

EFFICIENCY OF APPLYING SOLUTIONS TO DEVELOP PUBLIC'S SPORTS MOVEMENTS FOR WORKERS IN STEEL WORKS FACTORY - THAI NGUYEN IRON AND STEEL JOINT STOCK CORPORATION

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Abstract:

From the research results of the topic, the article focuses on analyzing the effectiveness of solutions to develop physical training and sports movement in a synchronic way for workers in the steel works factory - Thai Nguyen Iron and Steel Joint Stock Company.

Key words: Solution, develop movement, public's sports, workers of steel works...

INTRODUCTION

The movement of sport and physical training for workers in Thai Nguyen Steel Works factory has some limitations such as: uneven development, low quality, sports and physical training have not been paid attention. The limitations above have affected badly on the health and fitness of workers that leads to low productivity and labor efficiency. Therefore, selecting the right solutions is the important premise for the development of physical training and sports movement for workers in a synchronic way. At the same time it has social, practical and scientific meanings.

RESEARCH METHODS

The research method used the following methods: analyzing and synthesizing materials; interviews and discussion; Pedagogical examination; pedagogical experiments; mathematical statistics.

RESULTS AND DISCUSSION

1. Results of selecting solutions

Based on the theoretical basis, the legalize basis and the results of the interviews, the topic selected 7 solutions to develop the physical training and sports movement for the workers of the factory. As follows:

Strengthening the leadership of the Party committees, factory authorities for sports and physical training.

Strengthening the propaganda and educating awareness for workers on Sports and physical training.

Build sports clubs in accordance with the needs and conditions of the factory.

Enhance the number and quality of the Sports and physical training instructors.

Building sports competition system inside the factory.

Strengthening the facilities and good use of existing facilities for physical training and sports.

Strengthening the work of socializing sports and physical training in the factory.

2. Experimental results

2.1. The leadership of sports and physical training of the steel works factory, Thai Nguyen Iron and Steel joint stock Corporation (Table 1)

The results obtained in Table 1 show that after the experimental period there was a difference, the number of workers thought that the factory leaders were very interested in sport and physical training has increased. In contrast, only 19.78% said that factory leaders are not interested in sports and physical training through comparing with the index is $\chi^2 = 19.67 > \chi^2_{05}$.

2.2. Funds for the sports and physical training movement of the steel works factory, Thai Nguyen Iron and Steel joint stock Corporation (Table 2)

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Table 1. Results of interviews with managers and workers on the interest of the factory leaders on sport and physical training

No.	Interested level	Before experiment (n = 562)		After experiment (n = 536)		χ^2
		Number	%	Number	%	
1	Very interested	56	9.96	91	16.98	19.67
2	Normal	342	60.85	319	59.51	
3	Not interested	164	29.18	106	19.78	

Table 2. Growth of funds for the sports and physical training movement of the steel works factory (Unit: million VND)

No.	Item	Year 2013 (1)	Year 2014 (2)	Year 2015 (3)	W (%)	
					W ₂₁	W ₃₂
1	Buying equipments	10	12	15	18.18	22.22
2	Movement activities	30	33	40	9.52	19.18
3	Socializing physical education and sports expenses	0	0	20	0	200

The results from the table show that the funds for sports and physical training movement have increased from 2013 to 2015: Buying equipments from 12 up to 15 million VND (equivalent to 22.22%); Training and movement activities expenses increased from 33 to 40 million VND (equivalent to 19.18%); Socializing physical education and sports expenses have been raised up to 20 million VND, increased 200%.

2.3. The growth in the number of staffs, sport clubs and sports tournaments of the steel works factory, Thai Nguyen Iron and Steel joint stock Corporation (Table 3)

The results obtained in the table show the obvious effect of the solutions on the growth of sports and physical training staffs, the number of sports clubs and tournaments: The number of

coaches, sports instructors: Coaches increased 100%; Instructors increased 40% compared to 2014. The number of sports clubs increased 44.44% (from 3 clubs to 5 clubs). The number of participants in the clubs increased from 167 in 2014 to 230 in 2015 (31.74%). Number of tournaments held increased 54.54% over 2014; Number of competitions participated in increased 28.57% and number of participants increased 36.94% compared to 2014.

2.4. Number of people exercising regularly and number of sports families (Table 4)

The results in Table 4 show that: There is an increase in the number of workers exercising regularly, by 2015 reached 24.07%. The proportion of sports families of the factory workers increased from 11.74% in 2013 to 20.89% in 2015. By comparison with the index

Table 3. Growth of clubs, number of club members and P.E and sports staffs

No.	Content		Year 2013 (1)	Year 2014 (2)	Year 2015 (3)	W (%)	
						W ₂₁	W ₃₂
1	Physical Education and Sports staffs	P.E and Sports coaches	1	1	2	0	100
		P.E and Sports instructors	5	6	9	18.18	40
2	P.E and Sports clubs	Number of clubs	3	3	5	0	44.44
		Number of participants	152	167	230	4.7	31.74
3	Sports competitions	Number of competitions organized	4	4	7	0	54.54
		Number of competitions participated in	3	3	4	0	28.57
		Number of participants	120	128	186	6.45	36.94

Table 4. Comparison of the number of people exercising regularly and number of sports families of the steel works factory

No.	Interview content		Year 2013 (n=562)		Year 2015 (n = 536)		χ^2
			Number	%	Number	%	
1	Your frequency of practicing and exercising sports	Frequently	82	14.59	129	24.07	35.03
		Rarely	284	50.53	298	55.6	
		Not practicing	196	34.88	109	20.33	
2	Your family members participating percentage in practicing and exercising sports	$\geq 50\%$	66	11.74	112	20.89	16.92
		$< 50\%$	496	88.26	424	79.11	

Table 5. Compare the interview results of awareness, purposes of sports and physical training of workers in the steel works factory before and after experiment

No.	Interview content		Year 2013 (n=562)		Year 2015 (n = 536)	
			Number	%	Number	%
1	Your purposes of practicing and exercising sports	Hobbies	279	49.64	307	57.28
		Effectiveness of practicing sports	312	55.52	342	63.81
		Use of free time	76	13.52	67	12.5
		Drawn in by friends	82	14.59	61	11.38
2	Do you know that exercising properly will improve health, improve labor productivity and overcome occupational diseases.	Clearly know	194	34.52	295	55.04
		Know but not clearly	28	51.24	169	31.53
		Don't know	80	14.23	72	13.43
			$\chi^2 = 23.69$			

χ^2 shows the corresponding results of 35.03 and $16.92 > \chi^2_{05}$.

2.5. *Changes in awareness, purposes of sports and physical training of workers in the steel works factory, Thai Nguyen Iron and Steel joint stock Corporation (Table 5)*

The proportion of people who practice physical exercises and sports because of hobbies has increased from 49.64% to 57.28% in 2015; By seeing the effectiveness of practicing sports has increased from 55.52% to 63.81% in 2015. The number of people practicing in free time or drawn in by friends decreased.

The number of workers who clearly know exercising properly will have a positive effect on physical fitness, increased from 34.52% in 2013 to 55.04% in 2015.

2.6. *Compare the classification of health and disease conditions of the workers in steel works factory, Thai Nguyen Iron and Steel joint stock Corporation (Table 6-7)*

From Table 6, it was found that through the periodical health check in 2015, the health status of the workers from type I to type III was 96.1%. There was a decrease in the number of workers with poor health, however, not significant.

Table 7 shows that: Some diseases have a high rate of over 20%, such as diseases of ear - nose – throat, accounting for 43.61%; Joints (musculoskeletal system), accounting for 24.92%; Odonto Stomatology is 21.8%; Respiration accounted for 21.18%.

2.7. *Compare the general fitness of the workers in the steel works factory, Thai Nguyen Iron and Steel joint stock Corporation before and after experiment.*

The results show that after the experimental period, the general fitness of Thai Nguyen steel works factory workers was better than before experiment, the difference in tests at various ages was statistically significant at the probability threshold of $P < 0.05$ and $P < 0.01$. Especially in

Table 6. Compare periodical health check results of the workers in steel works factory

Health types	2013 (n= 722*)		2015 (n= 642*)	
	Number	Rate %	Number	Rate %
Type I	33	4.57	28	4.36
Type II	361	50	388	60.43
Type III	263	36.42	192	29.9
Type IV	50	6.93	24	3.74
Type V	15	2.08	10	1.56

(*) Number of staffs and workers taking the examination

Table 7. Compare disease conditions (clinical) of workers in the steel works factory

Health conditions	2013 (n= 722*)		2015 (n= 642*)	
	m _i	%	m _i	%
Ear - Nose – Throat	320	44.32	280	43.61
Joints (musculoskeletal system)	180	24.93	160	24.92
Odonto Stomatology	156	21.6	140	21.8
Respiration	149	20.63	136	21.18
Cardiovascular system	140	19.39	123	19.15
Eyes diseases	119	16.48	105	16.35
Digestion	101	13.98	85	13.23
Surgery	75	10.38	65	10.12
Blood Pressure	66	9.14	59	9.19
Endocrine	10	1.38	9	1.4
Psychology	3	0.41	3	0.46

(*) Number of staffs and workers taking the examination

the age group of 23-40, most of the post-experimental tests were statistically significant at the probability threshold of $P < 0.01$. From the age of 41-55, the physical fitness of the workers of the steel works factory tended to remain stable, the difference was not statistically significant. The results of this study confirmed that the reasonableness of the thesis solutions selected and applied on the research subjects have brought positive effects, the general fitness of the workers of Thai Nguyen steel works factory has been improved compared to before the experiment.

CONCLUSION

The results of the study have selected and applied seven solutions, the results of applying solutions have brought about a significant effect on the development of physical training and sports movement to develop the physical training and sports movement for the workers of the steel works factory, Thai Nguyen Iron and Steel joint stock Corporation.

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