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## DECISION MAKING IN SPORT: CHOICE DECISION VERSUS APPLICATION OF THE RULES OF THE GAME

**Key words:** rules of the game, decision making, choice decision, sport.

### ABSTRACT

The purpose of this study was to determine ways of solving problems that might occur during a sports game. These problems might concern the referees, players or coaches. A sample of representatives of each of these three groups was selected for this project aimed to determine the statistical significance of differences between these groups. 655 subjects took part in the study, involved in football, handball and basketball. The subjects' age ranged between 14 and 52 years ( $M = 24.24$ ,  $SD = 7.89$ ). Their sports experience varied from 0 to 30 years ( $M = 8.16$ ,  $SD = 5.56$ ). The groups of subjects included referees ( $N = 147$ ), athletes ( $N = 458$ ) and coaches ( $N = 50$ ). All participants filled out seven questionnaire situations containing 19 multiple-choice questions. The questions concerned making decisions to solve a problem during a sports game and were graded on a five-point scale. The results showed significant differences in the ways of decision making by referees, coaches and athletes. These differences can be explained by the fact that these groups have different experiences and perform different tasks in the sports context.

### INTRODUCTION

According to Baron [1] making of a decision is related to the way people think when they have to make a choice. Our decisions concern our activities, ourselves and sometimes other people as well. Our decisions are affected by the way we understand things and by social limitations and prejudices [2]. Harris [3] supports that making a decision implies that there are alternative choices to be considered for each problem.

The following study examines alternative choices for solving problems that arise during a sports game. The research aims to find out the best possible solutions for certain situations that might occur during a game. Problem solving during a

sports game is a task undertaken by referees. They are the ones who impose the rules of the game on athletes and coaches. Carosi [4] supports that "Referee decision making during a game is a fascinating and fraudtly complex area. Referees will approach, and deal with decision making in their own individual ways and will often rely on a combination of intuition and law facts concerning play" (p. 1).

According to Mellick [5], the referee has to perform a unique and complex task. It is often demanded from the referee to act both as a "witness" and a "judge" [6]. This duality in the referee's role entitles him to have certain rights but also a great responsibility. Referees must be unaffected, objective, fair and thorough. They must

defend the rules of the game and punish those who do not comply with these rules [7, 8, 9].

Each decision is made within a certain environment, which is defined as the collection of information, alternatives, values and preferences available at the time of the decision [3]. In the sports context the place for all decisions concerning the application of the rules is during the game. In this place all information and alternatives are limited. That is because the time a referee has to collect information and make a decision or decide on alternative solutions is also very limited. This suggests that there is a need for better mastery of the rules. This is a much better solution than simply trying to predict or guess things while making an important decision [3]. Fishhoff [10] claims that when there is a lack of correct information, decisions which are made are of much lower quality and significance.

Decisions in the sports context are usually made during a sports game and thus in the presence of other people. Other people might affect these decisions with their personal views. When a referee makes a decision, which is affected by others and thus might be a wrong decision, it can cause a negative effect on the athletes' performance [11, 12]. Latane, Williams and Harkins [13] support that a decrease in the performance of athletes occurs when the act is a collective one; namely, when personal responsibility is reduced. Also the referee's decision can also be affected when the referee is interested in what others think of him. People always care about what others think of them and also judge themselves in relation to other people [14]. In the sports context, application of the rules of the game helps to maintain the game's steady course. Referees apply these rules and are judged on their application and decisions they make. This might seriously affect their performance [15].

Players, coaches and sports fans often curse or threaten referees when their decisions are not acceptable. This affects the psychological situation of the referee. Plous [16] thinks that mood, i.e. emotional state of a person at a specific moment, can affect one's decisions. More specifically, it has been supported that mood [17, 18, 19] and stress [20] are two important factors which affect umpires' performance. It has also been supported that the personal views and prejudices of a referee can affect the way he treats the members of a specific team [21, 22]. Rosenthal [23] confirms that

the expectations players have lead to changes in the referees' behavior.

According to Shea [24] decisions are formed by value judgments related to what should be done or what one ought to do. Decisions are also invariably related to the sphere of ethics. This occurs because morality consists of rules, customs, habits or principles which determine our behavior towards other people and thus our welfare within the confines of our society. The function of morality is to secure certain limits. Within those limits people can settle their differences and find solutions when their interests are in conflict. This is for the well-being of the entire society [25]. Morality in its classical Greek meaning is the capability to decide on what is right and what is wrong [24, 26].

Even though the aim of competitive sport is to win in compliance with the rules, sometimes referees and coaches make decisions characterized by a lack of moral principles. For example, decisions that are aimed to improve the performance of the team or a certain athlete's performance often lack moral and ethical principles [24]. When athletes engage in competition for its inherent pleasure, generally very few problems based upon moral behavior emerge [27]. Also, when winning becomes the primary objective, other potential outcomes are lost [28].

The main characteristic of a right decision is that it is never affected by personal views [29]. Following a theory or certain laws should lead to making decisions. According to Presland [29] there are two types of ethical theories:

(1) Consequentialistic theories, according to which decisions are based on their results or consequences. Utilitarianism developed by John Stuart Mill is an example of a consequentialistic theory. Utilitarianism deems decisions and actions to be good if they produce the highest good for the greatest number of people [30].

(2) Deontological theories, according to which a person who uses such theories in making his decisions considers the basic duties and rights of individuals or groups and acts in accordance with these duties and rights. The most popular duty-based theory was developed by Immanuel Kant. His theory suggests that a person should act as part of a community and duly perform his duties. If all people act this way, everyone in the community would be satisfied [30].

Two types of decisions can be encountered in literature. The first type is known as behavioral

decision, where the decision-maker has to choose between acting and not acting. The second type involves the allocation of resources and presents the decision-maker with a choice between two or more possible distributions of an object or activity within the system. This type of decision is called distributive decision [31].

According to Kurtines [31], “behavioral and distributive decisions also differ in the type of criteria used during the decision making process” (p. 311). Behavioral decisions are teleological. People decide what is morally right by gauging the consequences of each decision. On the other hand, distributive decisions are deontological. People decide what is morally right by applying a socially defined template of moral rules for behavior [32].

Finally, in the sports context, disagreements between players and referees and coaches and referees occur often. These disagreements are related to certain assumptions how the referee should have acted in particular situations during the game. It can be assumed that players and coaches understand things differently than referees and they prefer different problems to be solved differently. The purpose of the present study is to examine what referees, coaches and players think about the ways problems which arise during a game should be solved. It is also important to examine how significant the observed differences are and how these three groups of people (referees, coaches and players) think.

## METHODS

### *Participants*

The participants in the present study were 655 subjects representing basketball, handball and football. The subjects' age varied from 14 to 52 years ( $M = 24.24$ ,  $SD = 7.89$ ), while their sports experience ranged from 0 to 30 years ( $M = 8.16$ ,  $SD = 5.56$ ). 492 subjects were male and 163 were female. The participants were players ( $N = 458$ ), referees ( $N = 147$ ) and coaches ( $N = 50$ ).

### *Apparatus*

The research apparatus used in this study consisted of dilemma situations that take place during a game. The problem-solving was researched through distributive decisions. The distributive decisions are decisions of the taker between two possible choices of problem solving

[31]. This sort of decision was chosen because the distributive decisions are deontological and related to the fairness (from the point of view of equality or equity) of distribution and not to the consequences of distribution, and because it can be used as a decision criterion [31].

Because the “distributive decisions are expressed quantitatively, the judgment usually takes the form of question: How should I (we) distribute X, where X is a continuous quantity or amount of some thing or activity” [31, p. 311]. Each situation was followed by the question: “How should the referee act?” For each case two or three choices were offered as possible problem solutions. The participants were asked to estimate the degree to which they agreed for the most choices to solve dilemma situations on a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree).

People participate in sports in many different ways. In the present study referees, players and coaches were involved. These groups are strongly affected by the application of the rules during a sports game. The participants represented three team games: basketball, football and handball. These games have some common elements such as physical encounters, cooperative spirit, and some similar rules of competition. They also attract a great number of sports fans.

The following procedure was applied: Referees filled the questionnaire sheets at the offices of their league, in the presence of the researcher. A small number of referees filled the sheets in and then mailed them to us. Players asked their coaches for permission to participate in the study and filled the sheets in during their training along with their coaches.

All data was analyzed using the SPSS 10.0 for Windows by means of a nonparametric test. For the evaluation of certain frequencies of participants, if those frequencies differed significantly, the Chi-Square method was used [33]. Contingency tables were used to evaluate the frequency of each scale. A multivariate analysis was used to test the influence of Experiences, Type of Sport, Age and Form of Participation in sports in making decisions.

## RESULTS

The results of the study confirmed the initial hypothesis that there were differences between players, coaches and referees on how they make their choices. The results with the frequency rates

for each proposed choice as well as the proposed choices between the referees, players and coaches are presented in Table 1. The dilemma situations and the results for each choice separately are described below.

The first dilemma situation was: “A Referee works for a company. The proprietor of the company is also the owner of a team. The referee is drawn to take part in a game where one of the rival teams is the team of his boss. As the game proceeds there is a chance that his boss’s team might lose the game”

Question: “How should the referee act?”

The first choice was: “Because his work depends on his boss, should he go along with his boss’s interests?” The results indicated that all groups did not differ significantly in the frequencies of data ( $\chi^2(8) = 13.40, p > 0.05$ ). Referees, players and coaches seemed to agree that the referee should consider his job and future in the company, if it depends on the way he acts during the game (Table 1).

The second choice was: “To apply the rules of the game, without even thinking about his boss’s presence”. The results showed that no significant difference was found between the choices of referees, players and coaches ( $\chi^2(8) = 8.78, p > 0.05$ ). All three groups seemed to disagree with a possibility that the referee should act after having checked with his boss (Table 1).

The third choice was: “Thinking on his boss’s interest and trying to draw more profits for himself, to favor his boss’s team”. The results showed a significant difference between the choices of referees, players and coaches ( $\chi^2(8) = 30.67, p < 0.05$ ). All three groups disagreed with the choice that the referee will be supposed to decide overlooking his boss (Table 1).

The second dilemma situation was: “A referee is self-employed (he runs a shop), and he was drawn to take part in a very critical game. The result is uncertain. The fans of the home team are very provocative and threatening to hurt his family and destroy his shop”.

Question: “How should the referee act?”

The first choice was: “Thinking of the well-being of his family and his estate, he should change his attitude and favor the fans of the home team”. The results showed a significant difference between the three groups of participants ( $\chi^2(8) = 96.16, p < 0.01$ ). It was found that all three groups, coaches and referees in particular, agreed that the

referee should think about his family and his shop and change his attitude during the game (Table 1).

The second choice was: “The referee, because of the nature of his job, should decide based on a sound and fair judgment and defy the threats of the fans”. The results showed that the three groups strongly disagreed in that the referee should be indifferent to the threats and perform his duty ( $\chi^2(8) = 74.33, p < 0.01$ ). All three groups and especially coaches and referees seemed to disagree with the possibility that the referee should not care about the threats and perform his duty (Table 1).

The third situation was: “During the game a player (A) is unintentionally, seriously injured because of another player (B). Player (B) caused the injury of (A) in his effort to avoid injury himself”.

Question: “How should the referee act?”

The first choice was: “As he wants to impose the penalty the regulation stipulates that he should not take into consideration the precedents”. The results showed significant differences between the three groups in frequencies of data ( $\chi^2(8) = 50.01, p < 0.01$ ), and that the three groups did not entirely agree with the option that the referee should take into account what happened and just impose the penalty stipulated by the rules of the game on player B. Players and coaches agreed more on that (Table 1).

The second choice was: “The referee tries to judge the event more objectively and find out what happened. He interprets a part of the regulation in a different way”. The results showed that the three groups disagreed on that he should try to be as objective as he can and apply the rules differently ( $\chi^2(8) = 46.09, p < 0.01$ ). In this choice, the results showed that the general view for the referee was not to try to apply and explain the rules differently (Table 1).

The third choice was: “Before he imposes his decision, the referee should consult his assistants”. The results showed that the three groups did not agree in that the referee should receive advice from his colleagues before penalizing the player. Players, coaches and referees disagreed significantly on this issue ( $\chi^2(8) = 69.17, p < 0.01$ ). The coaches and players strongly believed that the referee should not receive advice before applying the rules of the game (Table 1).

The fourth situation was: “A game ends up with several serious confrontations between the players, the agents and the fans”

Question: “How should the referee act?”

**Table 1.** Responses by referees, players and coaches (in percent)

Choices	Form of participation	Disagree strongly	Disagree	Neutral	Agree	Agree strongly
1.1	Referees	0.7	0.7	2.7	4.8	91.2
	Players	1.9	3.1	6.5	9.0	79.4
	Coaches	0.0	4.0	4.0	4.0	88.0
1.2	Referees	90.5	6.8	1.4	0.7	0.7
	Players	83.3	8.0	4.1	2.4	2.2
	Coaches	92.0	4.0	2.0	2.0	0.0
1.3	Referees	0.0	1.4	0.7	4.1	93.9
	Players	2.6	2.1	6.4	13.2	75.7
	Coaches	0.0	0.0	0.0	4.0	96.0
2.1	Referees	0.7	2.7	2.7	8.2	85.7
	Players	2.7	13.8	17.4	20.6	45.5
	Coaches	2.0	2.0	4.0	2.0	90.0
2.2	Referees	84.4	10.2	2.7	2.7	0.0
	Players	51.1	22.5	13.6	8.0	4.8
	Coaches	92.0	6.0	2.0	0.0	0.0
3.1	Referees	37.4	16.3	6.8	17.0	22.4
	Players	15.7	16.0	22.3	18.9	27.1
	Coaches	36.0	10.0	4.0	22.0	28.0
3.2	Referees	16.3	26.5	8.8	15.0	33.3
	Players	28.6	32.2	13.1	12.8	13.3
	Coaches	48.0	20.0	4.0	10.0	18.0
3.3	Referees	36.7	21.8	8.8	10.2	22.4
	Players	51.6	25.9	12.3	4.8	5.3
	Coaches	82.0	10.0	6.0	0.0	2.0
4.1	Referees	55.8	13.6	8.8	11.6	10.2
	Players	48.4	25.7	10.7	9.9	5.3
	Coaches	62.0	12.0	6.0	10.0	10.0
4.2	Referees	32.7	19.7	7.5	10.9	29.3
	Players	44.8	24.2	16.9	5.8	8.2
	Coaches	50.0	14.0	2.0	12.0	22.0
5.1	Referees	55.1	28.6	6.1	4.8	5.4
	Players	46.7	29.1	11.6	6.5	6.1
	Coaches	62.0	28.0	2.0	2.0	6.0
5.2	Referees	17.7	34.7	12.9	21.8	12.9
	Players	27.8	27.1	21.1	15.0	9.0
	Coaches	28.0	18.0	20.0	14.0	20.0
5.3	Referees	16.3	20.4	9.5	17.7	36.1
	Players	17.0	26.8	20.0	14.0	22.1
	Coaches	22.0	18.0	10.0	10.0	40.0
6.1	Referees	84.4	12.9	0.0	2.0	0.7
	Players	72.8	20.0	3.8	0.4	3.0
	Coaches	84.0	10.0	6.0	0.0	0.0
6.2	Referees	90.5	6.8	1.4	0.7	0.7
	Players	70.0	16.5	6.8	2.9	3.9
	Coaches	84.0	14.0	2.0	0.0	0.0
6.3	Referees	8.2	15.0	11.6	21.1	44.2
	Players	14.0	15.3	19.1	16.6	34.9
	Coaches	10.0	18.0	10.0	16.0	46.0
7.1	Referees	4.1	6.8	4.1	10.9	74.1
	Players	27.6	24.9	17.9	11.4	18.2
	Coaches	4.0	12.0	8.0	14.0	62.0
7.2	Referees	16.4	17.1	16.4	14.4	35.6
	Players	27.4	32.2	20.3	9.4	10.7
	Coaches	36.0	20.0	12.2	10.0	22.2
7.3	Referees	30.6	31.3	11.6	4.8	21.8
	Players	14.9	18.3	18.7	18.3	29.8
	Coaches	24.0	14.0	14.0	4.0	44.0

The first choice was: “To apply the regulation literary and interrupt the game”. The results showed that coaches, players and referees strongly disagreed that the referee should stop the game ( $\chi^2(8) = 18.0, p < 0.05$ ). All the groups disagreed with the referee stopping the game as the rules stipulated (Table 1).

The second choice was: “The referee believes that he should interrupt the game and he discusses it with the people in charge (to level the situation) and restart the game”. The results showed that the three groups also disagreed in that the referee should stop the game and restart it after consulting the people responsible ( $\chi^2(8) = 60.24, p < 0.01$ ). Players and coaches were the two groups that strongly disagreed with this choice, while a significant percentage of referees agreed with it (Table 1).

The fourth situation was: “When the progress of a game is generally smooth, minor problems are caused (protests or tough fouls)”.

Question: “How should the referee act?”

The first choice was: “He should try to level the minor problems in order to avoid more tension”. The results showed that the three examined groups seemed to agree in that it was not preferable for the referee to try and calm everyone down and let the game continue ( $\chi^2(8) = 11.78, p > 0.05$ ).

The second choice was: “Within the bounds of the accurate application of the rules, the referee should apply the rules faithfully”. The results showed that the three groups also strongly disagreed that the referee should be very strict and apply the rules directly, with the players being strongly against ( $\chi^2(8) = 21.56, p < 0.01$ ) (Table 1).

The third choice was: “The referee assuming the lack of tension applies the rules as he finds them appropriate”. The results showed that the three groups also demonstrated strong disagreement among that the referee should apply the rules as he thinks fit each time with coaches and referees agreeing more with this choice and players disagreeing with it ( $\chi^2(8) = 20.73, p < 0.01$ ) (Table 1).

The sixth situation was: “Despite the efforts of the referees for the smooth running of the game, the persons involved are protesting because the result does not serve their needs”.

Question: “How should the referee act?”

The first choice was: “If he does not aim to serve his personal interest, he will try to impose the rules”. The results showed that the three groups disagreed in that the referee should try and apply the rules despite the outcome of the game

( $\chi^2(8) = 19.58, p < 0.05$ ). All groups disagreed with that but with different frequencies (Table 1).

The second choice was: “To defy the protests and to impose the rules impartially”. The results showed that all groups also presented different data when it comes to the referee applying the rules and being indifferent to all protests ( $\chi^2(8) = 30.15, p < 0.01$ ). All groups disagreed that the referee should not care about protests, but the coaches and players disagreed with that more strongly (Table 1).

The third choice was: “To apply the rules as he believes appropriate, and not as the rules foresee, so that the protests stop”. The results showed that all groups seemed to agree with the fact that the referee should try and apply the rules as he sees fit in order to prevent all sorts of protests ( $\chi^2(8) = 11.29, p > 0.05$ ) (Table 1).

The seventh situation was: “During the game something comes up (e.g. breach of a rule) and the referee fails to evaluate it ... because he simply does not know the rule”.

Question: “How should the referee act?”

The first choice was: “In case he ignores the rule, and because he wants to rightly decide to discuss the case with the player or players involved in the violation”. The results showed that all the groups disagreed that the referee should discuss the issue with the players involved in the situation and then decide ( $\chi^2(8) = 181, p < 0.01$ ). The coaches and the players agreed with this solution, while the latter disagreed more strongly (Table 1).

The second choice was: “In case of he ignores the rule, he should allow a repetition”. The results showed that the three groups also disagreed in that the referee should decide for a repeat ( $\chi^2(8) = 61.01, p < 0.01$ ). The referees strongly agreed with this resolution, while the players and the coaches disagreed (Table 1).

The third choice was: “In case he ignores the rule, in order to cover up his incapability, he should let the game go on”. The results showed that the choice suggesting that the referee should just let the game continue without letting his ignorance show is also a point of disagreement between the three groups ( $\chi^2(8) = 47.76, p < 0.01$ ). The referees strongly disagreed with this solution, but for the coaches and players the results were not clear (Table 1).

As decision making was examined on subjects of different age, experience and practicing different sports, a multivariate analysis was used to assess the influence of these factors in decision making. A four-way MANOVA was conducted

with the 19 choices as dependent variables; and Form of Participation in Sports, Type of Sport, Experience and Age as independent factors. The results showed the highest influence of the form of participation (coach, player or referee) ( $F(38,620) = 2.05, p < 0.01$ ) and sports experience ( $F(19,313) = 1.74, p < 0.05$ ). Age and type of sport did not seem to affect the decision-making process.

## DISCUSSION

The results of the present study point to some causes of disagreement with the referee's decisions. Referees, coaches and players see various situations differently. They participate in sports in a different way and they also have different experience that is why they see things differently.

The present study shows that the consequences of a decision should be taken into consideration before the making of a decision. This remains in accordance with the fact that most decisions in sport are taken under a great amount of pressure. Such decisions should be made after considering what will happen next [12]. In this study, all participants thought that decisions should differ when the referee works for one of the team owners. A non-friendly attitude while officiating towards his boss's team might lead to unwanted consequences for the referee, and he should think about it that before deciding, at least this was suggested by all the participants. The different percentages observed between the three groups and in most of the choices might be due to different influences and different consequences a certain choice might yield for them [10].

Emotional stress created after threats also affects decision-making. This agrees with Maurer [19], according to whom, "threats and mind games are one of the causes affecting people's mood and thus, decision-making". Differences observed between referees and players, might be due to the fact that these two groups are affected differently by the made decisions.

To point out a direction of someone's decision by creating emotional stress and making him think of the consequences is a utilitarian attitude [34]. Utility and gain are not always synonymous with pleasure, but they are also neither ethical nor selfish [1]. They have to do with what is important to us and – in a specific situation – for the referee, his family, security, career and business to effectively control his own decisions.

Officials still argue whether there should be a literal interpretation of the rules for some situations. Organizational situations [35, 36] and simplification of the rules in order to prevent protests [37] are the reasons for literal interpretation. The present study agrees with this kind of solution when a game is conducted with no serious incidents. Only the players seemed to have a difficulty in accepting the literal interpretation of the rules. Most of the players in this sample were teenagers, which means that most of them followed some kind conventional moral way of thinking. They want to follow the rules and that is why they are not able to agree with the literal interpretation of the law [38]. The disagreement between the three groups derives from the different consequences a decision might yield for them. In the case of deliberate ignorance of the rules, the results for the three groups were not clear.

As for breaking the rules, Snyder and Purdy reported that "For basketball officials this subjective decision-making may actually be in violation of the rules. Yet these decisions are usually considered by officials to be in accordance with the spirit of the rules and in the best interests of the game by keeping the game moving while also keeping it under control" (p. 398). According to Snyder and Purdy, one third of high school basketball officials regularly overlook rule violations depending on game situations. This is also apparent in the present study.

In general, the rules of the game allow referees certain flexibility in interpreting and applying the rules subjectively. Interpreting the rules is a capability which becomes much improved with experience and cooperation of the colleague referees [4].

The results of the present research show that protests influence all participants in their decisions, especially coaches and referees. Players are not influenced by that as they are teenagers who think they are not affected by anything and can act as their moral thought leads them to act [39]. In an earlier research project 41% of officials were affected by protests, 30% adjusted their attitude along with that of fans and 36% claimed that they thought of the protests and reactions of fans before applying a non-friendly decision [37]. Snyder and Purdy [37] also reported that such reactions from the crowd, coaches and players could influence the officials' style and communication of their decisions in a manner they felt it would indicate they were in control.

Ignorance of the rules leads all three groups, players, coaches and referees to different types of action in decision making. Referees do not prefer to act in a way which shows their ignorance, and this can be explained by the fact that most people care about what others think of them [14] and thus, want to produce a good image of themselves. Referees prefer to discuss such a situation with the players in order to make the right decision. Players and coaches do not approve of certain solutions offered in this study.

Ignorance of the rules from referees is sometimes a result of players trying to deceive referees too many times in order to achieve their goal, i.e. winning the game. Coaches sometimes support such behavior (68% let their players try to score, even if they are offside; 42% are occasionally endorsing foul play). They also support emotional outbursts (71% of coaches are in favor of their players bursting out during a game; 32% accept protests against a referee's decision and 21% of coaches agree that a player can criticize a referee's decision) [37].

The results show that the three groups of participants differ in how they view decision-making in sports. This is due to their different forms of participation in sports. They also perceive the consequences of a certain decision in a different way. Experience is also a factor which determines a person's attitude. When a person is full of positive feelings from good experiences, he is able to understand the bad consequences of his actions. When a person is full of negative feelings from bad experiences he tends to focus on the near term and loses the sight of the big picture [39].

The type of sport and age do not seem to affect decision-making. This is probably because the three types of chosen sports have many common elements. In the case of age, according to N.R.C.I.M. [39], from the age of 12 or 13 adolescents become similar to adults in their ability to identify and evaluate possible consequences of engagement in risky behaviors. Also, it has been shown that chronological age does not seem to affect distributive decisions [40].

The following conclusions can be drawn: The working relationship of the referee with a team owner is an element that can affect his decisions. Emotional stress deriving from external pressure (protest, threats, etc.) can also affect the referee's decisions. On the other hand, when a game is being conducted without serious protests or other incidents, bending the rules is usually acceptable.

Different forms of participation in sports and also different experiences lead to a differentiation between players, coaches and referees in decision-making. Another important factor which affects the referee's decisions are the consequences of his actions.

## REFERENCES

- [1] Baron J., *Thinking and deciding*, Cambridge University Press, Cambridge, U.K. 1994.
- [2] Kostaridou-Efklidi A., *Psychology of thought*, Greek Languages, Athens 1997.
- [3] Harris M.J., Personality moderators of interpersonal expectancy effects: Replication of Harris and Rosenthal (1986), *Journal of Research in Personality*, 1989, 23: 381-397.
- [4] Carosi J., Decision-making on the field of play, Retrieved from the web 20/11/2001 <http://carosi.freeserve.co.uk/corshamreferee/dicide.htm>. 2001.
- [5] Mellick M., Only human! An investigation into interpersonal expectancy effects and interactional justice in the elite performances of association and rugby union football referees, 1999, Retrieved from the web 20/11/2001 <http://cpa.uwic.ac.uk/pages/research5.htm>.
- [6] ICSSPE Declaration on Fair Play, *Olympic Review*, 1998, 22: 16-22.
- [7] National Officiating Program Who Are Officials? Australian Coaching Council, Canberra. 1999.
- [8] Weinberg R.S., Richardson P.A., *Psychology of officiating*, Leisure Press, Champaign, IL. 1990.
- [9] Weiss Sport: A Philosophic enquiry, Southern Illinois University Press, Carbondale. 1969.
- [10] Fishhoff B., Risk taking: A developmental perspective, (in:) J.F. Yates, ed., *Risk-taking behavior*, Wiley 1992, pp. 126-162.
- [11] Bond C.F., Titus L.J., Social facilitation: A meta-analysis of 241 studies, *Psychological Bulletin*, 1983, 94, pp. 265-292.
- [12] Reason J., *Human Error*, Cambridge University Press, New York. 1990.
- [13] Latane B., Williams K., Harkins S., Many hands make light the work: The causes and consequences of social loafing, *Journal of Personality and Social Psychology*, 1979, 37: 822-832.
- [14] Festinger L., A theory of social comparison processes, *Human Relations*, 1954: 117-140.
- [15] Stephens D.E., Bredemeier B., Moral atmosphere and judgment about aggression in girls' soccer: Relationship among moral and motivational



- variables, *Journal of Sport Exercise Psychology*, 1996, 18: 158-173.
- [16] Plous S., *The psychology of judgment and decision making*, McGraw-Hill, New York 1993.
- [17] Anshel M.H., Weinberg R.S., Sources of acute stress in American and Australian basketball referees, *Journal of Applied Sport Psychology*, 1995, 7: 11-22.
- [18] McInman A.D., Development of a hierarchy of sources of netball umpires' mood changes, 3<sup>rd</sup> Annual Conference of the Society of Australasian Social Psychologists, Wollongong, Australia 1997.
- [19] Maurer R.E., *Managing conflict: Tactics for school administrators*, Allyn & Bacon, Boston 1991.
- [20] Smith R.E., Toward a cognitive-affective model of athletic burnout, *Journal of Sport Psychology*, 1986, 8: 36-50.
- [21] Blanck P.D., What empirical research tells us: Studying judges' and juries' behavior, *American University Law Review*, 1991, 40: 775-804.
- [22] Blanck P.D., Interpersonal expectations in the courtroom: Studying judges' and juries' behavior, (in:) P.D. Blanck, ed., *Interpersonal expectations theory, research and applications*, Cambridge University Press, 1993.
- [23] Rosenthal R., Experimenter expectancy, covert communication, and meta-analytic methods. Paper presented at the American Psychological Association Meeting, August 14, 1989 (ERIC Document TM014556).
- [24] Shea J.E., *Ethical decision in sport interscholastic, intercollegiate, Olympic and professional*, Charles C Thomas, Illinois 1996.
- [25] Rest J.R., Bebeau M., Volker J., An overview of the psychology of morality, (in:) J.R. Rest, ed., *Moral development, advances in research and theory*, Praeger Publishers, 1986, pp. 28-58.
- [26] Straub E., *Positive social behavior and morality (Vol. 1): Social and personal influences*, Academic Press, New York 1978.
- [27] Dulaney S., Ethics in coaching, *Journal of Legal Aspect of Sport*, 1992, 2: 56-63.
- [28] Lumpkin A., *Physical education and sport: A contemporary introduction*, Times/Mirror/Mosby College Publishing, St. Louis 1990.
- [29] Presland J.D., Injury and return to play, who decides? 1999, Retrieved from the web 18/12/2000, <http://aut.ac.nz/freshedu/studentwork/practice.html>.
- [30] Campbell A., Gillett G., Jones G., *Practical medical ethics*, Oxford University Press, Auckland 1992.
- [31] Kurtines M.W., Moral behavior as rule-governed behavior: A psychosocial role-theoretical approach to moral behavior and development, (in:) W.M. Kurtines W.M., Gewirtz J.L., eds., *Morality, moral behavior, and moral development*, John Wiley & Sons, 1984, pp. 303-324.
- [32] Frankena W., *Ethics (2nd ed.)*, Prentice-Hall, Englewood Cliffs, NS 1973.
- [33] Howitt D., Cramer D., *A guide to computing statistics with SPSS™ Release 10 for Windows*, Pearson Education Limited, 2001.
- [34] Tschudin V., *Ethics: Conflicts of interest*, Scutari Press, London 1994.
- [35] Day R., Day J., A review of the current state of negotiated order theory: An appreciation and critique, *Sociological Quarterly*, 1977, 18: 126-142.
- [36] Kohn M., Bureaucratic man: A portrait and an interpretation, *American Sociological Review*, 1971, 35: 461-474.
- [37] Snyder E., Purdy D., Social control in sport: An analysis of basketball officiating, *Sociology of Sport Journal*, 1987, 4: 394-402.
- [38] Kohlberg L., Moral stages and moralization. The cognitive – developmental approach, (in:) T. Lickona, ed., *Moral development and behavior. Theory, research and social issues*, Holt, Rinehart and Winston, 1976, pp. 31-53.
- [39] National Research Council Institute of Medicine *Adolescent decision making implications for prevention programs: The decision making framework*, Washington National Academy Press, 1999. Retrieved from the web 18/12/2000, <http://aspe.hhs.gov/hsp/adolescent99/decision.htm>.
- [40] Gunzburger D.W., Wegner D.M., Anooshian L., Moral judgment and distributive justice, *Human Development*, 1977, 20: 160-170.