Ranking of Preventative Manners of Sport Spectators’ Crime by Analytical Hierarchy Process (from Managers and Experts’ Viewpoint)

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DOI: 10.6007/IJARPED/v4-i3/1782 URL: http://dx.doi.org/10.6007/IJARPED/v4-i3/1782

Abstract
The purpose of present study was to analyze strategies for crime prevention in the field of crimes caused by sport spectators’ violence from managers and experts point of view based on analytic hierarchy process (AHP). The study sample included higher managers of Sepahan FC and Zobahan FC, higher managers of football board of Esfahan province, higher managers of sport and youth office of Esfahan province and experts in survey field. The full-counted and available samples were 39. For data collection paired comparison, including 76 questions, was used. This questionnaire had been organized and designed based on study’s hierarchal tree. So, the 76 questions included paired comparison of 7 indices in two main components, state and social prevention strategies. For validity determination, face and content validity by sport management professors was used and inconsistency rate of 0.1 was used for reliability of questionnaire. For data analysis based on AHP, approximate methods based on total row methods was used. Results showed that among spectators’ violence crime prevention state strategies indices, increased crime difficulty index with relative value of 0.42 is on top and crime risk, avoiding incitement to commit a crime and codification and information indices with relative value of 0.29, 0.19 and 0.10, respectively, follow. Moreover, among spectators’ violence crime prevention social strategies indices, facilities improvement index with relative value of 0.53 is on top and entertainment programs in stadium, calling to following norms indices with relative values of 0.16, 0.31, respectively, follow.

Keywords: crime prevention, spectators’ violence, football league, analytical hierarchy process.

Introduction
Attention to sports especially the football is socially, culturally and politically important (Salimi, Soltanhosseini, Padash & Khalili, 2012). Among different sports, football is the most common and the most popular and assigns most of the audiences and athletes. Audiences who spectate sport competitions in stadiums are especially important and regarded as a possession for professional clubs, since not only they give an identity to sport leagues but also by purchasing
tickets they make profit for clubs. On the other hand, more spectators bring attraction in stadiums (Nemati et al, 2011). However, over the ages pseudo sensitivities against football have been formed that caused anomalies and distortions among athletes and spectators (Ghasemi et al, 2009). One of the biggest and the most important of these anomalies is violence and aggression.

Sport violence and aggression can be defined as behaviors that take place out of sport’s norm and rules, cause intentional harm and do not have direct relation with competitive objectives (Rahmati, 2004). Although there are differences between violence and aggression words, but these can be used alternatively in sport articles and most of the issues regarding spectators’ anomalies cover both words (Russel and Ward, 2002). Discussing spectators’ violence in modern sports is in hooliganism category (Jewell, Moti, Coates, 2011). Although there is no accurate and formal definition for hooliganism, but Bodin, Heas and Robene (2004) believe that hooliganism means violent behaviors of football fans inside and outside of stadiums which is most of the time from youngsters. Violence in sport events is related specially to hooligan groups in England and the behaviors that are known as hooliganism in football have their origin in this country (Carnibella et al, 1996). This behavior anomaly in football was expressed for the first time in England in 1960 (Paknejad and Drani, 1388). While football hooliganism was recognized as a serious problem by governments and Media in 1960, it has a long history and football with violence began in England since the early thirteenth century (Carnibella et al, 1996). Of course violence is not limited to football or any geographical or cultural region. However, since violence and aggression are psychosocial phenomena which have the possibility to be expressed in social exciting environments for which football is the best way, violence in football is the most expressed and attracted (Mohammad Kazemi et al, 2007).

While violence and anomalies in sport events are not new phenomena, there have been little efforts to overcome them. One of the solutions regarding spectators’ violence beside punishment is crime prevention. There have been some attempts by some countries and organizations. European Convention on spectator violence in sporting events especially football matches in 1985 was accepted by member countries of European Union and was considered as a proper framework for cooperation (Adang, 1999). This convention was accepted following the tragic accident during which 38 spectators were killed in Hassle stadium in Brussels (Jwelle, Moti, Coates, 2011). Based on this convention members will be committed to prevent and control violence and safety of spectators. To achieve its goals a committee was made which will be held once or twice a year and provide recommendations and correct regulations (Adang, 1999). Sport clubs can enforce regulations for fans to prevent violence. For instance, Barcelona FC has provided guidelines and regulations for fans who enter New Camp stadium which are available in its website. Among these instructions, limitations for what spectators carry in the stadium, ones who are not allowed in stadium and spectators’ behaviors can be mentioned (instruction for visiting team supporters, 2014).

Prevention is a general concept and refers to efforts for preventing potential harmful actions for individual and group (Jafarian, Modaber, ChoopaniRostami, 2008). Dadban and Aghai (2009) define crime prevention as attempts for identifying and assessing crime risk and essential solutions for preventing them. In this work we are trying to identify preventive solutions for spectators’ crimes. Crime prevention has different identities and forms, the efficacy of which are not the same. Results of the work done by Moghimi and RafatiAsl (2010) showed that
choosing preventive solutions, identifying prevention priorities, targeted enforcement and finally decreased crime depend on deep knowledge of issue and detailed customized analysis. Due to crime type of spectators, in this survey prevention was analyzed and prioritized in two situational and social area which is of course the most common classification of non-criminal prevention. Situational crime prevention refers to attempts for omitting or controlling contributing factors (Norouzi and Afrasiabi, 2010). In this type we change the crime stages, like increasing expenses, making crime commitment harder and dangerous. Using this method we decrease opportunities for crime (AbrandAbadi, 2011) like Police presence in stadium. The focus of situational prevention is on environments in which the crime is committed not on people who commit that. This kind of prevention is done by analyzing situations that cause different kind of crimes (Moghimi, Rafatiasl, 2010). Thus in this kind of prevention the state before crime is considered for neutralizing their effects in a process that ends up to crime (Lashani Parsa, 2008).

In social prevention we are focused on individual and environmental changes and corrections which cause social and individual correction and prevention of crime permanently (AbrandAbadi, 1390). This kind of prevention necessitates programs that can effect behavioral patterns and values (Shateri Pour Esfahani and AbrandAbadi, 2012). In this kind of prevention with education, training, punishment, and encouragement we are willing to induce criteria for identifying one’s good and bad practice and give him the ability for self-assessment (AbrandAbadi, 2011). The aim of present study is to analyze strategies for crime prevention in the field of crimes caused by sport spectators’ violence from managers and experts point of view based on analytic hierarchy process (AHP). Analytical hierarchy process was proposed by Saaty in 1980 as an extensive analytical tool for modeling subjects like political, economic, social and educational fields and is based on paired comparison between values of a branch of subjects (Salimi, SoltanHoseini and Shabani Bahar, 2012). By guiding and simplifying decision making stages, this process helps us making proper decisions for complicated subjects. AHP, by regulating group thinking, develops an efficient structure for decision making (Soltan Hoseini et al, 2013). Assigning numerical resources to variables, helps the policy makers to have the proper pattern for thinking to achieving the goal (Azar, 2009). Salimi, Soltan Hoseini and Nasr Esfahani (2014) in their study demonstrated that AHP among other multi-criteria decision making methods is the best method for prioritizing different options.

Moreover, this study did not have any judgement about stadiums` current situation and preventive attempts for spectators’ violence reduction.

Methodology
The survey was applicable from purpose point of view and was descriptive and survey was used for data collection. Since most of the sport spectators’ violence belong to football, and besides many sports have no news about spectators’ violence, we chose football as a sample for study. The study sample included higher managers of Sepahan FC and Zobahan FC, higher managers of football board of Esfahan province, higher managers of sport and youth office of Esfahan province and experts in survey field. The full-counted and available samples were 39. For data collection paired comparison, including 76 questions, was used. This questionnaire had been organized and designed based on study’s hierarchal tree. So, the 76 questions included paired comparison of 7 indices in two main components, state and social prevention strategies. For validity determination, face and content validity by sport management professors was used and
inconsistency rate of 0.1 was used for reliability of questionnaire. For data analysis based on AHP, approximate methods based on total row methods was used, according to (Salimi, Soltanhosseini, Ghasemi, Torkyian Valashani, 2013).

**Results**

Table 1 shows the study sample categorization based on years of service.

**Table (1): Sample categorization based on years of service**

<table>
<thead>
<tr>
<th>Index</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of service</td>
<td>Less than 5 years</td>
<td>1</td>
<td>3.2%</td>
</tr>
<tr>
<td></td>
<td>5 to 10 years</td>
<td>3</td>
<td>9.7%</td>
</tr>
<tr>
<td></td>
<td>11 to 20 years</td>
<td>9</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>More than 20 years</td>
<td>18</td>
<td>58.1%</td>
</tr>
<tr>
<td>-</td>
<td>Total</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

As it can be seen from table 1, 3.2% of study sample had less than 5 years of service, 9.7% had 5-10 years of service, 29% had 11-20 years of service and 58.1% had more than 20 years of service.

Table 2 shows the study sample categorization based on level of educations.

**Table (2): Study sample categorization based on educations**

<table>
<thead>
<tr>
<th>Index</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of service</td>
<td>Less than diploma and diploma</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Associate degree</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Bachelor</td>
<td>9</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>Master and doctorate</td>
<td>22</td>
<td>71%</td>
</tr>
<tr>
<td>-</td>
<td>Total</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

Based on table 2, 29% had bachelor degree and 71% had master degree and higher, thus none of them were lower than bachelor degree.

Table 3 shows paired comparison matrices of main indexes of state solutions for crime prevention caused by spectators’ violence.
Table (3): Prioritizing main indexes of state solutions in crime prevention caused by spectators’ violence

<table>
<thead>
<tr>
<th>Raw comparisons</th>
<th>Relative weight</th>
<th>A4</th>
<th>A3</th>
<th>A2</th>
<th>A1</th>
<th>State solutions elements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.42</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>A1 Committing crime is more difficult</td>
</tr>
<tr>
<td></td>
<td>0.29</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0.33</td>
<td>A2 Committing crime is more risky</td>
</tr>
<tr>
<td></td>
<td>0.19</td>
<td>2</td>
<td>1</td>
<td>0.50</td>
<td>0.50</td>
<td>A3 No stimulation for crime</td>
</tr>
<tr>
<td></td>
<td>0.10</td>
<td>1</td>
<td>0.50</td>
<td>0.33</td>
<td>0.33</td>
<td>A4 Regulations and notification</td>
</tr>
</tbody>
</table>

As it can be seen in table 3, the difficulty of committing crime with relative weight of 0.42 has the highest priority and more risk for committing crime, no stimulation for crime and regulation and notification indexes follow, with relative weights of 0.29, 0.19 and 0.10, respectively. Graph 1 shows the position of indexes relative to each other.

Graph (1): comparison between relative weights of main indexes of state solutions elements

Table 4 shows paired comparison matrices of main indexes of social solutions for crime prevention caused by spectators’ violence.
Table (4): Prioritizing main indexes of state solutions in crime prevention caused by spectators’ violence

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>B3</th>
<th>B2</th>
<th>B1</th>
<th>Social solutions elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.53</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>B1</td>
</tr>
<tr>
<td>0.16</td>
<td>0.50</td>
<td>1</td>
<td>0.33</td>
<td>B2</td>
</tr>
<tr>
<td>0.31</td>
<td>1</td>
<td>2</td>
<td>0.50</td>
<td>B3</td>
</tr>
</tbody>
</table>

As it can be seen in table 4, the improving amenities index with relative weight of 0.53 has the highest priority and performing cultural and entertaining programs in stadiums and calling for adhere to norm indexes follow, with relative weights of 0.16 and 0.31, respectively. Graph 2 shows the position of indexes relative to each other.

Graph (2): comparison of relative weights of main indexes of social solutions

The other results of this study are as follow:

- Among related solutions to more difficulty for committing crime index of state solutions elements, using barriers between teams’ fans and spectators and field solution has the highest priority with relative weight of 0.53.
- Among related solutions to more risk for committing crime index of state solutions elements, identifying spectators by improving ticket selling system solution has the highest priority with relative weight of 0.42.
- Among related solutions to no stimulation for committing crime index of state solutions elements, improving media management solution in order to decrease tension and pseudo sensitivity against competitions and roorback has the highest priority with relative weight of 0.21.
• Among related solutions to regulations and notification index of state solutions elements, providing instructions for spectators in clubs` websites solution has the highest priority with relative weight of 0.46.
• Among related solutions to improving amenities index of social solutions elements, improving, correcting and reconstructing clubs` amenities solution has the highest priority with relative weight of 0.26.
• Among related solutions to performing cultural and entertaining programs index of social solutions elements, performing entertaining and fun programs before and between competition solutions has the highest priority with relative weight of 0.40.
• Among related solutions to calling for adherence to the norm index of social solutions elements, making media programs about behavioral norm pattern in stadium solution has the highest priority with relative weight of 0.40.

Discussion
Results show that the difficulty of committing crime with relative weight of 0.42 has the highest priority and more risk for committing crime, no stimulation for crime and regulation and notification indexes follow.
Difficulty in committing crime and risk of committing crime are two preventive elements. These elements are used against spectators who have the motivations for violence and crime. Considering no stimulation for committing crime motivation is not discussed, but spectators are the targets of this preventive element who have no motivation for crime before facing with the stimulant. Regulations and notification element tries to improve awareness and responsibility of spectators and can be considered as a spiritual barrier for crime. Regulations in this section have not enforcement a much as legal rules and are mostly for notifying about proper and improper behaviors. Thus it can be concluded that making barrier against motivated spectators and trying not to make any motivations can prevent violent behaviors and in comparison, soft and spiritual barriers for decreasing criminal behaviors feasibility are not effective in preventing violent behaviors of spectators. John Bozorgi et al (2010) in a work to investigate preventive role of police force in preventing destructive behaviors of football spectators, showed that effectiveness of using subtle control like using surveillance camera, plainclothes police among spectators and on transporter vehicles, is more than persuasive methods like media, notification and functional awareness. Attempts for subtle control are among increasing risk of committing crime elements, so these findings are consistent with present study. Also, Afrasiabi (2010) in his work, titled paradigms for crime state prevention, states that in crime prevention paradigms, power inhibition paradigm is more extensive and penetrative. State elements that have inhibitory effects are increased difficulty and risk of committing crime. In present study these two elements among state elements are the first and second priority which is consistent with these results.
Moreover, results of studies by RamezaniNejad et al (2012) and Fathi Nia and Alizadeh (2005) showed that media excitement, team members behaviors, arbitration, coach behaviors can be stimulants for violent behaviors which are among crime stimulation index. Thus these are consistent with our findings.
Our assessments show that most of the resources had investigated causes of violence among spectators from different dimensions like criminology, sociology, culture, psychology etc. and from different people point of view like referees, coaches and spectators. Identifying the causes of spectators’ violence can guide us in deciding for prevention of these behaviors, in other words, prevention of a cause that has the highest share in spectators’ violence can be a preventive effort for this kind of behaviors.

Results showed that among social solutions for crime prevention caused by spectators’ violence, improving amenities index with relative weight of 0.53 has the highest priority. Thus, improving amenities, which can induce sense of comfortability to spectators, decreased spectators’ violent behaviors more than the other two elements. Results of the study by RamezaniNejad et al (2012) showed that amenities and services management play roles more than media excitement, team members behaviors, referee, coach behavior in spectators’ violence. So results of present study, that showed improving stadium amenities has higher priority comparing to no stimulation for committing crime, are in consistent with this work.

Furthermore, based on results of a study by Fathi Nia and Alizadeh (2005) stadium population and environment and factors like transportation facilities, referee judgement and players performances have direct effect on spectators’ violent behaviors. In present study improving stadium amenities like improving transportation facilities was among the first social elements priorities.

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