Bulletin of the *Transilvania* University of Braşov
Series IX: Sciences of Human Kinetics • Vol. 11 (60) No. 2 - 2018

THE IMPACT OF THE TENNIS PLAY AND STAY METHOD ON BACKHAND SKILL LEARNING AND SATISFACTION LEVEL: THE CASE OF ELEMENTARY SCHOOL STUDENTS

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Abstract: *The essay aims at the investigation of the effects of the Tennis Play and Stay method in teaching fifth class elementary students the backhand skill as well as their level of satisfaction in the game. The traditional teaching approach and the proposed Play and Stay program were applied in two groups of participants. It was observed that groups highly influence the three estimations for technique assessment and the progress of the backhand ability and that the estimations for the studied groups are different when regarding to the majority of the variables on the participants' satisfaction questionnaire. These results highlight the value of the suggested tennis program.*

Key words: *tennis, learning, backhand, Play and Stay, satisfaction level.*

1. Introduction

Tennis is listed among the most popular sports worldwide and it offers great satisfaction to the players. Tennis remains a popular sport, despite the fact that it is crucial for the player to develop certain basic skills. These abilities include muscle power, endurance, speed, and talent. At present, the need for physical activity is of great importance. Based on the above, tennis could be played for life as a recreational sport.

Although, generally, tennis constantly becomes more even popular, a negative trend has emerged in certain countries. This trend is presented even in countries with a long-term tradition in the sport. The main reason for this trend appears to be the fact that individuals who make efforts to keep fit, as well as to maintain a healthy lifestyle are often attracted to different sports and activities characterized by fewer demands regarding the motor skills. Learning tennis is associated to several difficulties, the most common of which refer to the shots. Often, shots are too fast compared to the basic skills of beginners. Controlling the ball is a common difficultly mostly for starter players, which has directly influenced their rallying skill. Furthermore, certain tennis coaches use approaches that are very difficult or unsuitable for

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minors and as a result they are discouraged. As a result, sometimes learners end up observing instead of actually playing. Thus, they lose interest. Therefore, it is argued that tennis coaches re-evaluate teaching methods that they apply by introducing innovative practices so as to satisfy the players' needs. Innovative methods could also contribute to the expansion of the game to a broader group of people. The ITF presented an interesting program, known as Play and Stay. The Federation presented this method to coaches. It is a program which includes simplified learning processes. These processes help beginners (novice) players to familiarize with tennis [8].

In 2007, ITF launched the Campaign of the program in order to promote the sport to all ages across the globe [9]. According to the theory of Payne and Rink [11] whose model "Sport and Play" aimed not only to fully absorb the player's interest in the game, but to also inspire and encourage their active involvement in tennis for the rest of their lives. In accordance with this theory, several studies have been conducted in countries in which tennis is a traditional sport, including the USA [2-7], Australia [1] and New Zealand [4]. The program is based on the encouragement of beginners to play a game of tennis as soon as possible. The application of the program enables tennis coaches or in this case P.E. teachers to teach basic motor abilities and players learn how to serve, rally and score while having fun learning and feeling the health benefits. Although the ITF acknowledges the importance of technique, it recommends first focusing on the concept of the game, and encouraging only the basic abilities, required techniques and relative tactical instruction so as to encourage beginners to play tennis from the very first lesson. Through this program the coach is responsible for developing game-based exercises and activities that incorporate appropriate motor skills, while clearly communicating to the student that tennis is easy, enjoyable and healthy [9].

The coaching session for beginners, including children, comprises the use of slower balls (red, orange, and green). Such balls are used in order to absorb the impact and power of the hit. As a result, hits become slower, which gives beginners added time to control them, and to exchange balls. In particular, mostly for the underage players, several different sized rackets and courts are proposed. This variety makes it easier for the minors to exercise on hitting the ball without adding strength. Another advantage of this variety is the fact that returning the ball becomes less difficult.

In the present research, this program applied all the important techniques that helped to differentiate compared to traditional teaching approaches. Therefore, smaller rackets, slower balls, modified rules, reduced court, and competitive game-based coaching were applied [8]. In this way, the coach/P.E. teacher is able to focus on developing the basic skills, while creating an active learning environment for the players [3]. Besides game playing, it is important to set learning goals, as well as to give feedback. Lastly, the program does not only introduce tennis to the students, but also inspires them to play through lifetime.

The purpose of the present essay was the examination of the effects of the specific program in teaching fifth class elementary school students the skills of

the backhand. Additionally, the study aimed at the evaluation of the students' level of satisfaction in the game, which is used as an indirect proxy of their long-term interest in the game.

2. Material and Methods

2.1. Subjects Selection

The present study used convenience sampling. Sixty-two (62) fifth class elementary school students, aged between ten and twelve years (Mean Age=11.13, SD=0.33). Elementary students from four classes of two public schools participated in the research. It is noted that those who had already taken tennis lessons or were players were excluded from the research.

Random selection between two groups has been used. Firstly, the experimental group (N=36, of which 14 boys and 22 girls), in which the particular method was applied. The purpose of using this method was to enable children to serve, rally and backhand, while enjoying playing tennis. Secondly, the control group (N=28, of which 15 boys and 13 girls), in which the traditional coaching method was used, in order to teach basic tennis techniques.

2.2. Procedures

The intervention procedure was conducted over a six-week period during Physical Education lessons (three hours/week) in the school playground. At the start of every lesson the certain instructions on tennis technique and skills were repeated to both groups of participants.

The assessment of the process included three sets of measurements. These measurements were taken of all the participants. The first step was to ascertain that the initial knowledge of all the participants on playing tennis was common. Therefore, an initial test was applied. The second step was to control the impact on the players' performance of backhand stroke skill. Thus, a final test was applied when the six-week course was completed. The last step was realized a week after the completion of the program. During this step a retention test was applied, under the criterion that the players did not practice. This test was used in order to ascertain if the acquired ability of the backhand stroke had been maintained.

During the quantitative assessment, the participants had to execute ten backhand strokes as a response to a hit realized by their coach or the P.E. teacher, which were scored as following: (1=inside the court, 10=excellent, 0= into the net or outside the court). The qualitative evaluation consisted of video-taping the players who were then assessed by an independent observer, who was a professional tennis coach, on six factors of the backhand stroke technique. The ten hits were each scored out of 5m with the highest score of fifty equaling "excellent".

The satisfaction level was assessed by the students of both groups by filling in a questionnaire regarding the quality and the satisfaction level with the six-week course they followed. The questionnaire consisted of items scored on a seven-point Likert scale where one means that the participants "strongly agree" and seven that they "strongly disagree" on the six factors/categories of satisfaction with: 1. Facilities; 2. Staff; 3. Responsiveness of coach/P.E. teacher; 4. Reliability of coach/P.E. teacher; 5. Outcome of course,

and, finally; 6. Overall satisfaction and future participation.

The factorial design was used in the present study (2X3). The two groups were used as independent variables. On the contrary, the participants' measurements of the backhand stroke were used as independent variables. These measurements revealed their performance. Finally, independent samples' t-test analysis was used to assess the participants' satisfaction level

Statistical data analysis was carried out using the SPSS 17.0. program. Statistical significance was set at α=95%. Additionally, Box's M test of equality of covariance matrices and a Kolmogorov-Smirnov (K-S) test on the normality of the variables were performed.

3. Results and Discussion

T-test analysis on independent samples resulted in interesting findings. In particular, the first test presented no great differences between the group and the experimental groups. Based on this result it is argued that before the intervention program, the level of backhand stroke execution was common for all participants.

The technique was also assessed. Repeated measures ANOVA analysis was applied in order to compare the measurements between the two groups during the three tests of the backhand stroke. In addition, the LSD analysis of multiple comparisons among the sub-categories of the measurement factor led to interesting finings. In particular, I was observed that between the first and the second measurement, there are significant differences between the control and the experimental group ($p<.05$). Similarly, differences have been observed between the first and the third measurement ($p<.05$). Actually, the control group went from 24.69 to 30.24 and then to 30.65, while the experimental group went from 27.23 to 41.21 to 44.4 (Figure 1).

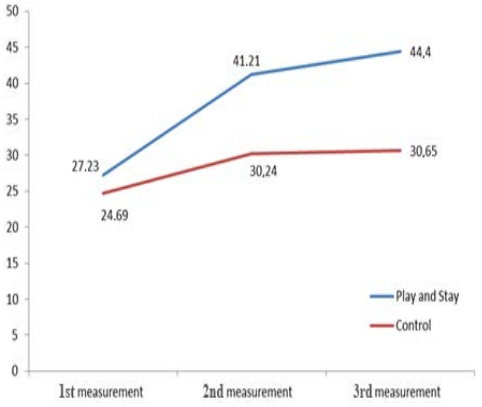

Fig. 1. *Performance of backhand when technique was assessed for both groups*

Furthermore, repeated measures ANOVA analysis revealed that the studied groups presented significant differences regarding the three measurements of the backhand stroke when outcome was assessed. According to the findings of LSD analysis, between the first and the second measurement, the two groups presented significant differences ($p<.05$), as well as between first and the third measurement ($p<.05$). More specifically, the control group went from 4.21 to 5.53 to 5.94 respectively, whereas the experimental group went from 4.84 to 7.52 to 7.27, respectively (Figure 2).

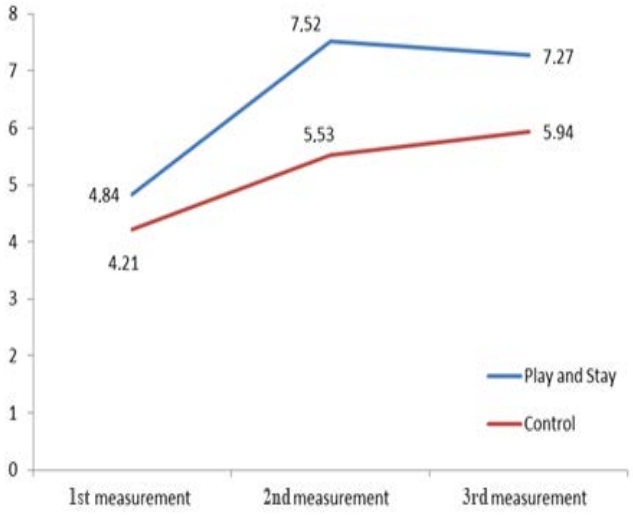

Fig. 2. *Performance of backhand when the outcome was assessed for both groups.*

T-test analysis on the questionnaire regarding the participants' level of satisfaction showed significant differences ($p<.01$) between participants of different groups most of the satisfaction factors (four out of six). Actually, it is observed the experimental group presented higher satisfaction levels compared to the control group in the following categories: "facilities" (5.7 and 4.1 respectively), "outcome" (6.05 and 3.69 respectively), "staff" (5.5 and 4.15 respectively), and, finally, the factor "overall satisfaction and future participation" (5.5 and 2.93 respectively). It should, however, be noted that there were no important differences in the factors "responsiveness" (5.27 and 5.29 respectively) and "reliability" (5.86 and 5.84 respectively) ($p>.01$) (Figure 3).

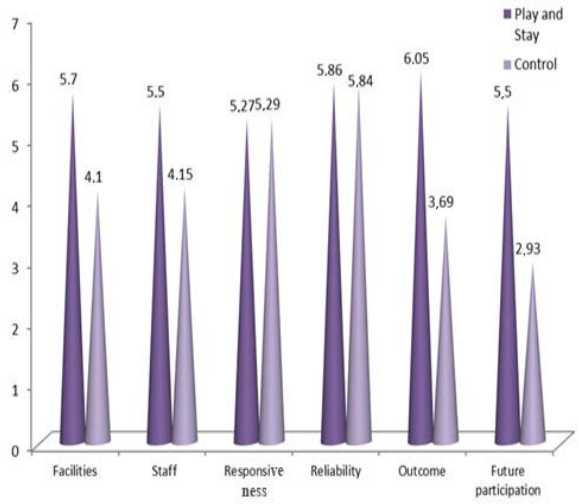

Fig. 3. *Satisfaction level for each factor for both groups*

Repeated measures ANOVA analysis was also applied in order to investigate gender differences. Similarly, this analysis was used for the three measurements on the performance scores of the backhand stroke when technique. In both cases, the analysis did not reveal any gender differences, as well as regarding the factors on the satisfaction questionnaire. In this case, the independent t-test analysis was used.

The findings of the present study revealed that there were no gender differences in the initial measurement taken prior to the course which indicated that they were at the same starting level. Nevertheless, both groups of students improved their backhand stroke technique after the six-week course. In the second test, however, it is clarified that the program of the experimental group presented a significantly much better outcome compared to the traditional method of the control group.

Likewise, comparing the first measurement (initial test) to the third (retention test), both groups had higher scores. Although the experimental group appears to have decreased its overall score slightly, nevertheless, it was still significantly higher than the control. This clearly proves that the program was substantially more effective than traditional coaching approaches. The effectiveness of the program is proven by the fact that it enables teaching basic tennis techniques, such as the backhand stroke to elementary school students.

Additionally, the findings indicate that at this age, no significant gender differences exist. Boys and girls achieved similar results in their performance of the backhand stroke for their respective groups. This finding can be interpreted that at elementary school sports can be taught in mixed-gender classes. Other researchers, who argued that there are limited or no gender differences in power prior to adolescence support this finding [10], [11].

Regarding the satisfaction questionnaire, the minors of the experimental groups who participated in the program reported much higher levels of satisfaction for two factors (“facilities” and “staff”), and almost double for two other factors (“outcome” and “overall satisfaction and future participation”) compared to the control group in which traditional training was applied. This provides strong evidence that the suggested program was considered as an effective and enjoyable method of acquiring tennis abilities.

Furthermore, considering that there were no differences between the groups in certain factors could imply that the children had a good relationship with their teacher. This is based on the high levels for the factors “responsiveness” and “reliability” that is related to their P.E. teacher. In addition, there were no gender differences in all the factors regarding the satisfaction level.

It should, finally, be noted that until today there have not been any relevant researches which analyze the actual effects of the program suggested by the ITF. Therefore, future research could focus on the impact of the program on various tennis skills especially on children who are starting to play tennis.

5. Conclusions

To sum up, novice tennis players usually find it difficult to learn tennis abilities. They face difficulties in controlling both the ball and the racquet, which means that they do not manage to actually play the game. In Greece, as in other countries as well, traditional coaching methods are still applied in the teaching of tennis abilities. Nevertheless, new players, mostly children, want to learn to play tennis as soon as possible, rather than go through the often time-consuming process of learning technique. That is why game-based lessons, adapted equipment, enable students to freely express their tactical skills instead of solely acquiring strict technical control. Moreover, the program pays attention on ensuring communication and enjoyment, which as important factors in effectively introducing the specific program.

In conclusion, the findings reveal that the program is associated to the improvement of the technique of the backhand stroke. Moreover, it is connected to the achievement of higher level of satisfaction and enjoyment in tennis playing. Based on these findings, the program is more effective compared to the traditional coaching method. The implication of these results is that assumption that this program should be applied by coaches and P.E. teachers, who need to develop innovative, learning environments for novice players to quickly and effortlessly experience personal progress in game playing and stay interested for many years. Children in particular, want to continue doing an activity when it is fun and they are successful at it. The suggested program emphasizes to the point that beginners should start playing from the first lesson in order to succeed.

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