

SPECIALIZED TRAINING ACCORDING to BASKETBALL PLAYERS' POSITIONS and its EFFECT on COMPETITIVE BEHAVIOR and TACTICAL PERFORMANCE

Taghread Ahmed Elsayed Ahmed¹, Ghada Mohamed Youssef Elsayed¹, Nour Taha Ebrahim Housen¹, Heba Abdelazim Hassan Ismail¹ & Naglaa Ahmed Radwan Ahmed²

1 Self-Development Department, Deanship of Preparatory Year, Imam Abdulrahman Bin Faisal University, Dammam, KSA.

2 Physical Education Department, College of Education, King Faisal University, Al-Ahsa, KSA.

taelsayed@iau.edu.sa

Abstract: The aim of this research was to determine the impact of Specialized Training program according to Basketball players' positions on Tactical performance and competitive behavior in junior basketball Players. To achieve the purpose of these study 60 junior female basketball players were selected from Sports Academy for Basketball in Zagazig-Egypt under 16 years of age (age: 14.65 ± 0.48 years; body height: 161.40 ± 3.09 cm; body mass: 57.38 ± 3.68 kg; training age: 1.43 ± 0.55 years). They were divided into two equal groups, namely Specialized training group according to playing positions (guard, forward, center), (STP) group and Control group (CON). Competitive behavior and Tactical Skills Scales were administered for collecting the data from the subjects, the total duration of specialized training program was 8 weeks. After 8 weeks of training period, data was collected on tactical performance and competitive behavior for both groups. The collected data was statistically analyzed by using "t" test to find out the difference between the two groups (STP) and (CON). Based on the results it was concluded that the STP group was significantly improved in tactical performance and competitive behavior more than (CON) group. The findings from this study supported the use of specialized training according to Basketball players' positions on training junior basketball players to improve thier tactical performance and competitive behavior.

Keywords: Playing positions, Tactical Skills, Physical preparation, muscular capacity

INTRODUCTION

Adolescence basketball players striving to reach the highest standard of performance needed to develop outstanding performance characteristics (Torres-Unda et al., 2013). Tactical skills are particularly important skills for basketball players, they are required to achieve successful performances (Fujii et al., 2010; Cortis et al., 2011; Torres-Unda et al., 2013). However between different playing positions, the significance of these skills can differ. It is possible to classify basketball players approximately into three playing positions (guard, forward, center), each with different functions to fulfil. Owing to these different requirements, in each playing position, different skills are needed to play well (Hoare, 2000; Abdelkrim et al., 2010; Sallet, et al., 2005).

Multiple team sports could be classified as invading sports, wherein players participate in the same field of action as their rivals, and basketball is one of the sports which are distinguished because of the need for players to continuously adapt to competition through quick adaptation to changing play settings and ball movement. Where players must contend with a complex and quickly shifting setting when entering the field of the opposing team to score (Hughes and Bartlett, 2002; Williams, 2000). Competitions in basketball make the sports exciting. but competition is not only about winning, it also channels our positive energies and, compared to other rivals, offers reliable information on one's position. Obviously, with such behaviour, players always want to win. Competitive behaviour in sports is a series of competitive acts and competitive responses that the athlete takes to establish or protect his competitive benefits and to enhance his position. It's all that individuals who have such behaviours still want to win. (Mahendra and Shivendra,2015). In addition to cognitive skills, success in basketball sports needs players of all ages to have well-developed physical, physiological and technological attributes. This integration is generally apparent in perform well in sports (Nougier and Rossi, 1999; Helsen and Starkes, 1999; Jonker et al., 2009).

Playing in invasion sports such as basketball at a high level of success involves selecting the right action at the right moment and successfully and consistently following the course of action during the match (Gréhaigne et al., 2001). Proper understanding of the game is important to execute the correct action at the right moment, with a good result, which is seen as a key feature for high performance levels. successful performance needs to for example, game intelligence, practical intelligence, tactics, tactical knowledge and tactical skills (Gréhaigne et al., 1999; McPherson,1994). Tactical skills are cognitive abilities required at the right time to read the game and perform the right action. Tactical skills apply to the decision-making activity during the game and the perception of action adaptations' (Mouchet, 2005). Tactical skills refer to the ability of an individual player to execute the correct action at the right time (Gréhaigne and Godbout, 1995).

Many researchers have examined the connection among tactical skills and performance. Within the context of the target structure of the game, expert athletes are better able to identify the appropriate response for a situation, relying on less knowledge, because of more highly developed tactical skills, and can do so more quickly than inexperienced athletes. Thus, tactical skills are an essential trait of players. It is often proposed that the degree of information structure of a sport situation and the knowledge of what to do' by a person influences the quality of decisions taken in the context of a game situation, and the quality of decisions taken in the context of the game is the best distinguishing factor among expert and novice irrespective of age (Baker et al., 2003b).

The aforementioned debate indicates that competitive conduct and tactical skills are an essential dimension or characteristic of the athlete's personality and directly or indirectly influence a sportsperson's overall sports performance. The current study therefore aimed to identify the effect of Specialized Training program according to Basketball playing positions on Tactical performance and competitive behavior in junior basketball Players. The researcher assumed that both programs (Traditional training and Specialized Training) would lead to improvement in Tactical performance and competitive behavior, but Specialized Training program according to Basketball players' positions would lead to greater improvements in Tactical performance and competitive behavior in junior basketball Players.

MATERIALS AND METHODS

Participants

The present study was conducted on 60 junior female basketball players were selected from Sports Academy for Basketball in Zagazig-Egypt under 16 years of age (age: 14.65 ± 0.48 years; body height: 161.40 ± 3.09 cm; body mass: 57.38 ± 3.68 kg; training age: 1.43 ± 0.55 years). They were divided into two equal groups, namely Specialized training group according to Basketball players' positions (10 guards, 14 forwards, 6 centers) (STP), and Control group (CON). Which apply Traditional training according to the program followed by their coach

Measurements

Tactical Skills Scale

There are four subscales of the Tactical Skills scale (knowing about ball actions, knowing about others, positioning and deciding, and acting in changing situations) in order to Evaluation the Tactical Skills of basketball players. Of the four subscales varying from 0.70 to 0.87, the scale was shown to have strong psychometric features with internal consistency coefficients (Cronbach's alphas). The correlation coefficients for repeated measures were as follows: 0.94 to know about ball actions, 0.95 to know about others, 0.95 to position and determine, and 0.93 to act in shifting conditions, and 0.94 to know about ball actions. Validating player scores on the Tactical Skills scale, players have been required to rate the tactical skills of each group on a 6-point Likert scale, varying from 'Very poor' to 'Excellent' for two basketball teams (high level - low level). To detect differences among high-level and low-level groups, a t-test has been used. t-test ranging from 10.84 to 12.70. and so, we can underline the validity and Reliability of the measure. the scale consisting of Twenty-two items (Elferink-Gemser et al., 2004). The Tactical Skills scale items are listed in the Table (1).

Table 1: The Tactical Skills Inventory Items (Elferink-Gemser et al., 2004).

| | | |
|--|--|---------|
| Knowing about ball actions | Declarative knowledge | |
| | I know precisely when or when not to pass the ball to a teammate | Attack |
| | I know exactly what to do if we're getting the ball (getting ball possession) | Attack |
| | I know precisely what to do afterwards when performing an action in a match | Attack |
| | If I have a ball , I know precisely who I have to pass to | Attack |
| Knowing about others | Declarative knowledge | |
| | My judgment on the play of the opponent is | Defense |
| | I rapidly recognize how the opponent plays | Defense |
| | I know where they are headed, even though I don't see my rivals | Defense |
| | I know where they're going without seeing my teammates | Defense |
| I know exactly what he's going to do if an opponent gets receives the ball | Defense | |
| Positioning and deciding | Procedural knowledge | |
| | Decisions I take during the matches on the proceeding actions are generally | Attack |
| | During a match, I know how to open up | Attack |
| | My positioning is generally during a match | Attack |
| | My overview (in possession of ball or in possession of ball by team) is | Attack |
| | My expectation (thinking of actions to proceed) is | Attack |
| | I'm good at making the right choices at the right times. | Attack |
| | In my trainer's view, my understanding of the game is | Attack |
| | My getting open and choosing position is | Attack |
| In my trainer's view, my positioning is | Attack | |
| Acting in changing situations | Procedural knowledge | |
| | My interception of the opponent's ball is | Defense |
| | My ball interception is | Defense |
| | quickly turn to my role as a defender if our team loses the ball during a match. | Defense |
| | I react quickly to shifts, from not owning the ball to having the ball | Defense |

Note: on a 6-point scale, items had to be answered, varying from 1 = very poor to 6 = excellent or from 1 = almost never to 6 = always, relative to top players in the same age group.

Competitive Behavior Scale

The scale aims to measure the competitive behavior of the athlete who needs care, guidance and training in psychological skills. It has been originally designed by "Dorthy Hariss". The

scale consists, in the initial form, of 50 statements. Allawi has quoted, localized and shortened the scale to 20 statements. The player answers the three alternative answers applying to (always - sometimes - never). The scale includes positive statements, which are (2-3-6-8-10-11-12-13-17). When correcting these statements, the grades are awarded as follows (3 always, 2 sometimes, 1 never). The scale includes also negative statements, which are (1-4-5-7-9-14-15-16-18-19-20) When correcting these statements, the grades are awarded as follows (1 always, 2 sometimes, 3 never). Therefore, the highest score of the scale has been 60 degrees, the lowest score 20 degrees, and thus the score of neutrality has been 40 degrees. (Allawi,1998). The test-retest reliability for the competitive behavior scale was ($r = 0.92$) and the validity coefficient between the highest and lowest quartile was ($t=5.73$). so, we can underline the validity and Reliability of the measure.

Experimental Design:

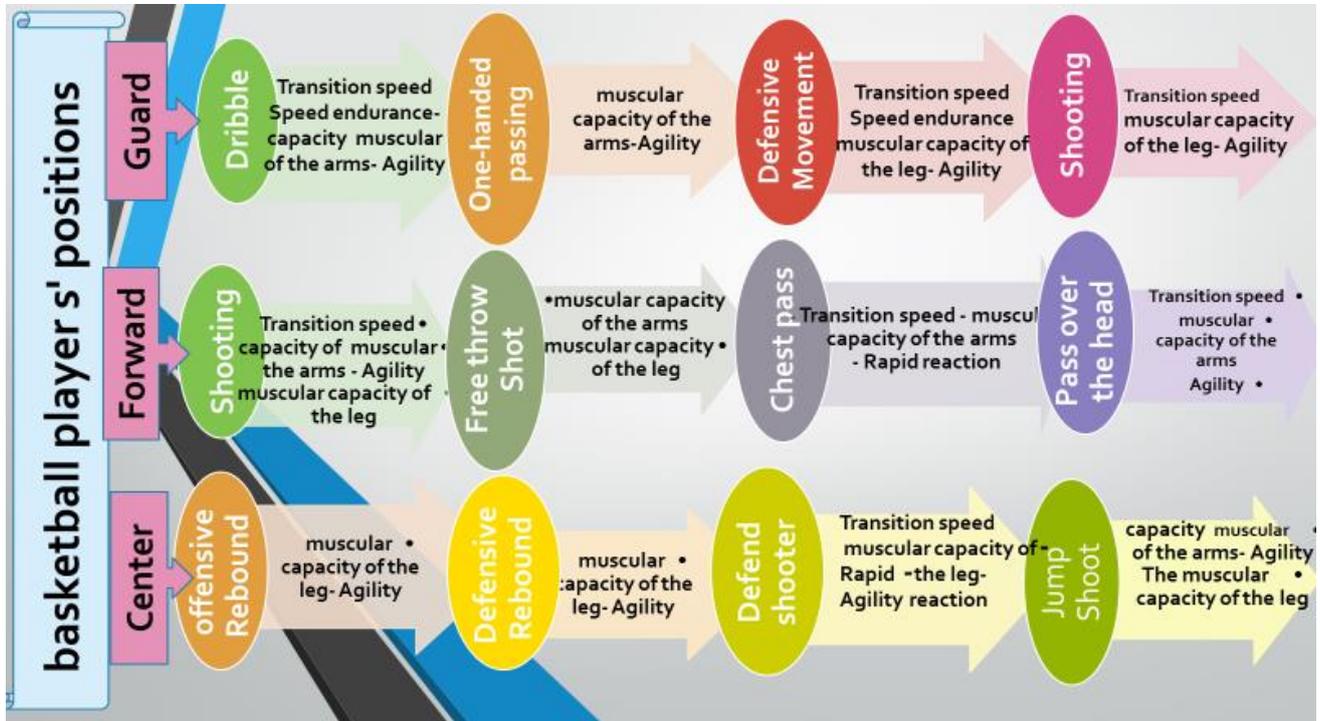
Specialized Training program

This research was conducted to assess the effect of Specialized Training program according to Basketball players' positions on Tactical performance and competitive behavior in junior basketball Players. This study was conducted following the pre-post test model of quantitative research methods. Thus, the measurements were established before and after the experiment in order to be able to compare and interpret the results obtained. The training program lasted 8 weeks and 3 times a week and each session lasted approximately 90 minutes. The participant had to perform 20 minutes warm-up first. This contained five minutes of moderate jogging, followed by 15 minutes of basketball specific movements. Afterward, the players were divided into two groups, the first one was the Specialized training group (STP) which divided into 3 groups (10 guards, 14 forwards, 6 centers) had to perform 60 minutes Specialized Training program according to the positions of Basketball players', and the second group was the Control group (CON) had to perform 60 minutes from Traditional training according to The program followed by their coach. The training was concluded with 10-minute cool-down for the two groups. In the beginning, before implementing the training program, the researcher identified the physical requirements for each playing position and determined the skills duties that must be completed for each position, and then developed a set of physical and skill exercises for each position according to the physical requirements and skill requirements of each basketball player position. the training Starting with a good warm-up before applying the training units because of its impact on developing the accuracy of performance. After that, the players were divided into their own playing centers (10 guards, 14 forwards, 6 centers) and each speciality was given its own physical training according to the playing position, while the control group carried out the training program prepared by their coach, which contains physical training for all players together without customization. Then the players were merged together again in the general skills training in basketball. The players were divided again into two groups (STP) and (CON). Specialized training group (STP) divided into their own playing centers (10 guards, 14 forwards, 6 centers) and each group was given its own skills training according to the play centers namely, the special skills training for each playing center was given separately. Figure (1) shows the results of the expert opinion survey on the motor skills of each player's

position and the physical characteristics required for each position's skill. Which was used as a guide in preparing the training program.

Fig. (1) The motor skills of each player's position and the physical characteristics required for each position's skill.

Statistical analyses



Using version 22.0 of the IBM SPSS program, all statistical analyses were carried out (Statistical Package for Social Sciences; IBM Inc., Armonk, NY, USA). which includes the following treatments: (arithmetic mean, median, standard deviation, correlation coefficient, skewness coefficient and t-test to test mean differences). For all variables, the independent sample t-test has been used to detect differences among the study groups and to define any substantial differences among the pre and post test groups for the dependent variables. To detect variations among pre and post measurements for each group, a paired sample t-test has been used. The statistical significance level was set at $P < 0.05$ for all the analyses.

RESULTS

Before the specialized training program, there were no intergroup variations in tactical performance and competitive behavior, but there were substantial variations among groups following the training program, as seen in the (Table 2). The two groups showed statistically substantial improvements among pretest and posttest in tactical performance and competitive behavior as shown in (Table 3). Figure 2 reveals the variations among pre and post measurements for (STP) group in tactical skills and competitive behavior, while Figure 3 reveals the variations among pre and post measurements for (CON) group in tactical skills and Competitive Behavior. After the Specialized Training Program in Tactical performance and competitive behavior, the (STP) group showed considerable progress better than the CON group. Figure 4 shows the differences between post measurements for (STP) group and (CON) group in tactical skills and competitive behavior. These results indicate that the specialized training program according to basketball players' positions had an effect on tactical performance and competitive behavior.

Table 2: Means, standard deviations (SD) and substantial variations in tactical skills and competitive behavior in basketball among the two groups in pre and post-measurement

| Variables | Pre-Test | | T value | P value | Post-Test | | T value | P value |
|--|------------------------|-------------|---------|---------|-------------|-------------|---------|---------|
| | (CON) group | (STP) group | | | (CON) group | (STP) group | | |
| | Tactical Skills | | | | | | | |
| Knowing about ball actions (point) | 12.17±1.58 | 11.97±1.25 | 0.55 | 0.89 | 13.37±1.45 | 18.86±1.79 | 13.05* | 0.00 |
| Knowing about others (point) | 15.17±1.21 | 15.27±1.28 | 0.31 | 0.89 | 16.83±1.32 | 22.56±1.77 | 14.21* | 0.00 |
| Positioning and deciding (point) | 23.97±1.49 | 24.23±1.43 | 0.71 | 0.85 | 25.47±1.36 | 33.00±1.85 | 17.94* | 0.00 |
| Acting in changing situations (point) | 12.43±1.83 | 12.13±1.25 | 0.74 | 0.76 | 14.06±1.89 | 19.16±1.66 | 11.09* | 0.00 |
| Total level of Tactical Skills (point) | 63.73±3.06 | 63.53±2.09 | 0.29 | 0.83 | 69.73±2.63 | 93.60±3.24 | 31.26* | 0.01 |
| Competitive Behavior | 43.00±1.86 | 42.75±1.95 | 0.89 | 0.76 | 48.56±1.98 | 55.63±1.87 | 5.42* | 0.00 |

*= significant at ($\alpha \leq 0.05$)

Table 3: Means, standard deviations (SD) and substantial pre- and post-measurement variations for the two basketball groups in tactical skills and competitive behavior

| Variables | (CON) group | | T value | P value | (STP) group | | T value | P value |
|--|------------------------|------------|---------|---------|-------------|------------|---------|---------|
| | Pre-Test | Post-Test | | | Pre-Test | Post-Test | | |
| | Tactical Skills | | | | | | | |
| Knowing about ball actions (point) | 12.17±1.58 | 13.37±1.45 | 9.89* | 0.00 | 11.97±1.25 | 18.86±1.79 | 15.05* | 0.00 |
| Knowing about others (point) | 15.17±1.21 | 16.83±1.32 | 10.81* | 0.00 | 15.27±1.28 | 22.56±1.77 | 16.12* | 0.01 |
| Positioning and deciding (point) | 23.97±1.49 | 25.47±1.36 | 11.24* | 0.00 | 24.23±1.43 | 33.00±1.85 | 21.90* | 0.00 |
| Acting in changing situations (point) | 12.43±1.83 | 14.06±1.89 | 12.45* | 0.00 | 12.13±1.25 | 19.16±1.66 | 18.41* | 0.00 |
| Total level of Tactical Skills (point) | 63.73±3.06 | 69.73±2.63 | 20.03* | 0.01 | 63.53±2.09 | 93.60±3.24 | 37.61* | 0.00 |
| Competitive Behavior | 43.00±1.86 | 48.56±1.98 | 4.21* | 0.00 | 42.75±1.95 | 55.63±1.87 | 7.39* | 0.00 |

*= significant at ($\alpha \leq 0.05$)

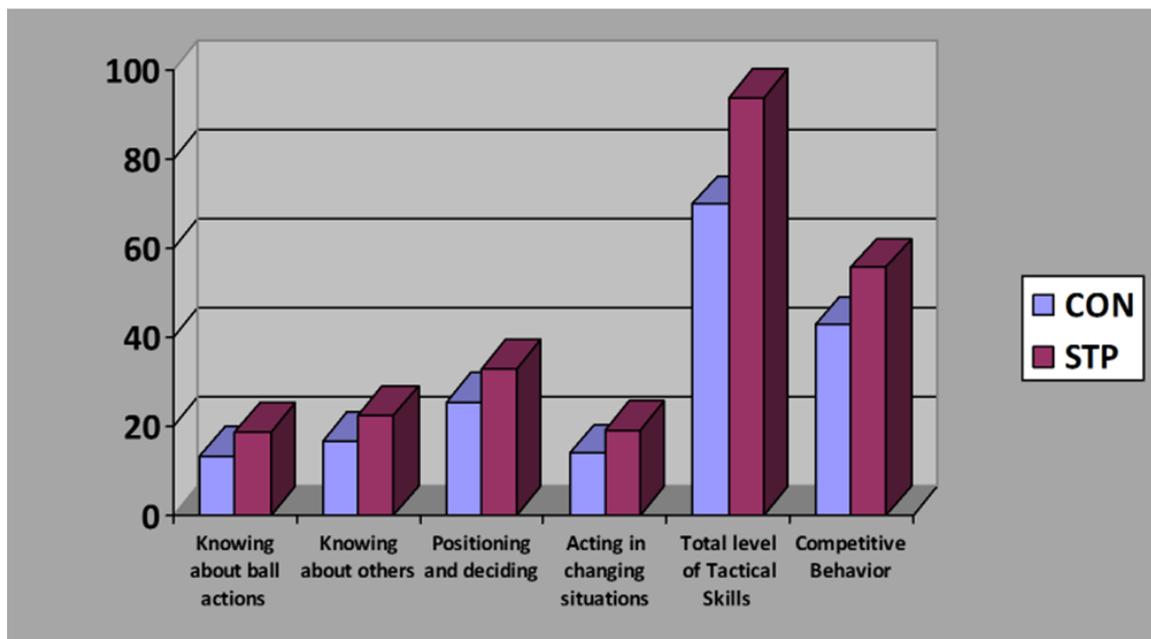


Fig.2: Differences between pre and post measurements for (STP) group in Tactical Skills and Competitive Behavior.

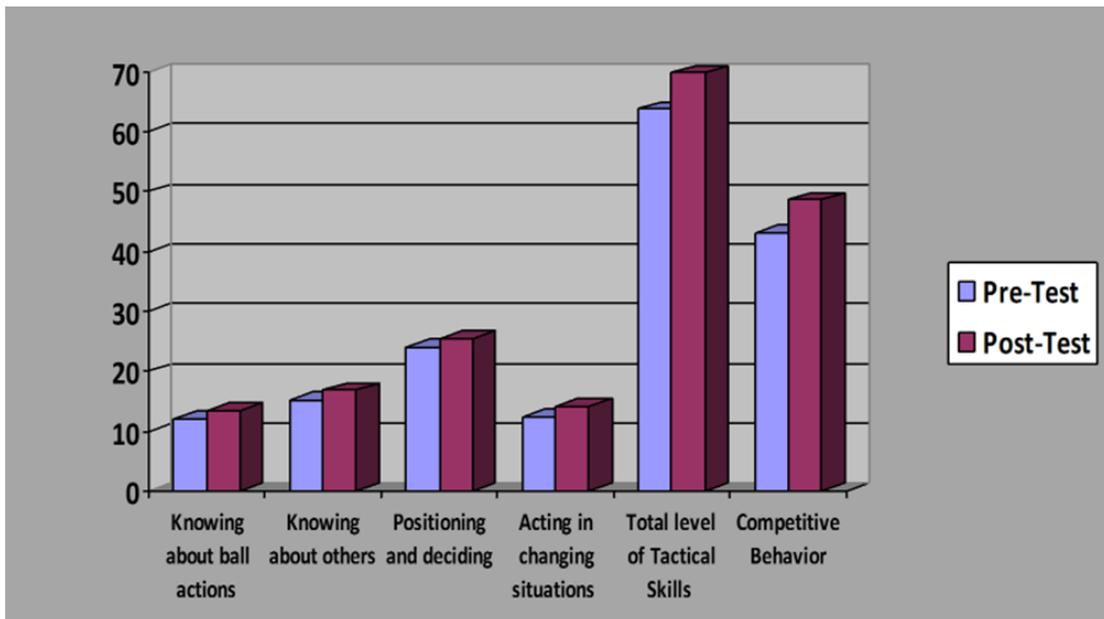


Fig.3: Differences between pre and post measurements for (CON) group in Tactical Skills and Competitive Behavior.

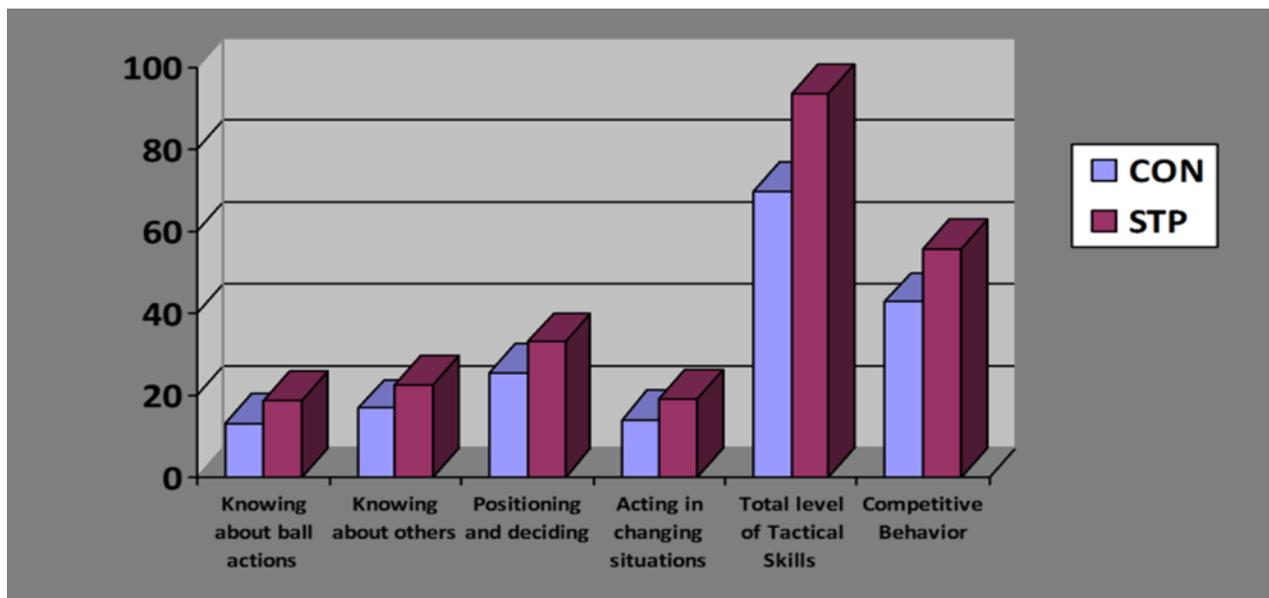


Fig 4: Differences between post measurements for (STP) group and (CON) group in Tactical Skills and Competitive Behavior.

DISCUSSION

The influence of a specialized training programme was evaluated in the current study according to basketball players' positions on tactical performance and competitive behavior in junior basketball players. The results showed that the STP group who received specialized training program had greater percentage of improvement on Tactical skills and competitive behavior than CON group who received only regular exercises prepared by their coach. The findings also revealed that there was a substantial difference in tactical performance and competitive conduct among the post assessments of the two groups.

In control group the improvement in tactical skills and competitive behavior could be due to the influence of adopted training program prepared by their coach which included on physical training and skill training for all players together without customization which carried out three

times per week, this contributed to improve tactical skills and competitive behavior. That is clear in Table 2 which reveals the significance differences among the pre- tests and post-tests for (CON) group after practice the regular basketball training prepared by their coach. and clear in Figur 3 which illustrates the variations among pre and post measurements for (CON) group in Tactical Skills and Competitive Behavior.

In specialized training (STP) group, there have been substantial enhancement in the components of tactical skills evaluated by measuring (knowing about ball actions, knowing about others, positioning and deciding, and acting in changing situations). That is clear in Table 2 which reveals the significance differences among the pre- tests and post-tests for (STP) group after practice in specialized training program, and clear in Figur 2 which reveals the differences among pre and post measurements for (STP) group in tactical skills and competitive behavior. This could be due to the effect of specialized training program according to basketball playing positions Which lasted for 8 weeks, each session lasted about 90 minutes, three times a week, the (STP) group divided into 3 groups (10 guards, 14 forwards, 6 centers) and then each group was given physical and skill specialized exercises for each playing position. the session Included 20 minutes warm-up (five minutes of moderate jogging, followed by 15 minutes of basketball specific movements.), 60 minutes specialized training (physical and skill training) for each playing position and 10 minutes cool-down. In addition to regular exercises performed by the athletes.

CONCLUSION

Acknowledging other important aspects related to tactical performance development and competitive behavior in basketball, this study provides increased understanding of the development of tactical skills and competitive behavior in basketball players through adolescence related to physical and skill requirements necessary for them according to the playing positions. Our results showed that the Specialized Training program according to basketball players' positions resulted in larger improvements in tactical performance (knowing about ball actions, knowing about others, positioning and deciding, and acting in changing situations) and competitive behavior in junior basketball players. So, coaches may need to design specialized training in the preseason preparation for youth athletes, since this type of training can be successful in enhancing tactical performance and competitive behavior. In addition, the position-related criteria of the guard, forward and center positions must be understood by coaches, trainers and players.

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