

Crisis management for public sports facilities

The great East Japan earthquake example

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Purpose

There are approximately 220,000 sports facilities in Japan and about 25% are public facilities set up by local authorities. These facilities provide local residents with opportunities for health promotion, sports activities and social interaction. However once a large-scale disaster occurs, they also are called upon to assist in the safeguarding of the lives and property of local people.

Japan was devastated by the Great East Earthquake along with a massive tsunami on March 11, 2011. When more than 270,000 buildings were partially or completely destroyed and up to 400,000 people had to leave their homes to take shelter, public sports facilities played an extremely vital role. Especially, the gymnastic halls in various municipalities performed important functions being used as emergency shelters, volunteer centers or disaster relief headquarters.

And in Japan the local governments also have some public sport facilities, which due to administrative and financial reforms are currently being privatized. All of the public sport facilities surveyed in this study were operated by private businesses. Following this disaster it was not unusual for long operating private sport facilities to be temporarily closed down. Therefore, it is important to demonstrate crisis management for public sport facilities not only in the public sector, but also in the private business operator.

Theoretical background

In research on disasters such as hurricanes (Matheson & Baade 2006), tsunami (Klein & Huang 2007) and earthquakes (Yasui 2007) it has often been noted that sport facilities play an important role in post-disaster situations. There are some differences about the role or management of sport facilities according to the type of disaster; however, this study focused on the management of public sport facilities in a prolonged situation of having serious damage from a large earthquake and tsunami. Kawata (2003) divided emergency management into prior preparation as risk management and afterward action as crisis management. Then he subsequently arranged the concept of crisis management into a chronological order (1. Direct 2. Urgent 3. Emergent 4. Recovery and 5. Social Mitigation).

Methodology

This study consists of two research methodologies. Firstly, research was conducted by interviewing public sport facility managers. Secondly, a questionnaire survey of local residents as facility users and its statistical analysis was undertaken.

First, Sendai City has five wards, each having a multipurpose gymnasium. All of which were utilized as disaster relief offices. Here we conducted interviews from June 2011 to February 2012. We interviewed 12 administrators of facilities such as manned gymnastic halls in charge of facilities to investigate damage to and utilization of facilities. In this survey, we used a semi-structured interview style. Interviews were about one hour in length. I recorded the interviews with the consent of interviewees to create a verbatim record for morphological analysis. This research utilized the aforementioned crisis management definition of Kawata (2003) to implement a chronological analysis.

Second, in October 2011 we performed a survey of facility users through a questionnaire to ascertain the relation between residents who experience disaster and sports activities. This research uses a direct distribution and detention method. Questionnaires were distributed, and 256 returned (RR 96%). The users answered about their motivations to participate in sports and recovery time from the disaster. The responses were analyzed for regional imbalances in post-disaster situations with a one-way analysis of variance and multiple comparison method.

Results

The words in the verbatim record of the facility administrators were classified into the five categories as described previously. Then, we interpreted the data based on the analysis of modification relations among them and strength of the relations. Specifically, as for 'emergency response', when the relation between 'emergency shelter' and 'user', 'emergency action' and 'facility' is linked there was a strong connection between 'facility' and 'user'. This suggests that the use of the facility as a post-disaster shelter and emergency actions taken varied depending on whether the facility was designated as an emergency shelter or not, and that administrators were forced to take on a wide-ranging management role.

According to the results of the questionnaire survey, recovery time for sports in each ward showed a significant difference, $F(4,242)=4.47, p<.01$. The multiple comparison method showed a difference between low damage and high damage areas, $p<.01$. Concerning sport motivations, the area of health showed no significant difference, whereas social interaction, $F(4,242)=4.78, p<.01$, leisure, $F(4,242)=3.38, p<.05$, restoration of sport facilities, $F(4,242)=3.28, p<.05$, did show notable differences. Multiple comparisons showed a difference between low damage and high damage areas in sports participation motivation. This research indicates that disaster has an effect on the motivation to engage in sports.

References

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