Full Length Research Paper

The case of male volleyball players’ team cohesion in Turkey

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The purpose of this study was to investigate the case of team cohesion of male volleyball players in line with the variables of age, status of a national player, the year of playing volleyball and success status in their branches in Turkey. The sample of the study includes 105 male volleyball players who attend Star Men Volleyball Turkey Championship, organized in Ankara in 23 to 28 July, 2014. The data which concerns team cohesion was gathered through the Group Environment Questionnaire (GEQ) in Team Sports. In this study, according to the results of analysis that concerns the sub-dimensions of team cohesion, significant difference was found between following items: according to the status of a national player variable, individual attraction to group-task level with group integration-social level (t=2.91, sd=103, p=0.00; t=2.22, sd=103, p=0.02); according to the year of playing volleyball variable, group integration-task level (F(4,100) = 2.87, p<0.05); according to the success status in their branches in Turkey variable, group integration-task level (F(2,102)= 3.88, p<0.05). In addition, it was found that there was a significant positive relationship between players’ success status in their branches in Turkey and their success in their own teams compared to other players (r=0.70). Results were discussed in line with findings and suggestions were offered.

Key words: Team cohesion, volleyball player, success.

INTRODUCTION

Socialization process that allows participation in the norms, values or behavior model of the group or community, in which people live, plays an important role in establishing social bond. Social activities and commitment task constitute the focal point of people in personal sense. The high level of concepts such as commitment within the team, intimacy and assignment and cooperation has led to the rise of group integrity level (Uygur, 2006).

Team is an organizational community constituted of members who have ideally similar or complementary skills, believe in great common purpose and common values, and, who have performance goals and evaluate themselves with these goals. One of the main features of the team is to create a synergy between the members. This synergy means to reach behavioral cohesion by
establishing a close link between members and mutual support (Tatar, 2009).

The team cohesion is identified with wider sociological term “group cohesion”. Both are expressed as commitment, togetherness or adhesion group holding or a team work together for a specific target (Sortullu, 2011). Team cohesion implicitly carries the opinion people assume as “The bigger the cohesion of the team is, is the bigger the success”, this definition is as follows:

It is a reflection in a dynamic process of the tendency of remaining in cohesion in order to achieve the goals of a group or satisfy individual needs (Uygur, 2006).

One of the major factors that make the team successful or failed is the team spirit and team cohesion. The teams that work together with have high harmony and compatibility, accepting each other, working for the success of each other and complement each other are the ones always creating the success and the biggest candidates in the permanency of the success. Harmony and trust is the basis of team spirit (Biger, 2006). The integration of people that forms the team is very important for creating a team that leads to success. Team integration facilitates the emergence of team performance. While facilitating the team performance by the team integration, emotional, mental stability and continuity should be achieved. It is difficult for the athletes and teams to suffer from constant emotional and intellectual fluctuations (Kanter, 2004).

Performance in team sports is observed by the sum of the performance of individuals within the team. Athletes, such as groups in the same work environment must close the deficits of each other, must do the things that are not done by the other athletes in the team and take the necessary responsibilities. In general meaning, tending to a common purpose as a team preparation is a suitable environment to achieve high performance of individuals in terms of intensity and likelihood of tasks of the individuals. Consequently, if everyone did their best that they could do, they can get the best that the team can do in total, thus leading to create synergies. On the other hand, tending towards a common goal as a team requires assistance and working together, and fulfilling a mission fully depends on the performance of more than one person. Thus, working as a team also brings social communication and interaction (Kocaeli, 2010).

Success has the potential of allowing strong interpersonal relationships and positive group morale to develop. Carron (1982) developed an operational definition that describes group cohesion as a multidimensional entity. Carron (1982) proposed that cohesion has both task and social properties that comprise both individual and group aspects. In developing a multidimensional model of group cohesion, Carron (1982) further proposed both antecedents and consequences of group cohesion. The antecedents of group cohesion were placed into four categories:

1. Leadership
2. Situational
3. Personal
4. Team factors (Brawley, 1990).

The consequences were identified in two categories:

1. Individual
2. Group outcomes

Subsequently, Carron et al. (1985) developed the Group Environment Questionnaire (GEQ) to quantify group cohesion as a multidimensional property. There has been a considerable amount of research dedicated to understanding the relationship of cohesion to many group related factors such as group size (Widmeyer et al, 1992), group performance (Williams and Widmeyer, 1991), sport interaction level (Matheson et al., 1997) and coaching behavior (Wester and Weiss, 1991) to name a few.

In Turkey, there have been studies on this subject with the work done in recent years but it remains limited. The pioneer study on this field is the doctoral thesis of Morali (1994) titled “Comparison of Team Cohesion Levels in Team Sports”. Morali (1994) translated the inventory developed by Carron et al. (1985), and this study used the Group Environment Questionnaire (GQE) into Turkish and made reliability studies for the Turkish society. In this study, the cohesion level of teams in different sports disciplines was investigated, it was found that the team cohesion level of footballers is higher than the handball players, “group integration-social” a sub-dimension of team cohesion is in the lowest level and “individual attraction to group-task” is in the highest level. According to another study carried by Akyüz (2003), the commitment within the sports group in teams and the effects of team cohesion on performance were examined, as a result it was revealed that the players’ attention and faith for the commitment within the team directly affect the performance and motivation of the team’s success.

Achieving the target success as a result of showing high performance of multiple athletes together in team sports has increased the importance of team cohesion. Therefore, in this study, the cohesion of the athletes in the team was measured. The purpose of this study is to examine the cases of male volleyball players’ team cohesion in terms of personal and team factors in accordance with age, status of a national player, the year of playing volleyball and success status in their branches in Turkey variables.

**METHODOLOGY**

This study aimed to determine the relationship between the sub-dimensions of team cohesion of male volleyball players. The study also investigated the effects of age, status of a national
player, the year of playing volleyball and success status in their branches in Turkey. Determining the mentioned relationship and the effects of the variables as age, status of a national player, the year of playing volleyball, and success status in their branches in Turkey is the main aim of this study.

Research design

In this study, both monitoring (descriptive) and the relational model were used. According to Karasar (2000), monitoring models are research approaches aiming to describe the existing shape of a situation in the past or currently exists. Event, person or object which is subject to the research is defined in their terms. Within the context of this research, the cohesion levels of volleyball players (it is intended to reveal the present case) were determined (Creswell, 2005; Fraenkel and Wallen, 2009).

Samples

The study group of this research comprised of 105 male volleyball players from 16 teams who participated in the Turkey Stars Men's Volleyball Championship held in Ankara on 23 to 28 June 2014.

Instrumentation

Group environment questionnaire (GQE)

The adaptation of team cohesion in team sport for Turkish population of “The Measurement of Cohesion in Sport Team; Group Environment Questionnaire” (GQE) developed by Albert et al. (1985) was made by Morali (1994). GQE used for the measurement of team cohesion includes measuring the team cohesion and thoughts of the team members on their team. The GQE is 9-point Likert-type, and consists of a total of 18 questions and 4 sub-dimensions:

1. Individual attraction to group-task: This consist of a set of group questions related to individual charm, group task as an individual, and of the questions covering the social aspect of the group (2, 4, 6 and 8). In individual charm information about feelings of team members, the group task, the efficiency of the group, and the purpose and objectivity of the group is enabled. If the study give an example of this dimension, in response to the judgment of “I do not like the way this team plays”, strongly agrees indicate a low level of attraction; strongly disagreed indicates a high level of attraction.

2. Individual attraction to group-social: In questions concerning the group-social dimension in individual attraction, there are questions about the feelings of the individual team members, effective in the group in social aspects and the group's attraction (1, 3, 5, 7 and 9). For example, in responses to the judgment of “Some of my best friends are playing in this team” strongly agreed shows a high level of attraction, strongly disagreed indicates the low level of attraction.

3. Group integration-task: There are questions about the cohesion of the group (10, 12, 14, 16 and 18). Social activities and tasks constitute the focal point of the individual. Group integration-task measures to individual perception of team members within the team on commitment, proximity and collaboration. For example, in response to the judgment of “Our team is together in line with the efforts to achieve the performance targets”, strongly disagreed is at the lower level and strongly agreed states the high level of participation.

4. Group integration-social: In group integration-social dimensions there are questions about the individual perceptions of group members towards commitment, proximity, similarity, and socialization within the team (11, 13, 15 and 17). For example, in response to the judgment of “team members do not come together except training and competition”, strongly disagreed indicates a low level of social cohesion, strongly agreed indicates a high level of social cohesion.

The GQE consists of 18 items including dimensions such as 4 statements for “individual attraction to group-task”, 5 statements for “individual attraction to group-social”, 5 statements for “group integration-task” and 4 statements for “group integration-social”. Some of these materials are negative and some are positive. Cronbach Alpha coefficients according to the sub-dimensions of the original study are respectively 0.75, 0.64, 0.70 and 0.76.

Data analysis

In the analysis of data gathered by the researchers, the frequency and percentages for the findings concerning demographic characteristics of volleyball; ANOVA for comparison of scores in independent measurements (one-way ANOVA, independent sample t-test) and Tukey test were used to determine which groups have the significant differences, and Pearson's correlation multiplication test was used to examine the relationship between sub-dimensions. Statistics Program (SPSS 20.0) was used for the analysis.

RESULTS

The findings concerning the demographic characteristics of the male volleyball players were examined; the relationship between the sub-dimensions of the GQE and the statistical result of the findings was used to determine the differences between the groups in terms of the variables as age and status of a national player. The year of playing volleyball and success status in branches in Turkey are included. Demographic information about male volleyball players participated in the study is presented in Table 1.

According to Table 1, the distribution of the male volleyball players who participated in this survey by age is 38 players in 10 to 14 years ranges (36.2%) and 67 players in 15 to 19 years range (63.8%). The distribution by national cases is 38 players who played in the national team (36.2%), and 67 players who do not play in national team (63.8%); distribution by the years for playing volleyball is 23 players for 1 to 2 years (21.9%), 43 players for 3 to 4 years (41.0%), 29 players for 5 to 6 years (27.6%), 6 players for 7 to 8 years (5.7%), 4 players for 9 to 10 years (3.8%).

According to Table 2, when the relationship between sub-dimensions of team cohesion was considered, a positive significant relationship between individual attraction to group-task and group integration-social ($r=0.501^{**}$) were found, a positive significant relationship between individual attraction to group-social and group integration-task ($r=0.455^{**}$) were found, no relationship between other sub-dimensions was found. When Table 3 was examined, as a result of the statistical analysis, there were no significant differences between the average scores of the answers given to the statement concerning
Table 1. Demographics of volleyball players participated in research.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>10-14</td>
<td>38</td>
<td>36.2</td>
</tr>
<tr>
<td></td>
<td>15-19</td>
<td>67</td>
<td>63.8</td>
</tr>
<tr>
<td>Status of a national player</td>
<td>Yes</td>
<td>38</td>
<td>36.2</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>67</td>
<td>63.8</td>
</tr>
<tr>
<td>The year of playing volleyball</td>
<td>1-2</td>
<td>23</td>
<td>21.9</td>
</tr>
<tr>
<td></td>
<td>3-4</td>
<td>43</td>
<td>41.0</td>
</tr>
<tr>
<td></td>
<td>5-6</td>
<td>29</td>
<td>27.6</td>
</tr>
<tr>
<td></td>
<td>7-8</td>
<td>6</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>9-10</td>
<td>4</td>
<td>3.8</td>
</tr>
<tr>
<td>Success status in branches in Turkey</td>
<td>Best</td>
<td>41</td>
<td>39.0</td>
</tr>
<tr>
<td></td>
<td>Middle</td>
<td>60</td>
<td>57.1</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>4</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Table 2. The relationship between the sub-dimensions of team cohesion.

<table>
<thead>
<tr>
<th>Sub-dimensions</th>
<th>IAGT</th>
<th>IAGS</th>
<th>GIT</th>
<th>GIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual attraction to group-task (IAGT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual attraction to group-social (IAGS)</td>
<td>-0.022</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group integration-task (GIT)</td>
<td>-0.160</td>
<td>0.455**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group integration-social (GIS)</td>
<td>0.501**</td>
<td>-0.005</td>
<td>0.022</td>
<td></td>
</tr>
</tbody>
</table>

p<0.01**.

Table 3. Differences between sub-dimensions scores of team cohesion by age variable (t test).

<table>
<thead>
<tr>
<th>Team cohesion</th>
<th>Age</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual attraction to group-task</td>
<td>10-14</td>
<td>38</td>
<td>12.000</td>
<td>8.337</td>
<td>-1.974</td>
<td>0.051</td>
</tr>
<tr>
<td></td>
<td>15-19</td>
<td>67</td>
<td>15.358</td>
<td>8.402</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual attraction to group-social</td>
<td>10-14</td>
<td>38</td>
<td>28.868</td>
<td>6.854</td>
<td>-1.572</td>
<td>0.119</td>
</tr>
<tr>
<td></td>
<td>15-19</td>
<td>67</td>
<td>31.000</td>
<td>6.573</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group integration-task</td>
<td>10-14</td>
<td>38</td>
<td>29.552</td>
<td>6.280</td>
<td>-1.108</td>
<td>0.271</td>
</tr>
<tr>
<td></td>
<td>15-19</td>
<td>67</td>
<td>31.089</td>
<td>7.121</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group integration-social</td>
<td>10-14</td>
<td>38</td>
<td>16.973</td>
<td>6.188</td>
<td>-0.987</td>
<td>0.326</td>
</tr>
<tr>
<td></td>
<td>15-19</td>
<td>67</td>
<td>18.283</td>
<td>6.719</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p<0.05.

When the Table 4 was examined, as a result of the statistical analysis, a significant difference between the mean scores of the responses for the team cohesion regarding the status of national player concerning the sub-dimensions of “individual attraction to group-task” and “group integration-social” was found (p<0.05). There were no significant differences in other dimensions according to the national player variable (p>0.05). According to the findings, the national athletes (17.23) were more significant than the players who are not in the national team. National players (19.65) reported more
There is a significant difference between the average score of the answers given concerning their perception towards the judiciary “group integration-task” which is a sub-dimension of team cohesion ($F(2,102)=3.881$, $p=0.24$). There was no significant difference regarding the variable of the success of players across Turkey in their branch ($p>0.05$).

According to the multiple comparison test results, in the evaluation of the situation of athletes for the success of players across Turkey in their branch, there is a significant difference between intermediate level and failed level in accordance with “group integration-task” sub-dimension ($p<0.05$). The average score of responses to the intermediate level is 31.566, the average score of failed level is 22.500.

**DISCUSSION**

In this study, the case of male volleyball players’ team
cohesion was examined in terms of personal and team factors according to the variables age, status of a national player, the year of playing volleyball and success status in branches. This study has revealed that there is a positive correlation between the sub-dimensions of team cohesion and there are significant differences according to their ages, year of playing volleyball, national status and achievements in the branches in Turkey. In addition, according to the obtained results, it could be said that the team cohesion contributes to team success.

When the relationship between sub-dimensions of the GQE is examined, a positive significant relationship between individual attraction to group-task and group integration-social \( (r=0.501**) \), and a positive significant relationship between individual attraction to group-social and group integration-task \( (r=0.455**) \) have been observed, no relationship has been found in other sub-dimensions. There is a positive parallelism with the dislike of the male volleyball players for playing the styles of their teams, thoughts for not developing themselves in the team, not finding the time and desire enough for playing and winning affect the relationship between teammates in a negative way and the dissatisfaction of players do not want to spend time outside of training and matches together with their teammates.

This situation could be interpreted as when the dissatisfaction of the team members are getting higher, the desire of players not to spend time together with team members is also getting higher. Also, there is a positive parallelism between being interested in participating in social activities with team members, longing teammates, thinking their team as to be the most important social activities and to improve the team performance, being union with team members and helping each other, and in communication regarding the responsibilities of team members. This case can be interpreted that when the situation of players being in a cohesion with teammates and share their responsibilities is increased, their desire to give more value to each other to spend time and participate in social activities with the team members.

In varying of sub-dimensions of team cohesion according to the age; as a result of the statistical analysis there was no significant difference between the average scores of the responses given to the judiciary for team cohesion depending on the variable of age of the player \( (p>0.05) \). Soyer et al. (2010) in their study found a negative significant difference between the team cohesion and age of the respondents in 0.01 level \( (r=-0.192**) \). They interpreted this difference as due to the decrease of team cohesion when the age grows. Tatar (2009) in his study, according to age group variable, found a significant difference between the responses given to the judiciary for perception of “group integration-task” which is a sub-dimension of team cohesion \( (p<0.05) \). The difference is between the groups of athletes at the age of 20 and below with athletes group at the age of 26 years and older, it was found that compared to the other group, understanding of “group integration-task” of the group at the age of 20 years and below is stronger. These results suggest that when they are getting older, behave more individually; the players in small ages are more commitment to the team cohesion. These results do not support the results obtained in this study. In this study, it could be interpreted that the reason why the players play in the star team level differentiated by the age variable in team cohesion is that the players are in learning-development period and their ages are too close to each other.

According to the findings, the national players (17.23) were more significant than the players who are not national (12.38) in individual attraction to group-task sub-dimension. It was revealed that the dissatisfaction of national volleyball players for playing style of their teams, thoughts for not developing themselves in the team, not finding the time and desire enough for playing are much more than the non-national players. This situation could be interpreted as the national players do not consider their team as sufficient for their personal development, and they have more expectations on their development and motivations from their teammates and their coaches in order to improve the performance. The confidence in his teammates and coaches of players, not like the style of play of teams can raise their level of success and increase team cohesion graphics.

In varying the sub-dimensions of team cohesion by national status, national players (19.65) reported more significant opinion compared to non-national players (16.76) in “group integration-social” sub-dimension. It was emerged that the national team players think to create opportunities for having fun, spending time together with their teammates much more than the non-national players. Given that the national players are more focused on the team success, they want to participate more in social activities with their teammates, have fun and spend time together. This case can be interpreted as spending time together with teammates to team cohesion may affect team success positively.

In varying the sub-dimensions of team cohesion by the year of playing volleyball, the players who play 5 to 6 years (32.379) reported more significant opinion than the players who played 1 to 2 years (26.652) in “group integration-task” sub-dimension. The players who played for 5 to 6 years want to be in communion with team members to improve their performance, to help each other, and to be in communication regarding the responsibilities of the team members much more compared to players who played for 1 to 2 years. It could be said that when the years of playing of the players increase, their unity level in the team and their motivation level to reach the goal increase as well. Therefore, it can be thought that when the playing year increases, at the same time the team success will increase. Dorak and ve Vurgun (2006) in their study found the team cohesion level of inexperienced athletes who play team sport
higher than the experienced athletes and as a result of this is interpreted as when the athletes are becoming more experienced, they are more focused on themselves. The result of this study does not support the result obtained in this study.

In varying the sub-dimensions of team cohesion by the success status in branches in Turkey, players in intermediate level (31.566) reported more significant opinion than the failed players (22.500) in “group integration-task” sub-dimension. The players in intermediate level want to be in communion with team members to improve their performance, to help each other, and to be in communication regarding the responsibilities of the team members much more compared to failed players. Athletes increase their success by adopting their tasks and their sports within the team to improve their performance; the increase of their success plays an active role in the increase of their commitment in the team. It could be assumed that the cohesion within the team increases, at the same time the team success increases.

As the unity does not occur in failed players, this can reduce the team success of the players. Grieve et al. (2000) reports that the performance has more impact on the cohesion. Uygur (2006) in his study, found a significant difference between successful and unsuccessful groups at $p<0.05$ level according to their success status in the sub-dimension of team cohesion. He discovered that in group integration-task sub-dimension, the successful and intermediate teams are in a good level in terms of commitment, proximity task cooperation compared to the failed teams. Many researchers believe there is strong relationship between cohesion and success. Carron et al. (2002), Murray (2006), Moradi (2004), Huang (2004) and Rang (2002) found that highly cohesive teams were more successful than teams with lower levels of cohesion. Grieve (2000) found that success has more impact on cohesion than cohesion on success. The result of this study supports the results obtained in this study.

According to the research results, the cases such as the dislike of the volleyball players for playing style of their teams, thoughts for not developing themselves in the team, not finding the time and desire enough for playing and winning affect the relationship between teammates in a negative way; which is why players dissatisfied do not want to spend time outside of training and matches together with his teammates. Moreover, the players who are together with their teammates in order to improve the performance of the team would like to participate in more social activities, and spend time with his teammates outside the training and competition. Expectations of the national players are more than the non-national from their team and coaches. In order to improve their performance, they want to stay in the game more, focus on success as a team, change their style of play if necessary. In addition, national players want much more than non-national players to spend time and have fun with the team members outside of training and matches. Level of cohesion in the team is increased in players who play volleyball more years; also these players compared to the players who play in a less time attribute more importance on the responsibilities. The players who are successful in intermediate level in their branches in Turkey are in more cooperation with team members and want to share the responsibility by communicating with team members for the performance and the cohesion of their team compared to players who have failed in general in their branches.

**Conclusion**

According to the results obtained from this study, it is necessary to determine and correct the discontent of the players within the team, plan social activities that team members can spend time together, identify and meet the expectations of national players, and in order to improve the cohesion feelings of players who are not national and play volleyball in a short time, to make a plan together with the team members. In addition, it would be appropriate to repeat behaviors such as collaboration, communication, cooperation and sharing, in order to motivate players who think themselves unsuccessful in the team and to raise their cohesion level within the team, and include unsuccessful players to the game a lot more.

**Conflict of Interests**

The authors have not declared any conflicts of interest.

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