

AMOS-based Analysis of Community Cadres Crisis Management Competency

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Abstract: The volatility and uncertainty of the modern crisis make how community cadres manage crisis to become the focus of attention. Based on the results of exploratory factor analysis, Amos23.0 software was used to conduct second-order confirmatory factor analysis on sample data. This paper preliminaries established 28 competency elements of community emergency management talents by literature research and interview, and ranked them in the order of the weight of competency elements: Executive ability, communication and coordination ability, emergency handling ability, emergency laws and regulations, crisis awareness, responsibility, training and guidance, calm, affinity, insight. The competency model is applied to the recruitment, training, development and assessment of community emergency management talents, so as to improve the overall quality level of the community emergency management team and promote the high-quality development of emergency management.

Keywords: crisis management; Competency; model

1 INTRODUCTION

German sociologist Beck (2004) suggested that human society has entered an era of "risk society". Crisis management in the risk society has gradually entered the public domain, and how leaders manage the crisis has been the focus of attention. In 2018, the State Council will integrate the crisis management functions of relevant functional departments and establish the third-generation crisis management system, namely the Ministry of Emergency Management, PRC. Xi Jinping has repeatedly called on officials to improve their ability to respond to emergencies, and repeatedly stressed the need to lower risk prevention and control capabilities, strengthen the first line of defense, and strengthen prevention and control capacity in rural areas, communities and other communities.

Under the background of risk society, the multiple risks pose new challenges to the emergency management ability of leading cadres. Improving the capacity of leading cadres of the crisis management is the focus of the government crisis management (stand upright, 2012), in particular, leading cadres at the grass-roots level to be strengthened, technical support, the risk awareness and the concept of ability needs to improve its (Gong ShunFang, 2020), it will strengthen the cultivation of leading cadres at the grass-roots level and development, to meet the demand for emergency management personnel at the grass-roots level in risk society. To improve crisis management ability of leading cadres, first of all, it is necessary to define the

competency characteristics of grass-roots emergency management talents, and carry out targeted talent cultivation and development based on these characteristics. Crisis management under the background of risk society demand for community emergency management personnel, as well as people's demand for higher quality of crisis management, to study the community emergency management personnel competence needed for quality, especially the influence core competence elements of crisis response performance, build a competency model, the related personnel recruitment, training, evaluation and so on, Thus, targeted training and development of community emergency management personnel for crisis management to provide high-quality personnel security and support.

2 LITERATURE REVIEW

As China enters a high-risk society, emergency management should be transformed from crisis disposal to crisis response capability. It becomes increasingly important to integrate leading cadres' crisis management competency into cadres' core ability training and selection. In 1973, Mc Clelland proposed for the first time that competency refers to deep-seated personal characteristics such as motivation, traits, self-image, attitude, knowledge and behavioral skills.^[1]

Being a function of the National Emergency Management System (NIMS), the core competencies of emergency managers include basic conditions, leadership, communication and coordination ability, management skills, task execution and other elements.^[2]Entry-level management positions require college degrees, work experience, training in the National emergency management system, literacy, computer skills, etc. Senior management positions require basic qualifications, leadership, command and coordination, management skills, communication and coordination ability, task execution, etc.^[3]After Hurricane Katrina in 2005, after many discussions by professors and the international Emergency Management Committee, 10 professional competencies of emergency managers were finally extracted, including leadership, team building, management, communication and coordination, reducing social vulnerability, and experience. In 2007, International Emergency Management Association mentioned 8 core competencies in emergency management, including comprehensive, progressive, risk-driven, collaborative, integrated, coordinated, flexible and professional.^[4]

Zhang Guohui (2011) proposed that emergency management capabilities include planning, organization, leadership, control, communication and decision-making capabilities. Zhang Jijun (2014) was observed from the perspective of elements that emergency management ability includes emergency manpower elements, Emergency knowledge elements and emergency fund elements. Emergency Manpower elements and Emergency knowledge elements enter into dialogue with each other, and emergency fund elements play a supporting role. Guan Zheng, She Lian (2017) explored the crisis leadership in different stages of emergency management from the ten elements of preparedness for prevention, communication, psychological endurance, crisis recovery, early warning recognition, crisis decision-making, collaborative control, crisis appeal, plan making and crisis learning. Song Chuanying and Qin Qiwen (2018) think that leading cadres should have effective prevention and warning ability, crisis decision-making ability, control and handling ability, communication and coordination

ability and recovery ability. From the perspective of the whole process of crisis management, Zheng Xiaoming and Guo Yirong (2021) suggest that emergency leadership includes six dimensions: warning power, responsible power, believe power, driving power, cohesion and growth power.^[5]

There are many foreign studies on the establishment of core competency standards for emergency personnel, and many domestic studies on the establishment of competency models and evaluation indicators for emergency management personnel. These studies on emergency leadership competency provide an accurate basis for the construction of community leadership competency model. Strengthening the research on the core quality of community emergency management talents can provide reference standards for the recruitment, assessment and evaluation of community cadres, so as to improve the professional quality level of community emergency management talents and provide strong talent support for the high-quality development of emergency management.

3 THE CONSTRUCTION OF COMMUNITY EMERGENCY MANAGEMENT TALENT COMPETENCY MODEL

3.1 Determining the competency elements of community emergency management talents

In today's risk society, risk prevention has become the normal state of shared governance, and the traditional emergency crisis management has been unable to meet the needs of modern people for high-quality life. Compared with traditional crisis management personnel, community crisis management personnel pay more attention to the improvement and cultivation of emergency knowledge reserve and early warning awareness, a potent psychological quality, crisis communication ability, keen executive ability and other competency elements.

In order to determine the competency factors of community risk management talents and cultivate excellent crisis management talents, further selection should be done according to the actual situation of risk society. In this study, literature research method is utilized to draw on the crisis management competency model of Liang Liming (2020), Shen Hongzhou (2017) and Zeng Zhihong (2012). Through empirical research, four competency factors, namely, leaders' crisis management knowledge, crisis management ability, crisis management characteristics and values, are summarized. 30 competency factors of community crisis management talents were selected preliminaries, and then the selected competency factors were modified by the interview method and the Likert scale. See Table 1.

TABLE 1 DEFINITION AND MEAN STATISTICS OF COMPETENCY FACTORS OF COMMUNITY EMERGENCY MANAGEMENT TALENTS

Number	Capability elements	Capability element definition	Index
1	Emergency expertise	Professional knowledge of health emergency response, safety production, protection, management, control, emergency response, etc	3.826
2	Knowledge of emergency law	Law on The Prevention and Treatment of Infectious Diseases, Public Health Emergency Response, Safety Production Law, Emergency Response Law, fire Control Law, etc	4.169
3	General knowledge of first aid	knowledge of sexual nursing, knowledge of self-education and mutual education	3.912
4	Psychological knowledge	to master a certain knowledge of psychology, deal with all kinds of stress reaction, help people release the pressure, to guide positive social mentality	3.785
5	Information communication and	Can collect and disseminate corresponding emergency information through the Internet and master communication mode of "we media"	3.926
6	Insight	acutely perceived risk state of bacterium bud, to a certain extent, reduce the risk of damage, and sometimes even eliminate the risk	4.101
7	Crisis intervention capacity	effectively prevent crisis, crisis management, crisis recovery ability	4.012
8	Communication and coordination skills	Communicate and coordinate with the media, the public and relevant subjects; be good at listening suggestions from all sides; be able to express personal opinions clearly and accurately	4.214
9	execution	to plan, the upper leadership arrangement of tasks are completed timely and effectively	4.153
10	the ability of innovation	can actively absorb new knowledge, knowledge internalization, innovation, and applied to the concrete practice, the ability to solve the problem	3.869
11	Emergency handling capability	please meet emergencies, targeted to take effective measures, reducing the loss of people, properly handle ability	4.201
12	training guidance ability	through training, grasps certain emergency method, and imparts this approach to subordinates and popular guidance ability	4.027
13	Decision making Ability	in accordance with all laws and regulations of the state, policy, plan etc according to the actual situation to make specific decisions	3.990
14	Motivational ability	Ability to use effective motivational methods to motivate colleagues and the public	3.869
15	the Honest code of honor	when to carry out all kinds of activities, abide by the commitment between each other, fair treatment of community, faith, not fraud	3.928
16	Patient	Patiently listen to the narrative process of people venting their personal emotions or emergency events, and can sense the needs of others and give help	3.883
17	Confidence	We have confidence in our culture, system and road, so that we can work in accordance with the law	3.977
18	Affinity	community close, love psychology, thus promote the communication each other, and thus enhance interpersonal harmony, reduce the contradiction and conflict	4.117
19	the Compressive	adjust crisis under psychological stress and negative emotions	3.789
20	Accountability	For the cause of the Party, for the development of society and the interests of the people, have sense of responsibility and twisted behavior	4.019
21	Attention to detail	Understand and understand the relevant details of emergency work, keep improving, and strive to be meticulous in every link	3.668
22	Integrity	to people's legitimate and reasonable, clear right and wrong, reward and punishment, for the sake of the public interest, recognized by the majority of the society	3.989
23	Active	actively deal with the problem, rather than waiting for, negative attitude in the face of the problem	3.976
24	Calm and collected	field is, not to judge calmly and make flexible coping strategies	4.003
25	Empathy	Can stand on the Angle of the party, objectively understand the party's inner feelings, and convey this understanding to the party's emotional state	3.878
26	Crisis awareness	A series of basic elements such as the cause, characteristics and classification of crisis are included in the perception and response to emergency situations	4.050
27	Loyalty	Be loyal to the cause of the Party and serve the people wholeheartedly	3.896
28	Public servant consciousness	work off the lives of the people of the practical work, good, hard, always put the security of the people's fundamental interests as a solution to all problems	4.120
29	socialist vision	the great rejuvenation of the Chinese nation and promoting the socialist modernization and achieving personal goals for a better life to struggle	3.658
30	Dedication	Protect the interests of the people, consciously abandon their own interests and even sacrifice their noble character of life	3.989

As can be seen from Table 1, among the 30 competency factors of community crisis management talent, the average value of 28 competency factors is above 3.7, and the value less than 3.7 includes two competency factors: attention to details and a socialist vision. Therefore, after excluding two competency factors less than 3.7, 28 competency factors of community crisis management talents are preliminaries identified in this paper: Emergency professional knowledge, legal knowledge, general knowledge, psychological first aid knowledge, communication and coordination, execution, communication and coordination, execution, information dissemination and media knowledge, insight and crisis intervention, emergency treatment ability, innovation ability, training, guidance, motivation, decision

ability, honesty, patience, self-confidence and affinity, compressive strength, bear responsibility, positive Directness, initiative, calmness, empathy, crisis awareness, loyalty, public servant awareness, dedication.

3.2 issuing and recycling of questionnaires

In order to test the validity Credibility of 28 competency factors of community leadership crisis management talents preliminaries determined. This study selected community populations in some cities of Guangxi as the survey objects to conduct a questionnaire survey. The questionnaire was divided into 2 parts. The first part is the basic information of the respondents, such as the age, educational background, professional ability. Etc. The second part is the community emergency management personnel competency factors to the important degree of the investigation. The questionnaire rated the importance of competency elements of the position on five scales of Likert's five-point scale (5 very important, 4 important, 3 moderately important, 2 Unimportant, and 1 Very Unimportant). The questionnaire survey adopted the sampling survey method. A total of 286 questionnaires were forwarded, of which 279 were actually collected. After excluding invalid questionnaires, 211 valid questionnaires were prepared for effective recovery rate of 75.6%.

3.3 Questionnaire statistics and analysis

3.3.1 Exploratory factor analysis

The Cronbach coefficient reliable method was used for reliability analysis of the data obtained in this study. The greater the reliability, the smaller the measurement standard error, and the more it can reflect the actual situation of the survey object. In this paper, the software SPSS25.0 is utilized to analyze the reliability of 211 valid questionnaires. It generally considers that α coefficient > 0.7 . The inherent reliability of the questionnaire is of great importance. The results show that the overall Cronbach a coefficient of the survey results is 0.93, much higher than 0.7, indicating that the internal consistency of the competency elements of community emergency management talents in this questionnaire is relatively high, and the setting of competency elements of community emergency management talents has certain reference value. In this paper, the maximum variance orthogonal rotation method is used to carry out carry out a principal component analysis of the questionnaire data. The results show that there are 4 common factors with eigenvalues greater than 1, and the total variance explanation rate reaches 64.626%, indicating that the four principal components extracted can reflect most of the original variables. According to the four main components of competency, four common factors of emergency knowledge, emergency ability, personality characteristics and values are extracted. The reliability test results of the questionnaire showed that the Kronbach A coefficients of the four common factors were all greater than 0.8, indicating that the questionnaire had high reliability, and the factor load coefficients were all greater than 0.7, indicating that the questionnaire had good structural validity. Explicit results are shown in table 2.

TABLE 2 EXPLORATORY FACTOR ANALYSIS RESULTS OF COMPETENCY FACTORS OF COMMUNITY EMERGENCY MANAGEMENT TALENTS

Name of factor	Constituent elements	Load factor	Total Cronbach's alpha value
Emergency knowledge	Emergency expertise	0.721	0.89 0.93
	Emergency legal knowledge	0.773	
	General knowledge of first aid	0.712	
	Psychological knowledge	0.722	
	Information communication and media knowledge	0.716	
Emergency ability	Insight	0.756	0.9
	Crisis intervention capability	0.726	
	Communication and coordination skills	0.755	
	Executive force	0.771	
	Learning innovation ability	0.723	
	Emergency handling capability	0.754	
	Training and guidance ability	0.771	
	Decision-making ability	0.720	
Motivation	0.707		
Personality trait	Honesty, trustworthiness	0.724	0.916
	Patience	0.719	
	Self-confidence	0.744	
	Affinity	0.754	
	Resistance to pressure	0.731	
	Responsibility	0.768	
	Integrity	0.719	
	Take the initiative to	0.714	
	Calm	0.781	
Empathy	0.701		
Ideas concept	Crisis consciousness	0.751	0.932
	Loyal	0.732	
	Attitude of a public servant	0.755	
	Dedication	0.717	

3.3.2 Confirmatory factor analysis

Building on the results of exploratory factor analysis. Amos23.0 software was utilized to conduct second-order confirmatory factor analysis on sample data. The fitting results show that CMIN/DF assumes than 3, which is 1.32. AGFI and GFI were 0.886 and 0.902 respectively, and AGFI was placed on the brink of 0.9, which was acceptable. CFI and TLI were 0.978 and 0.976, respectively, which were above 0.9. RMSEA was lower than 0.05, 0.032; RMR is less than 0.1, 0.018. Built on comprehensive judgment. It is assumed that the model is consistent with the actual data.

3.4 Determine the competency model of community emergency management talents

Depending on the competency factors of community emergency management talents, the analytic hierarchy process (AHP) model is created. The target layer of analytic hierarchy process model is community emergency management talent ability A. The standard layer has four dimensions: Emergency knowledge B1, emergency ability B2, personality B3 and values of B4. The factor layer includes 28 competency factors.

In the study, experts were given a questionnaire. The questionnaire took advantage of analytic hierarchy process and 1-9 scale methods to compare the importance of competency factors of community emergency management talents, and analyzed the membership degree of the results. A total of 20 questionnaires were forwarded, 18 were recovered and 15 were valid. By

summarizing 15 experts score weight as a result, the weight of all levels of competency elements arithmetic average, get the final weight of primary and secondary factors, and then the secondary factor weight is multiplied by factor weights with the corresponding level, get secondary elements combination weights, finally it is concluded that the community emergency management personnel competency model (as shown in table 3).

TABLE 3 COMPETENCY MODEL OF COMMUNITY EMERGENCY MANAGEMENT TALENTS

Primary factors	Account for the total target weight	Secondary factors	Single weight	combination weight	Importance ranking of secondary elements
Emergency Knowledge B1	0.3268	Emergency professional knowledge C	0.111	0.0209	22
		Emergency legal knowledge C1 2	0.168	0.0549	4
		General knowledge of first Aid C1 3	0.1299	0.0186	24
		Psychology knowledge C1 4	0.106	0.0152	29
		Information communication and media knowledge C1 5	0.0805	0.0263	18
Emergency capability B2	0.3424	Insight C2 1	0.1154	0.0217	21
		Crisis intervention capability C2 2	0.1204	0.0393	11
		Communication and coordination skill Execution C2 4	0.2106	0.0688	2
		Execution C2 4	0.2262	0.0739	1
		Learning and innovation ability C2	0.143	0.0269	17
		Emergency handling ability C2 6	0.1656	0.0567	3
		Training and guidance ability C2 7	0.2417	0.0454	7
		Decision-making ability C2 8	0.208	0.0391	12
		Motivation ability C2 9	0.1576	0.0225	20
Personality traits B3	0.188	Honesty C3 1	0.0962	0.0329	16
		Patience C3 2	0.1229	0.0176	25
		Confidence c 3 3	0.1096	0.0375	13
		Affinity C3 4	0.1247	0.0407	9
		The compressive C3 5	0.1038	0.0355	14
		Responsibility C36	0.1389	0.0476	6
		Integrity C3 7	0.1462	0.0209	22
		Active C3 8	0.1143	0.0163	26
		Calm down, C3 9	0.1226	0.042	8
		Empathy C4 0	0.0696	0.0227	19
Values B4	0.1429	Crisis awareness C4 1	0.1557	0.0533	5
		Loyalty C4 2	0.1809	0.034	15
		Public servant consciousness C4 3	0.1187	0.0407	10
		Socialist vision c4 4	0.104	0.0149	28
		Dedication C4 5	0.105	0.0151	27

3.5 Determine the core quality competency model of community emergency management talents

According to the weight of the top 10 competency elements in the order: execution, communication and coordination ability and emergency handling capacity, emergency laws and regulations, crisis awareness, bear responsibility, training, guidance, calm, affinity, insight, and thus determine community emergency management personnel quality of the core competency model (shown in figure 1).

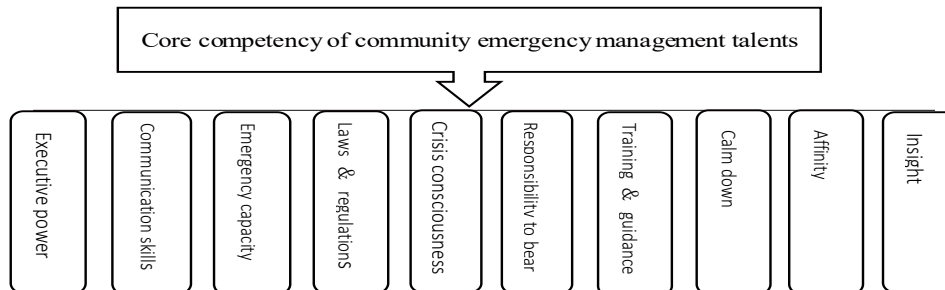


FIGURE 1 COMPETENCY MODEL OF CORE QUALITY OF COMMUNITY EMERGENCY MANAGEMENT TALEN

4 APPLICATION OF COMPETENCY MODEL FOR COMMUNITY EMERGENCY MANAGEMENT TALENTS

4.1 Applied to talent recruitment

Lin and Morrison (2007) found that competency plays a major role in human resource recruitment and selection. The core competency model can be utilized to resume screening, knowledge assessment, behavior interview, selection and appointment of community emergency management personnel. In the recruitment preparation, according to the core competency model, the core competency required by emergency management personnel is established. The recruitment team conducts systematic job analysis according to the job requirements, and formulates the job description and recruitment plan.

In the recruitment implementation process, the accurate screening of applicants' personal information, and then according to the emergency management position requirements of the assessment of applicants' core competency related knowledge, as well as with the emergency management position requirements of attitude, personality, interest and other internal qualities. During the interview process, through structured interview and behavioral event interview, to strengthen the core competence of the applicant's investigation, not only include the candidate's professional knowledge and emergency ability, should also consider the candidate's values and personality characteristics such as deep competency, make the quality of applicants meet the job requirements, realize people post match, improve the effectiveness of the recruitment.

4.2 Applied to talent training and development

Create a collaborative training platform for emergency management talents between the government and the university. According to competency quality in the competency model, colleges and universities and the government can jointly formulate talent training and development plans. Carry out targeted collaborative training for community emergency management personnel to clarify the quality and ability elements that should be stressed in the training of community emergency management personnel. We will open up a special green channel for personnel training and employment, implement order-oriented personnel training, and train basic community staff and management personnel by relying on administrative

management, emergency management, sociology and other majors in colleges and universities, so as to comprehensively enhance the value of human capital of community cadres. Being dependent on the competency model of community emergency management talents, government departments evaluate emergency management ability of personnel and formulate training plans. Through pre-job, on-job, rotation and online training, they can effectively improve their relevant knowledge and ability, and cultivate good professional ethics and work attitude. At the same time, colleges and universities formulate talent training programs according to actual needs, and design course content and teaching methods in the industry-university-research cooperative training system, so that students' emergency management ability can be continuously improved in the system, and standardized training of community emergency talents can be realized. Depending upon competent elements in the competency model, the potential of community emergency management personnel is deeply explored, the potential of targeted development is undertaken, and high-quality community emergency management personnel team is built.

4.3 Apply to talent assessment

In the previous management personnel post competency evaluation system, performance, award and performance are generally regarded as job evaluation criteria, which is one-sided. If the personnel assessment process refers to the core competency model and carries out an objective and comprehensive evaluation of the knowledge, ability, characteristics, attitude and potential of community workers according to the weight of each element, the standardization and fairness of the assessment can be guaranteed. The evaluation results have important reference value for staff's professional title evaluation, job promotion and excellent evaluation. At the same time, the assessment results are linked to individual performance rewards and salary levels of employees, so as to improve the incentive effect of management and mobilize the enthusiasm of community workers. Through the examination and assessment results, employees can timely find the difference between their current ability and the job ability requirements, improve and change the relevant knowledge, ability and attitude in a planned and purposeful way, reasonably plan the career, promote personal career development, and realize the long-term and sustainable growth of the work performance of community emergency management talents.

5 CONCLUSION

The volatility and uncertainty of the contemporary crisis make how community cadres manage crisis become the focus of attention. Executive ability, communication and coordination ability, emergency handling ability, emergency laws and regulations, crisis awareness, responsibility, training and guidance, calm, affinity, insight are located in the highest position of competency factors. It arises out of profound significance to apply the competency model to the recruitment, training, development and assessment of community emergency management talents to improve the overall quality level of the community emergency management team, and then promote the high-quality development of emergency management and quality.

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