

# THE IMPACT OF AN ADDITIONAL WEEK PROGRAM AS A PROTECTION INDICATOR IN WOMEN VOLLEYBALL

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## Abstract

Volleyball is a sport that is continuously modernized and developed to coincide with the overall development of the society. Among the most defining elements of modern volleyball, protection is of immense importance. Its basic elements include block, waiting for the ball, and waiting for the opponent's reactions to setbacks. Due to the speed and high bodily altitude of jumping in women and men's volleyball, it is very necessary to acquire an excellent technical and physical preparation. Specifically, this is in a view to meet the specifics of this game. In this study, we were able to prove that the available time for training in protective exercises is not enough in the actual practice of female volleyball in Albania. It must be increased not only quantitatively, but also on the composition of the training process that is dedicated to the technical tactical indicators of the key elements of the defense. Two female volleyball teams were involved in the experiment. One team was treated with an additional training program of 90 minutes per week for a period of 12 weeks. Also, the other team continued normal training process being treated as the control group. Each week, both teams held match training between themselves, through a clear procedure. During the training, the collective parameters of block, first ball reception, and reception to setbacks was highlighted. Results of the study show that the quantity and quality increase of training for protective actions is a more efficient way to improve athletic performance in women's volleyball.

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**Keywords:** additional week program, protection indicators, sport teams, volleyball.

## **Introduction**

Undoubtedly, volleyball is one of the sports that have evolved on a faster pace. Continuous adjustments to the rules of the competition, technical changes, and tactical operational changes has made volleyball without doubt the most evolving and modernized sport in the world. However, volleyball is one of the most traditional sports in the world and it has gone through a process of change which generally aims to:

1. Fit into sport with the request of the sports population;
2. Harmonize the commercial interests with the sports ones;
3. Increase the dynamics of this sport by fitting the pace and dynamics of modern life.

Subsequently, this intensive development and growth path of dynamism and modernization has been reflected in the modification of many other parameters associated with:

1. Selection of volleyball players;
2. Their training in much more efficient conditions;
3. Modernization of the equipment used in the training sessions and matches etc.

Modern volleyball training session has undergone fundamental changes compared to that of several years ago. In this context, we should also accept that the rhythms of these substantial modifications have changed drastically. In addition, the introduction of a new methodology was much slower few years ago, but today, everything is moving very quickly and is being spread much more intensively. Thus, this could even be in terms of the training process.

Today, the main element of the training session seen in the long-term perspective, is the reliance on a few basic principles that constitutes the pillars of the concept of actuality and perspective of this sport. They are:

1. Setbacks at the height of the game in the net.
2. Maximum dynamism tactical actions.
3. High technique and easy adaptable in terms of undeterminable alternatives in the game situation.
4. Match the possible limits of body size with the maximum coordination.

## **Material and Methods**

This study aims to analyze the assessment and how much it impacts the training process. However, this is done with the aim of improving the physical and technical indicators in the performance of defence in a women volleyball team. To undertake this study, we have selected a group of 36 volleyball players aged 19-23 years old as part of two championship teams of the first category. A team of 18 volleyball players was treated as an

experimental group, while the other team composed of 18 volleyball players was used as a control group. Therefore, it was necessary to involve a team made up of 3 sub teams of 6 players as the study protocol in this experiment. In addition, a match was played among them.

Furthermore, both the experimental and the control group did the same basic training program for 12 weeks. Besides this training session, the experimental group also held an additional training where they were more trained with defensive exercises. This exercise was dedicated to a particular time of 90 minutes training session during the training week. In the experimental training program, the team practiced a group of exercises focused on defensive and technical elements. These exercises were distributed into three sessions of 30 minutes for an interval of 48-hours from one session to another. Hence, this was in a view of reaching the weekly total time of 90 minutes, an extra length for the normal training sessions.

The control team held regular training program which also did defensive capability training exercises, but did not do the additional 90 minutes training session that the experimental team did. However, the didactic principle of the program was shifting from simple exercises to more complicated ones.

Therefore, the training program of the experimental team was done as follows:

Team/days	Day 1	Day 2	Day 3
Experimental	Defence individual exercises	Exercises in group (2-3 players)	Game concentrated in defence exercises

Nevertheless, if the control group performed a training session of about 120-150 minutes in a total of 500 minutes performed in a training week, the experimental group had a training of 210 to 240 minutes per week training.

The experimental group and control group were evaluated in terms of the efficiency of the defensive actions every week through the matches among them. Matches were held every week on a fixed day, between the experimental team and the control team. However, the teams played the game which lasted two sets for each group with three permanent teams. In every match, the first group of the experimental control team played against the first group of the control team. Also, the second group of the experimental control team played against the second group of the control team. Finally, the third group did the same for the respective teams.

Therefore, for each matches, there were statistics kept for defensive actions of the respective groups as follows:

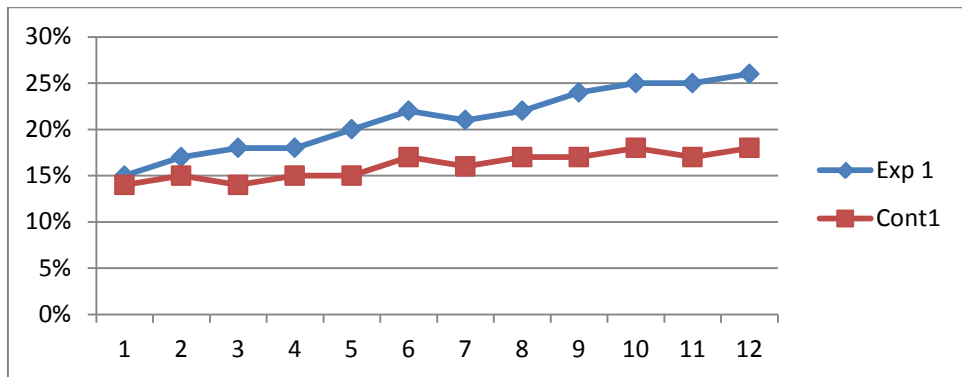
1. Resultative and no-resultative block
2. Bump pass from the spike (hit)

### 3. Bump pass from the setback

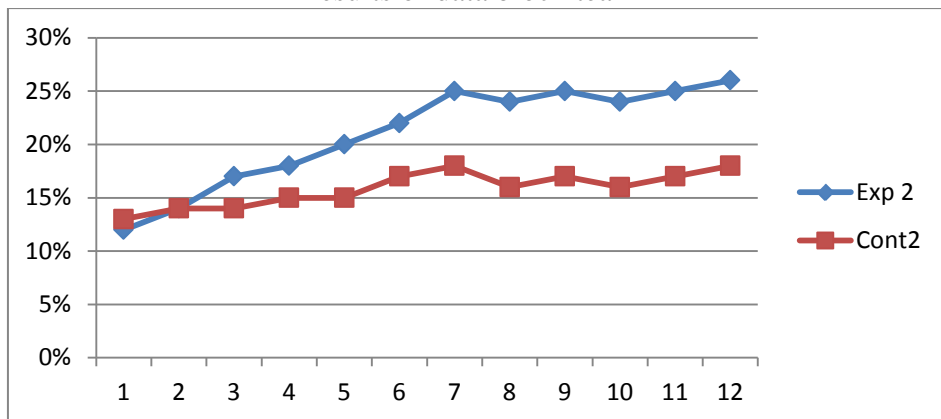
Thus, the results of the data processed in the success rate in three defensive actions for the 12 matches are listed below:

Teams	Exp 1	Cont 1	Exp 2	Cont2	Exp 3	Cont3
block 1	15%	14%	12%	13%	14%	13%
block 2	17%	15%	14%	14%	17%	15%
block3	18%	14%	17%	14%	19%	15%
block 4	18%	15%	18%	15%	19%	14%
block 5	20%	15%	20%	15%	19%	13%
block 6	22%	17%	22%	17%	21%	15%
block 7	21%	16%	25%	18%	22%	16%
block 8	22%	17%	24%	16%	23%	15%
block 9	24%	17%	25%	17%	24%	15%
block 10	25%	18%	24%	16%	22%	14%
block 11	25%	17%	25%	17%	21%	15%
block12	26%	18%	26%	18%	24%	16%

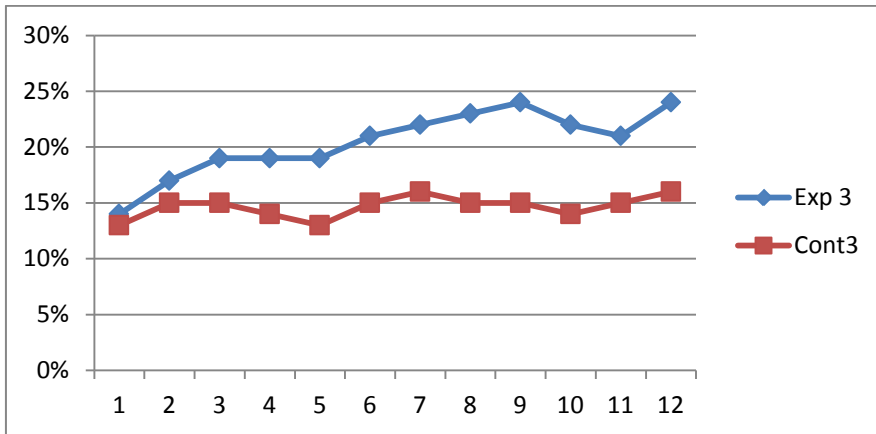
Results of data block team 1



Results of data block team 2



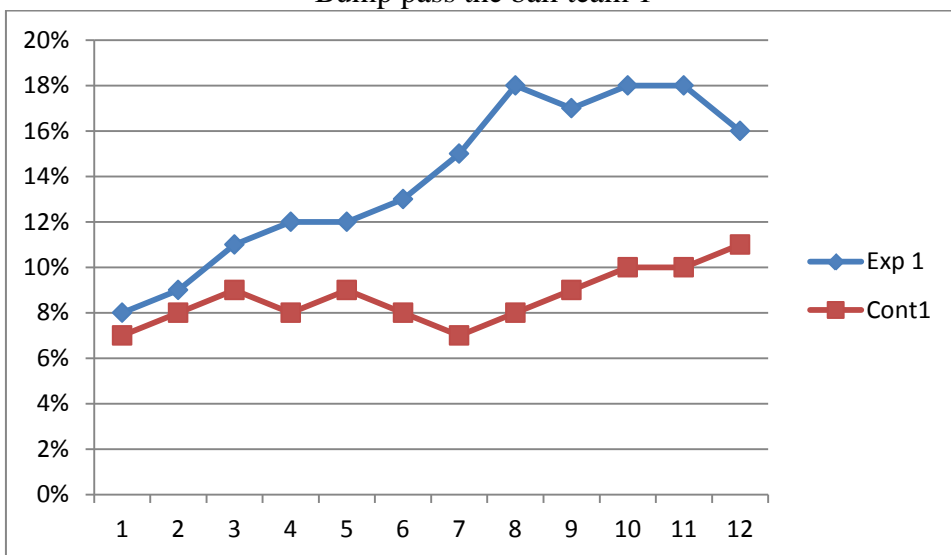
Results of data block team 3



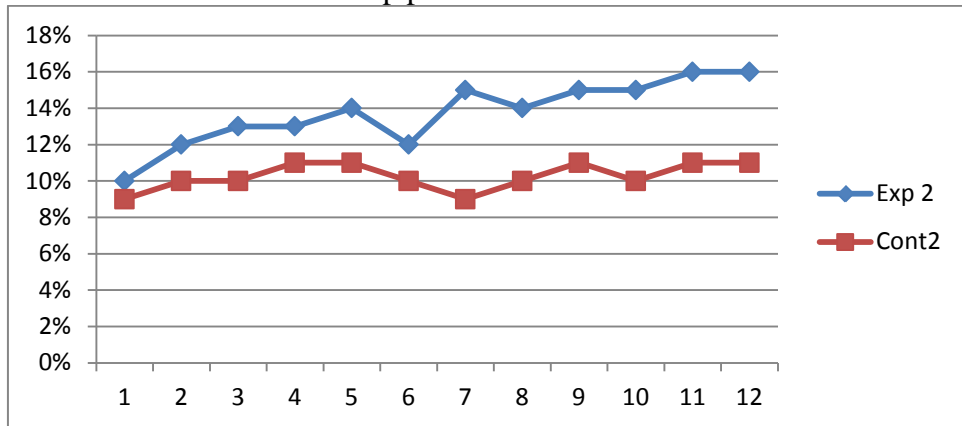
Data of the bump pass

Teams	Exp 1	Cont1	Exp 2	Cont2	Exp 3	Cont3
Bump pass 1	8%	7%	10%	9%	7%	8%
Bump pass 2	9%	8%	12%	10%	8%	8%
Bump pass 3	11%	9%	13%	10%	10%	8%
Bump pass 4	12%	8%	13%	11%	12%	9%
Bump pass 5	12%	9%	14%	11%	12%	10%
Bump pass 6	13%	8%	12%	10%	13%	9%
Bump pass 7	15%	7%	15%	9%	12%	9%
Bump pass 8	18%	8%	14%	10%	14%	11%
Bump pass 9	17%	9%	15%	11%	15%	11%
Bump pass 10	18%	10%	15%	10%	15%	11%
Bump pass 11	18%	10%	16%	11%	15%	10%
Bump pass 12	16%	11%	16%	11%	14%	10%

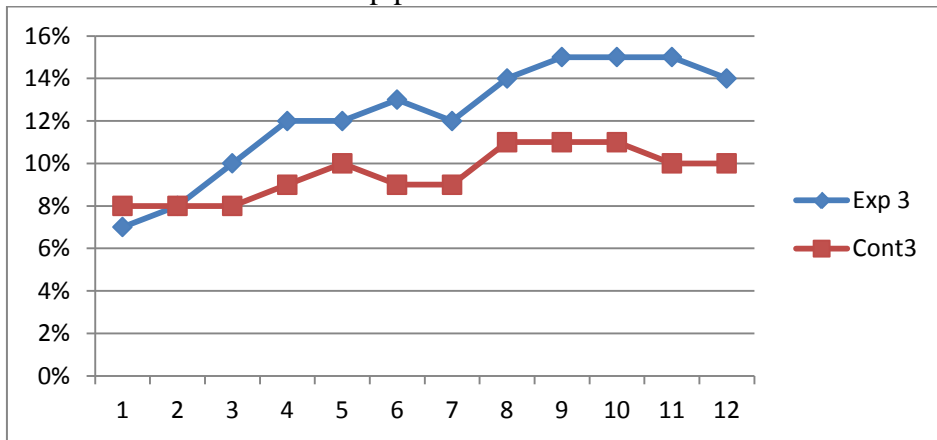
Bump pass the ball team 1



Bump pass the ball team 2



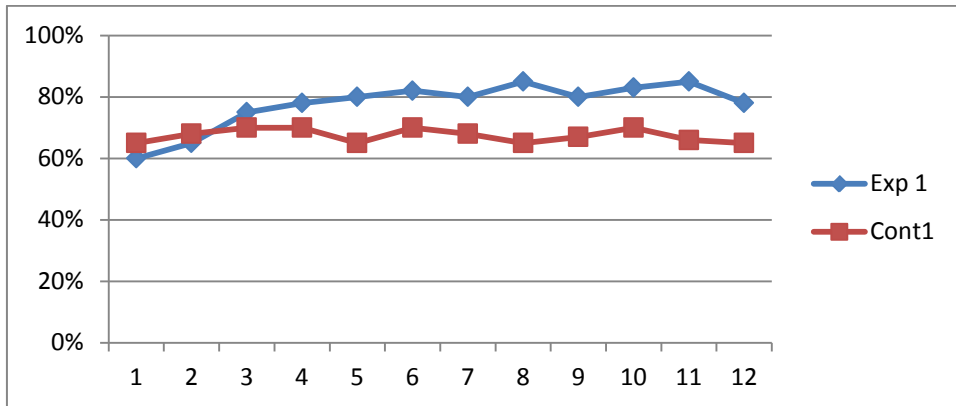
Bump pass the ball team 3



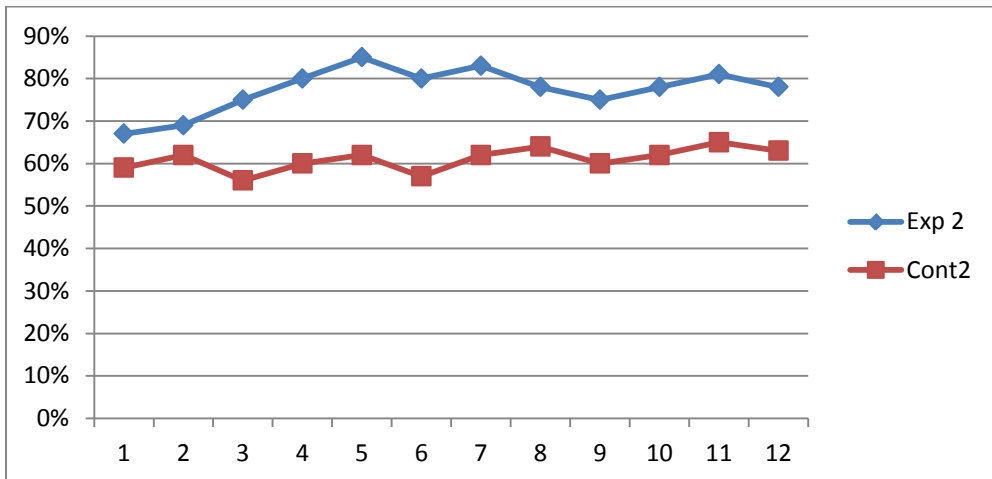
Opponent Response data of setbacks

Match/Teams	Exp 1	Cont1	Exp 2	Cont2	Exp 3	Cont3
Setback 1	60%	65%	67%	59%	62%	64%
Setback 2	65%	68%	69%	62%	67%	62%
Setback 3	75%	70%	75%	56%	74%	60%
Setback 4	78%	70%	80%	60%	75%	60%
Setback 5	80%	65%	85%	62%	78%	64%
Setback 6	82%	70%	80%	57%	76%	62%
Setback 7	80%	68%	83%	62%	79%	51%
Setback 8	85%	65%	78%	64%	82%	59%
Setback 9	80%	67%	75%	60%	75%	62%
Setback 10	83%	70%	78%	62%	76%	60%
Setback 11	85%	66%	81%	65%	79%	59%
Setback 12	78%	65%	78%	63%	81%	64%

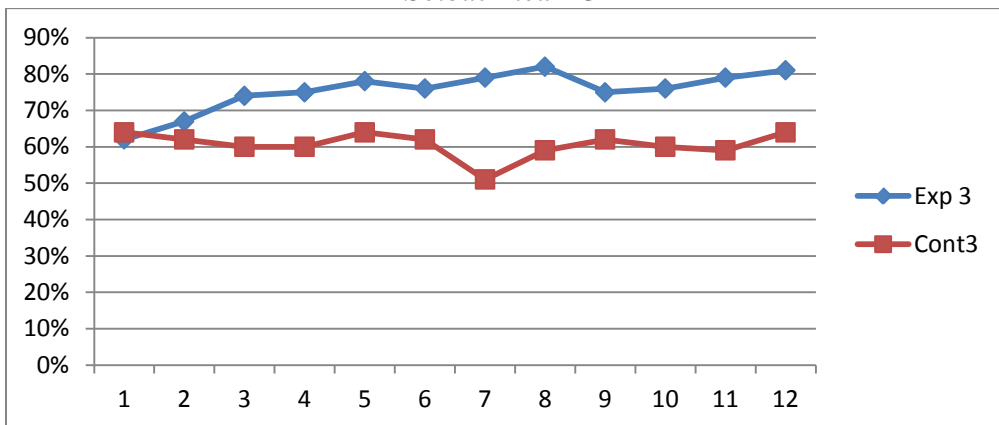
### Setback team 1



### Setback team 2



### Setback team 3



Although the impact of improving the defensive technique elements is clear, it is not possible to compare the results of the control matches. Still, it is interesting to see that the trend of improving technical elements of the defence had an impact on the result of these matches. Matches were among three sub-teams in two sets of play. However, they are shown in the table below.

Matches	1	2	3	4	5	6	7	8	9	10	11	12
	1 - 1	0 - 2	1 - 1	1 - 1	2 - 0	1 - 1	2 - 0	2 - 0	1 - 1	2 - 0	2 - 0	2 - 0
	0 - 2	0 - 2	1 - 1	1 - 1	0 - 2	1 -1 0	2 - 0	2 - 0	1 - 1	1 - 1	2 - 0	2 - 0
<b>Exp3- contr3</b>	1 - 1	2 - 0	1 -1 1	1 - 1	2 - 0	2 - 0	1 - 1	2 - 0	2 - 0	2 - 0	1 - 1	2 - 0

### Discussion of Results

From the presented data in the tables and graphs above, there is a significant improvement in the three performance parameters of the technical evaluation team in defence. Thus, this occurs due to the comparison between the experimental team and the control team.

Recognizing and taking into account the limitations of the method used to experiment the change of the defensive training session, the following limits was been represented:

1. It is very complicated to rigorously define the experimental procedures that should be practiced by two teams, given the fact that the experiment was extended to 12 months (a full season sports).
2. The comparison of players among them becomes very difficult when considering the fact that the teams were trained separately, so experimental team in one gym and the control team in another.
3. Many other variables interfere when assessing the data, such as the game played, and the level of other technical elements such as defence or serve techniques.

Consequently, in order to minimize the negative effect of these restrictions, some organizational measures was intended to be taken in the experimental phase which is as follows:

1. Two team unified training schedule, way of doing other elements such as fitness training, elements of the serve and attack technique, and warm up.
2. Teams played among them in control matches and were divided into three groups of 6 players. These three groups were the same and always played against each other in the 12 control matches.



### **Conclusion of the Study**

If we take into account the limitations of the study mentioned above, the results of this study will help us to achieve some important conclusions:

1. The training of elements of defensive technique should take a more important role in the training sessions of young ages 16-19 years.
2. The time available for defensive training exercises during a week of 10 hours must be at least 3 hours exclusively dedicated to defence.
3. Protection training exercises during a training week should pass the individual exercises, the ones in the group, and the exercises in terms of the game.
4. Even though we cannot identify a direct link from the observations, it was noted that improving defensive technical indicators also affects the sports results in matches among experimental teams.

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