

# Research on the Evaluation and Enhancement Strategy of Emergency Management Capability of Colleges and Universities--Taking Jiangsu Province as an Example

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**Abstract**—With the reform of colleges and universities, the unstable factors affecting campus safety have increased, and all kinds of emergencies have increased year by year, which have brought certain negative impacts to institutions, teachers and students. This paper collects data from colleges and universities in Jiangsu Province as a research sample, combines the current situation of emergency management in colleges and universities, establishes an evaluation index system based on the AHP method based on the types of emergency management in colleges and universities and the factors affecting them, and determines the weights of the indexes through the hierarchical analysis method and the expert evaluation method to conduct a comprehensive evaluation of the emergency management capacity of colleges and universities in Jiangsu Province in case of emergencies. According to its overall level, it puts forward suggestions to improve the emergency management capacity of colleges and universities.

**Keywords**—Higher education, Critical incident, Emergency management capability, AHP approach.

## I. INTRODUCTION

With the rapid development of the economy, the rapid development of higher education and changes in the internal and external environments, institutions are increasingly faced with an increase in the number of safety hazards and the possibility of emergencies, such as food poisoning, campus violence and student suicide, which pose great difficulties for administrators. Universities are important bases for cultivating advanced talents, and they themselves are highly valued by the government, the public and the media, therefore, emergencies in universities often cause strong reactions from the society. When emergencies occur, if the administrators cannot find appropriate ways to cope with them, then they will bring serious impacts to the university, teachers and students, and even the society. Therefore, the hot topic of the current research in this field is how the emergency response capability of colleges and universities is in the end, and how to measure the more accurate and real emergency management capability of colleges and universities through a more scientific and reasonable method.

## II. CURRENT STATUS OF RESEARCH ON EMERGENCY MANAGEMENT CAPACITY OF UNIVERSITIES IN EMERGENCY SITUATIONS

Emergency response management originated in the military, developed in enterprises and matured in public administration. Abroad, the earliest research on emergency management was carried out in universities in developed countries such as the United States and Japan in the late 1960s. For example, Judi (2001) pointed out that school emergencies are a more

complex event with strong social influence, which requires the participation of experts from outside the university in the whole process of emergency management. Williams (2003) and others believe that when dealing with school emergencies, the emergencies occurring should be reported to the emergency response department and recorded as a way of keeping track of the students' knowledge of emergencies, the relevant emergency response measures of the school, the emergency response capabilities of teachers and school healthcare workers, the environment and supervision of the school's facilities, and to provide data to support future response efforts. Marincioni Fausto and Fraboni Rita (2012) described the emergency preparedness of Italian universities, and the study found that within the Italian university system inconsistency and fragmentation of emergency management models, highlighting the need for a more rigorous framework of standardized security protocols and emergency management guidelines. The study also points out that strengthening emergency planning and preparedness in Italian universities requires increased security leadership, employee engagement, and personal responsibility for safety and security.

Currently, in 2021, Cornell and Gregory scholars used fuzzy comprehensive assessment to achieve the evaluation model of campus emergency management capacity, and the weights of its indicators were selected through the hierarchical analysis method. In their study, the emergency management capacity is divided into five levels, and the evaluation vector of its main indicators is calculated after the secondary indicators are established by asking experts, and the final

evaluation results are obtained through the maximum principle.

Although the domestic research on emergency management of college emergencies started relatively late, in the early 20th century, more and more scholars have researched on college emergencies in China in recent years and achieved fruitful results. For the concept of college emergencies, in 1994, the Chinese scholar Zhou Belong mentioned college emergencies in his *Crisis in Chinese Education*, which provided a solid theoretical foundation for later researchers.

The creation of emergency management capacity system for emergencies and the assessment of emergency response capacity. Tian Yilin (2008) establishes a relatively perfect emergency response capacity assessment index system with the help of balanced scorecard and expert judgement method, and finally evaluates the emergency response capacity of Wuhan city by combining with multilevel fuzzy evaluation model, which verifies the reasonableness of the indexes. Yang Xia and He Tao (2019) used the hierarchical analysis method and expert rating method to construct an evaluation index system with the emergency management capacity of emergency management organizations, emergency prevention capacity and emergency restoration capacity as the first-level indexes, and carried out empirical analyses with universities in Anhui Province as an example. Liu Yang et al. (2022) based on the theory of topology, introduced the asymmetric closeness discriminant criterion, established the emergency management capability improvement model of colleges and universities based on the theory of object element topology, and at the same time, based on the whole life-cycle process, established the evaluation index system based on the hierarchical analysis method, and carried out the application in five colleges and universities. Li Yufei et al. (2020) divided the emergency management process of university emergencies into three phases: prevention and warning phase, emergency response phase, and post-event recovery phase based on process management theory. Nine evaluation indexes such as publicity and education ability, risk control and early warning ability, and aftermath recovery construction ability were selected to establish the evaluation index system of emergency management ability of colleges and universities, and the mutation coefficient method was used to construct the model. After that, Li Yufei et al. (2023), in order to overcome the limitations of the evaluation index system of emergency management capacity of colleges and universities which lacks of dynamics and capacity and the shortcomings of traditional static evaluation model, based on the dynamic capacity theory, divided the elemental composition of emergency management capacity of colleges and universities into components, constructed the evaluation index system of emergency management capacity of colleges and universities and combined with the fuzzy comprehensive evaluation model to carry out empirical analyses.

On the emergency management strategy, Wei Jie (2016) believes that the current emergency management capacity of colleges and universities in emergencies shows the characteristics of "generalization", which restricts the effectiveness of emergency management in colleges and

universities in emergencies, and therefore it is necessary to strengthen the "differentiation" construction of the emergency management capacity of colleges and universities in China. Therefore, it is necessary to strengthen the "differentiated" construction of emergency management capacity of universities in China. Wei Qingxin (2010) believes that emergency management measures for university emergencies should contain at least five core elements, namely, emergency management concept innovation mechanism, crisis education mechanism, psychological crisis intervention mechanism, emergency prevention mechanism, emergency preparedness mechanism, monitoring and early warning mechanism, and aftercare mechanism. Xue Ra and An Xian (2018) believe that the construction path of emergency response dynamic capacity of colleges and universities can be explored from building a learning organization, creating an information platform and improving the assessment system. Jin Meng (2021) proposed corresponding countermeasures from four aspects of personnel, technology, organization and environment through socio-technical system theory: at the personnel level, innovation of emergency management concepts, enrichment of emergency management knowledge and optimization of the emergency management mode should be carried out; at the technical level, the quality of materials and equipment should be strictly controlled, technological means should be innovated, and the rate of investment in emergency funding should be improved; at the organizational level, the organizational structure should be improved and the system should be strengthened; at the environmental level, the organization should be improved and the system should be strengthened. system and strengthen the system construction; in terms of environment, it is necessary to strengthen the campus culture construction and safety management inside and outside the campus. Shi Jianfang (2022) summarized the effective path to deal with college students' emergencies in the new era, including the four aspects of doing a good job in guiding students' concepts, building a scientific emergency mechanism, constructing a high-quality protection team, and improving the information management mechanism.

At present, it is widely recognised in China's academic circles that emergencies are of great significance to the reputation and image, survival and development of higher education institutions. And the research on emergency management of emergencies in colleges and universities has been studied in depth. However, the research on the emergency management mechanism of emergencies in institutions of higher education is not perfect enough, and the evaluation methods and countermeasure suggestions are not systematic and clear enough. On this basis, this paper combines the research results at home and abroad, adopts the AHP method to establish the comprehensive evaluation model of emergency management of emergencies in institutions of higher education, conducts a comprehensive evaluation of the level of emergency management of emergencies in institutions of higher education and puts forward corresponding countermeasure suggestions.

### III. DATA SOURCES AND QUESTIONNAIRE DESIGN

This study mainly through the method of questionnaires and interviews, to understand the actual situation of emergency management of emergencies in universities in Jiangsu Province, summed up the types of emergency management of emergencies in universities in Jiangsu Province and the impact of influencing factors, to provide data support for the next analysis of the effectiveness of emergency management of emergencies for students in universities in Jiangsu Province and put forward the corresponding enhancement strategies. In terms of the design of the questionnaire, this paper reviewed the relevant literature at home and abroad, and combined with the characteristics of each university in Jiangsu Province, the influencing factors, etc., to formulate the initial title and specific options of the questionnaire. On this basis, in-depth interviews were conducted on the parts of the questions and options where there were disagreements, and further revisions were made to the parts where there were disagreements. We also validated the validity and reasonableness of the questionnaire effectively and finally developed a complete questionnaire.

The main part of the questionnaire is divided into 20 questions, so a sample size between 140-200 is more appropriate. The research began in May 2023 and ended at the end of July 2023, using an online questionnaire survey, created and distributed through Questionnaire Star. A total of 200 questionnaires were distributed, 150 were recovered, 140 were valid questionnaires, and the validity rate of the questionnaire was 93%. Considering that what is to be investigated is the actual situation of emergency management of emergencies in colleges and universities, we chose to limit

the scope of the survey to Jiangsu Province and distribute the questionnaires to students in colleges and universities in Jiangsu Province. This is because there are more colleges and universities in Jiangsu Province, the overall level of education is higher, and in recent years, student suicides and other accidents have occurred in Jiangsu Province, which is more representative as a survey object. Because the survey was conducted in colleges and universities, the survey target is students, so the respondents generally have a higher level of education also reflects the credibility of the questionnaire from the side.

### IV. STATISTICAL ANALYSIS OF CRITICAL INCIDENTS IN HIGHER EDUCATION

#### A. Survey on Types of Emergencies in Higher Education Institutions

Emergencies in colleges and universities are numerous, and our questionnaire broadly summarizes six types of emergencies in colleges and universities, namely, security accidents, public health incidents, unnatural deaths of students and teachers, such as suicides, public order or crime cases with significant impacts, natural disaster accidents and others. We conducted preliminary processing for the data from the questionnaire survey using SPSS software. We found that there is a relationship between the grade distribution of the questionnaire respondents and the types of university emergencies. We use multiple response cross-tabulation to further investigate the relationship between the two. In this paper, we examined the "grade" variable on the awareness of critical incidents, and obtained the following cross-tabulation table 1.

TABLE 1. Multiple response cross-tabulation.

		Incidents <sup>a</sup>						Total	
		Surety	Public health incidents, etc	Unnatural deaths of teachers and students like suicide	Cases of public order or crime with significant impact	Natural disaster	Other		
Grade	Freshman	Count	6	6	4	4	3	1	9
		Percentage of your grade level	66.7%	66.7%	44.4%	44.4%	33.3%	11.1%	
		Percentage of total	4.3%	4.3%	2.9%	2.9%	2.1%	0.7%	6.4%
	Sophomore	Count	11	19	12	10	2	0	30
		Percentage of your grade level	36.7%	63.3%	40.0%	33.3%	6.7%	0.0%	
		Percentage of total	7.9%	13.6%	8.6%	7.1%	1.4%	0.0%	21.4%
	Junior	Count	16	24	24	21	7	0	44
		Percentage of your grade level	36.4%	54.5%	54.5%	47.7%	15.9%	0.0%	
		Percentage of total	11.4%	17.1%	17.1%	15.0%	5.0%	0.0%	31.4%
	Senior	Count	17	14	22	15	10	0	28
		Percentage of your grade level	60.7%	50.0%	78.6%	53.6%	35.7%	0.0%	
		Percentage of total	12.1%	10.0%	15.7%	10.7%	7.1%	0.0%	20.0%
	Grade 1 master	Count	4	3	6	3	3	1	8
		Percentage of your grade level	50.0%	37.5%	75.0%	37.5%	37.5%	12.5%	
		Percentage of total	2.9%	2.1%	4.3%	2.1%	2.1%	0.7%	5.7%
	Grade 2 master and above	Count	15	16	17	17	10	1	21
		Percentage of your grade level	71.4%	76.2%	81.0%	81.0%	47.6%	4.8%	
		Percentage of total	10.7%	11.4%	12.1%	12.1%	7.1%	0.7%	15.0%
Total	Count	69	82	85	70	35	3	140	
	Percentage of total	49.3%	58.6%	60.7%	50.0%	25.0%	2.1%	100.0%	

As can be seen from the above table, horizontally from the grade point of view, freshmen respondents may occur security

and public health events accounted for the same proportion, both 66.7%, sophomore respondents are also public health

events accounted for the highest proportion of the respondents, can be roughly deduced that after the college entrance exams after the college freshmen, come to an unfamiliar environment, the most likely to occur some security accidents caused by their own danger, the respondents have strong insecurity! The respondents have a strong sense of insecurity, which makes the attention of university psychology courses and psychology teachers and counsellors particularly important; vertically, for the incident of unnatural death of teachers and students, the proportion of senior students and postgraduates is particularly prominent, especially the respondents of the second year of the study and above, which, to a certain extent, reflects the pressure of senior students near graduation multiplied, compared to the first and second year of college when the pressure of graduation thesis is worry-free. In some ways, this reflects that the pressure of senior students increases when they are approaching graduation. Compared with the carefree period in the first and second years of college, the pressure of graduation thesis, employment pressure, and pressure of graduation exams come one after another, and the pressure of graduation thesis is even more difficult to graduate due to the problem of graduation thesis for the second year of study and above. For natural disasters, from the table, the overall proportion is small, thanks to the good geographical location of Jiangsu Province, Jiangsu Province is in the plains, flat terrain, suitable climate, natural disasters rarely occur, and economically developed, since ancient times, has established a good water circulation system and drainage system, Jiangsu Province, a large number of colleges and universities, but also for the students can be assured that a solid foundation for learning. The province has a large number of colleges and universities, which provides a solid foundation for students to study.

**B. Causes of Emergencies in Higher Education**

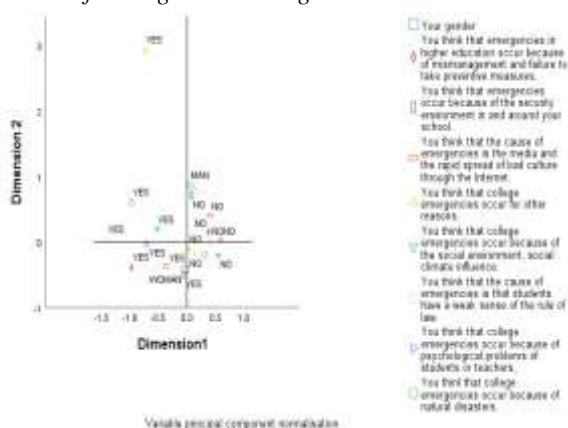


Fig. 1. Scatter plot.

According to the above analysis of the types of college emergencies, it can be found that the occurrence of college emergencies is generally caused by the influence factors such as improper school management and students' psychological problems. In order to further analyse the causes of emergencies in colleges and universities, we subdivided them into improper school management and prevention, the influence of the security environment in schools and their

surroundings, bad publicity in the media network, the influence of the social environment and culture, psychological problems of teachers and students, natural disasters, students' weak concept of the rule of law and others, and combined with the results of the questionnaire survey to carry out a multi-correspondence analysis, and the results are shown in the figure above. From the figure, it can be seen that female participants believe that the causes of emergencies in colleges and universities are mainly due to the security environment in schools and their surroundings, the media and the rapid spread of the media and the Internet to the adverse culture, and that natural disasters, the social environment and social atmosphere, and students' weak concept of the rule of law are irrelevant. This differs from the perception of male participants, who, according to the results, found that they believe that the emergence of college emergencies has nothing to do with the security environment and media and network dissemination, and is related to natural disasters, social environment and social atmosphere. In addition, both male and female participants believed that there are no other reasons for the emergence of critical incidents in higher education. Therefore, we found that the participants had different perceptions of the causes of university emergencies because of their gender, and that all relevant factors should be taken into account when improving the emergency management capacity of universities in order to make optimal decisions.

Through the statistical analysis of emergencies in universities in Jiangsu Province, we can find the importance of emergency management capability, and combined with the types of emergencies in universities and their causes, the emergency management capability is roughly divided into four kinds of capabilities, for emergency planning capability, emergency organization capability, emergency command capability, emergency coordination capability, so as to preliminarily construct the evaluation index system of emergency management capability of emergencies in universities.

**V. EVALUATION OF EMERGENCY MANAGEMENT CAPABILITY OF UNIVERSITIES BASED ON AHP METHOD FOR CRITICAL INCIDENTS**

**A. Explanation of The Evaluation Method of The Emergency Response Capacity of Universities in Case of Emergencies**

In order to comprehensively assess the emergency management capability of universities, this paper discusses how to construct the evaluation system of emergency management capability of universities through a large amount of literature search and communication with experts, we obtain the data of important indicators in the evaluation system through questionnaire survey, and use hierarchical analysis and expert scoring method to determine the first-level indicators and second-level indicators and to determine the weights of them. Secondly, we established a comprehensive evaluation model to score the emergency management capacity of universities and drew the corresponding conclusions; finally, we put forward the corresponding countermeasures for the conclusions and the problems found

in the process of investigation in dealing with emergencies in colleges and universities.

**B. Criteria for Evaluating The Emergency Management Capacity of Universities in Case of Emergencies**

By analyzing the characteristics of university emergencies and the types of events and other factors, we had a careful discussion with experts, and finally determined that the evaluation index system of emergency management capability of university emergencies is defined as the target layer A, and determined that the emergency planning capability, the emergency organization capability, the emergency command capability, the emergency co-ordination capability are four first-level indexes and the corresponding 15 second-level indexes, which are applied in the evaluation system. The evaluation system is applied in this evaluation system. The details are shown in the table.

TABLE 2. System of evaluation indicators.

target level	Level 1 indicators	Secondary indicators
Emergency management capacity for emergencies in higher education Evaluation indicator system A	Contingency planning capacity B1	Emergency monitoring capacity C1 Emergency recognition capability C2 Emergency early warning capacity C3 Construction of the Emergency Information Platform C4
	Emergency organization Capacity B2	Integrity of emergency management systems C5 Reasonable Integrity of Emergency Preparedness C6 Quality of security managers C7 Awareness of responding to emergencies C8
	Emergency command capacity B3	Emergency Preparedness Implementation Capacity C9 Campus order resilience C10 Emergency command and intermodal capacity C11 Emergency incident cause analysis capability C12
	Emergency coordination capacity B4	Emergency Control and Coordination Capability C13 Facility Rehabilitation and Reconstruction Capacity C14 Implementation of aftercare counselling C15

**C. Determination of Weights for Evaluating The Emergency Management Capacity of Universities in Case of Emergencies**

For the determination of the weights, we applied methods such as principal component analysis, Delphi method and hierarchical analysis. Principal Component Analysis (PCA), also known as Principal Component Analysis, aims at converting the main indicators into a number of specific and comprehensive indicators by means of dimensionality reduction. The so-called Delphi method is to collect the opinions of each member, and convert the originally opposite opinions into similar opinions as much as possible after several times of collection, and finally make a judgement. Hierarchical analysis method (AHP) is to stratify the decision-making problem in accordance with the overall goal, subgoals of each level, evaluation criteria to the order of specific alternatives, and to find out the priority weight of each

element in each level to a certain element in the previous level by solving the feature vector of the judgment matrix, and then to integrate the final weight of each alternative in the overall goal step by step by means of weighted summation, and the one with the highest weight at the end is the The best option is the one with the highest weight. However, because we collected a small sample, it is difficult to make a comparison, so we partially modified the method, we based on the questionnaire options are divided into four options: excellent, good, qualified, unqualified, the respondent's choice to give a score, and the score for the final weighting, to arrive at the total score of the objective level.

First, we analyzed the relationship between the four first-level indicator factors, for the importance of the same level of the indicators of the same level of the same level of two-by-two comparisons, the contrast to derive the judgement matrix, in turn, the next level of the indicators between the comparisons and then derive the judgement matrix, and expressed in the corresponding numerical value. Considering the impact of indicators and indicators on the emergency management capacity of universities, the importance of indicators over indicators is expressed by saaty's 1-9 scale (as shown in the table).

TABLE 3. Scale of the judgement matrix and its meaning.

Scale	Hidden Meaning
1	Indicates that two elements are of equal importance compared to each other
3	Indicates that the former is slightly more important than the latter when comparing two elements
5	Indicates that when two elements are compared, the former is significantly more important than the latter
7	Indicates that the former is more important than the latter when comparing two elements
9	Indicates that the former is more strongly important than the latter when comparing two elements
2,4,6,8	denotes the intermediate value of the above neighbouring judgements
Inverse of 1-9	Indicates the significance of the comparison of the order of exchange of the corresponding two factors

Secondly, according to the emergencies of college emergencies, by comparing two by two to construct the judgement matrix we established the judgement matrix A=(B1,B2,B3), as shown in the table, the maximum eigenvalue of this judgement matrix is 4.056, and it also passed the consistency test.

TABLE 4. Judgement matrix A-B.

A	B1	B2	B3	B4	weights
B1	1	0.5	0.6	0.8	0.164
B2		1	1.5	2	0.367
B3			1	2.5	0.303
B4				1	0.166

$\lambda_{max} = 4.056$ ,  $CI = 0.019$ ,  $RI = 0.900$ ,  $CR = 0. < 0.10$ , consistency test passed.

Based on the further study of the relationship between the secondary indicators, the following judgement matrices were derived as shown in the table, all of which have passed the consistency test.

TABLE 5. Judgement matrix B1 -C.

B1	C1	C2	C3	C4	weights
C1	1	1.2	1.5	2	0.332
C2		1	0.5	0.8	0.183
C3			1	1.8	0.300
C4				1	0.185

$\lambda_{max} = 4.094$ ,  $CI = 0.031$ ,  $RI = 0.900$ ,  $CR = 0. < 0.10$ , consistency test passed.

TABLE 6. Judgement matrix B2 -C.

B2	C5	C6	C7	C8	weights
C5	1	1.5	3	4	0.458
C6		1	1.1	1.4	0.224
C7			1	2	0.196
C8				1	0.122

$\lambda_{max} = 4.072$ ,  $CI = 0.024$ ,  $RI = 0.900$ ,  $CR = 0. < 0.10$ , consistency test passed.

TABLE 7. Judgement matrix B3 -C.

B3	C9	C10	C11	C12	weights
C9	1	0.5	0.8	1.5	0.212
C10		1	1.2	1.6	0.338
C11			1	1.8	0.282
C12				1	0.167

$\lambda_{max} = 4.036$ ,  $CI = 0.012$ ,  $RI = 0.900$ ,  $CR = 0. < 0.10$ , consistency test passed.

TABLE 8. Judgement matrix B4 -C.

B4	C13	C14	C15	weights
C13	1	0.5	2	0.297
C14		1	3	0.540
C15			1	0.163

$\lambda_{max} = 3.009$ ,  $CI = 0.005$ ,  $RI = 0.580$ ,  $CR = 0. < 0.10$ , consistency test passed.

Ultimately we arrive at the total weights for this evaluation system as shown in the table:

TABLE 9. Weight share of evaluation system of emergency management capacity of higher education institutions.

target level	Level 1 indicators	weights	Secondary indicators	weights	total weight
Emergency management capacity for emergencies in higher education Evaluation indicator system A	Contingency planning capacity B1	0.164	Emergency monitoring capacity C1	0.332	0.0544
			Emergency recognition capability C2	0.183	0.0300
			Emergency early warning capacity C3	0.300	0.0492
			Construction of the Emergency Information Platform C4	0.185	0.0303
	Emergency organization Capacity B2	0.367	Integrity of emergency management systems C5	0.458	0.1681
			Reasonable Integrity of Emergency Preparedness C6	0.224	0.0822
			Quality of security managers C7	0.196	0.0719
			Awareness of responding to emergencies C8	0.122	0.0448
	Emergency command capacity B3	0.303	Emergency Preparedness Implementation Capacity C9	0.212	0.0642
			Campus order resilience C10	0.338	0.1024
			Emergency command and intermodal capacity C11	0.282	0.0854
			Emergency incident cause analysis capability C12	0.167	0.0506
	Emergency coordination capacity B4	0.166	Emergency Control and Coordination Capability C13	0.297	0.0493
			Facility Rehabilitation and Reconstruction Capacity C14	0.540	0.0896
			Implementation of aftercare counselling C15	0.163	0.0271

#### D. Comprehensive Evaluation of Emergency Management Capabilities of Universities in Critical Incidents

In calculating the total evaluation score, the addition, multiplication and weighted scoring methods can be used. This paper uses the weighted scoring method, which is an evaluation method that can objectively determine the degree of importance of each evaluation item, highlight the role of the main evaluation items, and make the evaluation work focused, and thus the results are more accurate and reliable. The weighted scoring method assigns weights to evaluation indicators according to their degree of importance. When calculating the total evaluation score, the score value of each item is multiplied by the weight of the item and then added

together. Therefore, this paper requires the numerical quantification of each evaluation indicator and the use of a percentage system for quantitative processing:

When the final evaluation result is in the range of 0 to 40 points, it can be defined as unqualified; when the result is in the range of 40 to 60 points, it can be defined as qualified; when the result is in the range of 60 to 80 points, it can be defined as good; and when the result is in the range of 80 to 100 points, it can be defined as excellent (see table).

TABLE 10. Percentage score criteria.

talented	favourable	eligible (voter etc)	substandard
[80,100]	[60,80]	[40,60]	[0,40]

After the evaluation criteria have been established, each indicator is weighted and averaged to obtain a final score, i.e., Indicator = Statistical Ratio of Each Score. The final score of the assessment of the school's emergency management capacity to deal with emergencies is the sum of the product of the scores of the indicators at each level and their weights. Finally, we got the final result, the total score is 76.252, as shown in the table. According to the evaluation criteria in Table 11, it can be seen that the total score is located in the

good level interval, which indicates that the emergency management capacity of universities in Jiangsu Province is still good, and the occurrence of accidents on campus can be handled in a more timely and appropriate manner, but there are still some loopholes and mishandled places. However, there are still some loopholes and mishandling areas. The author believes that strengthening in these areas is expected to move into the excellent level.

TABLE 11. Comprehensive Evaluation Results of Emergency Management Capability of Universities in Jiangsu Province.

target level	Level 1 indicators	Secondary indicators	talented	favourable	eligible (voter etc)	substandard	score	total score
Emergency management capacity for emergencies in higher education Evaluation indicator system A	Contingency planning capacity B1	Emergency monitoring capacity C1	0.016	0.024	0.013	0.002	13.132	76.252
		Emergency recognition capability C2	0.009	0.009	0.011	0.001		
		Emergency early warning capacity C3	0.014	0.025	0.008	0.001		
		Construction of the Emergency Information Platform C4	0.010	0.013	0.006	0.001		
	Emergency organization Capacity B2	Integrity of emergency management systems C5	0.041	0.079	0.040	0.008	28.603	
		Reasonable Integrity of Emergency Preparedness C6	0.018	0.041	0.022	0.002		
		Quality of security managers C7	0.014	0.040	0.016	0.002		
		Awareness of responding to emergencies C8	0.011	0.017	0.014	0.003		
	Emergency command capacity B3	Emergency Preparedness Implementation Capacity C9	0.014	0.027	0.007	0.016	22.510	
		Campus order resilience C10	0.024	0.043	0.027	0.008		
		Emergency command and intermodal capacity C11	0.019	0.046	0.010	0.002		
		Emergency incident cause analysis capability C12	0.009	0.023	0.015	0.003		
	Emergency coordination capacity B4	Emergency Control and Coordination Capability C13	0.009	0.023	0.014	0.004	12.007	
		Facility Rehabilitation and Reconstruction Capacity C14	0.015	0.029	0.026	0.021		
		Implementation of aftercare counselling C15	0.008	0.013	0.004	0.001		

## VI. STRATEGIES FOR IMPROVING EMERGENCY MANAGEMENT CAPABILITY IN COLLEGES AND UNIVERSITIES

According to the above empirical results, it can be seen that the emergency management capacity of universities in Jiangsu Province is at a good level, but in recent years, emergencies have occurred in universities, therefore, it is important to improve the emergency management capacity for teaching, research and life to create a relatively stable school environment. This paper puts forward the corresponding promotion strategies according to the emergency planning ability, emergency organization ability, emergency command ability and emergency coordination ability respectively.

To improve the capacity of emergency planning, we should improve the emergency planning system, strengthen the security management and build an emergency information

platform. To improve the emergency organizational capacity of schools, the emergency management organizational structure of schools should be strengthened, and the education and training of students should be enhanced. Considering the suddenness and urgency of emergencies, a set of scientific and reasonable emergency programme should be established before the incident, and the responsibilities should be clearly divided according to the work programme. To improve the capacity of schools for emergency command and coordination should require schools to do a good job of emergency command in emergencies, to speed up the reconstruction of facilities and the restoration of normal teaching and learning order, and to set up psychological crisis intervention centres.

## VII. CONCLUSION

Generally speaking, colleges and universities are more

densely populated, and once an accident occurs, the consequences are more serious. Therefore, based on the types and influencing factors of college emergencies, this paper constructs evaluation indexes of emergency management capacity of emergencies, conducts empirical research and evaluates the emergency management capacity of emergencies in colleges and universities in Jiangsu Province, and finds that the emergency management capacity of emergencies in colleges and universities in Jiangsu Province is at a good level, which has not yet reached the excellent level, and there exists still room for improvement. Based on this, this paper puts forward the corresponding improvement strategy, in order to provide help for the prevention and timely control of university emergencies.

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