

Risk Management of Campus Safety in Primary and Secondary Schools

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Abstract: This paper introduces risk management and explores mechanisms for the integration of relevant techniques into campus safety risk management processes of primary and secondary schools. Based on thorough research and analysis of related theories and practices at home and abroad[1]. This paper scientifically summarizes and refines the application of risk management theories, gives full play to the normative, effective and scientific role of standards, develops standard campus safety related risk management processes, and provides guidance on the implementation of campus safety related risk management techniques in primary and secondary schools.

Introduction

The issue of school safety has become a hot issue in China in recent years. It can be seen from the Mizhi County incident in Shaanxi Province, the knife attack in Chongqing and other incidents that campus safety incidents are not mere crimes, but a concentrated embodiment of social problems with very high social sensitivity, which were largely dominated by campus theft, traffic and food safety incidents [2]. However, today's school safety incidents have gone through qualitative changes, and personal safety has become the most prominent issue. In China, most student-related accidental injuries occurred on campus and on the way to school, and primary and secondary school students had the highest death rate. Those accidental injuries not only caused permanent disabilities and premature deaths of numerous children, but also brought pain and misery to them and their families, not to mention the numerous socio-economic impacts. As Japanese educationist Tachida said, "shadows of different aspects of the society can be found behind every single campus tragedy" [3]. It means it is impossible for one social sector to address the issue of campus safety; it requires the whole society to coordinate and maintain safety. Hence this project tries to further improve campus safety management in primary and secondary schools by introducing the idea of risk management, and thus create more secure and harmonious campus environment [4].

Although governments of different levels attached great importance to the issue of school safety, the age-old, overlapped and less practical documents of related policies led to slow progress of school safety risk management. To strengthen and improve school safety risk management, we urgently need to thoroughly implement related requirements of the CPC Central Committee and State Council, do a good job in top-down design, enhance institutional systems, improve working mechanisms, strengthen organizational leadership and coordination, promulgate related standards, and further strengthen the development of school safety risk management systems [5]. This project aims to explore ways to further enhance the development of campus safety risk management systems of primary and secondary schools by integrating standardized risk management approaches, and ensuring that they are suitable for our national conditions [6].

Domestic and overseas research status

Our country has always attached great importance to campus safety works of primary and secondary schools, since the founding of the People's Republic of China, and promulgated a great number of laws, regulations, departmental regulations and policy documents successively. Meanwhile, different areas have also taken active measures and done great deal of work on the development of 'safe campuses' as a whole to enhance campus safety risk prevention and control in primary and secondary schools [6]. However, the frequent occurrence of school safety risk incidents is an undisputable fact, which can be attributed to the following reasons in the author's opinion:

Firstly, in terms of the systematic concept of campus safety related risks, most schools have very strong campus safety awareness, but they lack professional competence as well as clear understanding of the loopholes in campus safety [7]. Secondly, characteristics of modern education have resulted in schools' and parents' increased attention on better academic performance and neglect of inputs in campus safety as well as improvement of students' safety awareness. At last, the complexity and systematic nature of school safety related risk management have led to schools' conducts of treating the symptoms instead of root causes [8].

From the perspective of other countries' efforts in the maintenance of campus safety, it can be seen that they have actively integrated various resources, fully mobilized the government, primary and secondary schools as well as all sectors of society to jointly engage in campus safety construction, and thus built relatively sound campus safety system [9]. Different countries have taken maintenance of campus safety as an integral part of their national security strategies, and even made it an important normative activity for the prevention and deterrence of terrorist activity. Overseas countries have established ID verification system based on risk management philosophy, which includes the following two aspects: on one hand, students are required to wear uniforms and ID cards, which specify their basic personal and family information [10]. On the other hand, personnel entering primary and secondary schools are required to wear ID badges to facilitate primary and secondary schools' safety management. In consideration of frequent occurrence of campus safety incidents, many countries have allocated special funds pursuant to provisions of related laws, made the most of advanced risk management techniques and information technologies, and strengthened campus security works through installation of metal detectors, surveillance cameras, fences, searchlights and other facilities.

Proposed plan and innovation points

Analysis on characteristics of campus safety risks of primary and secondary schools from the perspective of public security theory. Given the common problems of campus safety of primary and secondary schools as well as public security, we shall conduct preliminary analysis from the perspective of public security, but campus safety of primary and secondary schools has shown many individual problems compared with general public security due to particularity of their areas and protection targets. For instance, campus safety of primary and secondary schools has unique protection targets, subject of liability, risk range, site environment and social impacts along with particular requirements on risk prevention and control [11].

Guidance on specific campus safety related risk management operations based on risk management philosophy. Risk management philosophy has been put into practice in most areas. To better guide implementation of campus safety measures in primary and secondary schools, first we shall sort out campus safety related risk sources of primary and secondary schools in a systematic manner. Secondly, professional institutions or schools shall carry out identification, classification and early warning of high campus safety risks of primary and secondary schools. The third aspect is establishment of risk management process design and risk management system that fits current campus safety needs [12]. The fourth aspect is proposal of technical approaches for campus safety related risk assessment and risk management in primary and secondary schools. The fifth aspect is emergency response and rescue during campus safety incidents in primary and secondary schools. The sixth aspect is primary and secondary schools' response to negative public

opinions on campus safety and public relations in crisis. The seventh aspect is qualitative accountability and compensation for problem arising from campus safety incidents in primary and secondary schools. The eighth aspect is rectification of high campus safety risks in primary and secondary schools. Campus safety related risk management works shall be further strengthened through aforesaid integrated risk management process.

Risk indicators of school safety. School refers to institutions accredited or recognized by educational administration departments, which can be mainly divided into four categories of nursery school, primary school, secondary school and university [13]. Key research objects of this paper apply to primary and secondary schools, and examples are as follows: We propose to conduct risk classification mainly by three items of crowding coefficient, number of personnel and vulnerable targets. Classification results are divided into four categories of red, orange, yellow and blue, which represent major risk, relatively high risk, normal risk and low risk respectively. In the statistical analysis, per capita floor area is taken as indicator A1 of crowding coefficient, faculty ratio and student number are taken as indicator A2 of number of personnel, while sensitive people are taken as indicator A3. The total value of indicators of a school's overall risk classification indicator system is 100, and specific assessment indicators and values are as follows:

Table 1 Values of school safety risk indicators

Item	Content	Criterion for indicator division	Value
Crowding coefficient A ₁	Per capita floor area	Per capita floor area <10	30
		Per capita floor area ≥10	0
Number of personnel A ₂	Faculty ratio	Number of faculty and staff/number of students <1:11	30
		Number of faculty and staff/number of students ≥1:11	0
Number of personnel A ₂	Number of students	Number of students ≥ 3,000	20
		1,000 ≤ Number of students < 3,000	15
		500 ≤ Number of students < 1,000	10
		100 ≤ Number of students < 500	5
		Number of students < 100	0
Sensitive targets A ₃	Sensitive people	With children below school age or exceptional children	10
		No child below school age	0
	Boarding	With boarding students	10
		Lunch break only	5
		No boarding student	0

Note Sum of values of different indicators is the school's inherent risk value, i.e. R=A1+A2+A3.

Risk classification of school safety. School refers to institutions accredited or recognized by educational administration departments, which can be mainly divided into four categories of nursery school, primary school, secondary school and university. Key research objects of this paper apply to primary and secondary schools, and examples are as follows:

The purpose of classification is mainly to facilitate government's monitoring on risk sources. Determination of classification criteria is both a technical approach and a policy-oriented conduct, and the strictness of classification criteria will have direct impact on quantitative proportion of government services of different levels' direct monitoring on risk sources [14]. Based on local realities, it's recommended to classify school's inherent risk value pursuant to the following table.

Table 2. Table of criteria for school safety risk classification

Risk class	Inherent risk value R
Major risk (red)	Comprehensive score of over 80
Relatively high risk (orange)	Comprehensive score between 60 and 79

Risk class	Inherent risk value R
Normal risk (yellow)	Comprehensive score between 20 and 59
Low risk (blue)	Comprehensive score between 0 and 19

Note: 'over' mentioned in table above includes the number.

Conclusions of school safety risk classification

Risk classification of 889 existing schools in City A has been conducted pursuant to classification criteria, among which, 65, 389, 319 and 116 of them are recommended to be categorized as serious risk management, relatively high risk management, normal risk management and low risk management respectively. See Annex 18 for the overall risk levels of the 2531 schools. The risk levels of schools in various districts and counties are as follows.

Table 3. Overview of distribution of school risk classes in districts and counties of X Municipality

No .	Jurisdiction	Major risk	Relatively high risk	Normal risk	Low risk	No classification	Total
1	A District	32	60	47	9	0	229
2	B District	4	76	66	9	0	114
3	C District	10	66	57	16	0	249
4	D District	3	53	65	33	0	144
5	E District	4	65	55	9	0	80
6	F District	12	69	29	30	0	241
Total		65	389	319	116	0	889

Summary

Based on the public safety theory and risk management methods, this article describes the safety risk management process in primary and middle schools. The specific method of risk assessment is used as an example to illustrate the implementation process of safety risk management in primary and secondary schools from the aspects of risk indicators, risk classification, and risk classification conclusions, and a more scientific conclusion is obtained [15].

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