

## INFLUENCE OF ATHLETIC RECREATIONAL ACTIVITIES ON HEALTH OF WORKERS IN ENGINEERING INDUSTRY

(Research note)

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### **Abstract**

*General aim of the research is to ascertain the influence of subjective perception of physical and working abilities and workers' health on participation in sports recreation and its connection with motivation for participation in sports and recreational activities. The choice of sample items was made completely randomly. Planned sample was 30% of total number of employees, that is 858 examinees. 818 workers were polled in total and that is 28,6 % of total number of employees in Work organization "Alatnica" and it represents realization of the plan of 95,34%. Polling was done completely by students of Faculty of Philosophy in Niš, department of physical culture. 8 students trained for poll conducting worked in this research. The results of the research of connection between subjective perception of a state of physical and working abilities and health on one side and activities in sports recreation and motivation for participation in sports and recreational activities show statistically significant connection*

**Keywords:** *job skills, physical abilities, physical activity, Questionnaire in sports recreation, recreational sports in athletics, health problems, motivation for sports recreation,  $\chi^2$ -test*

### **INTRODUCTION**

Sports recreation as a specific field of physical culture with its various forms, contents and methods, represents an important link in preservation and improvement of physical and working abilities and health of every individual. It becomes more and more one of the significant regulators of life process harmonization.

Concurrently with development of physical culture as an important factor of preservance and improvement of working and physical abilities, physical activities are more and more applied in treatment of some diseases, especially heart, blood vessels, lung diseases, then, certain deformities and injuries which lead to early disablement and shorten working life of each individual.

Sports recreation is one of the basic preventive elements for improvement of health and physical and working abilities of working people.

In relation to this, it would be necessary to study the connection between subjective perception of physical and working abilities and health and participation of working people in sports and recreational activities and their motivation for participation in these activities. Sports recreation becomes more and more influential and its functions more diverse and more numerous.

The subject of the research is subjective percep-

tive of physical and working abilities and health and their connection with participation in sports and recreational activities.

We are going to use the results of the poll in the research of subjective perspective of physical and working abilities and health of workers and pay attention to how those feelings influence doing sports recreation and how they motivate them for participation in sports and recreational activities. It is known that sports recreation contributes to: health improvement, increase of resistance to different diseases, prevention and elimination of occupational diseases, elimination of symptoms, hypo dynamic diseases, balance of energy expenditure and keeping normal body weight, increase of intensity and productivity of work, elimination of acute fatigue, reduction of number of accidents at work, preservation and improvement of working abilities, satisfying need for movement, providing harmonious physical development and maintenance of function of organs and systems of organs on an optimal level.

Therefore, special attention in this research will be devoted to identification of subjective perception of a state of physical and working abilities and health and to ascertaining their dependence on sports recreation. It will also deal with how subjective perception of physical

and working abilities and health influence motivation for participation in sports and recreational activities.

General aim of the research is to ascertain the influence of subjective perception of physical and working abilities and workers' health on participation in sports recreation and its connection with motivation for participation in sports and recreational activities.

With the aim defined in this way, the research had the task to ascertain the following:

- Subjective feeling of health discomfort in everyday life,
- Estimation of what can improve health,
- Subjective needs for programmed health preventive holidays
- Previous active engagement in sports ;
- Assessment of how a way of life influences health
- Participation in sports and recreational activities,
- Needs and wishes to do some sports and recreational activities in free time.

This universal hypothesis was further developed into seven general hypotheses.

The first general hypothesis is:

There is connection between subjective perception of a state of physical and working abilities and health and health discomfort in everyday life.

The second general hypothesis is:

There is connection between subjective perception of a state of physical and working abilities and health and a need for workers to go on programmed health preventive holidays.

## METHODS

### Sample of examinees

Work organization machine-tool industry "tool-making section", does business as a part of ELEKTRONSKA INDUSTRIJA NIŠ, electronic industry. The sample for this research is one-degree sample with deliberate and random choice of examinees.

Selection of item of choice. Work organization "Alatnica" EI Niš, was made on the basis of agreement with the recreation organizer in that working collective. Choice of sample items was made completely randomly. Planned sample was 30% of total number of employees, that is 858 examinees.

818 workers were polled in total and that is 28,6 % of total number of employees in Work organization "Alatnica" and it represents realization of the plan of 95,34%.

Polling was done completely by students of Faculty of Philosophy in Niš, department of physical culture. 8 students trained for poll conducting worked in this research. Results of the research of connection between subjective perception of a state of physical and working abilities and health on one side and activities in sports recreation and motivation for participation in sports and recreational activities show statistically significant connection

## RESULTS

### State of physical and working abilities and health

#### a) In relation to health discomfort in everyday life (Tables 1.A and 1.B)

Health discomfort suffered by workers in everyday life can be classified in the following order: pain in shoulders, neck and back (23,98% of total number of examinees), headache (21,35%), getting tired fast (13,74%), weakness and dizziness (7,89%), various disorders and discomfort in the heart region (6,43%), some other disorders (6,14%), digestive disorders (5,85%), sleep disorders (5,56%), increased irritability (5,41%) and appetite disorder (3,65%) .

Among workers who were not previously actively engaged in sports, there is the largest number of those with good physical and working abilities (34,69%), slightly smaller number of those with satisfactory (22,86%) and very good abilities (18,98%) and the smallest number is for workers with excellent physical and working abilities (8,61%) .

In the group of workers who were actively engaged in sport, there is the largest number of those with very good (27,33%), good (24,53%) and excellent health (23,29%) and the smallest percentage is for workers who assessed their health as weak (7,76%) .

Among workers who were not previously actively engaged in sport, there is the largest number of those who assess their state of health as good (27,35%) and satisfactory (26,12%), slightly smaller percentage of workers assess their state of health as very good (19,59%) and excellent (14,08%) and the smallest percentage as weak (12,86%).

Connection of subjective perception of a state of physical and working abilities and health with doing athletic and sports recreation and motivation for participation in sports and recreational activities will be analysed on the basis of data which refer to the following variables: health discomfort in everyday life and influence of the present way of life on health; need for sending workers on health preventive holidays; previous active engagement in sports; participation in sports and recreational activities; motivation for sports and recreational activities in free time.

According to the obtained results, for the majority of workers subjective perception of a state of physical and working abilities is good (30,64% of the total number of examinees), slightly smaller number perceive them as very good (23,90%) and satisfactory (20,22%), 18,02% of workers perceive their physical and working abilities as excellent and (10,92%) as weak.

When we talk about state of health, the majority of workers assessed their state of health as good (26,05%), slightly smaller number as very good and satisfactory (22,70% each group), 17,62% of workers think their health is excellent, and only 10,92% think it is weak.

Table 1.A. State of physical and working abilities in relation to health discomfort in everyday life

Health discomforts	I think my physical and working abilities are										Answers	%
	Excellent	%	Very good	%	Good	%	Satisfactory	%	Weak	%		
Getting tired fast	9	9.57	11	11.70	30	31.91	29	30.85	15	15.96	94	13.74
Weakness and dizziness	4	7.41	6	11.11	25	46.30	17	31.48	2	3.70	54	7.89
Disorders and discomfort in heart region	3	6.82	5	11.36	14	31.82	12	27.27	10	22.73	44	6.43
Headache	29	19.73	37	25.17	47	31.97	24	16.33	10	6.80	146	21.35
Sleep disorder	7	18.42	5	13.16	15	39.47	9	23.66	2	5.26	38	5.56
Appetite disorder	3	12.00	7	28.00	10	60.00	4	16.00	1	4.00	25	3.80
Increased irritability	12	32.43	11	29.73	6	16.22	7	18.92	1	2.70	37	5.41
Pain in shoulders, neck and back	18	10.96	45	27.44	47	28.66	38	23.17	16	9.76	164	23.96
Digestive disorders	5	12.50	16	40.00	7	17.50	11	27.50	1	2.50	40	6.86
Other	7	16.67	17	40.48	13	30.95	5	11.90	-	-	42	6.14

97 14.16 160 23.36 214 31.24 156 22.77 58 8.47 684

Total number of invalid answers 3,  $\chi^2 = 92.89362$ , Degree of freedom = 36,  $P < 0.01$ , Contingency coefficient = 0.34557

Table 1.B. State of health in relation to health discomfort in everyday life

Health discomforts	I think my health is										Answers	%
	Excellent	%	Very good	%	Good	%	Satisfactory	%	Weak	%		
Getting tired fast	5	5.32	10	10.64	24	25.53	33	35.11	22	23.40	94	13.74
Weakness and dizziness	3	5.56	8	14.81	19	35.19	16	29.63	8	14.81	54	7.89
Disorders and discomfort in heart region	1	2.27	5	11.36	10	22.73	12	27.27	16	36.36	44	6.43
Headache	35	23.97	25	17.12	43	29.41	32	31.92	11	7.53	146	21.35
Sleep disorder	4	10.53	9	23.68	15	39.47	8	21.05	2	5.26	38	5.56
Appetite disorder	7	28.00	8	32.00	3	12.00	6	24.00	1	4.00	25	3.65
Increased irritability	7	18.92	13	35.14	7	18.92	9	24.32	1	2.70	37	5.41
Pain in shoulders, neck and back	19	11.59	36	21.95	47	28.66	40	24.39	22	13.41	164	23.96
Digestive disorders	2	5.00	14	35.00	11	27.50	11	27.50	2	5.00	40	5.85
Other	5	11.90	19	45.24	9	21.43	8	19.05	1	2.38	42	6.14

88 12.87 147 21.49 188 27.49 175 25.58 86 12.57 684

Total number of invalid answers 134,  $\chi^2 = 117.17526$ , Degree of freedom = 36,  $P < 0.01$ , contingency coefficient = 0.38243

Table 2.A. State of physical and working abilities in relation to active engagement in sport

Were you an active athlete	I think my physical and working abilities are										Answers	%
	Excellent	%	Very good	%	Good	%	Satisfactory	%	Weak	%		
YES	77	23.84	102	31.58	79	24.46	52	16.10	13	4.02	322	39.66
NO	70	8.61	93	18.98	170	34.69	112	22.86	45	9.18	490	60.34
	147	18.08	195	23.99	249	30.63	164	20.17	587.13	812		

Total number of invalid answers 6,  $\chi^2=41.03997$ , degree of freedom = 4,  $p < 0.01$ , Contingency coefficient = 0.21921

Table 2.B. State of health in relation to active engagement in sport

Were you an active athlete	I think my health										Answers	%
	Excellent	%	Very good	%	Good	%	Satisfactory	%	Weak	%		
YES	75	23.29	88	27.33	79	24.53	55	17.08	25	7.76	322	39.66
NO	69	14.08	96	19.59	134	27.36	128	26.12	63	12.86	490	60.34
	144	17.73	184	22.66	213	26.23	183	22.64	183	22.64	812	

Total number of invalid answers 6,  $\chi^2=26.71391$ , degree of freedom = 4,  $P < 0.01$  Contingency coefficient = 0.17847

## CONCLUSION

Results of the research of connection between subjective perception of a state of physical and working abilities and health on one side and activities in sports recreation and motivation for participation in sports and recreational activities show statistically significant connection between health discomfort, the present way of life observed from the point of view of health, factors which can improve health, previous active engagement in sports and recreational activities and motivation for participation in sports and recreational activities on one hand and subjective perception of a state of physical and working abilities and health on the other hand.

The connection is not statistically significant between the need for programmed health preventive holidays and subjective perception of a state of physical and working abilities and health.

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