



# Readiness of women 36-55 years old for self-control of motor activity

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## Abstract

**Objective of the study** was to identify the readiness of women aged 36-55 who plan to engage in physical culture and recreational activities, to use modern digital technologies for controlling physical activity.

**Methods and structure of the study.** The survey involved 122 women of mature age (second period). For the study, two groups were formed for recreational fitness: 1e (n=60) of women living in a rural municipality (Churapchinsky district) of the Republic of Sakha (Yakutia), and 2e (n=62) of women living in the urban-type settlement Prokhorovka (Belgorod region).

**Results and conclusions.** The results of the study indicate the relevance of such tasks as ensuring the availability of digital technologies, digital infrastructure, and the need to improve the computer competence of women of mature age involved in sports and recreation activities in order to minimize the risks associated with the dosage of physical activity.

**Keywords:** *physical activity, digital technologies, self-monitoring, physical education and health activities, heart rate monitors, fitness bracelets, smart watches, mobile applications, questionnaires.*

**Introduction.** Motor activity is assessed by the number of completed movements (stepmetry), by time spent, and by indicators of energy consumption based on indirect calorimetry, pulsometry, since heart rate quite accurately reflects the degree of load on the cardiovascular system during muscle activity and is directly dependent on oxygen consumption [ 1, 2, 3, 6]. In accordance with WHO recommendations, the most common and most convenient method is to determine the time spent on various forms of physical activity during the week [4, 5].

The use of available digital products (heart rate monitors, fitness bracelets, "smart" watches, mobile applications) in the process of physical activity allows for a better level of self-monitoring of the dynamics of body parameters directly during physical activity and tracking information during the recovery period after exercise. In the process of self-control, prerequisites

are created for analytical activities, the formation of competencies for evaluating and analyzing one's actions.

As part of the phased introduction of digital technologies in physical culture and recreation activities, it is necessary to take into account the level of readiness of those involved in self-regulation of motor activity and individual physical conditions.

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**Methods and structure of the study.** The survey involved 122 women aged 36-55 years. Two groups were formed for recreational fitness: 1e (n=60) of women living in a rural municipality (Churapchinsky district) of the Republic of Sakha (Yakutia), and 2e



Table 1. Results of a survey of women aged 36-55 about their readiness to use modern digital technologies in the process of physical activity (%)

Questions	Answer options	Groups	
		1 <sub>e</sub> (n=60)	2 <sub>e</sub> (n=62)
Do you think that during physical culture and health-improving classes it is necessary to control the state of your body?	yes, definitely	10,0	11,29
	if it is necessary then yes	21,67	14,52
	maybe	30,0	27,42
	not necessary	16,67	22,58
	this requires special knowledge and skills	21,67	24,2
What indicators of the state of the body need to be monitored during physical exertion?	body length and weight	3,33	3,23
	the dynamics of the development of physical qualities	33,33	25,81
	sleep quality	8,33	14,52
	appetite	13,33	9,68
	mood	6,67	9,68
	work of the heart	50,0	41,94
	blood pressure indicators	51,67	46,77
	other indicators	5,0	11,29
Do you think that it is necessary to use modern information technologies in the process of physical culture and recreation activities?	yes	21,67	12,90
	no	5,0	8,06
	maybe	50,0	41,93
	don't know	23,33	37,10
Do you have a desire to learn how to use available information technologies for self-control during sports and recreation activities?	I can use	6,67	8,06
	yes i want to learn	61,67	45,16
	You can also try	11,67	9,68
	I probably still can't handle it	20,0	37,10

(n=62) of women living in the urban-type settlement Prokhorovka (Belgorod region).

### Results of the study and their discussion.

The summarized results of the study are presented in Table 1.

Analysis of answers to the question about the need to control the state of one's body during physical culture and health-improving activities showed that in both groups, a third of women (1e - 30.0%, 2e - 27.42%) answered "probably". At the same time, the smallest number of answers (1e - 10.0%, 2e - 11.29%) was noted in the item "yes, necessarily". About half of the respondents believe that, first of all, it is necessary to control the activity of the cardiovascular system, namely, pay attention to the work of the heart (1e - 50.0%, 2e - 41.94%) and blood pressure indicators (1e - 51.67 %, 2e - 46.77%). Further, in descending order, the respondents indicate the need to control the dynamics of the development of physical qualities, changes in height and weight indicators, the quality of sleep, appetite, and mood.

When answering the question about the need to use modern information technologies in the process of physical culture and health-improving activities,

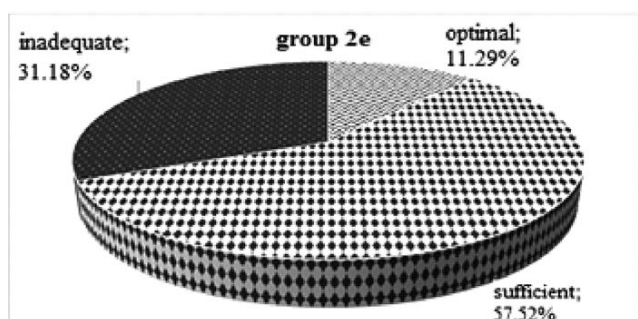
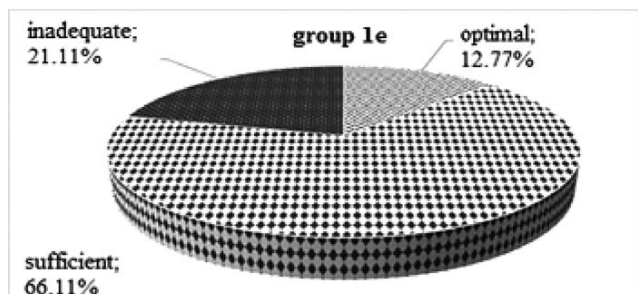
the majority of women surveyed in two groups (1e - 50.0%, 2e - 41.93%) were not sure of such a need and chose the item "probably". At the same time, it should be noted that the smallest number of women surveyed (1e - 5.0%, 2e - 8.06%) do not see the need to use modern information technologies in the process of physical culture and health-improving activities.

Unfortunately, a very small number of respondents are able to use information technologies for self-control during sports and recreation activities (1e - 6.67%, 2e - 8.06%). At the same time, 20.0% of women in group 1e and 37.10% in group 2e showed uncertainty that they would be able to cope with this and learn how to use modern information technologies. It is noteworthy that the majority of respondents (1e - 61.67%, 2e - 45.16%) expressed a desire to master the technologies of self-control, which creates a prospect for improving the quality of physical culture and health-improving activities.

Summarizing the results of the survey, we can present the levels of readiness of the women surveyed to use modern digital technologies in the process of motor activity (see figure). 12.77% of women in group 1e and 11.29% in group 2e have the optimal level of



readiness. At the same time, 21.11% of respondents in group 1e and 31.18% in group 2e showed a low level of readiness to use modern digital technologies in the process of physical activity. A sufficient level was determined in 66.11% of women in group 1e and in 57.52% of women in group 2e.



*The level of readiness of women of mature age to use modern digital technologies in the process of physical activity*

A comparative analysis of scores based on the results of a survey of women living in the Central Federal District and the Republic of Sakha (Yakutia) did not reveal significant differences according to the Mann-Whitney U-test ( $p \geq 0.05$ ).

**Conclusions.** Thus, the analysis of the survey results allows us to conclude that the majority of respondents are aware of the importance of control and self-control over the physical condition in the process of physical culture and health-improving activities and a significant part of women (1e - 61.67%, 2e - 45.16%) express a desire to learn how to work with modern digital technologies, which is also an additional incentive and motivation for regular physical activity.

The study of the level of readiness of those involved in physical culture and recreational activities for self-control of physical conditions, motor activity, well-being allows in the future to ensure the availability of the

use of fitness bracelets, smart watches, mobile applications that allow monitoring and evaluating physical activity and increasing the safety of physical exercises based on the implementation the preventive principle of preventing overdoses of physical activity.

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