A Design of Early Warning Models for Spectator Violence at Soccer Games - A Research Based on Home Games of Shanghai Greenland Shenhua FC in China Super League 2016

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In recent years, with the rising popularity of soccer games in China, fans violence has also increased dramatically. Overexcited soccer fans have physical confrontations with opposition supporters on a regular basis, and they often turn into large-scale fights. This study tries to find out the impact factors behind spectaator violence and design an early warning model through analyzing home games of Shanghai Greenland Shenhua FC in China Super League 2016. The research includes: (1) Designing a three-level index system which includes eleven factors, such as the popularity of the Super League, the attention drawn from social media, the importance of the game, and so on; (2) Standardizing those factors so that they have the same quantifiable measurements; (3) Using analytic hierarchy process (AHP) to determine the weight of each factor; (4) Optimizing the model twice with multiple stepwise regression analysis (MSRA) in order to improve its confidence level. A formula to calculate the index is derived from the research, and when the index is higher than a threshold value, violent incidents are very much likely to occur. As verification of the model proves its feasibility and application value, it can provide the basis for the Super League and Shanghai Public Security Bureau to take precautions against spectator violence in advance.

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