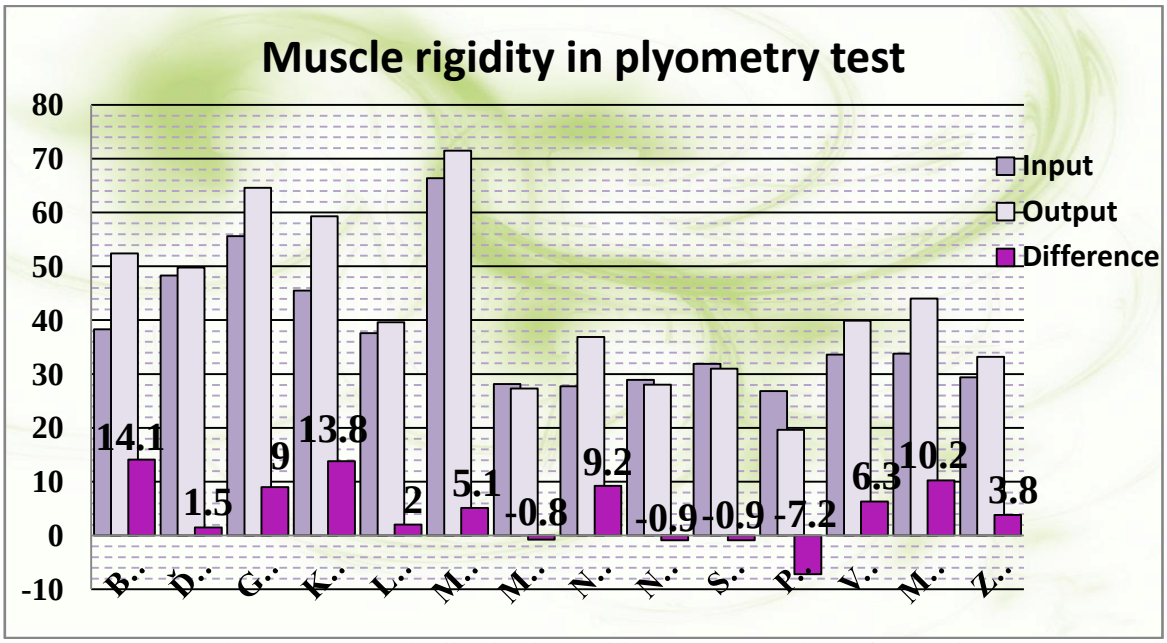

Figure 4: Intra-individual graphic representation of variation in level of muscle rigidity in plyometry test (n = 14)

Conclusion

Primary aim of research was to verify effect of our chosen compilation of exercises aimed at developing of explosive strength of lower limbs in pupils of volleyball preparation in VK Tatran Banská Bystrica. Using our measurements, we found that there was an overall increase in level of jump explosiveness in all watched parameters of explosive strength of lower limbs in pupils of volleyball preparation in VK Tatran Banská Bystrica, but in some parameters underlying monitored determinant were these changes minimal, not statistically significant at level of 5% of significance. Thanks to selected compilation of exercises we have achieved statistically significant ($p < 0,05$) changes in level of jump height and muscle rigidity of lower limbs. We have not achieved, however, statistically significant changes ($p > 0,05$) in time of contact with floor and reactivity participated on explosive strength of lower limbs.

Based on these arguments, we can conclude that our hypothesis was not confirmed in this case. As cause of non-fulfilment of hypothesis we see absence of some pupils on training units, mainly longer-term absence on training process due to injuries. Another factor which influenced that hypothesis was not confirmed was fatigue caused by higher training and match load. Most of players are not playing only volleyball, but also other sports, which increased rate of fatigue. Since our research group started training in late August 2013 and the first competitive round was on Schedule in about six weeks later, pupils did not have enough space for development of condition abilities, therefore to develop explosive strength. They had to by focused more on training of techniques and tactics, because they had not previous experience with volleyball. Detecting of level of lower limbs explosive strength of pupils in watched group outlined us direction in which we should go in our continuous training practice, that it is necessary to focus on all factors affecting explosive strength of lower limbs. Our research can be beneficial for other trainers who will apply obtained facts in their volleyball practice.

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An Approach on the Quality of Life of Community Health Agents in Mental Health Area

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Abstract

The quality of life discussion is increasing because it starts to bring the conditions and lifestyle as topics. This concern is also being observed in the workplace, and the work life quality is an important issue in the bioethics of protection view. So, this article aims to understand the quality of life of mental health professionals, specifically the community health agents of the Federal District in Brazil. **Methods:** A survey called WHOQOL-100 from the World Health Organization was used to describe the sociodemographic characteristics and the quality of life of the community health agents. Collected data were analyzed by SPSS 19.0 computer program. **Results:** Results indicated that the quality of life revealed by the five domains of Whoqol – 100 is located around 57%. Considering the aspects evaluated, we realized that no one reached greater percentage than or equal to 80% value. Some sociodemographic variables are associated with significant differences between the means in some domains of Whoqol - 100. In Social and Environmental Affairs domains, the averages between men and women were significantly different. The Socioeconomic Level of Community Health Agents was also associated with significant

differences in the level of independence. **Conclusions:** We observed that the quality of life for those workers passes before anything for its humanization.

Keywords: primary care; quality of life; mental professional; community health agents.

Introduction

The contemporary discussion of quality of life is comprehensive because it starts to bring the conditions and lifestyle as topics, besides the issues of symptom control, reduced mortality, increased life expectancy, some common points in the first bioethical thoughts about this subject. The current definition of quality of life adds other perspectives without unlinking the first.

The Group for Research and Study of Physical Activity and Quality of Life comprises quality of life as the individual's perception of their position in the context of culture and value systems in which they live and in relation to their goals, expectations, standards and concerns until the ethical and policy dimension [1].

Nowadays discussions of quality of life approach biomedical, psychological, socioeconomic and general aspects. The general approach consists of the quality of life for a multidimensional perspective. In the words of Almeida & Gutierrez [1] quality of life "presents a complex organization and dynamics of its components, differing from person to person according to their environment/context and even between two people engaged in a similar context. Characteristics such as values, intelligence, interests are important".

The socioeconomic approach takes social indicators as a reference. Government data of management, economic indicators with inflation index, among others are understood as its implications for the quality of life of a particular population.

Medical approaches in the opinion of Almeida & Gutierrez [1] are comprehensive and therefore is common conceptualization of quality of life expand. In the medical literature the quality of life has been associated with several meanings as health and social functioning.

Silva [2] observes that human work should be carried out in conditions that contribute to the full development of the worker and his life, respecting their physical and mental integrity. However, work activities, in different degrees of intensity, can often cause deleterious health effects, leaving aside the question of physical and mental integrity. In such cases, the work can take an ambiguous role in the life of the individual, and may be the cause of suffering or even illness for many people.

According to Fleck [3], health has been defined by the World Health Organization (WHO), in 1946, as "*a state of complete physical, mental and social wellbeing and not merely the absence of disease"*. However, the concern with improving health has intensified in the mid 70s, where it was observed that health was not merely the absence of disease.

The concept of quality of life began to be linked to the measurement of indicators of health from this decade. This change is associated with at least six strands which converge to the improvement of the concept of quality of life, such as: studies of epidemiological base about happiness and well-being; pursuit of social indicators; lack of objective outcome measures in health; positive psychology; customer satisfaction; humanization movement of medicina [4].

The old discussion followed the ethical biomedical clinic paradigm which understands the issue of quality of life guided only by medical issues. With the paradigm shift the medical institutes began to consider the human dimension linked to the people thougths with regard to their dreams, what they expect from life and how it is done, or not, in a social and cultural context.

After these changes, the next stage was the adoption of initiatives to measure quality of life. There is a significant amount of meters of quality of life used in scientific researches. During the 90s there were some initiatives that helped the development of a more holistic view about the quality of life. The WHOQOL is the name of the group of quality of life developed by WHO to address issues involving this topic. Later, the group's name became the name of the questionnaire developed to measure quality of life. This questionary works with four major themes: Physical, psychological, social relationships and environment. At this same time several studies that aimed to develop metrics for measuring quality of life were done [3].

These studies were done because during the late 20th century, with the fall of Berlin wall, the focus of world attention is no longer polarized contest between capitalism and socialism. Thus, the attention began to turn to voices that have echoed in societies, but they were not heard. People and groups who were violated for reasons of social order began to organize themselves and their claims

began to be heard. Those claims were in vast majority clamored for citizenship or for social justice and equity. At their heart they brought more than a social issue, they brought the human yearning for a better life [5].

Therefore the World Health Organization took forward an international collaborative project that resulted in the WHOQOL. This questionnaire has defined quality of life as "the individual's perception of their position in life in the context of culture and value systems in which they live in relation to their goals, expectations, standards and concerns" [5]. The fact that both the process creation of WHOQOL as the translation into Portuguese, have the presence of health professionals in the group of participants is important in measuring quality of life for professionals in the health field.

During the 70s, the term Quality of Work Life (QWL) was seen as a concern for the health of the individual in view of the results of their work tasks. In Brazil, during the same period, the newly created Sanitarian movement already discussed the implications of this dehumanized model that only favored the business sector [6].

The concept of QWL has since continued to be developed and improved by bringing perspectives, pathways and newer approaches. Discussion on the conditions and working environment remained and were being updated. Further discussions as the impression that workers had about the work itself, ie, how they understood the meaning of their own practice and their role as a worker, began to emerge.

Today, the concept of QWL is more holistic, as it undertakes, steadily, subjective and objective studies and discussions of work and workers. Because of this QVT is often used as an indicator of personal experiences in the organization and the level of employee satisfaction. The quality of life at work stems from a need for efficiency in service delivery. Goal is achieved, first, with the optimization of human resources, ie, issues of organizational climate directly affect the quality of services provided. We notice as well, that this proposal to make it more comprehensive discussion, the quality of life becomes to be linked to occupational stress, which opens up the range of futher discussion. In this sense, the evaluation initiatives to mesure stress and quality of life become better understood, however, in proportion, more complex to be measured [6].

This reality is also observed in a group of professionals that was instituted in Brazil, more specifically in the state of Ceará, working with the issue of patient care, but where they live. These workers are called Community Health Agents, and differ from other health professional, such as nurses, because they perform their work within their own communities, visiting patients in their homes, and only then, leading to the diagnoses within the hospitals. From these assumptions of quality of life, thinking about this kind of professionals that are also related to occupational stress, this study aimed to measure the quality of life of some community health agents who work in the mental health field.

Materials and methods

Description of the sample of participants

The sample consisted of 97 community health agents mostly women (78.4 %). The age of almost half of the group falls in the age group 30-39 years (40.2 %), married (51 %), have 1-3 children (60.8 %) and has a medium socioeconomic level (57.7 %) or low (34 %). The group is divided between those who develop basic work (55.7 %) or medium (41.2 %). The vast majority of agents work 40 hours per week (97.9 %) in the morning/afternoon shift (96.9 %).

Procedures

Assessing the quality of life of community health agents was performed by the instrument response of World Health Organization, the WHOQOL - 100, a validated version in Brazil, consisting 100 questions, grouped into six domains: physical, psychological, level of idependência, social relationships, environment and spirituality/personal beliefs. Each domain consists of facets, with a total of 24 facets, which are composed of four whestion. Besides the 24 facets, the instrument consists of a twenty-fifth facect which consists of general questions about quality of life. The response values were converted to percentage from 0 to 100, with higher values are indicative of better quality of life.

The questionnaire was administered in December 2012, in a private room, on the premises of the health centers. The project was approved by the ethics committee of FEPECS/SE/ DF under

No. 643/11, adopted on 02/15/2012. The 97 community health agents who agreed to participate signed an informed consent, anonymity and confidentiality of information is guaranteed. In order to ensure the confidentiality of the study, were not disclosed the names of family health units that were part of this research.

The statistical treatment of the data was performed using the statistical package SPSS version 19.0. Analysis for the differences in mean QWL in terms of demographic and socioeconomic variables, the Tukey test was used.

Results

Quality of Life (WHOQOL - 100)

Domains and Facets of Quality of Life

According to the results obtained, it was possible to ascertain the quality of life of the Community Health Agents active in teams of family health in mental health area. The results of WHOQOL percentages were transformed to allow a comparison between their domains and facets. Figure 1 shows the average percentage observed in the trial Physical, Psychological, Level of Independence, Social Relations, Environment and Self- rating of quality of life domains.

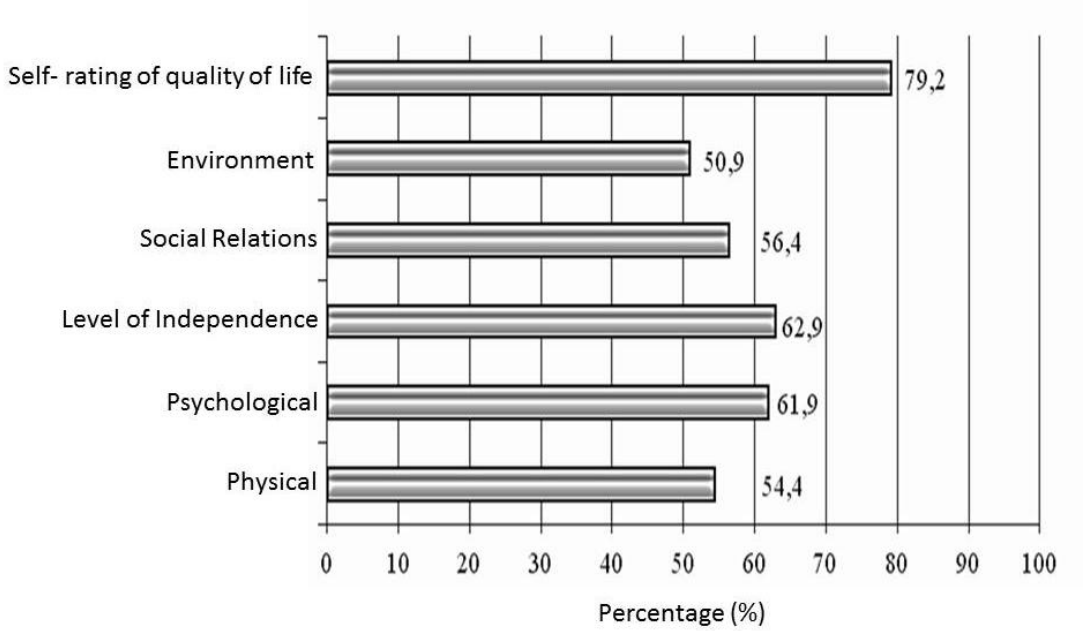

Figure 1. Judgement average percentage of each domain of the WHOQOL instrument. Federal District, Brazil. 2014

The average percentage trials indicate that CHA evaluated the areas of Quality of Life (QWL) from 50 % to 63 %. It is noteworthy that the self- assessment of QWL was superior to any area considered. The domain that received lower review was Environment that includes the facets: financial resources; Health and Social Care (availability and quality); Environment at Home; Participation in and opportunities for recreation/leisure; Physical Environment (pollution/noise / traffic / climate); Physical Security and Protection; and Transportation. This review is the average range of the trial responses. It was not observed a significant discrepancy between the percentage values of the other fields.

Table 1 reports the average percentage judgments observed in every facet of the WHOQOL. Averages are presented in decreasing order of magnitude. The average of the trials ranged from 24.2 % to 79.2 %.

Table 1: Trial mean percentage and standard deviation (SD) of facets. Federal District, Brazil. 2014

Facet	Average	SD
Spirituality / religion / personal beliefs	79,2	18,08
Ability to work	73,7	17,97
Self-esteem	67,2	17,32
Positive feelings	65,5	16,06
Sleep and rest	64,1	27,11
Thinking, learning, memory and concentration	62,6	15,47
Body image and appearance	62,2	19,08
Home environment	62,1	15,93
Quality of life from the point of reported view	62,0	16,12
Social Support	58,9	16,89
Personal Relationships	58,4	12,27
Opportunities for acquiring new information and skills	57,3	13,91
Physical security and protection	54,4	14,58
Pain and discomfort	53,4	17,02
Energy and fatigue	52,4	18,03
Sexual activity	51,7	16,62
Participation in and opportunities for recreation / leisure	51,7	18,3
Mobility	51,4	11,13
Activities of daily living	50,5	10,18
Financial Resources	49,9	7,01
Negative feelings	47,8	21,92
Physical environment (pollution/noise/traffic/ climate)	47,7	10,72
Transportation	44,5	12,16
Health and social care: accessibility and quality	39,5	18,17
Dependence on medication or treatments	24,2	24,5

The facets that received the lowest average judgments were health care and social care: accessibility and quality and dependence on medication or treatments (Table 1). Only 8% of the veneers had an average in the range of 70% to 79%; 28 % had a mean 60 % to 69 %; 40% had an average of 50 % to 59%; and 16% were between 40% to 49%.

An analysis of the frequency distribution of averages shows that 3 % is in the range from 1.82 to 1.97; 32 % to the range 2.1 to 2.99; 58 % to the range 3.02 to 3.92; and 7 % to the range 4.0 to 4.23. This means that the range of responses scale assessment center ("neither satisfied nor dissatisfied" or "somewhat" or "neither good nor bad", or "medium" or "sometimes") prevailed between evaluations of CHA. The extremes of the scale ("nothing/very dissatisfied/very bad" and "extremely/very satisfied/very good") were hardly mentioned.

Areas in terms of socioeconomic and demographic factors

It was not possible to observe statistically significant differences between the mean scores of the domains of quality of life when compared between the variables: age, marital status, job, education, number of dependents, and socioeconomic status.

With regard to the areas by gender, table 2 shows the means and standard deviations of rates observed in each area depending on the participant sex. The table indicates that all judgments of women are higher than ratings made by men. One-way ANOVA revealed that there are significant differences between the means on the basis of sex in domain IV - Social Relations, and domain V -

Environment. There was a marginally significant effect of Sex in Domain II - Psychological [F (1,94) = 3.801 , p = 0.054] . Subsequent tests (Tukey) between the means indicated that female CHA had higher averages than men in those three domains.

Table 2: Distribution of the results of the domains by gender. Brazil, 2014

	Sex	Physical Domain	Psychological Domain	IL Domain	SR Domain	Enviromnent Domain
Average	MALE	50,1	56,7	61,9	50,2	47,3
SD	MALE	16,4	15,4	7,0	9,4	8,8
Average	FEMALE	55,6	63,6	63,5	58,2	52,0
SD	FEMALE	16,0	13,8	8,8	11,3	8,6

Legend: SD = standard deviation, IL = Level of Independence, SR = Social Relations.

Means and standard deviations of the ratios as a function of socioeconomic level of the CHA are presented in table 3. One-way ANOVA revealed significant differences between means according to the socioeconomic level in domain III - Level of Independence. Subsequent tests of Tukey between the means indicated that CHA with low socioeconomic level nave level of Independence significantly higher of the CHA with medium socioeconomic level.

Table 3: Distribution of the results of the domains by socioeconomic level. Brazil, 2014

	SL	Physical Domain	Psychological Domain	IL Domain	SR Domain	Enviromnent Domain
Average	VLSL	60,2	63,9	61,3	54,2	47,5
SD	VLSL	12,5	8,6	4,4	10,1	9,1
Average	LSL	56,2	63,5	66,1	58,8	51,6
SD	LSL	17,7	14,2	8,5	12,2	9,9
Average	MSL	52,5	60,7	61,1	55,2	50,9
SD	MSL	15,4	15,4	9,1	11,1	8,2

Legend: SL = socioeconomic level, SD = standard deviation, VLSL = very low socioeconomic level, LSL = low socioeconomic level, MSL = medium socioeconomic level, IL = Level of Independence, SR = Social Relations.

Discussion

The CHA judged, on average, that the quality of life revealed by the five domains is located around 57 %. This percentage draws attention compared with the Self-Assessment of Quality of Life that is over 20 % higher (79.2 %). Whereas facets evaluated, we realized that no one reached values higher than or equal to 80 %. Most was evaluated in the range of 50 % to 67.2 %, and six are below 50 %.

Impaired quality of life of health workers can directly influence the provision of services. This can affect the dynamics of care, bringing damages to the patients care.

It was found greater satisfaction with the level of independence domain of quality of life of CHA assessed. Thus, mobility, daily life activities, dependence on medication or treatment and work capacity facets were aspects that provide higher levels of perceived quality of life of studied workers. Similar results were found by Fernandes et al. [7], working with nurses in family health teams of the 27 municipalities of Minas Gerais Macro-region of Health, in Brazil, where observed higher averages for level of independence and social relationships, using the responses of the evaluation instrument WHOQOL – 100.

Lopes & Macedo [8], in a study conducted with nurses from 11 units of family health, in Vitória da Conquista, Bahia, Brazil, observed, using the WHOQOL Breaf, that the highest score among the domains assessed were physical, followed by the psychic domain. The psychic domain, in our study, also had the highest scores, indicating that this aspect, connected to psychological issue, has great relevance to CHA with regard to quality of life. The psychological issue involves the dimensions of human life, ie, aspects like how to enjoy life, live well, with self satisfaction and satisfaction the other, without the presence of negative feelings. Vasconcellos & Costa Val [9] also

found that the psychological domain was presented the third highest score when evaluating the Community Health Agents in Lagoa Santa, Minas Gerais, in Brazil, using the WHOQOL Breaf.

Thus, subjective reactions and experiences of human beings are indicators involved in psychological approach. Almeida & Gutierrez [1] claim that this approach depends on direct experience of the person whose life is being assessed and indicate how people perceive their own lives, happiness or satisfaction. The autors says that fact of psychological approaches consider quality of life only as an aspect within a person, disregarding the environmental context in which it operates, is the main limitation of this line of thought [1].

As regards the "state of health and quality of life related to health" variables are disposed through a linear progression with respect to proximity to the individual, the more proximal (symptoms) to the distal (opportunities). According Patrick [10], assessment of quality of life is inseparable from personal or sociocultural context. In this sense, to mesure quality of life can be it is necessary to see all factos that involves the particular pearson.

The environment domain, where they are inserted the facets: financial resorces, health and social care, home environment, participation in recreation and leisure activities, factors related to pollution, noise, traffic, safety and transportation, showed the lowest percentage indicating that have less influency as regards the quality of work life. Factors such as availability of human resources, the organization of the work process and the recognition of the good way to take care of the assisted population, may be one of the factor that the environment domain presented the lowest percentage. Similar results were also found by Lopes & Macedo [8].

Mendonca & Oliveira [11], in work done of the quality of life of primary care workers of Amparo, São Paulo, Brazil, observed that physical, psychological, socias relations and the environment presented scores 68.58; 63.31; 66.24 and 57.42, respectively. Ursine et al. [12] also conducted a work with community health agents in the Family Health Strategy of the brasilian government, in Londrina, Paraná, to investigate the working conditions and quality of life of workers and found that the physical domain obtained the average score of 74, the psychological obtained a mean score of 71.5 and the lowest mean score was found in the environment field, that also corroborates the findings of the current work. It´s important to call attencion to the fact of the CHA work in their own community. This fact can give them mor facility on mobility, on transportation, and they may be more confortable working with people that they already know for a long time. So the enviromnent may be favorable for their actvities.

According Pascoal & Tamayo [13], the study of quality of life can be based on organizational stressors (work enviromnent stimuli that require adaptive responses by the employee and that exceed their coping ability), in the individual responses (psychological, physiological and behavioral responses issued by individual by work factors that exceed their coping skill), or in several variables in the stressor response process. Thus, re-educative measures can be articulated in order to provide better quality of working life in health and mental health, to also provide improved services to beneficiaries.

An analysis of the mean values obtained for each WHOQOL question showed that the CHA tended to opt for the medium scale of answers ("neither satisfied nor dissatisfied" or "somewhat" or "neither good nor bad", or "medium" or "sometimes"). As this chosen workers are in a low level of work, they often show fear to say what they realy thinks about some subject at work. They have fear that something could happen with their jobs if they say something that could desagree with their boss, even when the survey is done preserving the secrecy of identity. So, they mostly prefer to chose answers that may not affect them.

Some sociodemographic variables are associated with significant differences between the means in some domains. In Social Relacions and Environmental Domains, averages between men and women were significantly different. The Socioeconomic Level of CHA was also associated with significant differences in the level of independence. The other sociodemographic characteristics did not produce significant differences.

About the results is important to note that the health worker read in a care process paradox: life and death. Moreover, the nurse professional or community health agent, work on a human nature process that can occur both in the perspective of promotion, as the prevention and / or recovery of health [14]. Trevisan et al. [15] consider that this type of work requires an intense human

relationship, ie, which is intrinsic inter - relationship and bond. Then appear as productive action and social interaction simultaneously.

Research indicates that the reality in Brazil has shown that there is a partial or incomplete understanding about the quality of life of health professionals work in practice. According Miranda [16], the welfare referential is linked to quality performance focused on people. Sometimes meritorious, or simply managerial actions, ignore quality of work life on companies policies and processes or in repair risks aspects in working condition.

In this sense, promoting quality of life, according Gonsalves [17], would mean promoting the quality of work and employment having as a starting point safety assurance in career and employment, ensuring employability, income, social protection and workers' rights; maintenance and promotion of health and well - being of workers through health care and exposure to hazards at work and work organization more appropriate and effective; developing skills and competencies through training, training, career development; reconciliation of life inside and outside work by reducing or adequacy of extension of working time, the flexibility of time devoted to work and the creation of social support structures.

Conclusion

The quality of work life passes before anything for its humanization. It`s important to understand that, whether being boss or employee, needs quality of working life, not just for reasons that attach directly to work - as their production, goals and their challenges - but also by the relation of this work with a social context - such as compliance with legislation and to the recognition that society gives to work. Therefore the measurement of quality of life should always keep up with current issues or the most modern understanding of what will be evaluated about work quality of life.

Social participation, the management model to be adopted by governments and representatives of the people and the set of actions developed by professionals in the health field are extremely important for establishing quality of life for health professionals and also to improve health conditions of the Brazilian population. CHA are professionals who interact directly with the population, their desires, perspectives, and also sorrows and difficulties. Understand how the quality of life of these professionals is an important measure for both regard to the personal touch as iin what refers to the sphere of society in general.

There are only few studies on quality of work life for health care agents. In this sense, there is a need for greater efforts to understand how these professionals are considered, and how is the job of each one, to the betterment of their condittion of work and the community which they are inserted.

In this sense, it`s important to look for some principle that could help these health professionals. The bioethics in understood as a legitimate and efficient tool for critical analysis of the morality of public policies in the area of health and for the decision making. According to Schramm & Kottow [18] the principle of protection meets the requirements of ethics in public health and allows moral justification and analysis of public policies, by requiring clear identification of objectives and authors involved in the implementation. So, the bioethics of protection aplication facing these health professionals, the community health agents, can ensure better professional development inside and outside of your work environment.

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Role of Temporal Transspective in Personality Formation of Adolescents Without Parental Support

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Abstract

Temporal transspective is understood as ability to connect in whole image of the past, present and future.

The article shows the results of a comparative study of temporal transspective of adolescents, whose personality formation takes place in different living conditions. Participants were 50 adolescents without parental support (experimental group) and 60 adolescents brought up in a family (control group). The research showed that temporal transspective of adolescents without parental support has not only peculiarities as gap between important events in the past, present and future, but as well such characteristics of their personalities as lack of confidence, ambivalency, anxiety, pessimism, moreover, motivation limited by nearest future.

Keywords: temporal transspective; the past; the present; the future; ambivalency; anxiety; optimism; pessimism; self-evaluation; motivation.

Introduction

Teenagers without parental support and therefore raised in state institutions, constitute a significant problem to society. This category of children is "anchored" in psychology and pedagogy as a typical "risk group" of deviant behavior, causing direct or consequential damage to society. But what brings these teenagers into a "risk group" of multiple adverse effects? What psychological "mechanisms" provoke destructive forms of their behavior? What important life relationships are impaired with adolescents in stable family deprivation?

Indeed, most teenagers without parental support, even as a child lived in the so-called "dysfunctional family", resulting an favorable process of forming their time perspectives images. However, deprived of even a small family support, they often get into public institutions, where

conditions conducive to mental development and personality formation, are not provided despite the efforts of the staff [7, 8]. Sometimes it happens, that children deprived of a full family, gradually become "psychologically handicapped", apparently due to special assessments of their own lives' perspectives. These children are forced to rethink, reevaluate their capabilities, desires and priorities in life. Most often this process is not satisfactory; as a result of life script "breakage", personality formation takes place under a special" social situation of development" (according to Vygotsky L.S.)

Difficult living conditions when adolescents have lost their families, leads to their personality formation distortion, in particular, because of a distorted perception of their own life time perspectives (the past, present and future) and transspective as a specific psychological phenomenon performing the ability of consciousness to connect in the present representation of the past and the future [1, 3, 4].

Time perspectives images of own life are related to personality formation and human behavior at present [6, 15, 16, 17, 18]. At the moment some aspects of relations of time perspectives images of own life and personality characteristics of adolescents that live in families and outbred, are studied [10, 11, 12, 13].

However, the process of forming image about temporal transspective and its characteristics in different social groups, apparently being complex and deeply individual, is understudied.

Methodology

When studying the temporal transspective, the results obtained by using these psychological techniques, were reviewed, "Motivational induction method" (MIM) [5, 8], "Assessing five-year periods of life" [4], "Trait anxiety scale for 10-16 year-old students" [8], "Diagnostics of attitude to the past, present and future" [9], "Self-evaluation" (T. Dembo – S.Y. Rubinshtein), author's profile "Forecasting the Future ", author's questionnaire "Thoughts about future".

Estimation of statistical significance of empirical data relations was made using Pearson criteria χ^2 and Ch. Spearman rank correlation coefficient [2].

Participants

110 adolescents living in Moscow region participated in the research; they were combined into two groups. The first group consisted of 50 teenagers from orphanages and shelters (experimental group). The second group was 60 adolescents brought up in families (control group). Samples had no significant differences in gender and age.

Findings

When analyzing the experimental results, some features of temporal transspective of adolescents without parental support, were found.

The first feature is that adolescents of experimental group have the line of transspective deformed in two places: the past is not related to the present, and the present – to the future.

A comparative analysis of participants' quantity of significant events of the past (five years period from 0-5 years, 6-10 years), present (11-15 years) and future (all remaining five years periods, starting from 16-20 years etc.) periods by procedure "Assessing five years periods of life".

Thus, there were no statistically significant associations by Spearman criteria of significant events quantity in the past, present and future, in the responses of adolescents of experimental group (Figure).

At the same time statistically significant correlations by Spearman criteria between the events of the past and present (r_s = 0.50, n=60; p=0,01); the past and future (r_s = 0.29, n=60; p=0,05), per quantity of significant events, were obtained in the responses of adolescents of control group. These data can be interpreted as follows: adolescents who are brought up in public institutions, have the quantity of past significant events not statistically linked to the quantity of significant events of the present and future.

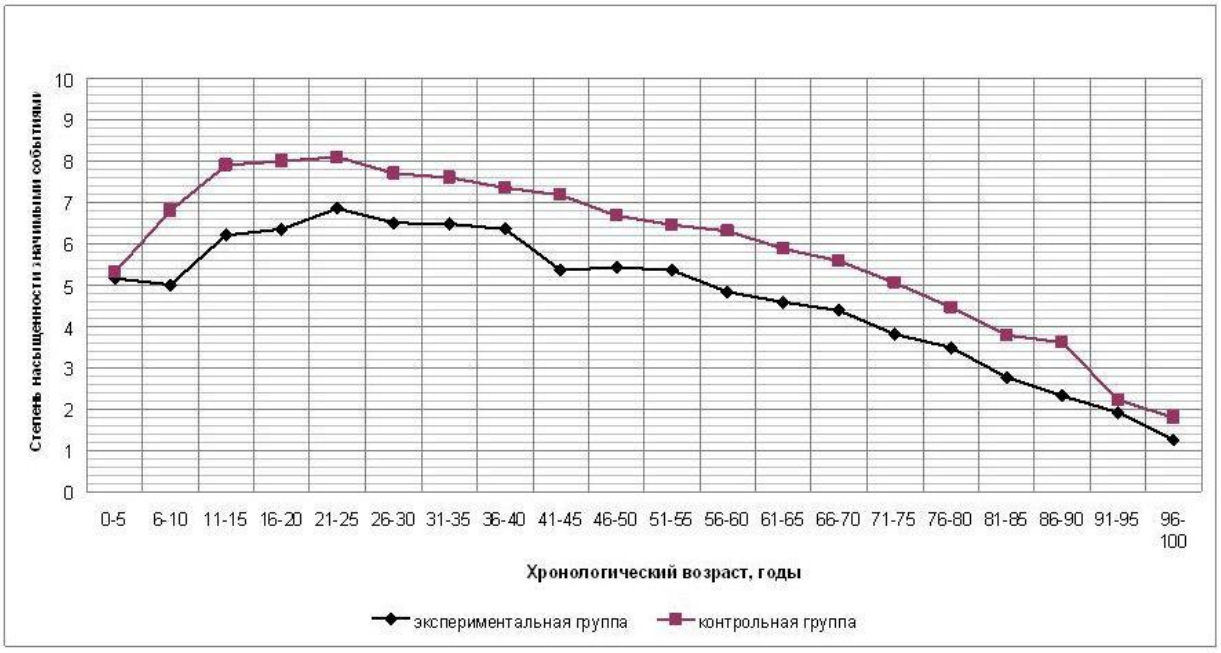

Fig. 1. Average quantity of significant events in five-year periods of life

The responses of adolescents outbred, by procedure "Assessing five-year periods of life", did not show statistically significant relation of significant events quantity in the present and future. In assessments of adolescents of the control group, the number of significant events in the present and future, statistically significant relationships by Pearson ($\chi^2_{0.05} = 4.51$; v=1) and by Spearman criteria ($r_s = 0.38$, n=60; p=0,01), were obtained. Consequently, teenagers left without family, underestimate the potential that the present has, to prepare positive events in the future.

Teenagers without parental support, predict a twice shorter period of their lives full of significant events compared to adolescents brought up in a family. Confirmation lies in the estimation reduction (below the median, Md = 5,4) of number of significant events in future of teenagers outbred, already after the age of 40. Teenagers who live in a family, “postpone” such a change in their lives to 70 years.

In addition, estimates of teenagers of the experimental group of number of significant events in life periods from 16 to 70 years and from 70 to 100 years (old age) did not show statistically significant relations. Whereas adolescents of the control group showed statistically significant correlations by Pearson ($\chi^2_{0.01} = 7.38$; v=1) and by Spearman ($r_s = 0.51$, n=50; p=0,01) criteria in the estimates of number of significant events in life periods from 16 to 70 years and from 70 to 100 years (old age). Thus, adolescents without family support have quantity of significant events life period from 16 to 70 years less related to quantity of significant events that may be in their life period from 70 to 100. One can assume that adolescents without parental support are not inclined to consider the significant events of their adult lives as the basis of their well-being and activity at their old age.

Were obtained statistically significant differences in responses of the subjects of the experimental and control groups that reflected their attitude to the past, present and future ($\chi^2_{0.01} = 18.95$; v = 1) by procedure "Diagnostics of attitude to the past, present and future". Most teenagers of the experimental group (54%) show dominant contradictory attitude to the past, present and future, which is usually characterized by inconformity, a gap between them. While most adolescents in the control group (87%) show dominant realistic, optimistic, consistent view of the past and future. Realistic, optimistic, consistent representation of the past and future is a favorable factor of full personality development in adolescence.

Thus, adolescents without parental support do not have the number of significant life events in different chronological periods in the past, present and future, connected. Meanwhile, the researchers note that one of the forms of unfavorable of the adolescent's personality development is an option when the past, present and future are isolated from each other. At present, the

development of such a scenario is not derived from the past, and the future is not the continuation of the present [9].

The second feature of transspective representations is that outbred adolescents' appealing to memories of the past is associated with predicting financial problems. Were obtained statistically significant correlations by Pearson ($\chi^2_{0.05} = 4.13$; v=1) between adolescents' thinking of the past (MIM) and prediction of financial problems in own's future (author's profile "Forecasting the Future"). Thus, the more often adolescents of the experimental group, reminisce, the less optimistic they are when assessing their financial security in the future. Adolescents of the control group, do not have such a relation.

The third feature of transspective representations is that their dissatisfaction with the way of life, is connected to externality, expression of hope and desire for self-realization in the future.

Thus, when analyzing results, the adolescents of the experimental group show relation between feeling dissatisfaction with the present and feelings, connected to anticipation of others' activity, their fate dependence on circumstances.

Statistically significant correlations by Pearson of adolescents without parental support, were obtained between dissatisfaction with the present and motives of hope "everything will be fine" in future - the category "expression of hope" "MIM" ($\chi^2_{0.05} = 4.73$; v=1). Adolescents, who live in the family, do not show such relationship.

Studies of mindsets for the future show that subjects who see their future as determined by circumstances (external attribution), as a rule, have their own activities with low instrumentality. That means, that teenagers who are not able to consider their studies as a tool for a future career, have a lower academic motivation. Therefore, we can state the impact of prospects of future on behavior in the present.

Such a trend cannot be considered constructive and it can contribute to deformation of the teenager's personality and formation of such traits as passivity, laziness, low motivation of activity, etc. It is believed that dissatisfaction with the way of life, leads to formation of illusions, hopes that in the future everything should change for the better, it is a kind of "wishful thinking". It should be noted that such expectations are often associated with social passivity of these adolescents.

Adolescents of the experimental group show statistically significant correlations by Pearson: between the experience of ill-being in the present and motivation of self-realization in the future in the category "self-realization" MIM ($\chi^2_{0.05} = 4.12$; v=1). Consequently, the experience of ill-being in the present cause the desire to "become somebody" in the future, i.e. self-realize. Adolescents of the control group do not show such a relation.

The fourth feature consists in connection of externality in the present and motivation of self-realization in the future, with adolescents without parental support. The sample of adolescents who are brought up in public institutions, showed statistically significant correlations between the results of motivational tendencies associated not with a personal activity, but with the expectation of the activity of others, with a sense of their behavior and fate dependence on circumstances (category "aspiration of something from others" "Motivational induction method") and self-realization motivation in the future (the category of "self-realization" "Motivational induction method": $\chi^2_{0.05} = 5.65$; v = 1). The paradoxical nature of this relation is that adolescents of the experimental group hope that in the future they will overcome the dependence on the circumstances that takes place in the present. Such expectations, in our view, can be considered as a compensatory mechanism to overcome difficult situations. We do not find such a relation with adolescents of the control group.

Thus, we can state that the peculiarity of transspective of adolescents outbred, is that their transspective lacks a constructed realistic connection between the past, present and future, there is no realistic and constructive time transspective "from success in the present - to success in the future".

The experimental group adolescents' experience of ill-being is associated with externality (dependence on external circumstances), expressing hope, that in the future everything will be fine and seeking for self-realization. Originality of the trasspective of adolescents without parental support, lies in a special way of adaptation to unfavorable situations in the present. Namely, some adolescents tend to hope for a future where "everything will be fine" and they will be able to self-realize, by changing the external personality orientation, and others do believe that they are not able to change anything in their fate/life.

Time transspective relation to some personality characteristics of adolescents without parental support

In our view, memories of teenagers of their past and visions of the future impact on the perception of the present and their personality formation. We analyzed how transspective is associated with certain personality traits, namely, self-esteem ("Self-evaluation" by T.Dembo – S.Y. Rubinstein) anxiety ("Scale of personal anxiety for students 10-16 years" A.M. Prikhozhan), values, intrapersonal conflicts "Free choice of values", "Level ratio" values " and "accessibility" in various spheres of life" [14]. Analysis of ratings on the above test methods, allowed to identify a number of specific links between personality traits and transspective of adolescents without parental support.

The first feature is that the more often adolescents without parental support, are not self-satisfied in the present, the more they discover the uncertainty about the future, the more ambivalent their visions of the future are, the more clear their desire to "quickly" graduate from school, is, the often they discover motives, limited by/with nearest future.

Statistically significant correlations by Pearson were obtained, in estimates of teenagers of the experimental group, between the uncertainty of what might happen in their future life (author profile "Thoughts about the future") and the degree of discrepancy between self-esteem and level of aspiration "Self-evaluation" ($\chi^2_{0.05} = 4.43$; v=1). Therefore, we can say: the less their degree of self-satisfaction in the present, the more they tend to demonstrate the uncertainty that awaits them in the future.

Were obtained statistically significant correlations by Pearson in estimates of teenagers of the experimental group, between ambivalence in predicting future events (author profile "Thoughts about the future") and the degree of discrepancy between self-esteem and level of aspiration «Self-evaluation» ($\chi^2_{0.05} = 3.99$; v=1). Consequently, the less satisfied they are in the present, the greater uncertainty about the future they are experiencing. Adolescents of the control group do not show such a relation.

Were obtained statistically significant correlations by Pearson of estimates of adolescents of the experimental group, between motivational tendencies "to quickly graduate from school" "MIM" and the degree of discrepancy between self-esteem and level of aspiration, differentiation of self-esteem in the future «Self-evaluation» (χ^2 0.05 = 3.94; v = 1 and χ^2 0.05 = 4.61; v = 1, respectively). Consequenly, the less the teenager is satisfied with him/herself in the present, the less stable is his/her estimation of own qualities in the future, the more they wish to graduate from school “as soon as possible”. Adolescents of the control group do not show such relation.

In assessments of adolescents of the experimental group, were obtained statistically significant correlations by Pearson between representations about their nearest future (category of "nearest future", "MMI") and the degree of discrepancy between self-esteem and level of aspiration «Self-evaluation» ($\chi^2_{0.05} = 4.96$; v=1). Thus, the smaller the degree of self-satisfaction of adolescents without parental support, the more they discover statements reflecting their motives for the near future. Adolescents of the control group do not show such relation.

Thus, self-dissatisfaction as a personal trait is related to temporal transspective. Namely, with the uncertainty of the future, ambivalence of ideas about the future, with the desire to "quickly" graduate from school, with motives reflecting representations of their nearest future.

The second feature is that adolescents without parental support’s, memories of the past are associated with general anxiety.

In assessments of adolescents of the experimental group, were obtained statistically significant correlations by Pearson ($\chi^2_{0.05} = 4.97$; v = 1) between the motives that reflect memories of the past under "MIM" and general anxiety on the "Trait anxiety scale for 10-16 year-old students". In other words, the more disturbing experiences are in the present, the more teenagers living in state institutions are turning to memories of the past. Adolescents of the control group do not show such relation.

The third feature is that adolescents without parental support, are characterized by a combination of low self-evaluation in the present and future with forecasting low degree of saturation of significant events in the future.

Were obtained statistically significant correlations by Pearson of degree of saturation with significant events of life period from 16 to 70 years, "Assessing five-year periods of life" and general self-evaluation in the present and future, "Self-evaluation" of adolescents the experimental group,

($\chi^2_{0.01}$ = 7.93; v = 1; $\chi^2_{0.05}$ = 5.42; v = 1, respectively). We can state that the lower adolescents outbred, assess their personality traits (abilities, character, beauty, intelligence, self-confidence) both in the present and in future, the less significant events they forecast in the period of life from 16 to 70 years, and vice versa. Adolescents, who live in the family, do not show such relation.

Consequently we can state the links between experience of psychological past, present, future and some personality characteristics of adolescents without parental support: general anxiety, self-evaluation in the present and estimation of own qualities in the future, self-satisfaction, differentiation of self-esteem in the future.

Discussion

It should be noted that there exist few works of temporal transspectiveand role ideas about the future in personality development of adolescents who are brought up in public institutions.

The researchers note that adolescents outbred cannot build a vision for the future and are therefore not able to perceive the relationship between present and future events, are not able to bind actual events of his/her future with the most important events of the past (А.М. Прихожан, Н.Н. Толстых, 2007). Orphans face real contradictions between the need and the possibility of long-term planning of their lives that leads to distortion, reduction of life perspective, lack of plans for the future, their will to build them (Н.И. Федотова, 2008).

Conclusion

In our study, we found that adolescents outbred, are characterized by a subjective shortening of the period of active life. Temporal transspective is deformed, at least in two places: the past is not related to the present, and the present is not linked with the future. Our study adds the following conclusions to previous findings of temporal transspective of teenagers outbred: a more frequent appealing to memories of the past is associated with forecasting a lot of financial problems in their future; dissatisfaction with the present way of life is associated with externality, expression of hope and desire to self-realization in the future.

The majority of adolescents without parental support, find the following features in the estimates of temporal perspective: depreciation of the past, i.e. the period of life preceding adolescence, dissatisfaction with the way of life, prevalence of pessimistic assessments of possible future events, their illusory and ambivalent representaions, underestimation of past and present, as well as potential possessed by the future.

The study showed that such images of time perspective of adolescents without parental support, are associated with the uncertainty of the present and future, readiness to adverse events (mindset for adverse events in the future, "defeatist mood") , decreased activity and pessimism, underestimation of education role in ensuring future success (success in life); insufficient willingness to overcome difficulties, to make efforts to achieve high goals, unrealistic goals; external personality; hidden anxiety.

Thus, the attitude of teenagers outbred, to various aspects of time perspectives, is related not by coincidence to the formation of their personality and behavior in the present.

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