

FACTORS INDUCING ADULTS TO HIT “READY FOR LABOUR AND DEFENSE” QUALIFYING STANDARD

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Objective of study is to identify factors determining the abilities and willingness of adults to pass the “Ready for Labour and Defense” tests successfully as well as to propose recommendations aimed at promoting cooperation with this category of citizens within the “Ready for Labour and Defense” movement.

Methods and structure of study. Theoretical methods — systematization and generalization; experiment — study of physical development parameters and verification of body composition.

Results and conclusion. Adults’ training for taking the “Ready for Labour and Defense” tests should take into account the influence of both external factors and personal (individual) ones: awareness of the organizational process of going through the “Ready for Labour and Defense” tests standards; marital status; free time availability; presence or absence of experience and specific knowledge for individual sporting activities; formation of motivation for sports in general; health status.

Extramural technical university students aged 20 to 45 took part in the experiment. The students were asked to undergo a physical development study; therefore, the indices of their body composition have been analyzed. To verify the abilities of the test subjects, their age characteristics have been compared with their physical development. It has been found out that 50% of students fewer than 30 years of age have a body type favorable to start training for “Ready for Labour and Defense” tests (in case of correlation of fat and muscle bulk indices). But only 31% of students in the test group over 30 years of age have the same type of physique, i.e. an individual approach and various strategies of physical training are to be required.

When collaborating with adults, it is necessary to take into account the general state of health, the body mass index and body type when choosing appropriate “Ready for Labour and Defense” tests (from amongst the list of choice). To support and to train people for taking the “Ready for Labour and Defense” tests, there is a need to create centers at the premises of universities and sporting facilities, as well as to involve employers in order to maintain the “Ready for Labour and Defense” movement.

Keywords: “Ready for Labour and Defense” tests, age characteristics, external factors, personal factors, physical development, body composition.

Background. Currently, a number of scientists justify the importance of attracting the civilian population of the Russian Federation to a healthy lifestyle to improve their physical fitness. Thus, for the state it is important to revive the “Ready for Labour and Defense” movement for health promotion of the nation and to ensure readiness for civil defense [1]. It is the students who are considered to be the basis of the country’s human potential; they will make it possible to revive the “Ready for Labour and Defense” sports complex [4]. The conducted research has shown that 58.9% of men and 62.2 % of women consider the “Ready for Labour and Defense” complex as a means motivating to be systematically engaged in physical training and sports [2]. Meanwhile, many scientists and specialists in the field of sports believe that there are no obvious incentives to attract people to join the ranks of this recreational and sports movement [7]. Currently, many scientific papers have been devoted to the study of factors affecting the abilities and desire

of students to participate in the “Ready for Labour and Defense” movement [3; 5].

A significant potential in the development of the “Ready for Labour and Defense” movement and increasing the number of participants in this very project belongs to a higher educational institution as a link between students and the state, which seeks to increase the health of the nation and to promote patriotism. However, when working with the adult population, much more factors need considering within the “Ready for Labour and Defense” system than those compared to the people of younger age. In addition to personal characteristics and accumulated worldview, it is also necessary to have regard to the age — appropriate physiological characteristics.

Within the framework of the entire research “adults” are the subjects to be between the ages of 20 and 45; they are the basic cohesive group of extramural students under study.

The practical significance of the study is that the quantity of students of correspondence training in the

system of higher education is great. Thus, in 2020 the number of extramural students getting higher education amounted to 1,414 thousand people, and the percent of the ones as opposed to the rest modes of study is quite high — about 40 % [6]; but this index varies by regions (figure 1).

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The scientific novelty of the research is that the revival of the “Ready for Labour and Defense” complex system in modern world requires having respect to the actual and priority factors that motivate the adult population to fulfill the requirements of the “Ready for Labour and Defense” at the present time. Within the framework of the format of this study, not only external and internal factors are taken into account, but the functional abilities of the body as well.

Materials and methods of research. The paper deals with the following theoretical research methods: a systematic approach and generalization in case of the study of factors determining abilities of adults to take the “Ready for Labour and Defense” tests; and experiment, concerning examination of physical development parameters of extramural students (height, weight in upright position, sitting height, chest circumference, hand strength) and verification of body composition by bioimpedance method (‘the Tanita’ scales).

The variety of factors affecting the abilities and capabilities of adult citizens to take the “Ready for Labour and Defense” tests can be classified as follows (figure 2).

External environmental factors create favorable conditions that encourage people to join the “Ready for Labour and Defense” movement, as well as negative ones, i.e. acting as sports demotivators in general and in getting ready for the “Ready for Labour and Defense” tests in particular.

The key problem is that individual factors influence the involvement of people into the “Ready for Labour and Defense” complex participation: awareness of the organizational procedure of taking sports standard tests; marital status; free time availability depending on employment and family fare; experience background and knowledge required for individual training; motivation maturity for going in for sports in general; health status.

Meanwhile, individual factors have either positive or negative impact on person’s motivation. On the one hand, it is impossible to influence the objective factors; on the other hand, subjective factors are exposed to be managed, both from within and without.

The experimental surveillance has been carried out at the premises of the Khakass Technical Institute — branch of Siberian Federal University; sixty-six extramural students pursuing engineering degree took part in it. The students were offered to go through the study of their physical development and body composition as well. The students themselves were involved in filling in the study protocols. They worked in pairs: they took each other’s anthropomet-

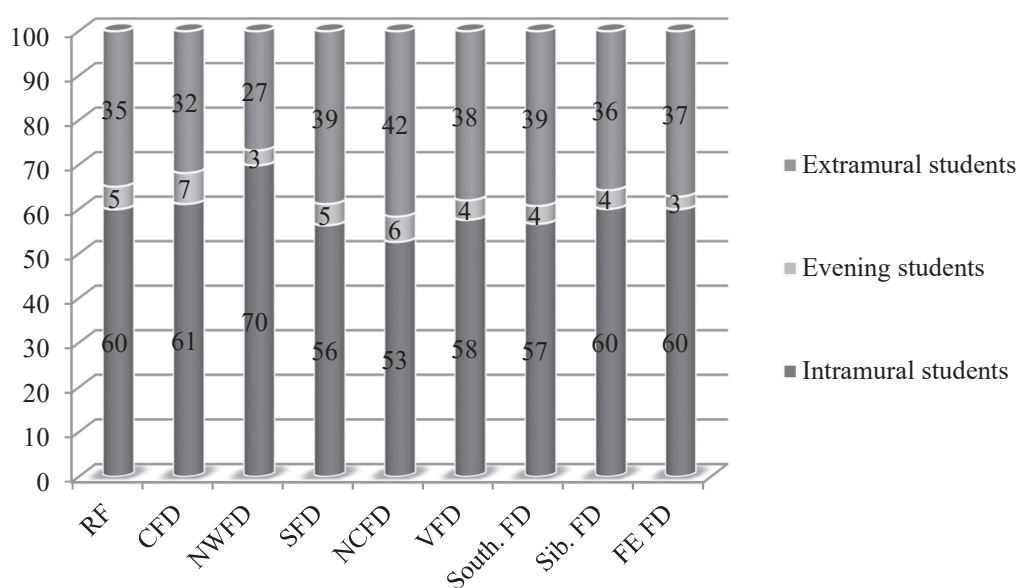


Fig. 1. Ratio of students in Russian Federation in 2020 by mode of study, %

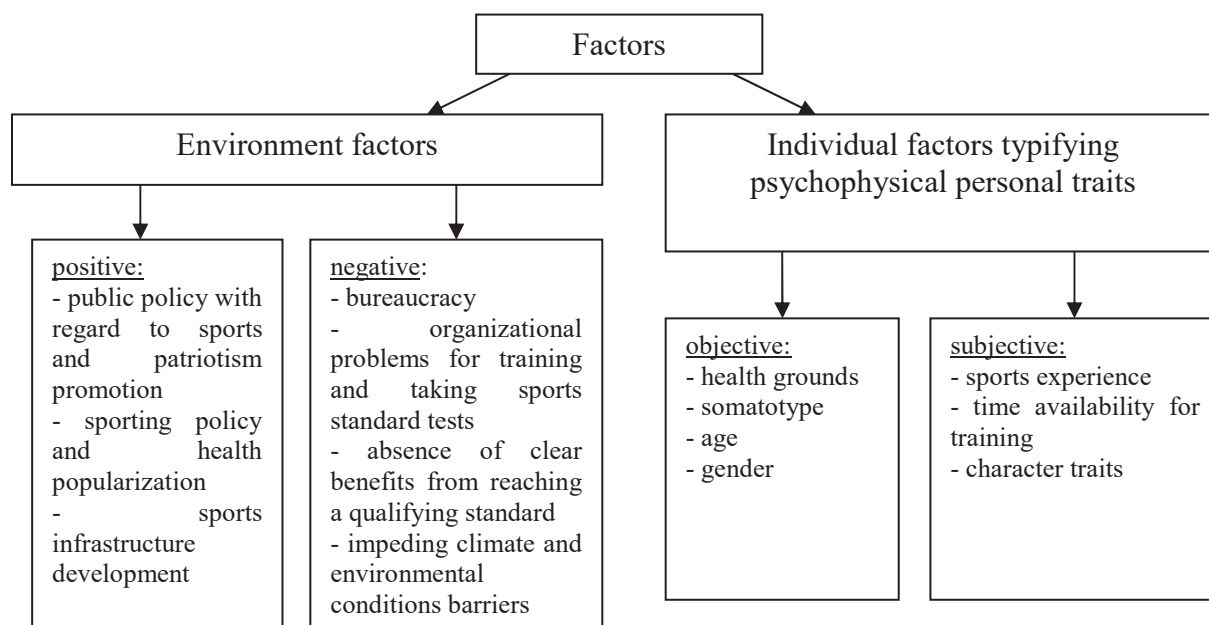


Fig. 2. Factors determining abilities of adults to take “Ready for Labour and Defense” tests

ric measurements and recorded the results. In this way we tried to attract attention and interest to the procedure itself.

Results and discussion. The results of theoretical study have revealed that the formation of human’s personality is subjected to various factors that determine the opportunities for the adult population to be engaged in physical culture and sports. This is a person whose worldview is practically formed under the influence of many factors.

The individual factors presented in figure 2 were being studied during the experiment phase. Since the “Ready for Labour and Defense” test standards are divided into several stages, it was of special interest to study the ratio of distribution of extramural students by age category correlated to this very criterion (fig. 3).

The age of the subjects varies from 20 to 44 years old, but the principle bulk of students are of 22 years old (thus, the average index is 22.4 years old). But in the context of this investigation specifically it is quite important to reveal how the examinees are grouped out to reflect the “Ready for Labour and Defense” stages (fig. 4).

Each stage comprises two age-subcategories. The bulk of the examinees belongs to the first age-subcategory of stage 6 and includes those up to 24 years old.

It should be noted that starting from the stage 6, there is an age gradation with a gradual decrease in the test score requirements for both men and women.

To assess the testees’ abilities, it is of interest to compare their age characteristics with their physical development (table 1 and table 2).

Table 1

Indicators of physical development of the subjects

Indicators	Age Group ($\bar{X} \pm \sigma$)	
	Stage 6 (n = 44)	Stages 7—8 (n = 22)
Height (length of body), cm	178,5 ± 6,5	175,7 ± 4,7
Weight (body mass), kg	81,6 ± 18,5	84,6 ± 19,4
BMI (body mass index)	25,5 ± 5,1	27,3 ± 5,9
Chest circumference, cm	101,8 ± 10,6	105,6 ± 12,0

Table 2

Body composition indices of the subjects

Indicators	Age Group ($\bar{X} \pm \sigma$)	
	Stage 6 (n = 44)	Stages 7—8 (n = 22)
Percent of fat, %	18,8 ± 8,1	20,4 ± 7,1
Percent of water, %	57,9 ± 6,1	56,7 ± 5,4
Muscle bulk	62,0 ± 10	62,7 ± 9,1
Bone mass	3,2 ± 0,5	3,3 ± 0,4
Visceral fat	4,2 ± 3,5	7,7 ± 4,6

It has been found out that 50 % of students fewer than 30 years of age have a “Standard” body type (average ratio of fat and muscle bulk). Such a combination of fat and muscle bulk ratios is favorable for starting to train for taking the “Ready for Labour and Defense” tests. But only 31% of students have

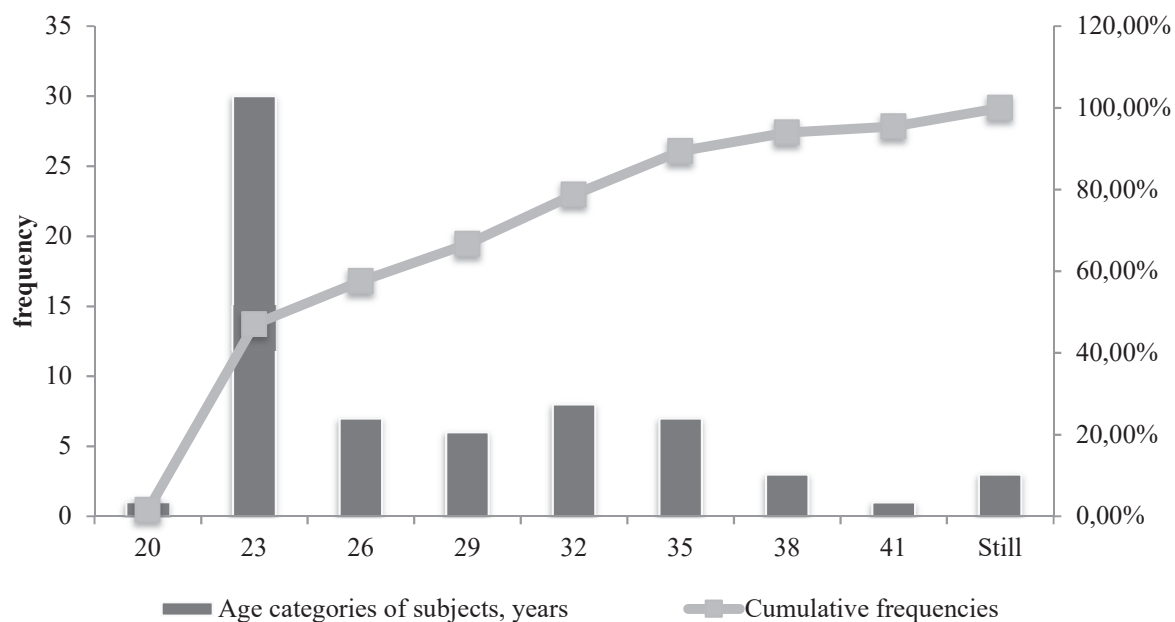


Fig. 3. Distribution of test subjects by age category

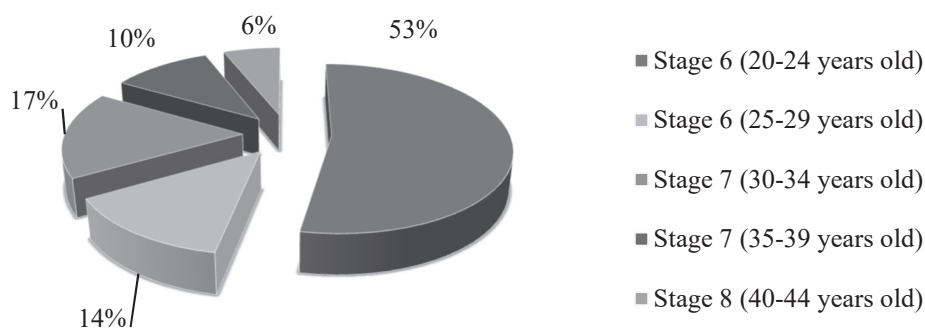


Fig. 4. Correlation of test subjects' age ratio to the “Ready for Labour and Defense” stages, the All-Russian Physical Culture and Sports Complex

this type of physique in the age-group over 30 years old. The obtained data should be considered to select the optimal forms of training for going through the “Ready for Labour and Defense” tests standards, regarding the individual characteristics of the subjects.

As a follow-up to the present research, it is planned to conduct a questionnaire on the issues of maintaining a healthy lifestyle and motivating extramural students to take the “Ready for Labour and Defense” tests. The questionnaire consists of 4 item blocks: sports experience in the past, occupation and marital status, the level of sports culture and desire to participate in the “Ready for Labour and Defense” testing procedure.

Conclusion. Thus, in the course of the study, it has been revealed that when working with adult citizens in the framework of popularization of the “Ready for Labour and Defense” movement, it is necessary to take into account both external factors and internal (personal) factors.

Government bodies and government agencies along with the participation of enterprises and organizations should work on *external factors*.

It is necessary to create centers at the premises of universities and sporting arenas where contenders could not only receive information support, but also get training and assistance in taking the “Ready for Labour and Defense” tests.

Employers are recommended to develop a system of incentives for employees who have passed the “Ready for Labour and Defense” tests; there could be both material and morale-boosting incentives. In accordance with the statutory documents of the Russian Federation, there is a set of measures to encourage different age groups of the population to hit the qualifying “Ready for Labour and Defense” tests; this concerns working citizens as well [8]. But the actual pursuance to these directions depends on the resources of a particular employer.

Currently, incentives for passing the “Ready for Labour and Defense” tests are not so popular among employers; therefore, it is necessary to form the public opinion on the prestige of this achievement, as well as to pay attention to the internal motivation of a person to the training process itself.

Individual (personal) factors depend on the person directly, but they could be influenced by the citizen’s surroundings as well: people who make up a social network, organizations, the mass media and others.

Individual approach and appropriate methods of work will ensure an increase in the number of people willing to take the “Ready for Labour and Defense” tests. First of all, it is necessary to take into account the state of human health; in this case a medical examination is to be carried out. Meanwhile, selecting appropriate “Ready for Labour and Defense” test standards to take (from among the list of choice), it is necessary to consider the body mass index and body type.

When dealing with the adult population, such factors as marital status, sports experience, literacy in the field of sports and a healthy lifestyle, and a positive image of participation in the “Ready for Labour and Defense” movement should be regarded.

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Факторы, побуждающие взрослых соответствовать квалификационному стандарту «Готов к труду и обороне»

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Работа со взрослыми людьми в области подготовки к сдаче норм «Готов к труду и обороне» должна учитывать влияние факторов как внешнего характера, так и личностные (индивидуальные) факторы: осведомленность об организационном процессе сдачи норм; семейное положение; количество свободного времени; наличие или отсутствие опыта и необходимых знаний для самостоятельных занятий; сформированность мотивации для занятий спортом вообще; состояние здоровья.

Выявлено, что 50 % студентов до 30 лет имеют тип телосложения, благоприятный для начала подготовки к сдаче норм «Готов к труду и обороне» (соотношение уровня жира и мышечной массы). В группе старше 30 лет всего 31 % обладают таким типом телосложения, т.е. требуется индивидуальный подход и различные методы физической подготовки.

Ключевые слова: нормы «Готов к труду и обороне», возрастные характеристики, факторы внешней среды, личностные факторы, физическое развитие, состав тела.

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