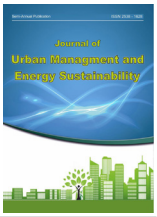
Journal of Urban Management and Energy Sustainability (JUMES)

Homepage: http://www.ijumes.com



CASE STUDY RESEARCH PAPER

Examining the role of city managers in reducing urban risks with passive defense approach (Case study: Nowshahr city)

Farhad Banisheikholslami[1], Ameneh Haghzad[2*]

1 *Ph.D. student of Geography and Urban Planning Department of Geography Faculty of Humanities, Islamic Azad University, Chalous Branch, Iran*

2* *Faculty Member of the Geography group, Faculty of Humanities, Islamic Azad University, Chalous Branch, Iran*

ARTICLE INFO

Article History:
Received 2023-11-29
Revised 2024-02-15
Accepted 2024-03-13

Keywords:
Urban managers, urban risks, natural disasters, Nowshahr city.

ABSTRACT

Urban risks and their coping strategies have become the central concern of urban authorities in recent years. Recognizing cities as one of the most vulnerable residential areas, efforts have been made to enhance the optimal management of these risks at the urban management level. A prominent example of this is the establishment and equipping of crisis management bases at the city level. Objective: This research aims to examine the effective indicators on the role of urban managers in reducing risks in the city of Nowshahr. The present study, in terms of purpose, employs an applied method and, in terms of study approach, uses a descriptive survey method. Data collection methods include questionnaires and library documents, and data analysis is conducted using one-sample t-tests in SPSS software. The study population consists of the city of Nowshahr, with a sample size of 60 individuals selected for the research. The results of the one-sample t-test indicate that in the competence and cultural indices, there is a relatively favorable role in reducing risks in the city of Nowshahr. Additionally, the indices of design and planning, as well as infrastructural support, have a positive role. Furthermore, considering the obtained level of significance less than 0.05, with a 99% confidence level, the results are confirmed.
Conclusion: The research findings, while confirming the significant impact of these four dependent variables, indicate the managerial performance weakness based on the low averages obtained from the data analysis results.

DOI: 10.22034/ijumes.2024.2017201.1187

Running Title: The role of city managers in reducing urban risks with passive defense approach

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
36	03	10

*Corresponding Author:
Email: *ameneh_haghzad@yahoo.com*
Phone: +989117846737
ORCID: https://orcid.org/0000-0002-6995-8140

INTRODUCTION

Due to its unique geographical and political position, our land has always been exposed to various natural and non-natural crises, resulting in significant human casualties and financial losses. Therefore, societies are constantly seeking solutions to control and manage the damages caused by such disasters and vulnerabilities. Statistics indicate that out of 44 types of natural disasters, 43 occur in Iran. Consequently, 90% of the country's population is at risk of hazards arising from natural events, and with this volume of incidents, Iran ranks sixth globally and fourth in Asia in terms of the occurrence of natural disasters.

Cities, due to high levels of investment, the establishment of various economic facilities, and most importantly, large populations, face significant financial and human damages in the event of urban hazards. In urban areas, damages resulting from human and natural hazards include a combination of physical destruction and disruption in the functioning of urban elements. The destruction of structures and buildings, road and access networks, essential facilities, water reservoirs, power plants, and communication lines (telephone, electricity, water, gas, etc.) are among the consequences.

Neglecting proper urban planning, urban growth, and development, as well as the lack of necessary planning to prevent the chaotic growth of cities, has led to numerous issues and challenges regarding the resilience of cities under burdens (Mozaffari, 2013). Iran, located in the Alpine and Himalayan mountain belts with a variable and temporary climate, has experienced natural disasters, especially floods and earthquakes, throughout its history. It is considered one of the ten disaster-prone areas globally (Center for Urban and Rural Studies, 2006). Iran's plateau is one of the most active earthquake zones globally, accounting for 17.6% of the destructive earthquakes worldwide (Sasanspor et al., 2009). Besides natural factors, human factors also contribute to increasing casualties (both human and financial), with one of the most critical issues being the vulnerability of residential buildings. This structural vulnerability exists to a greater or lesser extent in all Iranian cities. Statistics show that approximately 90% of the country's cities are vulnerable to a 5.5 Richter earthquake in the past decade (Pormohammadi and Mosaiebzadeh, 2007). The protection of human lives, their belongings, urban facilities, and equipment is vital. Various factors, such as inappropriate land use, improper construction and design of buildings, population density, physical deterioration, inefficient and outdated communication networks, compact urban structures, and inadequate distribution of urban open spaces, contribute to increasing the risk of disasters in urban habitats.

Considering these challenges in cities, it is crucial to focus on the role of urban managers in reducing the effects of both natural and human-made disasters. The process of crisis management in cities, relying on management principles, planning, organization, leadership, supervision, and coordination, should be the most critical aspect of the strategy to reduce the effects of natural and human-made disasters (McNamara, 2008). Although crisis management involves a coherent set of government organizations and civil institutions, the pioneering role of urban management (city managers) is crucial. Municipalities, as public institutions, play a central role in crisis management, acting as coordinators for other organizations and factors involved in crisis management.

Nowshahr, located in the northern Mazandaran province, lies between geographical latitudes 36 degrees 37 minutes 10 seconds and 36 degrees 40 minutes 31 seconds north and longitudes 51 degrees 36 minutes 43 seconds and 51 degrees 33 minutes 23 seconds east. The city is situated in the western plain of Mazandaran on Quaternary marine and lacustrine deposits, with the important rivers of Meshlak, Gerdkol, and Korkorsar passing through its boundaries. Natural hazards such as proximity to faults and

flash-flood rivers threaten Nowshahr. Regarding human factors, unauthorized construction around rivers, population density, and a lack of crisis management-related infrastructure are notable issues. In this context, the current research aims to analyze the role of urban managers in reducing risks in the city of Nowshahr.

In the field of the role of risk managers in cities and crises arising from hazards, many studies have been conducted. However, there are few studies on the role and performance of urban managers in this regard. From the beginning of the prehistoric era and in the first millennium BC, walls were built around villages. An example of this can be seen in ancient China, where they built walls with yellow soil, referred to locally as "Naju," reaching a height of 10 meters. These walls were initially built to protect against attacks by bandits and wild animals, but later they were mainly constructed for defense against enemy invasions (PourMohammadi et al., 2013).

The concept of passive defense was first seen explicitly in the book on temporary protective shelters. This guideline was employed in the United States command headquarters to respond to severe invasions and atomic surprises (Zargari et al., 2:1393). In the field of urban management or the role of urban managers in reducing urban disasters and hazards, emphasis on the role of passive defense can be noted. Thomas Hobbes, in his book "DE CIVE," introduced ensuring the security of citizens as the main law and the most important duty of rulers towards the people, considering neglecting it as an act against peace and the laws of nature. Currently, crisis and disaster management, both natural and human-made, is recognized as a general goal and a responsibility of every government. Many governments have extensive responsibilities in crisis management.

Tong (2004) assessed the vulnerability of the city's communication network to earthquakes in Kathmandu. Using models like HAZUS, and RADZUD, and expanding these models to other assessment methods, he estimated the vulnerability of the city network and its related elements to earthquakes with different intensities, ultimately pointing to vulnerability methods. Marelle (2008) evaluated the vulnerability of buildings and presented damage scenarios for Italian cities, assessing vulnerability models, including the building vulnerability risk model, and finally estimating and modeling earthquake damage scenarios at various intensities. Batrowa (2009) assessed the role of geographic information in measuring the vulnerability of cities to earthquakes, focusing on the evaluation of the role of geographical information and data in studies related to measuring social and physical vulnerability in the city of Medellin, Colombia.

Dong and Shen (2013) emphasized the need for planning and crisis management against natural disasters, especially earthquakes, and how to organize and shelter the affected population in predicted locations using statistical and geographic information system methods in their studies.

"Urban risks and crises have existed from the beginning until now, and humanity has devised various measures to cope with them. Generally, urban risks can be divided into two categories: natural and human-made. In natural risks, humans are less often the main cause, but their actions can either increase or decrease its effects. In human-made risks, humans are the primary factor, leading to life and financial damages.

Urban crises and risks impact various aspects such as physical, natural, economic, and urban management, affecting elements like residential structures, service and relief facilities, and infrastructure networks (such as water, electricity, gas, roads, etc.), many of which lose their resilience and efficiency. Poor placement of physical and user elements in urban land, inefficient communication networks, dense urban fabric, high urban density, poor placement of urban infrastructure, and inadequate distribution of urban open spaces play a crucial role in increasing the inflicted damages (Habibi et al., 2009).

In addition to these, social and infrastructural dimensions should not be overlooked. Despite the existence of legislative frameworks, legal procedures, due to a lack of understanding of crisis conditions and the resulting damages in cities, are among the main factors necessitating encouragement and cultural development among urban communities. Measures that can enhance public trust in urban areas and facilitate people's assistance in crises by upgrading infrastructure and providing necessary services can pave the way for reducing urban vulnerability.

Based on this, we can identify the key performance variables of urban managers in reducing vulnerability in four dimensions: legislation, cultural development, urban planning and design, and the provision of suitable services and infrastructure. In other words, urban managers can contribute to reducing the vulnerability of urban structures in these four dimensions."

The field of crisis management, especially in the context of urban issues in Iran, has a research history of less than 20 years. Briefly highlighting the results of Iranian researchers in this field, Kamran and Hosseini Amini (2011) conducted a study on the safety assessment of Rasht City from the perspective of non-military defense. The results indicated that Rasht city is unsafe in terms of natural and human-made disasters, emphasizing the urgent need for comprehensive urban planning and the creation of protected areas for vital city centers.

Akbari and Ahmadi Moghadam (2014) investigated the role of integrated urban management in non-military defense, focusing on factors influencing the coherence of urban management at the policy and decision-making levels. Their findings suggested that urban managers should strive to prepare for rapid response and improvement of conditions to normal levels during emergencies, emphasizing the need for effective decision-making, oversight, and implementation.

Yazdani and Seyedin (2016) examined the vulnerability of Ardabil city to non-military defense, identifying six major risk-prone areas in the city, emphasizing the unfavorable conditions of physical indicators and the concentration of administrative, organizational, military, and provincial institutions in these areas.

Sadeghloo and Nasrollahi (2017) assessed the performance of urban managers in reducing the vulnerability of urban structures to earthquakes in Babol City. Their results indicated that the average ranking of actions taken by managers in legislation, cultural development, urban planning and design, and infrastructure support was below average, with a more effective performance in decision-making compared to oversight and implementation.

Sasanpour and colleagues (2017) studied the vulnerability of buildings in Kashan city, particularly in the Mahdashi neighborhood, to natural disasters, such as earthquakes. The spatial distribution of vulnerability was linked to the non-use of resistant materials, poor quality, and aging of structures, with the highest vulnerability in the central part of the neighborhood.

Ebrahimi and Sepehr (2017) investigated the role of environmental hazards in land use planning in Nowshahr city, focusing on earthquake risks. They used the Analytical Hierarchy Process (AHP) and Geographic Information System (GIS) to explore the direct relationship between natural hazards and land use. The study concluded that unfortunately, reducing natural hazards has not been given enough attention in Nowshahr city planning.

Mousavi Nasab and Keshvari (2019) focused on non-military defense in urban management, with a case study in Varamin city. They identified factors contributing to urban vulnerability, such as the presence of vulnerable areas, non-compliance with technical and engineering regulations, inadequate management control over urban structures' health and safety, and the lack of structures related to various crises.

The research results showed that in the city of Varamin, the component of fortifications and safe structures with a weighted average of 4.33 got the highest rank and the component of coverage with a weighted average of 2.90 got the lowest rank. (Fig. 1)

MATERIALS AND METHODS

The research adopts an applied approach with a descriptive-research method. It utilizes a survey-based data collection method, falling under quantitative research. The survey method is chosen as it is suitable for gauging attitudes and orientations toward urban management roles in reducing natural disasters. The research involves an individual as the research unit, making it a quantitative survey. Descriptive and inferential data analysis methods are employed, encompassing descriptive statistics (frequency, mean, and standard deviation) and inferential statistics. To demonstrate the desirability of the four dimensions of urban managers' roles in mitigating risks in Nowshahr, a single-sample t-test is employed. This test aims to assess the acceptability and appropriateness of the selected indicators. The process involves introducing indicators for each dimension, followed by a single-sample t-test to gauge the acceptability and appropriateness of these indicators.

Case study:

The study focuses on Nowshahr, located in the southern part of the Caspian Sea and northern Mazandaran province, with geographical coordinates ranging from 36 degrees 37 minutes 10 seconds to 36 degrees 40 minutes 31 seconds north latitude and 51 degrees 26 minutes 43 seconds to 51 degrees 33 minutes 23 seconds east longitude. (Fig. 2)

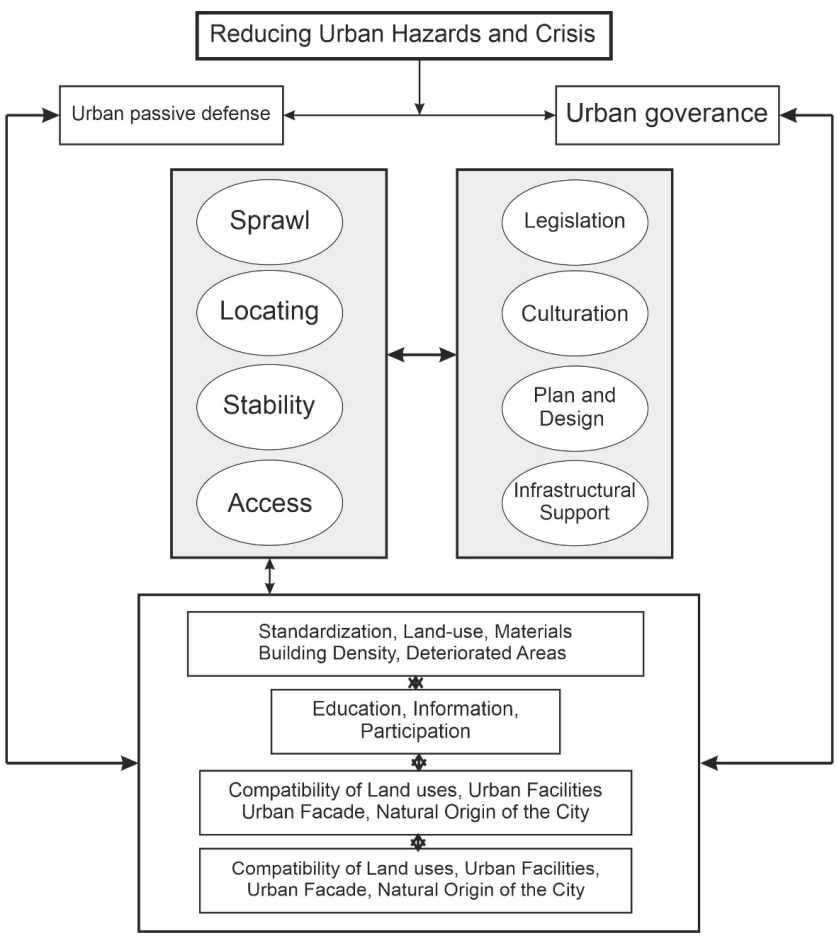


Figure 1.: Model of reducing urban hazards and crisis Shahrnegar;2022

Nowshahr is situated in the Mazandaran plain, on Quaternary marine and alluvial deposits. Major rivers like Mashlak, Gerd Kurd, and Karkarser pass through the city. The city's elevation varies, with a minimum of 25 meters above sea level on the coast and 43 meters upstream.

This geographical information sets the context for understanding the dynamics and vulnerabilities addressed in the research within the city of Nowshahr. Based on the population and housing census of the year 2006 (Solar calendar), the population of Nowshahr city was 42,175 people. With a growth rate of 1.9% in the year 1390, it reached 46,184 people, and in the year 1395, with a growth rate of 1.6%, it further increased to 49,403 people. Comparing the population growth rates in different census periods indicates a decrease in the population growth rate of this city.

Table 1 of the population and housing census of the year 1395 in Nowshahr city shows that 49,403 people live in 16,287 households in this city. This consists of 50.36% males and 49.64% females. Examining the household size in this city reveals that each household consists of an average of 3.3 individuals, which is below the national average.

DISCUSSION AND FINDINGS

The target population of this research includes managers, officials, and experts in the city of Nowshahr, with a sample size of 60 individuals selected to examine the role of managers. Respondents' characteristics, including gender, work experience, and educational background, have been investigated.

According to the research findings, 90% of the respondents are male, while 10% are female. Analyzing the work experience and activity history of experts and city officials in Nowshahr reveals that 68% have more than 20 years of experience, 25% have 10 to 20 years of experience, and 6% of managers have 5 to 10 years of work experience.

Concerning the educational qualifications of the relevant managers, 5.5% have associate degrees, 33% hold bachelor's degrees, and 61% possess master's or doctoral degrees. These results indicate a diversity in the educational backgrounds of managers in the city of Nowshahr. (Fig. 3)

Analytical Findings:

To assess the desirability of the role of systematic organization of city managers in reducing risks, a single-sample mean comparison test has

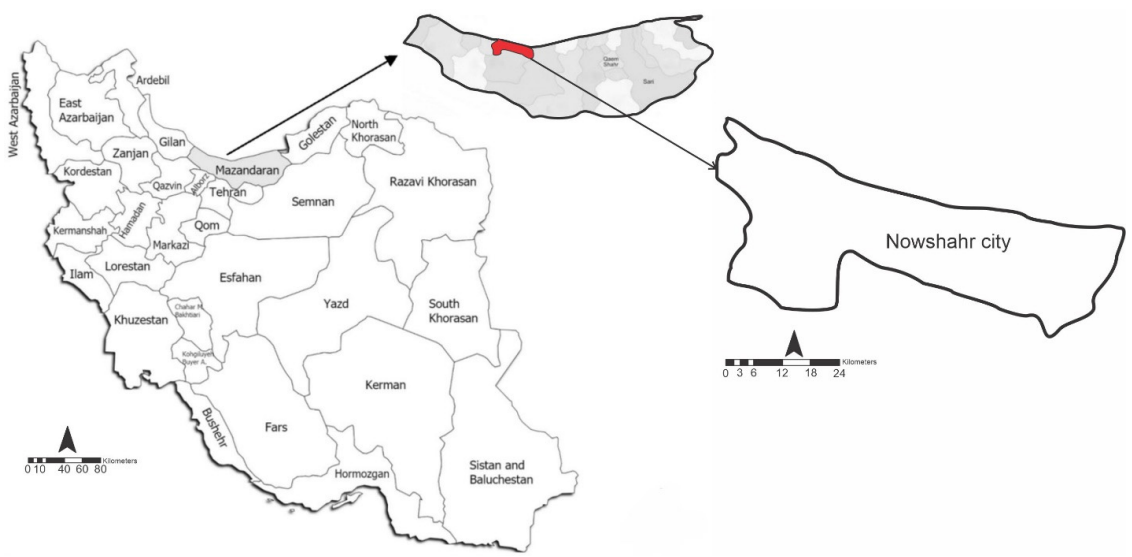


Figure 2.: geographical scope of Nowshahr
Shahrnegar;2022

been employed to gain an overall understanding of the systematic dimension. This test aims to measure the acceptability and appropriateness of the indicators, as perceived by respondents, for managing risks in Nowshahr city.

Since the average response in all the questions related to the dimension under consideration is valued at 3, and considering the number of questions in this dimension, which is 22, the numerical value of the average desirability status for this dimension is assumed to be 66. Therefore, the hypothesis of the equality of the mean desirability of this dimension in the studied community (Nowshahr city) with the numerical value of 66 has been subjected to testing (Tables 2 and 3)

Table 2: Mean and standard deviation of legislation

standard deviation	mean	number	Dimension
4/27	68/2	22	legality

Research findings 2022

Results of the Examination of the Systematic Organization of City Managers for Urban Risk Reduction in Nowshahr:

Table 6 shows that the sample mean is 61.2, and the standard error of the mean is 3.8. Since this value is less than the overall mean (66), the index is somewhat suitable for dealing with urban risks. To judge the hypothesis (H0), analytical data from Table 3 has been used.

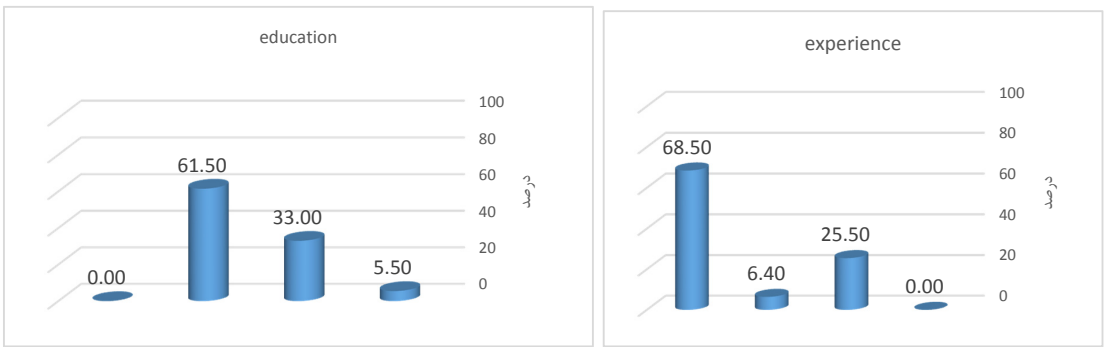
The results of this table indicate that the decision criterion value is less than 0.05. There-

Table 1: Population of Nowshahr city (by gender) year 2015

region	sector	city	household	population	men	women
Nowshahr	Kajoor	Pul	1064	3150	1571	1579
		Kajur	1052	3120	1567	1553
	central	Nowshahr	16287	49403	24880	24523

Iran Statistics Center, Population and Housing Census (2015)

Figure 3: education and experience background of urban managers



Research findings 2022

Table 3: One-sample mean test after of legislation

Risk reduction status	One Sample T-Test						dimension
	95% confidence interval		Mean absolute difference	decision criterion	Degree of freedom	Statistical test	
	max	max					
Somewhat suitable	0/28	3/6	3/83	0/023	36	0/217	legislation

Research findings 2022

fore, there is no evidence to reject the null hypothesis (H0), and it can be admitted that the components and indicators related to the role of city managers and systematic organization for urban risk reduction in Nowshahr are relatively favorable

Examination of the Desirability of the Cultural Role of City Managers in Reducing Risks:

The results of the examination of the current status desirability of the role of Nowshahr city managers in cultural development to reduce urban risks within the specified scope are presented in Table 4 and 5 using a single-sample mean comparison test.

Since the average response in each question related to the dimension under consideration is valued at 3, and considering the number of questions in this dimension, which is 12, the numerical value of the average desirability status for this dimension is assumed to be 36. Therefore, the hypothesis of the equality of the mean desirability of this dimension in the studied community (Nowshahr city) with the numerical value of 36 has been subjected to testing.

Results of the Examination of the Cultural Role's Average by the Sample Community in Table 5 indicate that the sample mean is 31.6, and the standard error of the mean is 2.86. Since this value is less than the overall mean (36), this index is considered relatively undesirable. To judge the hypothesis (H0), analytical data from Table 5 has been used. The results of this table show that the decision criterion value is less than 0.05. Therefore, there is evidence to reject the null hypothesis (H0), and it can be admitted that the components and indicators related to the role of city managers in reducing urban risks in the studied city are relatively less desirable.

Examination of the Desirability of the Role of Design and Planning in Risk Reduction:

The examination of the desirability of the role of Nowshahr city managers in design and planning for urban risk reduction within the specified scope, using a one-sample t-test, is presented in Table 6 and 7. The average response in all the questions related to this dimension is valued at 3, and considering the number of questions in this dimension, which is 15, the numerical value of the average desirability status for this dimension is assumed to be 45. Therefore, the hypothesis of the equality of the mean desirability of this dimension in the studied community (Nowshahr city) with the numerical value of 45 has been subjected to testing.

Results of the Examination of the Average Planning and Design Dimension by the Sample Community in Table 10 show that the sample mean is 3.51, and the standard error of the mean is 2.28. Since this value is greater than the overall mean (45), the index is considered desirable. To

Table 4: Mean and standard deviation of culture dimension

standard deviation	mean	number	Dimension
3/25	6/31	12	acculturation

Research findings 2022

Table 5: One-sample mean test after acculturation

Risk reduction status	One Sample T-Test						Dimension
	95% confidence interval		Mean absolute difference	decision criterion	Degree of freedom	Statistical test	
	min	max					
Somewhat suitable	0/28	2/16	2/86	0/034	13	0/352	acculturation

Research findings 2022

judge the hypothesis (H0), analytical data from Table 7 has been used. The results of this table show that the decision criterion value is less than 0.05. Therefore, there is evidence to reject the null hypothesis (H0), and it can be admitted that the components and indicators related to the role of city managers in urban risk reduction are desirable at a satisfactory level.

Examination of the Desirability of the Role of Infrastructural Supports in Risk Reduction:

The examination of the desirability of the role of Nowshahr city managers in the infrastructural supports dimension for urban risk reduction within the specified scope, using a one-sample t-test, is presented in Table 8 and 9. The average response in all the questions related to this dimension is valued at 3, and considering the number of questions in this dimension, which is 15, the numerical value of the average desirability status for this dimension is assumed to be 42. Therefore, the hypothesis of the equality of the mean desirability of this dimension in the studied community (Nowshahr city) with the numerical value of 42 has been subjected to testing.

Results of the Examination of the Average Infrastructural Support Dimension by the Sample Community in Table 12 show that the sample mean is 31.6, and the standard error of the mean is 2.78. Since this value is greater than the overall mean (42), the index is considered desirable. To judge the hypothesis (H0), analytical data from Table 12 has been used. The results of this table

Table 6: Mean and standard deviation of design and planning dimension

standard deviation	mean	number	Dimension
2/28	51/3	45	Planning and design

Research findings 2022

Table 7: One-sample mean test after planning and design

Risk reduction status	One Sample T-Test						Dimension
	95% confidence interval		Mean absolute difference	decision criterion	Degree of freedom	Statistical test	
	min	max					
Optimal	0/69	4/2	1/9	0/026	17	0/286	Planning and design

research findings 2022

Table 8: Mean and standard deviation of infrastructural support

standard deviation	mean	number	Dimension
2/78	47/2	42	infrastructural support

Research findings 2022

Table 9: One-sample mean test of the infrastructural support dimension

Risk reduction status	One Sample T-Test						Dimension
	95% confidence interval		Mean absolute difference	decision criterion	Degree of freedom	Statistical test	
	min	max					
Optimal	0/69	4/2	5/4	0/026	17	0/286	Infrastructural support

Research findings 2022

show that the decision criterion value is less than 0.05. Therefore, there is evidence to reject the null hypothesis (H0), and it can be admitted that the components and indicators related to the role of city managers in urban risk reduction are desirable at a satisfactory level.

To assess security and prioritize the role of city managers in urban risk reduction, the Friedman test has been used. This test compares the average ranks in K variables (groups). The results of this test are presented in the provided tables.

Results obtained from Table 10 in the Friedman statistical test in Nowshahr city indicate that the managers of this city have the most significant roles in the dimensions of infrastructural supports (with an average of 3.6) and then in planning and programming (with an average of 4.3). On the other hand, the calculated statistic value (Kai square) for Nowshahr city is 76.359 with a degree of freedom of 2, and a significant level of 0.012, providing 95% confidence that the results of this test are valid.

RESULT AND CONCLUSION

As mentioned in the previous sections, numerous studies have been conducted on the role of urban management about reducing damages caused by urban risks and crises. However, attention to the reduction of these damages from the perspective of non-military defense (especially its use regarding natural disasters) has received less attention from other researchers. For example, Ms. Sadeghloo and Mr. Nasrollahi (2014) have examined the reduction of vulnerability in the structural fabric of Babol County against earthquakes. Although the indicators used in the present study bear considerable similarity to theirs, the inclusion of indicators and questions related to non-military defense in their study has not been considered. It should be noted that many previous researchers, including Ms. Sasanspor and colleagues (2017), have utilized factor analysis techniques. The vulnerability of the studied city (as in the research by Yazdani and Seyedin, 2016, and Sasanspor et al., 2017) is that the present study has focused more on the indicators of urban management related to reducing disasters and urban risks. In this regard, there is a significant similarity to the research by Sadeghloo and Nasrollahi, with the difference that the previous researcher has examined vulnerability using urban management from the perspective of non-military defense as a reducing factor. Previous researchers in vulnerability have mostly sought to identify the vulnerable areas of their study region (such as Moosavi Nasab and Kashoori, 2019; Yazdani and Seyedin, 2016), but this study has attempted to consider the process and indicators that reduce the vulnerability of the study area (Nowshahr city) using a non-military defense approach (as a reducing factor). In this regard, the research has set its goal. A review of previous research indicates that there are limited studies on examining the risks of Nowshahr city, among the most important of which are the articles by Ms. Riyazirad and colleagues (2009), Ms. Ebrahimi and Ms. Sepehr (2017), Mr. Abedi Gheshlaghi and colleagues (2017), and Mr. Esmaili and colleagues (2018). They have addressed issues such as land use, risks associated with rivers, and the risk of forest fires in Nowshahr city, focusing on urban management and its impact on reducing vulnerability to risks and urban crises.

Table 10: Prioritizing the role of city managers in reducing urban risks in Nowshahr

Significance level	Degree of freedom	Chi-square	rank	average	indicator
0/012	2	359/76	3	3/18	Legalization
			4	2/56	acculturation
			2	3/4	Design and planning
			1	3/6	Infrastructure support

Research findings 2022

City managers and officials aim to protect cities from all threats, minimizing damages (financial and human) to cities and population centers when potential threats turn into actual events. To achieve this, two separate specialized areas have been established in the country, and this research highlights their functions and importance. This separation allows each specialist and city manager to become familiar with their respective areas and enhances efficiency and productivity.

The necessity of reducing urban risks is considered one of the main objectives of urban management and urban planning. This role of city managers should not be overlooked. In this regard, the role of managers in relation to the variables of standardization, cultural development, planning, and urban design has been investigated and analyzed. The study area in this research is Nowshahr city, which, given its geographical location, proximity to the sea, a special position for maritime transportation (especially having a port), the presence of military garrisons, an airport, and various entrances and exits, may face numerous urban risks. Considering the role and function of non-military defense and adhering to its principles by city managers can significantly contribute to reducing potential damages from various urban risks (both natural and human-made).

The results obtained in this research, while confirming the effectiveness of these four dependent variables, indicate a functional weakness in the performance of managers, considering the low averages obtained from the data analysis results. The results suggest that the average ranking of managers' actions in all four dimensions of legislation, cultural development, planning, and urban design is lower than the desirable level. Among these, the status of their actions regarding infrastructural support indicators, with an average of 3.6, is better compared to other indicators. In this area, managers have been more effective. Following infrastructural support, the design and planning indicator is slightly less effective, followed by the standardization indicator with an average ranking of 3.18. Finally, managers' actions regarding the cultural development component, with an average ranking of 2.56, are the least favorable. The results from the t-test indicate that the role of city managers in the infrastructural support and design and planning dimensions for reducing urban risks is desirable and relatively desirable, while in the other two dimensions, it is less favorable.

REFERENCES

Amiri, Hadi (2012), Determining safe and emergency points during an earthquake in urban areas using GIS (case study; District 1 of Tehran Municipality), Master's thesis, Islamic Azad University, Semnan branch.

Assar, Mohammad and Qadim Abolhasan (1994), Guidance for improvement in natural disaster in Tehran.

Badri, Seyyed Ali (2004), crisis management, principles and coping methods, organization of municipalities and rural districts of the country, Tehran.

Bryson, John M. (2011); Strategic planning for government and non-profit organizations, translated by Dr. Abbas Monavarian, Public Management Education Center Publications, Tehran.

Chaluk, Gholamreza (2018), Analysis of the current security situation in Tehran and presenting a police strategy against earthquakes using SWOT technique, Police Management Studies Quarterly, Year 5, Issue 4, Winter 2019.

Clark, KL, Larsen PB, Wang XX, Chang C. (1998), Association of the Arabidopsis CTR1 Raflike kinase with the ETR1 and ERS ethylene receptors, Proceedings of the National Academy of Sciences, USA 95, 5401–5406.

DaeiNejad, Faramarz (2006); principles and guidelines for designing and equipping the open space of residential complexes for the purpose of non-operating defense; Tehran, Building and Housing Research Center

Ghasemi, Mohammad; Razavi, Mohammad Mohsen and Shouriayi, Mehdi (2009), Report on the research project to identify the characteristics of Mashhad neighborhoods (Milad, Soroush and Danesh neighborhoods), Mashhad Supreme Council Research Center.

Green, Colin (2000), Flood management from the perspective of integrated water resource management. International Symposium on Flood Control, Begijing.

Hill M.J, Brateen R. 2005. "Multi-criteria decision analysis in spatial decision support: The ASSESS analytic hierarchi process and the rule of quantitative methods an spatially explicit analsis". Environmental Modeling & Software. 20: P-P 955-976.

ISDR, 1994, Yokohama Strategy and Plan of Action for a Safer World, UN World Conference on Natural Disaster Reduction Initiatives, Geneva, The United Nation.

Jack, Gatz Chak (2013), crisis management (in private and public sectors); Translated by Ali Parsaian, Tehran, Termeh Publications, frist pub, 1383.

Kantari, Khalil, 2015 data analysis and analysis in socio-economic research, Sharif Publications.

Kordavani, Parviz; Ghanbari, Abdul Rasul; Atlasi, Leila (2013), crisis management planning in the urban area of Fasa, in order to reduce damage caused by earthquakes, Lar Natural Geography Quarterly, 4th year, number 13, autumn 2014.

McNamara, Carter (2008), Management, translated by Abbas Saeedi, Encyclopaedia of Urban and Rural Management, Publications of the Organization of Hari Kishore Municipalities and Villages, Tehran, pp. 689-690.

Memarzadeh, Gholamreza and Sarfarazi, Mehrzadeh (2009), Review of the steps of the crisis management process in the organization, Crisis Management Research Paper, Cultural and Social Research Group.

Mileti, d. 1999. Disasters by Dising: a Reassessment of Natural Hazards in the United States. Washington: Joseph Henry Press. P 35.

Moe, t, and pathrankul, P. (2006), an integrated Approach to natural Disaster, prevention and manegment, vol 15, pp 396- 413.

Mozafari, Seyed Ramin (2013), evaluation and empowerment of urban crisis management to reduce the effects of natural disasters (case study: District 7 of Tehran municipality), master's thesis, Islamic Azad University, Yadgar Imam Khomeini (RA) branch, Shahrerei, Advisor: Dr. Haider Lotfi.

Pauchant, T., and Mitroof, I., 1992, Transforming the Crises Prone Organization. San Francisco, gossey – Bass.

Pearson, C.M, and Clair, J.A., 1988, Reframing Crises management. Academy of management review, 23: 59-76.

Perry R. W, Lindell M., (2004), Preparedness for Emergency Response: Guidelines for the Emergency Planning Process, Disaster, 2003, 27(4): 336-350.

Pielke, Jr. Damnton, Mary W. Zoe Barnard Miller, J. 2002. Flood Dmage in the United States 1926-2000. National Center for Atospherice Research.

Pour Mohammadi, Mohammad Reza and Mosaiebizadeh, Ali (2007), Vulnerability of Iranian cities to earthquakes and the role of neighborhood participation in their relief, Geography and Development Magazine, No. 12, pp. 117/144.

Pour Mohammadi, Mohammad Reza, Shafaati, Arezoo and Kiyoomars Maleki, (2013), Mandatory Non-Agent Defense in Urban and Regional Planning, Third National Conference on passive defense, May 7-8, Ilam University.

Quarantelli, E. L., (1994), Twenty Criteria for Evaluating Disaster Planning and Managing and Their Applicability in Developing Societies, Disaster Research Center.

Rashed, T, WEEKS, J. (2003), Assesssing vulnerability to Earthpuake hazards thorugh spatial Multi criteria analysis of urban areas, Geographical information Science, voll 7.

Sadeghlou, Tahereh and Nasralahi, Naymeh (2013), investigating the performance of urban managers in reducing the vulnerability of the physical fabric of the city against earthquakes (Mor Studu region, Babol city), the 6th National Conference on Urban Planning and Management with an emphasis on the components of the city Islamic 2016.

Saeed Nia, Ahmadi (2008); Kabri Zemin Shahri, Publication No. 99, Publications of the Center for Urban Planning Studies.

Sasanpour, Farzaneh and Jafar Moussand (2009), the impact of man-made factors in intensifying the consequences of natural hazards in metropolitan environments using GIS, FUZZY LOGIC (case study; District 5, Tehran) Applied Research Journal of Geographical Sciences, Volume 13 Number 16, spring 2019.

Sasanpur, Farzaneh; Shamai, Ali; Afsar, Majid and Saeedpour Sharare (2015), Studying the vulnerability of city buildings against natural hazards (earthquake), Journal of Natural Environment Hazards, Volume 6, Number 14, Winter 2016, pp. 103-122.

Sayah Mofazli, Ardeshir; Safi Nadimeh (2009), explanation of the methodology of using the risk management model in crisis management in Natiq 13 of Tehran Municipality) Urban Management Quarterly, second year, number 2, summer 2009, pp. 42-69.

Shakib, Hamza; Moghdisi Mousavi, Ali (2015), crisis management in the capital, collection of papers of the second seminar on construction in the capital, June 1-3, University of Tehran.

Shoja Iraqi Mahnaz; Tavalaei Simin; Ziayian Parviz (2018) optimal location of crisis management support bases using geographic information system (case study of district 6 of Tehran municipality), urban studies and researches. Regional, 3rd year, 10th issue, autumn 2018, pp. 41-60.

Taqvai Masoud and Karimi, Hadi (2013) The role of education and participation of citizens in urban fire control in order to plan and manage urban crisis, Space Geographic Quarterly, year 11, 2013, number 36.

Teymoori, Mahmoud (2013), crisis management in historical contexts, Supplement to Municipalities Monthly, No. 61, Special Issue No. 14.

HOW TO CITE THIS ARTICLE
Haghzad, A., & Bani Sheikhul-Islami, F. (2024). Examining the role of city managers in reducing urban risks with passive defense approach (Case study: Nowshahr city). International Journal of Urban Management and Energy Sustainability, (), -.
DOI: 10.22034/ijumes.2024.2017201.1187