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Research on the application of outward bound that breaks through the traditional training thinking and mode in track and field training

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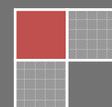
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ABSTRACT

Track and field pursuits of a better level of people basic actions, playing a decisive role in the sport, but with the popularity of new sports, athletics status is continuously extruded even replaced. To change this situation, concept of outward bound which breaking through the traditional training thinking mode and requirement is introduced, joining the outward game in preparation activities in the track and field training. The research uses control experiment and divides the experimental sample into observation group and control group. The observation group will add outward bound in the track and field training. After 4 months of training, test the two groups in the aspects of final track examination, psychological quality, and social adaptability, so as to study whether it is beneficial to use the outward bound in track and field training. According to the results of the survey experimental subjects who accept outward bound perfume better in the three aspects of track and field sports exam, psychological quality, social adaptation than those who have not accept outward bound. And according to the statistical analysis of the investigation result, the difference between the obtained two groups is significantly, with statistical significance. It can be concluded that the outward bound can make track and field training more interesting and improve trainees' interest, so as to improve the trainees' athletic performance, and exercise psychological quality and social adaptability of trainees; therefore, the trainer should use the outward game more in the track and field teaching in the future.

KEYWORDS

Outward bound; Track and field training; Traditional training thinking and mode.



INTRODUCTION

Track and field is an important project in sports, and with the pursuit of the higher degree of completing the basic movements such as walking, running, jumping and other sports, it is the foundation of other types of sports. Good foundation of the athletes in track and field sports can significantly improve their basic human exercise ability and physical quality. For the common people, adhering to the exercise of track and field sports can on the one hand, improve the quality of body, and maintain a healthy body; on the other hand people can cultivate the sports spirit of perseverance and self – defeating in track and field, having important significance to the development of individual mental health. But with the continuous development of the new sports project, many of the new physical education has been popularized in universities, and the educational status of track and field sports is gradually extruded and replaced, which have been confirmed by a lot of investigation and researches. Some researchers investigated 1000 students in many higher vocational colleges, and found that about 800 students who did not like track and field sports^[1]. The results of the research made by the research group of “Investigation and reform of the current track and field teaching situation of colleges in Beijing” also showed that fewer and fewer college students selected track and field sports as their elective courses, leading to the predicament of "opening class difficult"^[2]. Outward bound emerged in Britain after the Second World War, and is a new outdoor training mode. The trainer simulates real outdoor environment to make trainees be able to be personally on the scene and the get the true exercise from the two aspects of physiology and psychology.

Training methods of traditional track and field teaching is mainly confined to the lectures on the physical theory, and train the students with single physical quality training, speed training etc. Although these training methods occupies an important position in the track and field training, but can not restore the true motion environment, and lacks of interest in terms of the participants. While, the emerging outward bound can effectively make up the deficiencies in the traditional way of track and field training. However, the researches on the track and field teaching at the present stage in sports field are more limited to the reformation of the teaching style^[3-4] and the improvement of traditional training method^[5] without real breakthrough of the thinking mode in the training mode. Therefore, the research of the present paper surveys the students in some colleges and universities in China and explores the use of outward bound in track and field training.

MATERIALS AND METHODOLOGY

Research subjects

Two classes in Grade13 track and field class of the college are selected with 80 students in total to do the control experiment. According to the test, there is no significant difference between these 80 students in the physical quality, sports ability, and interest of track and field, having the statistical significance for the experiment.

There are 53 male students and 27 females of the 80 research subjects, and they are aged 18 to 22 years old. Divide the 80 students into observation group and control group, with 40 people each group. There are 27 boys and 13 girls in the observation group, with age between 18 to 22 years old; 26 boys and 14 girls in the control group, with age between 19 to 22 years old.

Methodology

The research uses the method of control experiment and research analysis. According to teaching syllabus of the athletic major of Beijing Sport University, the elective teaching contents of track and field include quality practice test 1000 meters (male), 800 meters (female), push-up (male), stand and push-up (female). And the obligatory learning content includes the 100 meter, 4 x 100 meter relay race, long jump, and shot put. The introductory content includes hurdles, high jump, javelin, 4 x 400 meter relay race, fitness walking, running, jumping and throwing. And the assessment content includes 4 x 100 meter relay run and jump^[6]. The students in the control group only accept conventional track and field teaching, while students in observation group, in addition to the conventional training, add outward bound which integrates track and field training into some small games, and takes after the preparation activities and before the track and field teaching. The specific content of the game is shown in the following table. The whole study lasted from 2013 September to 2014 January continued, totaling 4 months. The training content of the outward bound is shown as TABLE 1.

TABLE 1 : Training content of the outward bound

Name	Content	Purpose
Unity is strength	Divide the students into groups, with about 8 people in each group. Every group stands on 1m ² -puzzle, and coaches gradually reduces the puzzle. The group whose member has been squeezed out will be eliminated until the final team win.	Train the students' team cooperation ability.
Challenge yourself	Students stand in the high altitude platform, and jump to grab the bar with the height of about 1.5m, The one who grabs can pass.	Train students' jumping ability, psychological quality, self-confidence, and help to overcome the fear of altitude.
Fall with trust	The student stands at the edge of a 1.3m high platform, and the other students build a bet with their arms in the corresponding position. The student standing in the platform falls into the arm bed with his back facing to everyone.	Increase the trust between teammates and the train students' psychological quality.

Observing index

At the end of semester, collect the scores of the students' final exam, questionnaires of surveying students' psychological quality and questionnaire surveying social adaptation ability. And use the data of these three materials as indexes to measure whether the students can achieve better track and field teaching training after accept outward bound.

Statistical method

In this study, the involved data will be processed and analyzed with SPSS 13 data packets, and the counting data is represented as mean (+) and standard deviation ($\pm s$). The two sets of results are compared by t test; measurement data is represented as rate (%). And the two sets of results are compared by χ^2 test, with $P < 0.05$ as the standard for difference having statistical significance.

RESEARCH RESULTS

The comparison of the final exam scores of two groups

The statistical results of final exam scores of the two groups are shown in TABLE 2.

TABLE 2 : The comparison of the final exam scores of two groups

Group	n	Above 90 scores	80~90 scores	70~80 scores	60~70 scores	Below 60 scores
Observation group	40	10	12	10	6	2
Control group	40	5	9	15	8	4

In order to describe the score distribution of the two groups more intuitively, the research group draws pie charts of the score distribution separately as follows.

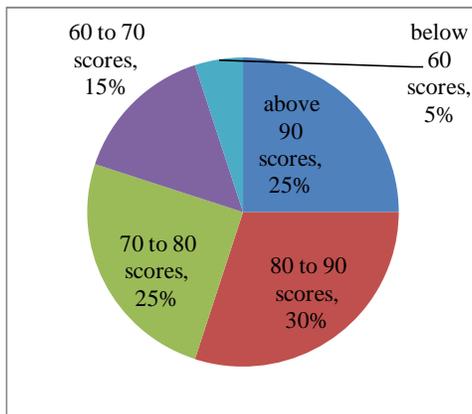


Figure 1 : The score distribution of observation group

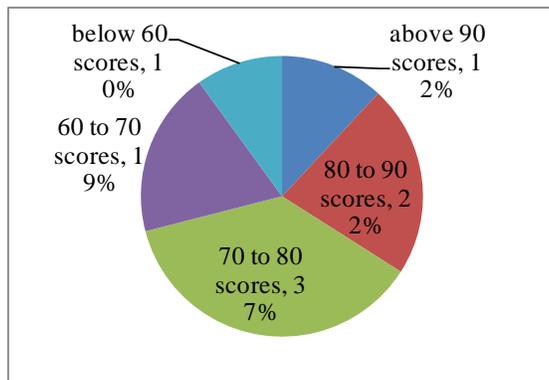


Figure 2 : The score distribution of control group

In terms of the values, the scores of the observation group are higher than that of control group. But to make the experimental results more reliable and scientific, research group made mathematical statistical analysis of the results and the analysis results are shown in the following TABLE 3.

TABLE 3 : Comparison of the excellence rate and passing rate of the two groups' final exam scores

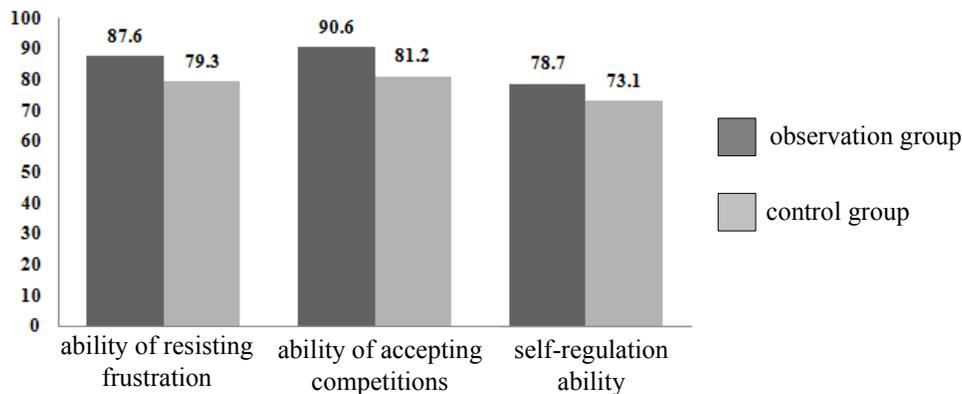
Group	n	Excellent score (above 80 scores)	Excellence rate [n (%)]	Passing score (above 60 scores)	Passing rate [n (%)]
Observation group	40	22	55.0	38	95.0
Control group	40	14	35.0	36	90.0
χ^2	\	\	2.79	\	3.16
P	\	\	<0.01	\	<0.05

From the above analysis, it can be seen that excellent rate of the observation group after accepting the outward bound is 55%, and the passing rate is 95%, which is higher than 35% and 90% which are the rates of the control group who have not receive outward bound. And according to the χ^2 test of the statistical results, χ^2 of the comparison of the excellent rates is 2.79 with P value smaller than 0.01, and χ^2 of the comparison of the passing rates is 3.16 with P value smaller than 0.05. Therefore the statistical result has significant differences and is statistically significant.

Through the mathematical analysis, it can be concluded that students who accept outward bound performed better than those who did not accept. This is mainly because some track and field training is added to the outward bound that students accepted leading to the results that during the outward bound, students enhanced their physical exercise capacity invisibly; In addition, the outward bound is carried out in the form of game which is funny and can be better able to attract the attention of students and enhance the enthusiasm of students, promoting and foreshadowing the regulatory teaching of track and field later; moreover, outward bound also exercises the courage and the psychological quality of the students and helps the students overcome the fear to a certain extent, making the students be able to better overcome the psychological tension in the examination process, and perform better.

The comparison of the psychological quality of the two groups

A questionnaire survey was conducted on two groups of students' psychological quality, and obtained the scores of the psychological quality of the students. And higher score means better psychological quality with the survey results shown in the Figure 3 below.

**Figure 3 : The comparison of the average scores of psychological quality of the two groups**

From the above figure, it can be seen that average score of the psychological quality of the observation group is much higher than that of observation group. And in order to make the results more credible, the study group made the statistical analysis of the results, as shown in the following TABLE 4.

TABLE 4 : The comparison of psychological quality of the two groups ($\pm s$)

Group	n	Ability of resisting frustration	Ability of accepting competitions	Self-regulation ability
Observation group	40	87.6 \pm 12.9	90.6 \pm 5.3	78.7 \pm 6.0
Control group	40	79.3 \pm 13.1	81.2 \pm 9.5	73.1 \pm 8.9
t	\	3.24	3.10	3.79
P	\	<0.01	<0.01	<0.01

From the statistical data in the above table, it can be seen that score of resisting frustration ability of the observation group is (87.6 + 12.9). And score of ability of accepting competitions is (90.6 + 5.3), and the self-regulation ability score is (78.7 + 6); the control group students' resisting frustration ability score is (79.3 + 13.1), score of ability of accepting

competitions is (81.2 + 9.5), and self-regulation ability score is (73.1 + 8.9). T test is carried out on the statistical results, and get the t values of the three data, respectively 3.24, 3.10, and 3.79, with all P values smaller than 0.01, indicating that there are significant differences between psychological qualities scores of the two groups, with statistical significance.

Outward bound has obvious effect on improving the students' psychological quality. The reason is that the outward bound breaks through the traditional training thinking which only pays attention to mastering technical movements and improvement of the body ability. The outward bound also pays attention to the cultivation of students' psychological quality. For example, "challenge yourself " and "fall with trust "focus on training students to overcome fear, overcome themselves, becoming more brave and confident.

The comparison of the social adaptation ability of the two groups

A questionnaire survey was conducted on two groups' students' social adaptation ability and obtained the scores of the social adaptation ability of the students. And higher score means better social adaptation ability with the survey results shown in the Figure 4.

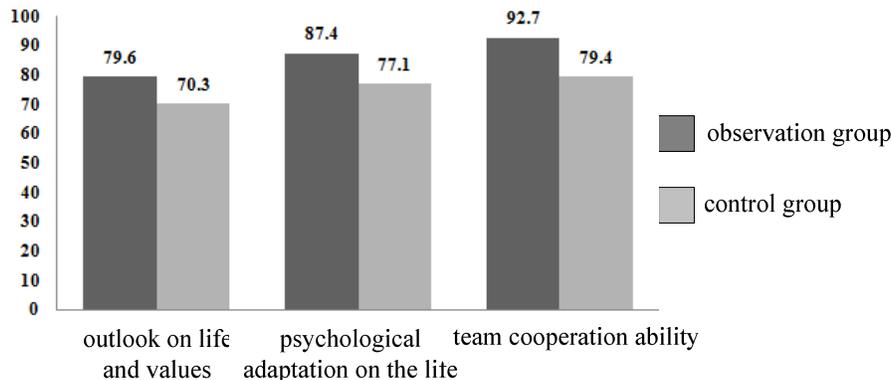


Figure 4 : The comparison of the average scores of social adaptation ability of the two groups

From the above Figure 4, it can be seen that average score of the social adaptation ability of the observation group is much higher than that of observation group. And in order to make the results more credible, the study group made the statistical analysis of the results, as shown in the following TABLE 4.

TABLE 4 : The comparison of social adaptation ability of the two groups (±s)

Group	n	The outlook on life and values	The psychological adaptation on the life	Team cooperation ability
Observation group	40	79.6±5.8	87.4±4.3	92.7±6.3
Control group	40	70.3±6.3	77.1±7.2	79.4±7.9
t	\	3.12	3.43	3.65
P	\	<0.01	<0.01	<0.01

From the statistical data in the above table, it can be seen that score of the outlook on life and values of the observation group is (79.6±5.8). And score of the psychological adaptation on the life is (87.4±4.3), and team cooperation ability score is (92.7±6.3); the control group students' the outlook on life and values score is (70.3±6.3), score of the psychological adaptation on the life is (81.2 + 9.5), and team cooperation ability score is (79.4±7.9). T test is carried out on the statistical results, and get the t values of the three data, respectively 3.12, 3.43, and 3.65, with all P values smaller than 0.01, indicating that there are significant differences between social adaptation ability scores of the two groups, with statistical significance.

Outward bound has significant function in improving the social adaptation ability of the trainees. This is because that the outward bound, compared to the traditional track and field training which only pays attention to improving the physical quality and the scores of students, focuses on training students' teamwork skills. For example, Activities like "union is strength" and "fall with trust" needs to be completed through the team cooperation. And communication and cooperation with others are needed to complete the task which is a subtle training of the students' ability of social communication. Therefore, the students' social adaptation ability is virtually improved.

ANALYSIS OF THE RESEARCH RESULTS

From the results of the research, it can be concluded that breaking through the traditional training thinking and mode and adding outward bound in the track and field training benefit a lot in many aspects.

Increase the interest of track and field training and improve the students' interest

In the students' impression on the traditional track and field training, most of the trainings are boring, because the traditional training mode uses single and direct method to improve physical quality and strength of students, without considering whether the students can concentrate on the course, and whether they are interested in the course and are willing to actively participate into the training. And outward bound are mainly "icebreaking" warm-ups and "low risk, low elements" outdoor activities. "Icebreaking" is a metaphor, which can ease the apathy and nervous of the participants at the beginning of the teaching activities and create a warm and harmonious atmosphere of learning^[7]. Use lively activities and games to improve the enthusiasm of students, which can promote the later track and field teaching.

Improve students' psychological quality and social adaptation ability

In addition to "icebreaking" warm ups, outward bound also includes "low risk, low elements" outdoor activities. "Low risk, low elements" outdoor activities low risk, low factor" refers to the outdoor activities which request low conditions and are relatively safe. And these activities mainly use the existing school site, equipment or even no props, and conduct usually below two meters height^[7]. Of course, activities without risks cannot be called as outward bound, and risks include physical risk, psychological risk and behavioral risk^[8]. And the outward bound contains high psychological risk. Students face and overcome psychological risk, so as to overcome psychological fear, and overcome themselves. At the same time, most of these outdoor activities need to be completed by team work which asks students to unite with their teammates to complete the task. Therefore, the students' social ability can be enhanced virtually.

Improve the students' performances of track and field

In addition to improving students' training initiative by outward game, contents of track and field are added into the outward bound which is specially made for field and track training. Students in the process of the game not only enjoy happiness, but also virtually exercise their running, jumping and other basic sports of athletics, improving their physical quality and proficiency of basic sports skill and being beneficial to improving students' performances of track and field.

CONCLUSIONS

Based on the current difficult of selecting courses in athletics education of colleges and universities in China, the concept of outward bound which breaking through the traditional training thinking and mode is introduced. Use outward bound to assist the track and field training. Research group, through the control experiment, studies the function of outward bound in track and field training. The results are that research subjects who accept outward bound got higher scores in track and field final exams, psychological quality and social adaptation ability than those who did not accept the outward bound. Therefore adding outward bound into track and field training can increase the interest of track and field training, improve the students' interest, improve students' psychological quality and social adaptation ability, and improve the students' performances of track and field; then the trainers should break through the traditional training thinking and mode in the course of track and field training, and use some methods of outward bound to improve the trainees' performance.

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