



Design and Validating a Framework of High-School Crisis-Management Curriculum (The Case of Covid-19 Crisis)

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ARTICLE INFO

Article type:
Research Article

Article History:
Received 29 November 2022
Revised 07 June 2023
Accepted 12 June 2023
Published Online 09 March 2024

Keywords:
framework,
curriculum,
crisis management

ABSTRACT

The present study aimed to develop and validate a curriculum framework based on crisis management. Research method was mixed and in qualitative part was used Grinded theory and in the quantitative part, descriptive survey. Sampling was done in a purposeful way until the theoretical saturation of the data with 15 experts. The data collection tool in the qualitative section was semi-structured in-depth interview and in the quantitative section, researcher-made questionnaire. For the validity of the instruments, the reliability and content validity technique was used, and for the reliability, the reliability test and Cronbach's alpha were used. To analyze the data in the qualitative part, content analysis was used using open and axial coding, and in the quantitative part, Friedman's test and one-sample t-test and SPSS software. The results showed that the developed curriculum framework is favorable in terms of usefulness and implementation capability.

Cite this article: Dibaei Saber, M.; Tahmasebzadeh Sheikhlar, D. (2024). Design and Validating a Framework of High-School Crisis-Management Curriculum (The Case of Covid-19 Crisis). *Interdisciplinary Journal of Management Studies (IJMS)*, 17 (2), 553-565. DOI: <http://doi.org/10.22059/ijms.2023.350790.675487>



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DOI: <http://doi.org/10.22059/ijms.2023.350790.675487>

Introduction

An effective way to alleviate crisis impacts is to provide general education and encourage individuals to effectively confront its consequences and repercussions. In this regard, the ministry of education can undertake a more constructive role than other organizations and institutions, and it can play a crucial role in providing in-disaster and post-disaster reliefs (Hatamloy, 2014). To do so, the ministry of education deploys educational tools and aids such as libraries, laboratories, workshops, and curricula, where the latter is a crucial ingredient of an educational system. A curriculum can provide a ground, opportunity, content, and helpful methods to educate and prepare students for coping with disasters. Accordingly, many countries, including Iran, have engaged in development curricula based on crisis management and developing high-level governmental agendas, such as the formation of a national committee for assuaging the impacts of natural disasters act, and the national comprehensive law of relief and rescue (Hatamloy 2014). By definition (Wachter & Barrio 2020; Di Pietro et al. 2020), a crisis is a situation that results in the destruction of infrastructures of a community or financial damages and loss of lives in a way that interferes with the functionality of that community. Moreover, high-level governmental agendas, including Iran's 20-Year Vision Plan, give a perspective of a safe, healthy, affluent nation, with an optimal environment. With the outbreak of Covid-19 in East Asia, and then its spread beyond the boundaries of eastern countries to the point of a pandemic, the COVID-stricken world faced a huge catastrophe. In the midst of Covid-19 pandemic, education systems in many countries also suffered from the newly emerged crisis, since Covid-19 crisis caused changes in the structure of the educational system such that, from the second half of 2019, virtual education replaced in-person education, and it is not known when schools will be open to teachers and students. One might therefore say that the education system has faced the crisis of Covid-19. Since the outbreak of such crises is sometimes unpredictable, national, regional, provincial, and local organizations need to make plans to prevent, confront, and control various sorts of crises. For education to be effective in crises and to actualize its capabilities and achieve its objectives, not only is it necessary to have minimum educational standards in which children play a pivotal role in the learning process, but they should also be introduced to the principles of coping with crises in their curricula. Nevertheless, the findings of various studies (including Khamoushi Bidgoli & Mazaheri 2019; Rashidi et al. 2015; Salehi et al. 2015; Siraj & Absalanzadeh 2014; Torabi 2015; Javanmard et al. 2014) show that crisis management is not accommodated in school curricula, while learning about how to tackle crises is crucial to having a healthy desirable life, and it is indeed necessary to promote such learning for every community (National Education Association 2018; Tysinger et al. 2020). To teach students about crises and how to cope with them would enable individuals (McBrayer et al. 2020; Tysinger et al. 2016), promote their awareness of the problem and its impacts (Debes 2021; Ozkayran et al. 2020), enable the students and introduce them to methods of relief and rescue (National Education Association 2018; McBrayer et al. 2021), change people's lifestyle by promoting the culture of resilience against incidents (Ozkayran et al. 2021; Debes 2021; Karasavidou & Alexopoulos 2019). It is therefore inevitable to educate students about coping with crisis. According to my survey, most research about crisis in Iran (including Salehi et al. 2015; Rashidi et al 2015; Siraj & Absalanzadeh 2014) is devoted to crisis education and the components of teaching crisis management in textbooks, but no study was conducted on planning and validating the framework of high-school crisis-management curriculum. For instance, Hatamloy (2014) has conducted a research about "crisis management: a new educational approach in schools and an assessment of its affectability in educational environments" to compare the behaviors and awareness of students before and after the course of coping with earthquake. The study was carried out about female and male students in fifteen secondary schools in all areas of the city of Tabriz. The results show that an educational course about a principled crisis management leads to increased awareness of students about their environment and its risks, increased self-confidence, self-possession, the choice of a proper way of dealing with earthquakes, and an enhanced performance.

Faramarzi and colleagues (2015) have also researched on "crisis management and education against earthquake in the Ministry of Education" to measure students' learning about drills and educational activities performed at schools. The results show that, despite several problems in the academic drills and the earthquake the absence of a principled, continuous, and high-quality education about the management of earthquakes at schools, most students could learn the behaviors and

activities that fit different stages of crisis management (Poorahmadi et al. 2014). Moreover, in research on “evaluation of the effectiveness of educational courses of crisis management at schools in Isfahan Province,” it is concluded that if educational programs of crisis management at schools are sufficiently continuous and dynamic and are supported by families, then significant changes will occur in students’ awareness and performance at the time of the earthquake (McBrayer et al 2020). Research was done about “assessment of educational programs of crisis management for children,” which concludes that although many educational programs of crisis management, organized today at schools are carried out by educators from non-official organizations, such as emergency management organizations, they can have positive effects in students if families support them.

Given the above and considering the research gap (absence of a high-school crisis-management curriculum), let us focus on the issue to answer the following question: What are the characteristics of a high-school crisis-management curriculum (in the case of the Covid-19 crisis)?

Research Questions

- What are the characteristics of a conceptual framework for a crisis-management curriculum, according to experts?
- How do we prioritize the proposed framework of high-school crisis management curriculum, according to experts?
- For curriculum development experts, how is the high-school crisis-management curriculum framework feasible and helpful?

Theoretical Grounds of the Research

The crisis is a condition in which a sudden change occurs in a regular course, which renders it unstable. Crisis management is a process of coping with a complex, stressful condition that mobilizes all programs, organizations, and group controls with mutual actions and reactions and then provides them to administrators for proper decision-making (Hu et al. 2022). Scientific studies show that crisis management education can save thousands of lives, reduce costs, protect property, and prevent side effects. Accordingly, the education of people at risk is an essential part of the program for preparation against incidents (Boina & Rhinard 2022). Education must be planned in a way that leads to a change in people’s knowledge, perspective, and skills since education is a strategy that is implemented with a certain goal and direction over time (Börzel & Risse, 2022).

The education system as an institution, and indeed as the most prominent social institution, has obligations toward crises and emergencies, and its contributions are necessary and practical. The obligation is, of course, extended to curricula as a subsystem of education. Given changes in circumstances, the nature and functions of curricula differ from what they are in normal, peaceful conditions (Brad 2020, 10). Schools, curricula, and their members can play a significant part in crisis management (Javid and Niazi 2005, 40). The distinction guides researchers to further investigate the relevant curriculum.

The principle of flexibility of planning (in its general sense) requires curricula to involve proper strategies and solutions for unstable circumstances such as crises so that they help people for resilience, rescue from such conditions, and self-recovery. Crises are facts of human lives, which are addressed by various branches of science such as engineering, management, geology, and sociology. Still, the development of the science of curriculum development has understudied them. For this reason, crises can provide a vast domain of research for curricula. This is confirmed by a moment of reflection on recent incidents in West Asia and Iran. For instance, how effective are the curricula and education systems of countries in the rise of a phenomenon like terrorism? If we accept that a curriculum should pave the path for learning and enhance people’s lives, then when haze, floods, and COVID-19 put people’s lives at risk, particularly those of children and teenagers, what education based on what curricula could help to protect their health? If there is a need for designing a new curriculum in these circumstances, which view, approach, or framework of curricula could play a supportive role? This article is primarily concerned with the latter question.

As for the significance of the issue, it might be said that scientific studies in this field so far indicate that educating people about crisis management has saved thousands of lives and reduced costs.

In Table 1, empirical evidence inside and outside Iran is presented for the impact of education on crisis management.

Table 1. Studies carried out concerning crisis management

Author(s)	Year	Conclusion
Lamooki and Shoormasti	2022	Education is effective in crisis management, but all official and non-official institutions have a role to play in publicizing and cultivating crisis management as a comprehensive education of crisis management should be internalized into people's culture.
Zamoom	2021	The findings of this research show that, of 24 colleges of public relations and communications studied, only two considered crisis management in their curricula. Recent developments in the Western world determine new mechanisms for managing the management of information and news, treatment of people, and local and international mass media. Thus, new branches of crisis management focus on interdisciplinary education.
Robertson	2022	The findings of this study confirm the impact of education on crisis management and indicate that most curricula of preparation for crisis management are concerned with the central manager (educational leader). Accordingly, managers are apprehensive about the lack of constant education on crisis management at schools. Thus, they suggest that curricula should be presented in preparation for crisis management.
Perriton and Reynolds	2019	This study deals with crisis management and considers recent changes in crisis management education. Thus, it calls the community of education to a critical revision of its curricula and prepares the ground for turning classrooms into places for preparation against various circumstances.
Kahrizi and Alodari	2019	The findings show that the crisis management model with the human resource approach and the method of thematic analysis can be studied in three main stages: pre-disaster, in-disaster, and post-disaster management. Pre-disaster preparation includes themes such as efficiency of human resources, preventive measures, education of human resources, and identification of primary signs. In-disaster management consists of the theme of human resource preparation. And post-disaster management consists of the themes of identification, evaluation, limitation of languages, and the ability to reconstruct.
Saadat Talab	2018	From managers' perspective, the most effective method of educating students is done constantly and unceasingly. Thus, they require that preparation and immunity against crisis should be considered as contents of official textbooks in all grades.

According to my studies, no research has so far been done about the framework of crisis management curriculum in high schools (the case study of the Covid-19 crisis). For this reason, we focused on the issue and considered the following questions:

Research Methodology

Since the present research aims to identify a crisis management curriculum from the perspective of crisis management experts and professors, the exploratory sequential mixed method was deployed. In the qualitative part, the thematic analysis method was used; in the quantitative part, descriptive survey analysis was utilized.

The qualitative part of the research:

Since the research aims to analyze and determine the framework of crisis management curriculum, it looked for people who had a shared experience concerning the subject matter of the research so that they could effectively and reliably contribute to the research. In this way, the sample selection method was purposive, critical case with the technique of theoretical saturation. Thus, fifteen people were chosen as the participants in this study. There were three criteria for selecting the participants, two of which were necessary: scholarly expertise (those with sufficient knowledge of crisis management; that is, those who have written books or articles on crisis management or have relevant academic degrees); practical experience (those who are familiar with crisis management in practice).

The sampling ended with theoretical saturation. In this technique, the selection of samples continued until interviews with additional experts did not provide us with new information, and the data became almost repetitive. Although the information obtained after the thirteenth interview seemed redundant, went on to interview the fifteenth individual to ensure the saturation point. The concepts, terms, and key phrases from interviews with the experts, as well as an in-depth study of the sources and previous research, included my research's qualitative data. The tool for collecting qualitative data was semi-structured interview and the study of sources, texts, and documents. For qualitative accreditation of the initially planned framework, they the technique of credibility and reliability by aligning the sources (expert views, theoretical principles, scientific research). The validity of a qualitative analysis consists in the extent to which experts agree on the research findings: the greater the degree of agreement, the higher the credibility of the research. In addition, in my analysis of the contents of expert interviews and notes as well as sources, texts, and previous research, the criterion for the credibility of the research is the extent to which key phrases, words, and concepts recur to the point of theoretical saturation at which data become repetitive and new phrases rarely appear. In this research, expert consensus or agreement over each criterion or mark of the initial

framework is evidence of its high credibility. Additionally, for further assurance of the qualitative credibility of the findings of this section, the criteria of qualitative accreditation, such as verifiability and validity, were used. To determine the internal credibility of the findings of this research, three techniques were utilized: triangulation (data, investigator, and methods), acquisition of accurate parallel information, and researcher's self-revision. Furthermore, to determine construct validity (verifiability), the proposed conceptual collection, analysis of negative cases, and flexibility of the deployed method were relied on the following techniques. Moreover, the sources of data were diverse and used triangulation. Frequently modified and corrected the proposed framework. For data collection in the qualitative part, the following were used: 1) semi-structured deep interviews with experts and professors of crisis management, and 2) sources, texts, and documents relevant to the subject matter of the research. First, the participants were informed about the goal of the interview, and with their consent, the interview was recorded. They were assured that their identity would be secret. The interviews were from twenty to forty minutes, which were then written down. Finally, I drew on the qualitative content analysis method to analyze the research findings. Analysis of the information was received from the participants, and then, without my intervention, the data were encoded using the content analysis method. Next, additional and repetitive codes were deleted, and reducing the codes continued until broader classes and components were obtained. Furthermore, the framework of the crisis management curriculum was identified.

To ensure the validity of the qualitative part of the studies, the reliability test refers to the extent to which others can renew and repeat the data. This is equivalent to the notion of validity in the quantitative part. In this research, too, the reliability test is conducted with the technique of documentation of the study and analysis processes throughout different stages of the research. The processes in studying the theoretical grounds, previous research, and interviews with experts were organized, systematic, and aligned, leading to a typical result, which makes it reliable. To analyze the data coming from interviews, re-implement the coding method. they analyzed the data in three stages: verbal evidence, conceptualization, and categorization. Here was the procedure: after the researcher collected the data through deep semi-structured interviews, he coded the data to answer the first research question. Grounded theory, they used three sorts of coding to analyze the data: (1) open coding, (2) axial coding, and (3) selective coding. It is necessary to note that this research used open and axial types of coding to answer the first research question.

The quantitative part of the research:

In the quantitative part, tested the tool for the production of the initial framework of the crisis-management curriculum, which was planned in the qualitative part, by collecting quantitative data. Therefore, the research method in the quantitative part was a descriptive survey method. The statistical population in the quantitative part concerning the extent of helpfulness and feasibility of the crisis-management curriculum included all professors of curriculum development in the governmental universities of the city of Tehran. On my assessment, there are thirty such professors. In this part, they did not make a sampling and studied them with the census method. To collect quantitative data, a researcher-made questionnaire was formed at the stage of qualitative research. This research, used a questionnaire involving six elements of curriculum based on qualitative data, such as logic, objective, content, teaching strategy, instructional materials, and evaluation, and asked the individuals to show their opinion about the extent to which what is discovered from interviews, theoretical grounds, and practical research relates to the relevant elements on a five-point Likert scale (1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree). The method of scoring and interpreting each question on the questionnaire depends on the item checked by the respondents, where the minimum score for each question is one and the maximum is 5. Here was the way scored: strongly agree (5), neither agree nor disagree (3), disagree (2), and strongly disagree (1). After the required corrections, the experts confirmed the validity of the initial framework and the questionnaire of their form and content. Furthermore, construct validity was established through the method of factor analysis. Also, given that Cronbach's alpha was obtained as more excellent than 0/90 in all dimensions, the validity of the research tool was confirmed. At this stage and after the subjects filled out the questionnaires, they began to analyze the acquired data. Analyzed the quantitative data with the SPSS software. They used the statistical test, a one-sample t-test, to analyze the quantitative data and to answer the questions about the helpfulness and feasibility of the crisis management curriculum.

Research Findings

The first research question

According to experts, what are the characteristics of a conceptual framework for a crisis-management curriculum?

As noted in the section on methodology, this was a sequential exploratory mixed study which used the grounded theory (Glaser's approach) to plan a conceptual framework. To analyze the data from interviews, implemented the method of open coding. Since the data were analyzed at the three stages of verbal evidence, conceptualization, and categorization, and given the number of categories (elements) and the researcher's limits in presenting all stages of coding applied to all of the elements, mention one sample of the coding process for the reader's information.

First stage: extraction of verbal evidence

To analyze the data, I made full transcripts of the voice files of interviews and then extracted evidence from the transcripts. Table 1 presents part of the verbal evidence from the first interview.

Table 2. A sample of verbal evidence in the first interview

Verbal evidence
Preparation for proper reaction to critical circumstances will be reinforced with the drills.
Our students are introduced to the first aid in the classroom, but can they put their knowledge into practice when they face an incident?
The skill of coping with crises cannot merely be obtained through reading pamphlets, brochures, and books.
I cannot introduce students to crises just through classrooms and books. Drills are much more effective than theoretical materials.

Second stage:

Conceptualization mean to take an observation case, a sentence, or a paragraph, and then divide it into parts, and then assign a name to each incident, opinion, or event. This label serves as its designator or replaces it (Strauss and Corbin 2011). In Table 3, part of the conceptualization of the third interview is presented.

Table 3. Conceptualization of the Third Interview

The final code	Verbal evidence
Choosing the best solution and approving and implementing it on time	You might be familiar with the methods of relief, but when you are in the situation, you might not know what to do.
	Many costs of a crisis are due to wrong or late measures.
	In situations of crises, you should decide on the spot. You do not have much time to make a decision.
	It is indeed an art to state different solutions in situations of crises.
Promotion of the student's knowledge base in crisis management	In addition to theoretical education, the students should exercise practical skills so that they become institutionalized behaviors.
	The empathy of consultants and aid workers with students and their parents, particularly during the COVID-19 crisis, leads to a quantitative and qualitative enhancement of the programs.
	Teaching through book reading, storytelling, and educational video clips can instruct students on how to cope with Covid-19 while observing health protocols.
Introduction to how institutes and organizations work in crisis management	Given the spread of the disease, it is necessary to observe health protocols and coexist with the coronavirus, particularly for children and teenagers, both at home and school.
	The best way for students to protect themselves against the crisis is self-care, which they should learn from their parents, national TV, and non-governmental organizations.
	The national crisis management law emphasizes the development of people's participation to reinforce the culture of safety and care in society.
High degree of educability in children	To counter Covid-19, children and teenagers take their family members, particularly parents, as their role models.
	Students can influence and communicate what they learn to their family members and peers.
	When children participate in projects like water assistant and police assistant, their families will have more ingrained beliefs and adopt the proper norms in managing the sources of water and electricity or crises such as earthquakes and Covid-19.
Identification of the risks	Despite their young ages, children comprehensively view their surroundings, curiously monitor everything, and record them as serious observers.
	Students and their families should know that, with education, self-care could replace fear and anxiety at times of crisis.
	Self-awareness, accountability, awareness of one's environment, the ability to make decisions, and communication with people around are the crucial instructions that should be given in crisis management classes.
	Students should learn that fear and stress negatively impact one's body and mind, making us more vulnerable.
	Students should learn that when they cannot overcome stress and fear, they should not blame themselves.

Third stage: categorization

Once we determine certain phenomena in our data, we can classify the concepts based on them. This reduces the number of units with which we should work. Categorization is the procedure in which concepts seem to have the same meaning and are related to similar phenomena. Table 4 states the categories concerning crisis-management curriculum and their associated concepts.

Table 4. Paradigmatic features of the high-school crisis-management curriculum

Category	Concept	The Final Code
The framework of crisis-management	Logic and reason	Choice of the best solution and its timely approval and execution, planning, organizing, attempt to make optimal use of the sources, improving the student's knowledge base in crisis management, introduction to how institutions and organizations work together in crisis management, identification of weak and strong points in crisis management, introduction to the principles of integrated management in coping with crises, determination and choice of risk reduction methods, identification of risks, planning for an optimal implementation of risks, the high educability of children, reduction of losses and damages, reduction of death tolls.
	Objectives	Introduction to varieties of crises, mechanisms of reasonable reactions to crises, introduction to individual and social crises, introduction to preventive measures, overcoming crisis and emergency situations, management of time and costs, optimization of counter-crisis measures, minimization of losses from crises, creation of solidarity between people, taking the proper steps and making the right decisions, examination of the positive and negative effects of crisis in individual and social dimensions, promotion of public awareness, providing the required self-care educations, a fast recovery of the society to the normal state, minimal loss of lives and financial losses, reduction of the impacts of the crisis in the society and coping with them at the lowest cost possible, reduction or minimization of the negative effects of the crisis, preparing the society for dealing with crises, creating a sense of responsibility in people, encouraging the sense of participation in people, attainment of a reasonable solution to overcome abnormal conditions, development and promotion of the safety culture, controlling one's emotions and feelings in critical situations, prevention of post-crisis repercussions, physical, psychological, and cultural reconstruction of crisis-stricken areas, drills and exercises of students in various places to prepare for dealing with crises, the necessity of supports by families and governments to overcome crises, institutionalization of the sense of responsibility, students' empathy and sympathy toward crisis-stricken people.
	Content	Education of citizenship skills, introduction to the principles and notions of safety, introduction to pre-crisis, in-crisis, and post-crisis measures, introduction to varieties of crises and their threats, introduction to the required skills to optimally cope with crises, introduction to educational experiences of various countries in dealing with crises, education of self-care and other-care activities in times of crisis, introduction to relief and rescue organizations and their duties, learning how to contact relief organizations (e.g., their phone numbers), introduction to the signs of (coronavirus) crisis and situations of (coronavirus) crisis, introduction to the first aid kit and its contents, introduction to the roles and functions of different institutions, introduction to the individual and social consequences of the outbreak of crises, learning the concepts of relief and rescue, introduction to the warning safety signs, introduction to safe and unsafe areas in situations of crises, learning more about one's living place and how to navigate, introduction to health and safety instructions, introduction to proper ways of taking shelter and emergency exits, learning how to react fast in times of crises, learning how to deal with a crisis-stricken (Covid-stricken) person, educating the students on how to talk to their families about crises (Covid-19).
The framework of crisis-management	Teaching strategy	Projects of practical exercises, teaching through storytelling, deployment of blended learning methods, use of the technique of planned exercises, problem-solving methods, role-playing, teaching by team members, the method of learning through cooperation, playing games, unit-of-activity method of teaching, exploration-based teaching, exercise method, education in the incident spot while observing safety measures, learning to the point of mastery, learning through observation, field trip method of learning, performance-judgment methods of teaching, group discovery method of teaching, brainstorming, learning through simulation of situations, indirect game-centered teaching, group discussion, distance education, giving lectures, free organized talks and conversations, teaching through songs and dolls, learning through tours of nature, organized cognitive and verbal activities with playing tools, collaborative and interactive learning.
	Education materials	Use of mentors, invitation of experts from service institutes such as firefighters or police, brochures, stands, books of story and poetry, movies related to coping with crises, educational software, educational pamphlets of the Iranian Red Crescent Society, checklists, writing tasks about safety in the face of disasters, computer games, animations, photo or painting galleries about coping with crises, first aid kits as well as relief and rescue packs of the Iranian Red Crescent Society, textbooks (such as those about empirical sciences), paintings, workshops, internet websites, camps, wall newspapers.
	Evaluations	Evaluation by analyzing situations of crises, evaluation through the ability to collect information in circumstances of crises, written exams, oral exams, evaluation through observation, evaluation by doing tasks, contests, self-assessment projects, practical tests in drills, evaluation in terms of theatrical projects, evaluation by comparing the performance with the paradigmatic performance, evaluation through individual descriptions, initial measurement, summative evaluation, aggregate evaluation, pre-tests and post-tests in planned exercises

The second research question

How do we prioritize the final codes of each organizer (element) of the high-school crisis-management curriculum, according to experts?

As can be seen in Table 5, the final prioritized codes in each organizer (element) in the proposed curriculum framework are determined based on expert views.

Table 5. Final prioritized codes

Organizer	Item	Rank	Average
Logic	Introduction to how organizations collaborate in crisis management	1	18.71
	Promotion of the knowledge base of students in times of crises	2	17.53
Objective	Promotion of public awareness	1	19.19
	Controlling emotions in times of crises	2	18.78
	Providing self-care and other-care instructions	3	18.12
Content	Teaching the required citizenship skills for peaceful coexistence in times of crises	1	19.43
	Introduction to the principles and notions of safety	2	19.02
	Introduction to pre-crisis, in-crisis, and post-crisis measures	3	18.88
	Teaching through games	1	19.85
Method	Teaching in the area of incidence while observing safety measures	2	19.65
	Practical planned exercises	3	19.20
	Learning through observation	4	18.86
	Use of educational exercises	5	18.71
	Teaching through simulations of situations	6	18.51
	Use of simulators and educational software	1	19.53
Education materials	Use of movies related to coping with crises	2	19.16
	Animations	3	18.46
	Photo or painting galleries about coping with crises	4	18.18
	Evaluation by comparing the performance with the paradigmatic performance	1	19.74
Evaluation	Evaluation by practical tests in planned exercises	2	19.02
	Evaluation through games	3	18.81
	Evaluation by describing individual performance in hypothetical situations	4	18.03

Consideration of the first hypothesis

For experts in curriculum development, the framework of a high-school crisis-management curriculum is feasible and helpful.

Table 6 presents the final codes of organizers based on interview samples. According to those final codes, designed a researcher-made questionnaire to analyze the research hypotheses and then give them to experts in curriculum development. In what follows, address the findings of the quantitative part.

Table 6. Summary of one-sample t-test

Confidence interval		t-value	degree of freedom	Level of significance	Average
Minimum -2.62	Maximum -3.23	-25.12	29	0.000	-2.384

$p < 0.05$

As can be seen in Table 7, given that the value of the level of significance (sig) of the helpfulness variable of the framework of the curriculum of coronavirus crisis management is smaller than 0.05 ($p < 0.05$), it can be claimed that curriculum development experts assess that the helpfulness of the framework of crisis-management curriculum is very high (agree). Therefore, the Z hypothesis is rejected, and the research hypothesis is approved.

Table 7. Summary of the analysis of Pearson correlation of helpfulness

Variable	R	P
Logic	.489	0.000
Objectives	.561	0.000
Contents	.621	0.000
Teaching methods	.674	0.000
Education materials	.712	0.000
Education activity	.722	0.000
Evaluation	.781	0.000

This table presents the correlation matrix for the helpfulness of the crisis management curriculum. Given the results of Table 8, the correlation rate between the helpfulness variable and the elements of crisis-management curriculum is significant at the level of 0.01. Moreover, this shows a positive significant correlation between helpfulness and those factors. Therefore, it is confirmed that a crisis-management curriculum is helpful, and the zero hypothesis is rejected.

Table 8. Summary of one-sample t-test

Confidence interval		t-value	Degree of freedom	Level of significance	Average
Minimum -2.80	Maximum -3.26	-91.62	29	0.000	-3.54

p<0.05

As Table 9 shows, given that the value of the level of significance (sig) of the feasibility variable of the framework of the curriculum of coronavirus crisis management is smaller than 0.05 (p<0.05), it can be claimed that curriculum development experts assess the feasibility of the crisis-management curriculum as being high (agree).

Table 9. Summary of the analysis of Pearson correlation of feasibility

Variable	R	P
Logic	.281	0.000
Objectives	.351	0.000
Contents	.369	0.000
Teaching methods	.412	0.000
Educational materials	.466	0.000
Educational activity	.502	0.000
Evaluation	.571	0.000
Time	.594	0.000
Space	.601	0.000
Classification of Students	.625	0.000

Table 9 shows the correlation matrix for the helpfulness of the framework of the crisis-management curriculum. Given the results of Table 3, the correlation rate between the helpfulness variable and the elements of crisis-management curriculum is significant at the level of 0.01. Moreover, according to curriculum development experts, the result shows a positive significant correlation between helpfulness and those factors. Therefore, it is confirmed that the crisis-management curriculum is helpful, and the zero hypothesis is rejected.

Discussion

The present research was carried out to plan and validate a framework for a high-school crisis-management curriculum. I analyzed the qualitative findings from fifteen interviews with crisis management teachers and experts. The results of the qualitative analysis of the interviews consisted of 6 organizers and the prioritization of 19 final codes (factors), which the subjects (interviewees) considered crucial to each organizer. The organizers included logic, objectives, content, teaching methods, educational materials and sources, and evaluation methods. Here are the 19 final codes prioritized by experts. According to the findings of the research, for experts, the primary rationale behind planning and devising crisis management curricula in the educational system is the consideration of two dimensions: “promotion of students’ knowledge base in conditions of crisis” and “introduction to how organizations and institutions interact in crisis management.” As for logic, two items are crucial to the curriculum: “promotion of the knowledge base of students in times of crises” and “introduction to how organizations collaborate in crisis management.” The finding squares well with the findings of the following studies: McBrayer et al., 2020; Tysinger et al., 2020; Ozkayran et al., 2020; Kruger et al, 2018. In their studies, they conclude that by reviewing and learning more about our past experiences and those of other countries in times of crisis, we can predict and prevent unexpected incidents. In addition, my findings square with the findings of Kruger et al. 2018. In their study, Kruger and colleagues conclude that knowing about crisis-management organizations and their

duties can minimize the losses of crises. This finding can be explained as follows: the education system cannot be indifferent to crises that lead to losses of human and financial capital. Moreover, experiences of past crises, such as natural disasters, show that students are among the most vulnerable groups in society. When an incident such as an earthquake occurs at school, then if they are not prepared for coping with the disaster, the losses will undoubtedly be irrecoverable. For this reason, deeper planning for enhancing students' awareness will have a tangible echo in society. In this way, sustainable development and the final goal of having a safe country will be possible. Today's students are tomorrow's parents. With continuous sustained education, they should acquire the necessary preparation against crises to show the proper behavior in crises.

Furthermore, the results of my research show that the main goals of a crisis-management curriculum are as follows: promotion of public awareness, control of emotions in times of crisis, and presentation of self-care and other-care education. This finding is consonant with Tysinger 2016; Debes 2021; Hoskova 2020; Alawawdeh 2016; and Ahmad Derbass 2012. Their studies suppose that a fundamental principle and skill in dealing with crises is to prevent emotional intelligence. Social skills such as perception of other people's needs to advance one's goals, excitement, guiding other individuals and groups, solving disagreements, and working with others to realize shared goals require a remarkable degree of emotional intelligence. To explain this finding, we can say that empathic capability, self-care, and effective communication with others are necessary for proper the right management of crises, and all these need emotional intelligence rather than intellectual intelligence. In times of crises and incidents, empathy with others and collaboration in dealing with crises can help solve problems. Social awareness, communication with others, awareness of other people's feelings, needs, and interests, understanding their feelings and viewpoints, showing an interest in finding their views, and awareness of current events reflect networks of decision and power relations.

Moreover, the findings of the research show that the following items are the most crucial characteristics of the content of the crisis-management curriculum: education of the required citizenship skills for peaceful coexistence in times of crises, introduction to the principles and concepts of safety, and introduction to pre-crisis, in-crisis, and post-crisis measures. To explain this finding, we can say that the education system in general, and the curriculum development system in particular, can play a considerable role in preventing, controlling, and managing crises by teaching the required citizenship skills in crises through the preparation of the right educational content before, during, or after crises. As for prevention, a case in point is the preparation of educational content about a variety of natural and non-natural crises in the past and how people reacted to them. As for control, the education system can provide content in the form of brochures and pamphlets to teach how to interact with others and how to react to the crisis, which can motivate them to overcome the crisis.

Additionally, the results of the research show that the following seven methods are most crucial to the crisis-management curriculum: teaching through gametraining; teaching in the area of incidence while keeping safety measures, practical planned exercises, learning through observation, use of academic exercises, and teaching through simulations of situations.

This finding is consistent with the findings of the following studies: Holzweiss et al. 202; Javed & Niazi 2015; Tysinger et al. 2016; Karasavidou & Alexopoulos 2019. For instance, Holzweiss et al. (2020) stress the teaching methods of simulation and role-playing, and Karasavidou and Alexopoulos (2019) emphasize the methods of performance judgment and educational exercises as effective methods of teaching crisis management.

Furthermore, the findings of the research show that, for experts, the following four methods can be used for evaluating crisis-management curriculum: evaluation by comparing the performance with the paradigmatic performance; evaluation by practical tests in planned exercises; evaluation through games; evaluation by describing individual performance in hypothetical situations. This finding is consonant with the findings of the following studies: McNamara et al. 2021; Duiven 2012; Mueller 2010; Jobet 2012. For instance, Duiven (2012) methods plays up the method of evaluation based on describing individual performance in a hypothesis crisis circumstance, and Mueller (2010) emphasizes evaluation through games as an effective method for assessing the quality of learning by the participants of crisis-management courses.

Conclusion

The findings of this research show that, for experts in curriculum development, the framework of a crisis-management curriculum is not only agreeable but also helpful and feasible. Thus, We can conclude that the framework of the planned curriculum defines the characteristics fundamental to crisis-management education such that a curriculum framework that consists of its various elements enjoys an organized, scientific, and ordered structure. According to the findings of this research, to operationalize and implement the planned curriculum for crisis management, the following measures are recommended:

The education system is recommended to consider the elements of logic, objective, content, teaching method, educational materials and sources, and methods of evaluation proposed in this research in planning a program for teaching and preparing the students to cope with crises. The Office of Human Resource planning of the education system can draw on the proposed curriculum in this research to prepare applied and more defined education for the students. Policymakers, planners, authors of textbooks, teachers, and parents can use the framework of crisis management in planning and implementing crisis-management programs. The program can be promoted by brochures, catalogs, and educational pamphlets related to the proposed curriculum. These can be distributed at schools and offices of the education system and other organizations and individuals.

Educational workshops can help to empower the instructors on how to implement the crisis-management curriculum in the fields of preventing and coping with the social harms of crises.

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