Doi: 10.61186/jorar.17.3.3

Investigating the Effect of Hazard Awareness and First Aid Training on Improving the Awareness and Preparedness of Villagers in the Border Areas of Gonbad-e Kavus County Using Education Ambassador Vehicle in 2025

Pouria Mirza Zanjani[1], Navvab Shamspour[2], Naser Bay[3], Mostafa Khabazi[4], Masoud Ahmadi[5], Ahmad Kahsari[6], Mousa Alikhani[7], Nesa Qavidel[8]

Date of submission: 29 Jul. 2025 ***Date of acceptance: 03 Sep. 2025***

Original Article

Abstract

INTRODUCTION: Hazard awareness and first aid training are important elements in increasing resilience and reducing vulnerability of communities to disasters, especially in rural and border areas. The education ambassador vehicle, as a mobile educational system with access to remote areas, provides the opportunity to hold specialized and practical training courses in Golestan province and can play a key role in improving awareness and relief skills of villagers.
METHODS: In this descriptive-analytical study with a quantitative approach, 1554 participants of training courses were surveyed in a three-month period from April to June 2025, of which 134 people responded to the questionnaire as an available sample. The data were analyzed using SPSS software, statistical tests and linear regression, one-sample t-test, independent, and linear regression.
FINDINGS: The findings showed that the level of awareness of the participants before the training was significantly lower than the desired level, while after the training, 93.3% reported a possibility of using the learnings and 80.7% reported a positive attitude change. Also, 92.6% were satisfied with the quality of the training content and 91.1% with the practical training. In addition, there was no significant difference between genders in the effectiveness of the training, but a significant relationship was shown between demographic characteristics and satisfaction.
CONCLUSION: According to the results, The results showed that the training provided through the Education Ambassador vehicle had a very positive and significant impact on improving the level of awareness and preparedness of villagers, and this innovative approach could be a successful model for other border and deprived areas of the country.

Keywords: Golestan province; Gonbad-e Kavus; First aid training; Natural hazards; Education Ambassador vehicle

How to cite this article: Mirza Zanjani P, Shamspour N, Bay N, Khabazi M, Ahmadi M, Kahsari A, Alikhani M, Qavidel N. **Investigating the Effect of Hazard Awareness and First Aid Training on Improving the Awareness and Preparedness of Villagers in the Border Areas of Gonbad-e Kavus County Using Education Ambassador Vehicle in 2025**. Sci J Rescue Relief 2025; 17(3): 150-159.

Introduction

Hazard awareness and first aid training has been recognized in recent decades as one of the fundamental pillars of crisis management and disaster risk reduction systems. These life-saving training play an important role in improving public health and reducing the mortality rate from unforeseen events. The ability of community members to take timely and effective first aid measures in emergencies not only saves lives, but also prevents irreparable injury. Border and deprived areas face numerous structural challenges, the most important of which include inadequate infrastructure, long distances from service and medical centers, and a lack of specialized

1. Member of the Board of Directors of Golestan Province Red Crescent Society, Golestan, Iran
2. General Director of Basic and General Education Affairs of IRCS, Tehran, Iran
3. Deputy of Education and Research of Golestan Province Red Crescent Society, Golestan, Iran
4. Associate Professor, Department of Geography, Shahid Bahonar University of Kerman, Iran
5. PhD student in Geography and Urban Planning, Shahid Bahonar University of Kerman, Iran
6. PhD Student in RS & GIS, Tarbiat Modarres University, Tehran, Iran
7. Master of Management, Employee of Golestan Province Red Crescent Society, Golestan, Iran
8. Rescue and Relief Expert, Employee of Golestan Province Red Crescent Society, Golestan, Iran

Correspondence to: Naser Bay, Email: Naserbay1@gmail.com

resources. These conditions increase the vulnerability of such areas to natural and human-induced disasters, such as earthquakes, floods, storms, road accidents, and other emergencies. In these environments, response time becomes critically important, and the capacity of local communities to promptly identify hazards and provide first aid can be decisive in saving lives and minimizing human and economic losses. Given the importance of preventive education and immediate response in crisis management, ensuring equitable and effective access to this vital education for marginalized communities has become increasingly essential.

Education is a key indicator of prevention and response in crisis management; without it, the concept of prevention loses its meaning. One of the most effective ways to reduce the effects of anticipated and unforeseen disasters is crisis management, and education serves as a key component of the preparedness phase in the disaster management cycle and is considered a pre-crisis intervention that plays an important role in reducing the consequences of unexpected events. (1)

Community preparedness, centered on public education, is considered a critical part of a broader strategy to reduce losses and casualties. Research shows that primary prevention is the most effective approach to minimizing the impacts of natural disasters. (2)

In line with the Declaration of the Second Step of the Revolution, the IRCS serves as the country's main relief organization and has consistently played a vital role in providing health, education, emergency and support services to vulnerable populations. (3)

In the contemporary era, crisis management and disaster risk reduction have emerged as major societal challenges. Training in hazard awareness and first aid, as foundational elements of prevention and crisis response systems, plays a decisive role in enhancing public awareness and preparedness. (4)

In this context, the use of Education Ambassador Vehicles as accessible and flexible tools offers a unique opportunity to bring essential education closer to underserved communities. (5)

This innovative approach not only overcomes geographical and temporal barriers but also enables the delivery of practical and interactive training in a familiar environment for rural residents. The theory of universal education, developed by crisis management experts, is based on the principle that public awareness and preparedness are primary factors in reducing the negative impacts of natural and man-made disasters. (4) According to this theory, targeted and diverse educational programs can enhance community resilience and facilitate more effective responses during crises (6). The United Nations' Disaster Risk Reduction (UNDRR) model identifies four key components: preparedness, prevention, response, and recovery. Within this framework, education is highlighted as a central element of community preparedness, with a strong emphasis on hazard awareness and first aid training. (7) Bandura's Social Learning Theory further supports this approach, emphasizing that individuals learn through observing and imitating others' behaviors-making practical demonstrations especially effective in transferring essential first aid skills. (8)

The Mobile Education Model, developed in recent decades, emphasizes the use of vehicles equipped with educational tools. This model is particularly effective in remote and underserved areas, helping to overcome barriers to access specialized training. (5) The Health Behavior Theory, developed by public health specialists, highlights that awareness, attitudes, and health-related behaviors can be modified through targeted education, making it highly relevant to hazard awareness and first aid training. (9)

According to statistics recorded in the database of the Rescue & Relief Organization, Golestan province ranks among the top three provinces in Iran in terms of the frequency of natural and man-made disasters, resulting in significant annual economic losses. (10)

Floods, freezing temperatures, forest and rangeland fires, landslides, and droughts are the most recurrent events that have periodically affected Golestan over the past 30 years. The spatiotemporal pattern of disasters in the province indicates that crises—often impacting rural areas—are inevitable. However, some of the resulting damages can be mitigated or even eliminated through prediction, prevention, and organized crisis management. Achieving this goal requires establishing coordinated mechanisms in crisis management, which is one of the most important and fundamental strategies for reducing the impacts of natural disasters. (11)

This necessitates adopting a social approach to crisis management, which has gradually

[DOI: 10.61882/jorar.17.3.3]

emerged globally since the late 1980s and early 1990s. This approach primarily emphasizes reducing individual and social vulnerability to natural disasters and has become the dominant and comprehensive paradigm at the international level and in many countries. (12)

Gonbad-e Kavous County has villages in the border areas that have benefited less from the services of the CS due to their distance from the city center. Accordingly, the provincial RCS, has implemented an innovative project of an education ambassador vehicle equipped with educational aids and specialized instructors, providing first aid and hazard training in these areas with the aim of improving public knowledge in this regard, and has examined the effectiveness of this training and analyzed its impact on the level of awareness and preparedness of local residents.

Gonbad-e Kavous has a high level of access to services, but this advantage is primarily concentrated in the urban center, leaving rural and border villages underserved. (13) This issue becomes more apparent by examining the Gini coefficient of province, and this figure was 0.3997 for urban households in 2023 (ranking third in income inequality), and for rural households, it was 0.3766 (ranking second), highlighting significant socioeconomic disparities. (14)

The primary objective of this study is to assess the impact of hazard awareness and first aid training delivered through the Education Ambassador Vehicle on enhancing the awareness and preparedness levels of rural populations in the border areas of Gonbad-e Kavous County in 2025. And can hazard awareness and first aid training delivered via the Education Ambassador Vehicle significantly enhance the awareness and preparedness levels of rural populations in the border areas of Gonbad-e Kavous County in 2025?

Aghayari and Kouhi (2024), in their study demonstrated that teaching first aid and correct responses in emergency situations to students, in addition to increasing individual empowerment, also helps to promote security and collective resilience, and they emphasize the key role of teachers, health educators, and organizations such as the RCS in this direction. (9) Yari and Parishan (2017) in their study reported that educational programs in schools and mass media were insufficient and inappropriate regarding components such as first aid and self- and community-protection. They also found a significant relationship between education and residents' geographical location and educational level, highlighting the necessity of diverse teaching methods. (11) Pourkarimi (2015), in the study presented a model based on components including needs assessment, design, implementation, evaluation, and motivational strategies, applicable in both in-person and remote formats. Validity testing using a one-group t-test showed that both training models met the required criteria.(12)

Study area

Gonbad-e Kavous County is located in the eastern part of Golestan province. It covers an area of 531,539 hectares and is situated at a geographic longitude of 55°18′ E and latitude of 37°17′ N. With a population exceeding 348,740, it is the largest county in the province by area and ranks second in terms of population. It lies in the northern and central regions of Golestan province.

Methods

This study is a descriptive-analytical research with a quantitative approach. All participants (n=1554) in first aid and natural hazard awareness training sessions held by the RCS Education Ambassador Vehicle in the border villages of Gonbad-e Kavous County in the first quarter of 1404 (March - June 2025) were studied. The training program covered topics such as identifying common natural hazards in the region (e.g., floods, earthquakes, storms) and teaching basic first aid skills, including CPR, bleeding control, and helping the injured. Training sessions were conducted in person, interactively, and using instructional equipment available in the Education Ambassador Vehicle, directly within the villages. Each session lasted between two and three hours and included theoretical instruction by expert trainers, followed by hands-on practice of acquired skills on mannequins. The proposed sample size using the Cochran formula was 385 people, but due to limited access to qualified individuals to respond to the questionnaire, the statistical sample was limited to 134 people through convenience sampling.

These individuals included 50 men and 84 women in different age groups. The main objective of the study was to assess the level of knowledge and performance of interviewees in the field of trained skills. Data were collected

[DOI: 10.61882/jorar.17.3.3]

through a standard questionnaire with a 5-point Likert scale and several researcher-made open-ended questions. The questionnaire was administered in two stages: pre-training and post-training. Data analysis was performed using SPSS-26 software. Descriptive statistics, paired t-tests (to compare scores before and after training), independent t-tests (to compare groups), one-way analysis of variance (to examine differences between groups), and linear regression modeling (to identify predictor variables) were used.

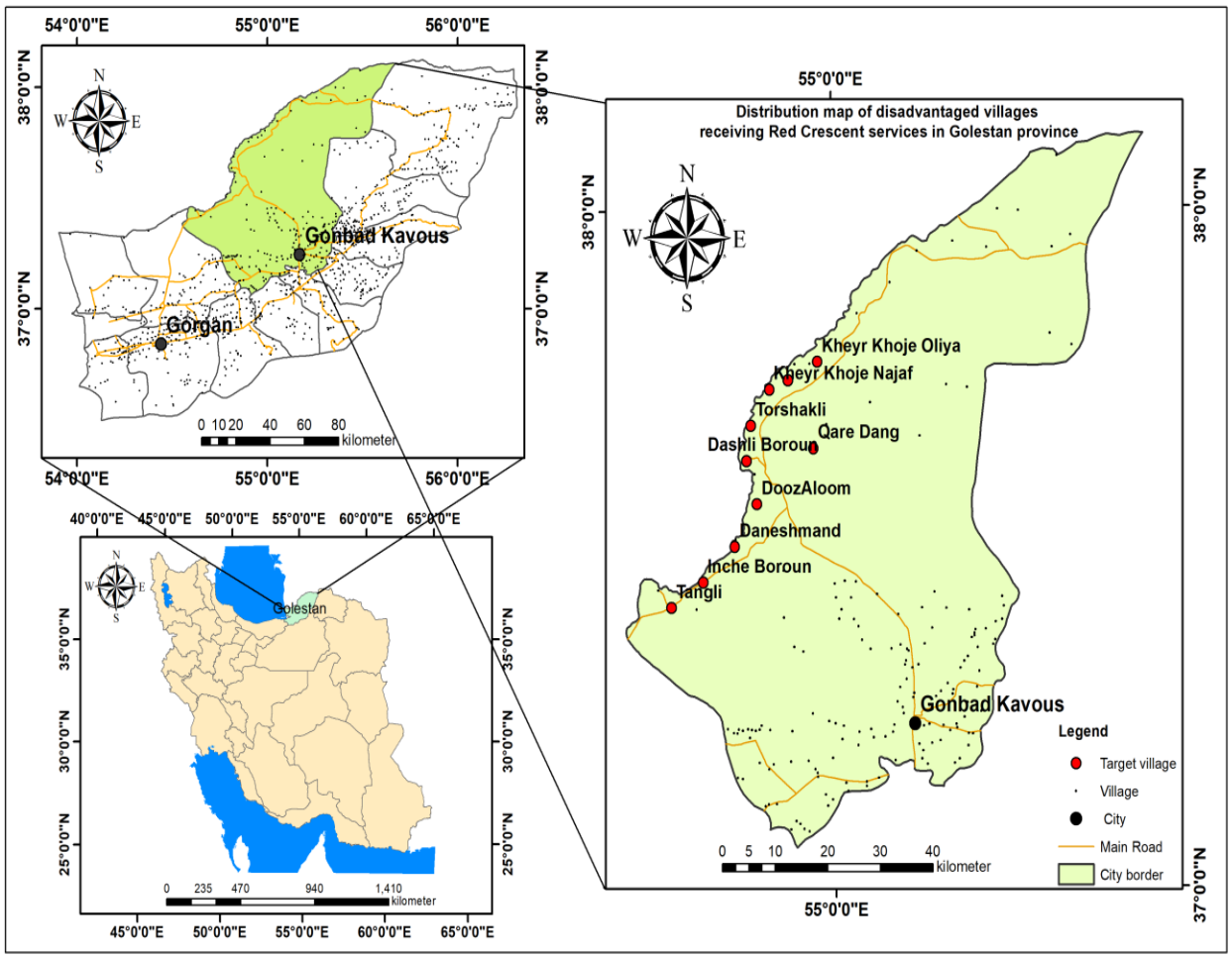

Figure 1. Geographical location of the study area (Authors: 2025)

Table1. Demographic characteristics of respondents -Authors, 2025

Statements assessing the pre-training status	Very Low	Low	Medium	High	Very High
My awareness of first aid was sufficient	45	39	31	9	11
I had adequate knowledge about natural hazards such as earthquakes and fires	38	40	25	24	8

Table 2. Statements on awareness and preparedness status after training

Statements assessing the post-training status	Very Low	Low	Medium	High	Very High
The training provided has improved my practical skills in first aid.	18	12	23	32	50
I have greater self-confidence in dealing with emergency situations.	15	11	21	39	49
This training has increased my level of preparedness for emergencies.	8	21	25	37	44
This course has enhanced my confidence in crisis management.	5	14	19	36	61
The content of this training is also useful for different groups such as children and elderly people.	4	7	19	42	63

[DOI: 10.61882/jorar.17.3.3]

Table 3. Effectiveness of the training from the participants' perspective

Statements assessing training effectiveness	Very Low	Low	Medium	High	Very High
The content presented in this training was useful and practical.	8	14	28	14	8
The training was delivered in a simple and understandable language.	3	11	36	39	46
It is very likely that I will apply what I have learned in this course in my daily life.	1	3	5	60	66
This training changed my attitude toward the importance of first aid.	2	2	22	40	69
The training content matched my real-life needs.	10	15	30	35	45
Practical training (e.g., cardiopulmonary resuscitation and wound dressing) was sufficiently provided.	0	2	10	55	68
This training helped me experience less anxiety during crises	3	1	25	39	67

Findings

Data were collected from 135 valid respondents, including information on gender, age, and educational level. Of the respondents, 63% were female and 37% were male, indicating a predominance of female participants in the sample. Table 1, which presents the participants' statements regarding their level of knowledge before the training, shows a consistent pattern. Of the 135 participants, 45 (33.3%) rated their prior knowledge of first aid as "very low" and 39 participants (28.9%) described it as "low". In total, 84 participants (62.2%) reported having low or very low knowledge of first aid before the training. Regarding awareness of natural hazards, 78 participants (57.8%) lacked sufficient knowledge – including 38 (28.1%) with "very low" knowledge and 40 (29.6%) with "low" knowledge.

The results of the one-sample t-test, with a t-statistic of 2.98 and 134 degrees of freedom, indicate that the mean level of knowledge of the participants (2.72) was significantly lower than the value of test 3 (p=0.004). The mean difference of 0.279, with a 95% confidence interval of 0.09 to 0.46, highlights a statistically significant gap between the participants' actual level of knowledge and the desired level of knowledge.

Table 2 shows the results after the training and the obvious improvement in the knowledge and skills of the participants. Out of 135 participants, 82 (60.7%) reported that the training had increased their practical skills. In addition, 84 participants (62.2%) showed more confidence in facing emergency situations. Regarding emergency preparedness, 81 (60%) responded positively. In addition, 97 participants (71.9%) stated that the training had significantly increased their confidence in crisis management.

Overall, these results confirm the effectiveness of the educational intervention in significantly improving participants' practical skills, self-efficacy, and emergency preparedness, and have a transformative impact on the community's capacity to respond to crises.

Finally, it can be concluded that more than 60% of the participants had insufficient knowledge before the training, while after the training, more than 60% of them reported significant improvements in their skills and confidence. These significant changes indicate the positive and significant impact of the training provided through the Education Ambassador vehicle on increasing the awareness and preparedness of rural residents in the border areas of Gonbad-e Kavous County.

Regarding the statement "the content provided in this training was useful and practical", participants responded as Table 5, 85 out of 135 participants (63%) rated the training content useful and practical, indicating a strong alignment between the training content and the needs of the participants.

For the statement "the training was presented in simple and understandable language," 85 participants (63%) considered the training to be clear and understandable, emphasizing the importance of effective communication in transferring knowledge to the rural population.

Based on the statement, "It is very likely that I will apply what I have learned in this course in my daily life," 126 out of 135 participants (93.3%) indicated a high likelihood of applying the knowledge gained in their everyday lives. this finding is especially important as it reflects the translation of training into sustainable, real-world behavioral change.

regarding the statement, "this training changed my attitude toward the importance of first aid," 109 participants (80.7%) reported a positive shift in their attitude toward the importance of first aid, demonstrating the profound impact of the training on participants' perspectives.

[DOI: 10.61882/jorar.17.3.3]

Concerning the statement, “the training content matched my real-life needs”, 80 participants (59.2%) affirmed that the training content aligned with their actual needs.

Finally, for the statement, “practical training (e.g., cardiopulmonary resuscitation and wound dressing) was sufficiently provided”, 123 out of 135 participants (91.1%) expressed satisfaction with the adequacy of practical training. this underscores the importance of hands-on, skill-based instruction in educational programs.

These results collectively confirm the high perceived value, relevance, and effectiveness of the training delivered through the Education Ambassador Vehicle, demonstrating its potential to foster meaningful and lasting changes in knowledge, attitudes, and practices within rural communities.

The results of the independent samples test show an F-value of 0.387 with a significance level (Sig.) of 0.535, indicating homogeneity of variances and no significant difference between the variances of the two gender groups. The independent samples t-test yielded a t-value of 0.372 with a two-tailed significance level of 0.710, demonstrating no statistically significant difference between the mean scores of the male and female groups.

These findings confirm that the training programs delivered through the Education Ambassador Vehicle have had a highly positive and significant impact on improving the awareness and preparedness levels of rural residents in the border areas of Gonbad-e Kavous County. Over 90% of participants expressed satisfaction with the quality of the training, and no significant gender difference was observed in training effectiveness (p=0.710, two-tailed), reflecting the gender-neutral nature of the program and equal access for all individuals. Overall, these results underscore the importance of accessible, targeted education for rural populations in border regions and demonstrate the potential of this model to be successfully replicated in similar underserved areas.

Based on the results, participant satisfaction with the content, instructors, and teaching methods delivered through the Education Ambassador Vehicle in the border areas of Gonbad-e Kavous County was evaluated, with the following findings:

Regarding the statement, "The teaching method of the instructors had a positive impact on my learning," 65 participants (48.1%) strongly agreed, and 45 participants (33.3%) agreed to a large extent. Overall, 110 out of 135 participants (81.5%) considered the instructors’ teaching methods effective.

Table 4. Descriptive statistics of the training effectiveness variable from participants’ perspective by gender male vs. female

Variable	Gender	Statistical concepts	Confidence Interval		Standard Error	Statistic
			Lower	Upper		
Effectiveness	Male (N=50)	Mean	52.265	55.749	.8733	54
		Std. Deviation	4.128	7.5091	.86362	6.023
		Std. Error of Mean	-	-	-	.851
	Female(N=85)	Mean	51.37	55.058	.9142	53.49
		Std. Deviation	4.528	12.021	2.0425	8.412
		Std. Error of Mean	-	-	-	.912

Table 5. Level of satisfaction with training content, instructors, and teaching methods

Statements	Very Low	Low	Medium	High	Very High
The teaching method of the instructors had a positive impact on my learning	12	13	32	45	65
Interaction and the question-and-answer environment during the training were appropriate.	0	1	19	45	70
he quality of educational resources and materials in this course was appropriate.	0	1	9	52	73
The teaching methods used in this course were engaging and effective.	1	14	29	43	48

Table 6. Results of linear regression analysis on the effects of age, education level, and prior training experience on participants’ satisfaction

Variable	Sig.	T	Standardized Coefficient (β)	Standard Error	Unstandardized Coefficient (B)
Constant	0.000	16.16	-	2.98	48.15
Age	0.256	1.14	0.09	0.07	0.08
Education Level	0.000	4.07	0.33	0.89	3.62
Prior Training Experience	0.004	2.92	0.24	1.01	2.95

[DOI: 10.61882/jorar.17.3.3]

Additionally, 32 participants (23.7%) responded neutrally, 13 (9.6%) agreed slightly, and 12 (8.9%) agreed only to a very small extent. These findings reflect the high quality of instruction and the trainers' ability to effectively convey educational content to the target audience.

With regard to the statement, "Interaction and the question-and-answer environment during the training were appropriate," the analysis showed that 70 participants (51.9%) strongly agreed, and 45 participants (33.3%) agreed to a large extent. In total, 115 out of 135 participants (85.2%) evaluated the interactive learning environment as appropriate. Moreover, 19 participants (14.1%) responded neutrally, and 1 participant (0.7%) agreed slightly. No participants disagreed strongly. This result highlights the effectiveness of interactive teaching methods in fostering an active and participatory learning environment.

According to the statement, "the quality of educational resources and materials in this course was appropriate," 73 participants (54.1%) strongly agreed, and 52 participants (38.5%) agreed to a large extent. In total, 125 out of 135 participants (92.6%) evaluated the quality of the instructional materials as appropriate. Additionally, 9 participants (6.7%) responded neutrally, 1 (0.7%) agreed slightly, and none disagreed strongly. These findings indicate a high level of satisfaction with the quality of the educational content and materials used in the program.

Furthermore, regarding the statement, "The teaching methods used in this course were engaging and effective," 48 participants (35.6%) strongly agreed, and 43 participants (31.9%) agreed to a large extent. Overall, 91 out of 135 participants (67.4%) considered the teaching methods satisfactory. Moreover, 29 participants (21.5%) responded neutrally, 14 (10.4%) agreed slightly, and 1 (0.7%) agreed only to a very low extent. This highlights the importance of employing innovative and engaging teaching methods to enhance learning motivation and effectiveness.

The results of the linear regression analysis indicate a statistically significant relationship between demographic factors and participant satisfaction ($F= 12.71$, $p<0.001$). The regression sum of squares was 3,528.6 with 3 degrees of freedom (mean square = 1,176.20), while the residual sum of squares was 12,116.7 with 131 degrees of freedom (mean square= 92.49). The total sum of squares was 15,645.3 with 134 degrees of freedom, indicating that 22.6% of the variance in participant satisfaction can be explained by the independent variables: age, education level, and prior training experience. This finding demonstrates a significant association between participants' individual characteristics and their level of satisfaction with the educational program.

A comprehensive analysis of the collected data reveals a high level of participant satisfaction with the training programs delivered through the Education Ambassador Vehicle in the border areas of Gonbad-e Kavous County. Among the 135 participants, 110 (81.5%) were satisfied with the instructors' teaching quality, 115 (85.2%) found the interactive learning environment appropriate, and 125 (92.6%) confirmed the quality of the educational materials.

Figure 2. An example of training delivery using the "Education Ambassador Vehicle (Authors: 2025)

[DOI: 10.61882/jorar.17.3.3]

Additionally, 91 participants (67.4%) described the teaching methods as engaging and effective. Advanced statistical analysis using linear regression confirmed a significant relationship between participants' demographic characteristics and their satisfaction levels with the training program.

The model, which included age, education level, and prior training experience, explained 22.6% of the variance in participants' satisfaction. The results indicate that individual factors, particularly education level, play a significant role in how participants perceive and evaluate the training programs. Specifically, participants with higher educational attainment reported greater satisfaction, underscoring the importance of tailoring educational programs to the knowledge levels and educational backgrounds of the target population.

Linear regression analysis showed that education level and prior training experience were significantly associated with participants' satisfaction with the Education Ambassador Vehicle training, while age did not have a significant effect. These findings highlight the need to consider participants' educational and training backgrounds when designing efficient and effective short-term (rapid solution) educational programs.

Discussion and Conclusion

The findings of this study demonstrate the significant effectiveness of this educational approach. According to the results of the one-sample t-test before training, it was found that the participants' basic knowledge about first aid and natural hazards was significantly lower than the desired level (mean < 3) with a significant value of p = 0.004. This finding is in line with the research of Yari and Parishan (2017), (11) who emphasized the inadequacy of existing educational programs in meeting the needs of the society related to first aid skills and disaster response. Furthermore, this low level of knowledge is consistent with the findings of Aghayari and Kouhi (2024), (9) who emphasized the necessity of teaching basic rescue and emergency skills to students as a fundamental step towards increasing social awareness. However, the results of post-training showed significant improvements. More than 60% of the participants reported increased skills and greater confidence in managing emergency situations, indicating the effectiveness of the training provided through the "Education Ambassador Vehicle". This finding is in line with Pourkarimi's (2015) model (12) of effective public education and supports the results of Keikha et al. (2018) (10) who highlighted the positive impact of RCS public education programs on urban disaster management. The hands-on and interactive training approach used here is also consistent with Bandura's Social Learning Theory (7), which emphasizes the importance of observation and imitation in the learning process.

Moreover, over 90% of participants expressed satisfaction with the quality of the practical training, and more than 92% were satisfied with the educational content. These findings highlight the importance of using appropriate and context-sensitive teaching methods, aligning with Green & Kreuter's (2025) Health Belief Model (8), which emphasizes the role of targeted education in changing awareness, attitudes, and behaviors.

Statistical analysis further showed no significant difference in training effectiveness between genders (p=0.710), reflecting the gender-neutral nature of the program and equal access to high-quality training for all participants—consistent with the principles of inclusive public education. Additionally, 22.6% of the variance in participant satisfaction was explained by demographic factors such as age, education level, and prior training experience, underscoring the need to tailor educational programs to the specific characteristics of the target population.

The findings of this study confirm that the use of the "Education Ambassador Vehicle"—a mobile learning model similar to those recommended by the World Health Organization—can effectively bridge the gap in access to vital education in remote and underserved border regions. This innovative approach not only overcomes geographical and temporal barriers but also significantly enhances residents' knowledge and preparedness by delivering interactive, practical training in a familiar local environment. These results can serve as a successful model for other border and disadvantaged regions across the country and clearly illustrate the critical role of education in the disaster management cycle, as emphasized in the UNISDR (2005) and Quarantelli (1998) frameworks. (5&6) Therefore, the main hypothesis of the study—that training in hazard awareness and first aid delivered via the

[DOI: 10.61882/jorar.17.3.3]

"Education Ambassador Vehicle" can significantly improve the knowledge and preparedness of rural residents in border areas—is strongly supported.

The findings indicate that the training programs implemented by the Golestan Provincial Branch of the RCS, through the deployment of the "Education Ambassador Vehicle," have significantly enhanced public awareness, practical preparedness, and community participation in the border villages of Gonbad Kavous County. Given the region's economic disparities, relative poverty, and frequent exposure to natural disasters, such initiatives play a vital role in reducing community vulnerability and strengthening local resilience. However, the sustainable effectiveness of these interventions depends on several operational and institutional prerequisites.

In summary, to achieve these goals, the following actions should be taken: strengthening coordination mechanisms between provincial headquarters and RCS county branches; engaging and informing local authorities; maintaining and expanding the Education Ambassadors program to similar areas; redesigning training content based on the diversity of audiences; and monitoring the effectiveness of training through periodic evaluations.

Ultimately, this study proves that careful planning, face-to-face instruction, local engagement, and institutional coordination can lead to tangible improvements in rural community preparedness for crises. By leveraging such innovative models, the RCS can make a significant contribution toward achieving humanitarian goals, reducing vulnerability, and promoting sustainable safety and health in high-risk areas across the country.

Compliance with Ethical Guidelines

All ethical principles have been considered in this article, and participants were informed of the purpose of the research and its implementation steps.

Funding/Support

This article is not received any financial support.

Author's Contributions

This article is based on Naser Bay idea at RCS at Golestan province, who was responsible for conducting the research, collecting, and analyzing the data; and the first till the eight author, Pouria Mirza Zanjani, Navvab Shamspour, Mostafa Khabazi, Masoud Ahmadi, Ahmad Kahsari, Mousa Alikhani, Nesa Qavidel, were responsible for the design, supervision, and methodology. However, Naser Bay was responsible for correspondence and editing the final manuscript submitted to the journal.

Conflict of Interests

The authors declare no conflict of interest.

Acknowledgments

The authors sincerely thank Dr. Faegh Abdollahzadeh, Director General of Specialized Education, Empowerment, and Skill Development and Dr. Vahideh Moradi, Director General of Research and also Ms. Fouzhan Tabasi and all members of the RCS who contributed to this research.

References

1. Modiri M, N. S., Karimi Shirazi H. [Crisis management planning in urban management with inactive defense approach using SWOT and MCDM method (Persian)]. Emergency Management. 2015; 4: 4-15.
2. Rashidi Y, Hossein Pourmotlag M, Nokhostin Ahmadi M. [Explaining the role of cyberspace in urban crisis management with emphasis on the city of Hamedan (Persian)]. Proceedings of the Sixth Congress of the Iranian Polytechnic Association, Ferdowsi University of Mashhad. Mashhad; Iran. 2013. Available from: https://civilica.com/doc/234064
3. Alexander D. E. Confronting catastrophe: new perspectives on natural disasters. Publisher: Oxford University Press. 2000.
4. WHO. World report on disasters management in the health sector. World Health Organization. [Internet] [cited 2011] Available from: https://iris.who.int/bitstream/handle/10665/326106/9789241516181-eng.pdf
5. Quarantelli E.L. Disaster crisis management: A summary of research findings. Disaster Research Center. Journal of Management Studies, Wiley Blackwell. 1988; 25(4): 373-385 https://doi.org/10.1111/j.1467-6486.1988.tb00043.x
6. UNISDR. Hyogo Framework for Action 2005-2015: Building the resilience of nations and communities to disasters. United Nations. [Internet] [cited 2005] Available from: https://www.unisdr.org/files/1037_hyogoframeworkforactionenglish.pdf
7. Bandura A. Social learning theory. Prentice Hall. The University of Michigan. 2010
8. Green L, Kreuter, M. Health program planning: An educational and ecological approach. New York; McGraw Hill. 4th Edition, 2005.

[DOI: 10.61882/jorar.17.3.3]

9. Aghayari Z, Kouhi G. [Teaching first aid to students: an effective step in raising an informed and prepared generation in crises (Persian)]. The first international conference of talent-seeking and culture-creating teachers in the development of technical and professional education and its associates in the path of sustainable development. [January 20, 2025]. Bam: Iran. 2025 Available from: https://civilica.com/doc/2270166
10. Keikha A, Shahreki Z, Haddadi E, Nouri Delavar M. [The role of Red Crescent Society public education in urban crisis management(Persian)]. Journal of Rescue and Relief. 2018; 10 (2):1-17
11. Yari A, Parishan M. [Investigating the role of education in natural hazard risk management (earthquake), case study: rural areas of Qazvin city (Persian)]. Journal of Spatial Analysis of Environmental Hazards. 2017; 1:49-64.
12. Pourkarimi J. [Presenting a public education model for Iranian Red Crescent Society: a comprehensive and systemic approach (Persian)]. Journal of Rescue & Relief .2016; 7 (4): 1-17
13. Bay N, Montazeri M, Gandomkar A. [The Study of the effect of Hydro-Climate factors on natural hazards in Golestan province with emphasis on flood (Persian)]. Journal of Rescue & Relief. 2013; 5 (2) :13-1
14. Mohaghegh M. [New approaches to crisis management and disaster risk reduction (Persian)]. Journal of Rescue & Relief. 2012; 4 (3):107-110
15. Yeylaghi Ashrafi M H, Akhtari E, Bay N, Oveisi N. [A strategic approach to crisis management 2019 Golestan province floods by using SWOT method (Persian)]. Journal of Rescue & Relief. 2021; 13 (2):129-140
16. Taghvaei M, Bay N.[The assessment of impart quantity of counties of Golestan province by analytical hierarchy process (Persian)]. Journal of Geographical Research. 2012; 3: 1-20.

[DOI: 10.61882/jorar.17.3.3]