Determination of The Assertiveness and Problem Solving Skills of Basketball and Volleyball Referees

Rıdvan Ekmekçi

1 Pamukkale University, Faculty of Sport Sciences, Department of Sport Management, Denizli, Turkey.

ridvanekmekci@gmail.com

Abstract

It is very important to determine sport officials’ problem solving skills and assertiveness as a manager on the court. The purpose of this study was to examine assertiveness and problem solving skills of basketball and volleyball referees. 214 basketball referees (186 males and 28 females) ranging in age from 21 to 48 years (M = 28.58, SD = 4.69) and 177 volleyball referees (112 males 65 females) ranging in age from 23 to 55 years (M = 39.21, SD = 6.36) participated to this study voluntarily (N= 391). Hypothesis was basketball referees assertiveness and problem solving skills are better than volleyball referees. Rathus Assertiveness Inventory (RAI) and Problem Solving Inventory (PSI) were applied to the referees. As a result, basketball (X_{RAI} = 92.20±12.71; X_{PSI} = 94.14±10.39) and volleyball (X_{RAI} = 89.34±13.15; X_{PSI} = 108.65±17.88) referees’ average score of RAI and PSI found as middle level. According to Mann-Whitney U test findings, statistically significant difference revealed in favor of basketball referees (p <0.05). From the point of information on high scores received from PSI shows one cannot find effective solutions in the face of problems, basketball referees (X=94.14±17.88) can find more effective solutions than volleyball referees (= 108.65 ± 10.39).

Keywords: Problem solving, assertiveness, sport, basketball, volleyball
INTRODUCTION

Referees are the people responsible for the application of the rules on the game field. However, apart from the regulatory role taken on by the referees, they have to perform other tasks as well. These tasks involve developing judgment skills in order to assess leadership, demonstrate prompt decision-making and also interpret situations as they are by the application of relevant laws and regulations. In order to perform all these activities referees must be assertive in their behavior and develop their problem-solving skills to the fullest.

Assertiveness is a characterization of how a person responds in a situation in which her positions and/or interests are, or could be, in conflict with others’ positions or interests (Ames, 2009). In the literature, assertiveness has been defined (Wolpe & Lazarus, 1966) as the capacity to effectively communicate in interpersonal encounters by sharing ideas clearly and directly (Matthew & Aleksander, 2006).

A referee regulates the rules in the game. Referees are the managers on the court who controls all the players and others. Therefore, in order to manage and maintain such a personality which is able to impose all the laws and regulations of the game, referees need to manage their personality and traits. Among these qualities, the referees need to develop problem-solving skills which can be applied on the field to resolve issues and get on with the game. In addition, the referee must demonstrate assertive behavior. He must be present in the field yet should not interfere with the game and the players. The referee should be able to pass a judgment quickly and confidently and this would only be possible if the referee has a good grip on all the regulations governing the game. After athletes and coaches, officials are third dimension of athletic contest; yet officials perform one of sport’s most difficult tasks (Weinberg & Richardson, 1990). But their perform effects on players perform, therefore they need to be able to perform both physically and mentally on the court. Moreover, cognitive features of the officials are more important than other attributes.

For several years now, researchers have been able to study both the affective as well as the cognitive aspects of human problem-solving (Sternberg, 1997; Sternberg & Grigorenko, 1997). The construct of problem-solving style has been identified and distinguished from measures of creative thinking ability and achievement (Treffinger, Selby, Isaksen & Crumel, 2007).

Why Referees Struggle?
What causes the referees to struggle on the game field is the pressure that mounts up. The reasons for the pressure are that the referee might pass a poor decision at crucial moments of the game. Therefore the match officials of referees need to develop some mental and physical skills to deal with the pressure that arises. Among the mental skills required, the primary focus always lies on the referee being consistent with his performance and judgment. The consistency arises from blocking out distractions, both internal and external. Sometimes the referee may get intimidated by the players who rush up to him and complain. However it is up to the referee to keep in mind that the players are arguing with the uniform, not with the person himself. This allows the referee to be assertive in his behavior by confidently taking decisions without being under influence and enhances the problem solving abilities on the ground. Assertiveness is defined as the ability to use authority and power while protecting and preserving the rights of others. It allows people to behave according to their will and express their feelings honestly while keeping in mind that their behavior may affect others as well. (Guven, 2010)

Expectations from Referees

Experience has shown that referees’ lack of consistency creates some problems. Officials themselves recognize the importance of consistency in their work. A study of basketball officials found that 73% of the sample agreed with the statement “I believe that consistency in one’s officiating is more important following the rules to the letter” (Weinberg and Richardson, 1990). Referees need to give full concentration to make good decision on the court. Also they need to have well communication skill with players, coaches and staff. They need to be a good team with the colleagues. But never forget that “it is not referees job to make happy everyone”.

What are Problem Solving Skills?

Problem solving can be considered as a complex cognitive function (Taugne & others, 2008). Problem solving skills are defined as the complex demands both internal and external those need to be met in order to integrate different behavioral processes (Heppner & Krousakopf, 1987). To put it in simple words problem solving skills are the ability to identify the best way for removing obstructions that keep from achieving the main target (Morgan, 1999). In terms of referees the problem solving skills is the ability of the referee to ensure that the game play is smooth and that the referee is able to deal with normal and extraordinary problems that arise during the match.
What is Assertive Behavior?

While the referees need to possess skills that solve issues and problems that arise however the referees must also maintain good behavior at all times. Good behavior does not necessarily mean that the referee should behave well even with those who commit fouls or break the rules of the game. The referees must maintain assertiveness at all times. Assertiveness is defined as the middle ground between passive and aggressive behavior. Assertiveness refers to the positive behavior that is vital because it allows you to be viewed as well behaved yet resistant to non-compliance (Öztürk, Koparan & Efe, 2009).

Assertiveness is the kind of behavior that allows the referee to maintain the integrity of the players yet penalize them for any fallacies that they commit. It is a method of expressing your own rights while maintaining the integrity of the rights of other people (Guven, 2010)

How does Assertive Behavior lead to better Problem solving skills?

A high level of assertiveness has a positive impact on the skill set and mindset of the referees. An increased confidence and assertiveness level supports the physiological and psychological state of the referees which allows them to stay calm in pressure situations and allows them to take rational and fair decisions without being intimidated by anyone (Sorias, 1986) Therefore if you know your rights and respect the rights of others, that is when you start to demonstrate positive “assertive” behaviour which can lead to the referee running the match smoothly without obstacles and threat of being influenced (Alberti & Emmons, 1973)

Comparison of the Behavior and Skill set of Basketball and Volleyball referees

Due to sport of basketball complex structure and rules, basketball referees cognitive and behavioral skills must be better than volleyball referees. Hypothesis is basketball referees assertiveness and problem solving skills are better than volleyball referees.

**METHODS**

Participants

The people who participated in the study (N=391) included 214 basketball referees (186 males and 28 females) ranging in age from 21 to 48 years ($M = 28.58, SD = 4.69$) from the Turkey Basketball Federation Classification Referee Seminar who were put against 177 volleyball referees (112 males 65 females) ranging in age from 23 to 55 years ($M = 39.21, SD$
from the National Referee Development Seminar. Both Seminars were held on the same date in order to collect raw data for the sake of interpretation.

Materials and Procedure

A survey was carried out in 2016 to assess the assertiveness and problem solving skills of referees by contrasting basketball referees with volleyball referees. The methodology used in the survey involved the use of two software namely the PSI “Problem Solving Inventory” and the RAI “Rathus Assertiveness Inventory”.

How was the data collected?

Data collected by the RAI: The referees were given questionnaires that contained 30 questions. The composition of the 30 items was 13 positive and 17 negative items. Positive items were to be rated on a scale of 1 – 6 with 6 depicting “Fits perfectly” and 1 being “Never fits”. For negative items the scoring was carried out in the opposite fashion. The behavior of the referee was assessed on the basis of a scoring scale that would rate the answers given by them. If the scores were between 80 – 130, the behavior was termed as inhibited, if the score was between 80-130, the behavior was termed normal and if the score was between 130-180, it was termed as assertive behavior.

Data collected by the PSI: The scale included 35 items with a mix of both positive and negative items. Among the 35, 32 were to be assessed. The minimum score that could have been achieved was 32 whereas the maximum score was 192. It is obvious that the referee with high scores were deemed to have a higher degree of problem solving skills.

How was the data analyzed?

Arithmetic mean and standard deviation methods, independent sampling and Mann – Whitney U testing were applied to analyze the data and obtain useful information.

RESULTS

After the data was collected and the results were achieved, various testing methodologies were applied to the results to get useful information on the behavior and skills of the referees. Data was exposed to various testing methods. The tests involved determining whether the probabilities assigned were normally distributed. The Kolmogorov-Smirnov test was applied to assess the normality and the data was found to be normally distributed (p>0.05).
The equality of the variances also had to be assessed because the variances may arise due to
the referees belonging to different sports. For this purpose the Levene test was applied on the
data to test the statistical difference.

Table1. Basketball and Volleyball Referees’ Rai and Psi Values

<table>
<thead>
<tr>
<th>Sport Branch</th>
<th>Score</th>
<th>n</th>
<th>Minimum</th>
<th>Maximum</th>
<th>X</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basketball</td>
<td>RAI</td>
<td>108</td>
<td>45</td>
<td>124</td>
<td>92.20</td>
<td>12.71</td>
</tr>
<tr>
<td></td>
<td>PSI</td>
<td>106</td>
<td>46</td>
<td>125</td>
<td>94.14</td>
<td>10.39</td>
</tr>
<tr>
<td>Volleyball</td>
<td>RAI</td>
<td>93</td>
<td>64</td>
<td>132</td>
<td>89.34</td>
<td>13.15</td>
</tr>
<tr>
<td></td>
<td>PSI</td>
<td>84</td>
<td>90</td>
<td>163</td>
<td>108.65</td>
<td>17.88</td>
</tr>
</tbody>
</table>

The results confirmed the variances to be homogenous. The variances in answers were
genuine to the perception and conduct of the referee and had no link to their respective sports.

Assessment of the Mean Scores

The initial findings of the exercise were to evaluate the mean scores of the RAI and the PSI
data. The mean score of the RAI for basketball referees was (\( \bar{X} = 92.20 \pm 13.15 \)) and for
volleyball referees was (\( \bar{X} = 89.34 \pm 12.71 \)). These scores indicate a moderate problem solving
skills level among both referees. Further evaluating the results of the PSI, the mean score that
was obtained for basketball referees was (\( \bar{X} = 94.14 \pm 17.88 \)) and for volleyball referees was
(\( \bar{X} = 108.65 \pm 10.39 \)). These scores again indicate a mediocre assertiveness level among both
referees.

T-Testing

The T-testing approach considered the data collected from the RAI in isolation. This data was
then subjected to the t-testing approach. Similar testing methods were applied to determine
whether the probabilities assigned were normally distributed. The Kolmogorov-Smirnov test
was applied to assess the normality and the data was found to be normally distributed
(\( p > 0.05 \)). The Levene test was applied to assess the equality of the variances and it was found
that the scores of both referees were not materially different in terms of statistical
significance. To put it in simple words, the basketball and volleyball referees displayed
similar levels of assertiveness.
Table 2. Independent Samples T-Test Result According to Variable of Being a Referee in Different Sport Branches

<table>
<thead>
<tr>
<th>Score</th>
<th>Sport Branch</th>
<th>n</th>
<th>$\bar{X}$</th>
<th>SD</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAI</td>
<td>Basketball</td>
<td>108</td>
<td>92.20</td>
<td>13.15</td>
<td>-1.561</td>
<td>0.120*</td>
</tr>
<tr>
<td></td>
<td>Volleyball</td>
<td>93</td>
<td>89.34</td>
<td>12.71</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p>0.05

Mann-Whitney U testing

The Mann-Whitney U testing considered the results of the PSI in isolation. The results of the Levene test were that the variances were statistically in the favor of basketball referees. The scores of the PSI for the basketball referees were higher as compared to their volleyball counterparts. This shows that the Basketball referees display better problem solving skills in crunch times during the match.

Table 3. Mann-Whitney U Test Result According to Variable of Being a Referee in Different Sport Branches

<table>
<thead>
<tr>
<th>Sport Branch</th>
<th>n</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>M-Whitney U</th>
<th>Z</th>
<th>p</th>
<th>Levene’s F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basketball</td>
<td>106</td>
<td>76.24</td>
<td>8081.00</td>
<td>2410.00</td>
<td>-5.427</td>
<td>0.000*</td>
<td>35.153</td>
<td>0.000**</td>
</tr>
<tr>
<td>Volleyball</td>
<td>84</td>
<td>119.81</td>
<td>10064.00</td>
<td>3410.00</td>
<td>5.427</td>
<td>0.000</td>
<td>35.153</td>
<td>0.000**</td>
</tr>
<tr>
<td>Total</td>
<td>190</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.05

Interpretation

The scores of all the tests indicate that the scores of both the referees in the PSI and RAI were moderate. The assertiveness of both referees is also the same however the basketball referees hold a distinct advantage when it comes to problem solving skills during officiating a match.

What affects the Assertiveness and Problem Solving Skill set of the referees?

As many scholars of leadership, and contingency theories of leader effectiveness, would be quick to point out, different situations call for different levels of assertiveness (Vroom & Jago, 2007 & Zaccaro, 2007). Studies indicate that there are factors which affect the behavior and competency level of the referees. Age has no impact on the behavior or skills of the referees however the level of education does have an effect. The better educated the referee is, the more sound he is in his practices on the field (Guven, 2010; Görü, 1999; Onur, 2006).
education effect can be evaluated by assessing the research carried out by Kaya in 1992. According to the study, there was seen to be a high correlation between the level of education and the individual’s resistance to depression, criticism, confidence and other mental states. Ozbulak (2011) indicated that assertiveness and general problem solving skills did not differ based on gender in her research. Because these kinds of skills are mental skills which sport officials usually need to have in a game.

Applying this research on the referees, it is essential for referees to be mentally active and stable on the field. Although physical fitness is also important however in games like basketball and volleyball, the referees do not have to move much unlike soccer or rugby. Therefore what matters is the mental agility of the referee. The better educated the referee is, the higher the probability is that the referee would be more confident in his conduct, would know the rules better and would be able to make more informed decisions on the court (Ames, 2008).

**DISCUSSION**

The purpose of this study was to examine assertiveness and problem solving skills of basketball and volleyball referees. Results slightly supported my hypothesis. Basketball is more complex according to rules and game strategies. There are more physical contacts between the players to consider for the referees than volleyball players. Basketball referees are facing more stressful issue in a game (Anshel, 1995, 1996, 1997, 2000, 2001, 2007, Kaissidis, 1993, 1997, 1998, Ekmekci, 2010, Sayiner, 2009), therefore, they need to be more assertive and have a better problem solving skill than volleyball referees. Also being a team is very important for the basketball referees and uses their problem solving skill and assertiveness as a team.

Smith-Jentsch, Salas, and Baker (1996) suggested that assertive team members share their opinions with their teammates in a manner that is persuasive to others, facilitating the communication process in team contexts (Marks, Zaccaro, & Mathieu, 2000). This is very important for the official team in sport. Matthew and Aleksander (2006) propose that these characteristics are crucial for members occupying critical positions and have the potential to affect both team performance and satisfaction. I agree with this propose for officials who are the managers of the games. On the other hand problem solving skill is can be developed with optimal assertiveness.

Although, results supported my hypothesis, basketball and volleyball referees are need to
improve their assertiveness and problem solving skills both. RAI and PSI scores were not satisfactory for both groups of referees. Institutional and personal referees are needs to understand what is the assertiveness and problem solving in their world. Therefore they need to have some support from the professionals.

The key for the official is to develop psychological skills such as problem solving and assertiveness. But, as Ames (2007, 2008, 2009) mentioned in his researches, too much assertiveness can be a bad thing.

It’s a struggle that I couldn’t reach enough research on assertiveness and problem solving on sport. Especially, sport officiating became very important in last decade. Pressure on referees is increasing significantly. To manage the court and the other relevant environment is very important and requires special skills like assertiveness and problem solving.

**CONCLUSION**

Referees do not train to become referee since childhood unlike players do. For players physical agility is more important than mental strength however for referees both go side by side. Referees have to judge what the players do while keeping themselves between the action. The behavior of the referees affects the teams and their performance during the match (Pearsall & Ellis, 2006). Therefore all relevant authorities must look to develop the skills and correct the behavior of the referees by providing training and development opportunities. Assertiveness is one of the important norm for the referees in organizational culture.

Norms for competitiveness and interpersonal assertiveness no doubt vary by country, region, sport branch, club, function, and other factors. Indeed, work on organizational culture has identified related constructs, such as aggressiveness, as one of the meaningful dimensions on which organizational cultures vary (O’Reilly, Chatman, & Caldwell, 1991). Differences in assertiveness norms likely have effects on employee attraction, selection, socialization, and retention (Schneider, Smith, Taylor, & Fleenor, 1998) and the maximally effective level of interpersonal assertiveness would arguably be higher in more aggressive organizational cultures (Ames, 2009).

Along with norms, situations certainly vary: some tasks, times, or settings call for dominance and forcefulness while others suggest conciliation. This notion resonates with theories of contingent leadership that prescribe different styles for different situations, including situational factors such as the structure of the task, subordinate maturity and competence, and
the power possessed by the leader (Fiedler & Chemers, 1974, Hersey & Blanchard, 1972 & House, 1971).

Optimal assertiveness depending on the situation of the game, as a leader, referees would be well-served to read and respond accordingly. Ames (2009) research is consistent with this, showing that the situational fit of a leader's assertiveness predicts ratings of his or her effectiveness above and beyond linear and curvilinear impacts of “average” assertiveness.

Officiating can be challenging, exciting and rewarding. On the other hand, officials can also feel frustrated, abused and unappreciated. Officials face as much pressure and emotion as do athletes and coaches. Many officials know all the rules, use proper mechanics and are technically skilled. What separate the best officials from the rest of the pack are psychological skills, which few officials take time to develop (Weinberg & Richardson, 1990).

References


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