ClinicSearch

Archives of Clinical Investigation

Sadegh Kazemi *

Open Access

Opinion

Presenting and Prioritizing Strategies for Managing Healthcare Waste in Kermanshah and Varzaqan-Ahar Earthquakes using SWOT and QSPM Approaches

Sadegh Kazemi

Associate Professor of Health Education and Promotion School of Public Health Shahid Sadoughi University of Medical Sciences.

***Corresponding Author:** Sadegh Kazemi, Associate Professor of Health Education and Promotion School of Public Health Shahid Sadoughi University of Medical Sciences.

Received date: March 07, 2024; Accepted date: March 17, 2024; Published date: March 25, 2024

Citation: Sadegh Kazemi, (2025), Presenting and Prioritizing Strategies for Managing Healthcare Waste in Kermanshah and Varzaqan-Ahar Earthquakes using SWOT and QSPM Approaches, *Archives of Clinical Investigation*, 4(2); **DOI:**10.31579/2834-8087/039

Introduction: Managing the challenges of healthcare waste produced after the earthquake is a vital issue. This study aimed to provide a comprehensive management plan for healthcare waste in Kermanshah and Varzaqan-Ahar earthquakes using two models: Strengths, Weaknesses, Opportunities, and Threats (SWOT) and Quantitative Strategic Planning Matrix (QSPM). Materials and Methods: The present qualitative study was conducted through a content analysis approach using semi-structured interviews and a purposive selection of 16 experienced experts and managers in the field of healthcare waste management in an earthquake in 2021-2022. After recording and transcribing data, data analysis was done in MAXQDA software (version 18). Lincoln and Goba criteria were used to check the reliability of the data. The statements (strengths, weaknesses, opportunities, and threats of waste management) were summarized for each main category in the SWOT classification. Strategies for improving healthcare waste management were presented by comparing internal and external factors. Finally, the attractiveness table was compiled and weighted using the QSPM method for prioritizing strategies.

Results: The study found 18 strengths, 24 weaknesses, 18 opportunities, and 19 threats. The final scores for internal and external factors of healthcare waste management in earthquakes were 2.38 and 2.3, respectively. A total of 12 strategies were developed based on the findings. Finally, the strategy of "optimal use of the opinions provided by managers, researchers, and experts interested in the field of waste management for the development of guidelines and national regulations for the management of healthcare waste in an earthquake" was prioritized to be implemented based on the QSPM matrix.

Conclusion: The strategic priorities identified in this study are important steps towards achieving sustainable development goals and protecting public health and the environment in disaster situations. Moreover, using QSPM and SWOT models helps to provide appropriate solutions for improving the management of healthcare waste in earthquakes.

References:

1. BALBAY EG. 2023 Earthquake and the Lung. Duzce Medical Journal..
2. Mavrouli M, Mavroulis S, Lekkas E, Tsakris A 2023. The impact of earthquakes on public health: A narrative review of infectious diseases in the post-disaster period aiming to disaster risk reduction. Microorganisms.;11(2):419.
3. Kazemi S, Mokhtari M, Vaezi A, Salmani I, Ehrampoush MH, Tafti AAD, 2022 et al. The challenges of strategic management of the wastage produced due to earthquake in Kermanshah and Varzaghan-Ahar: A qualitative study. Journal of Education and Health Promotion.;11(1):393.
4. Zhang L, Wu L, Tian F, Wang Z. 2016 Retrospection-simulation-revision: approach to the analysis of the composition and characteristics of medical waste at a disaster relief site. PloS one.;11(7):e0159261.
5. Organization WH. 2021 Safe management of wastes from health-care activities a summary.[Internet].[Updated; cited 2021 Dic 10
6. Askari R, Pourkosari F, Koupal R, Mokhtari M 2022:. Presented and prioritizing waste management strategies using SWOT and QSPM approach in two private hospitals in Yazd in 2021. International Journal of Environmental Health Research. 1-14.
7. Pradhananga P, ElZomor M, Kasabdji GS. 2021 Disaster waste management challenges in Nepal: Health impacts and the need for safe practices. Natural Hazards Review.;22(2):05021001.
8. Chen Y, Zhao R, Xue J, Li J. 2013 Generation and distribution of PAHs in the process of medical waste incineration. Waste management.;33(5):1165-1173.
9. Brown CO. Disaster Waste Management: a systems approach..
10. Hall ML 2012, Lee AC, Cartwright C, Marahatta S, Karki J, Simkhada P. The 2015 Nepal earthquake disaster: lessons learned one year on. Public health. 2017;145:39-44.

11. Nathan M. 2000 The paradoxical nature of crisis. Review of Business.;21(3/4):12.
12. Mehrolhassani MH, Jafari Sirizi M 2012, Poorhoseini SS, Yazdi Feyzabadi V. The challenges of implementing family physician and rural insurance policies in Kerman province, Iran: a qualitative study. Health and Development Journal.;1(3):193-206.
13. Su T, Saimy B, Bulgiba A. 2013 Socioeconomic consequences of the 2004 tsunami: Policy implications for natural disaster management. Preventive medicine.;57:S74-S6.
14. Motlatla M, Maluleke TX. 2021 Assessment of knowledge about healthcare risk waste management at a tertiary hospital in the northern cape province, South Africa. International journal of environmental research and public health.;18(2):449.
15. Pazouki M, Jozi S, Ziari Y. 2017 Strategic management in urban environment using SWOT and QSPM model. Global Journal of Environmental Science and Management.;3(2):207-216.
16. Shenton AK. 2004 Strategies for ensuring trustworthiness in qualitative research projects. Education for information.;22(2):63-75.
17. Ferronato N, Ragazzi M, Portillo MAG, Lizarazu EGG, Torretta V. Healthcare waste indicators for assessing the infectious waste management in the public hospitals of la paz (bolivia).
18. Domingo N, Luo H. 2017 Canterbury earthquake construction and demolition waste management: issues and improvement suggestions. International journal of disaster risk reduction.;22:130-138.
19. Kobayashi Y, 1995.editor Disasters and the problems of wastes-institutions in Japan and issues raised by the Great Hanshin-Awaji earthquake. Earthquake Waste Symposium;
20. Liu Z, Liu T, Liu X, Wei A, Wang X, Yin Y, 2021 et al. Research on optimization of healthcare waste management system based on green governance principle in the covid-19 pandemic. International Journal of Environmental Research and Public Health.;18(10):5316.
21. Thakur V, Mangla SK, Tiwari B 2021. Managing healthcare waste for sustainable environmental development: A hybrid decision approach. Business Strategy and the Environment.;30(1):357-373.
22. Ardani KB, Reith CC, Donlan CJ. Harnessing Catastrophe to Promote Resource Recovery and Eco-industrial Development. Journal of Industrial Ecology. 2009;13(4):579-591.
23. Zhang F, Cao C, Li C, Liu Y, Huisingh D. 2019 A systematic review of recent developments in disaster waste management. Journal of Cleaner Production.;235:822-840.
24. Hazarika H, Bhandary N, Kajita Y, Kasama K, Tsukahara K, Pokharel R 2016. The 2015 Nepal Gorkha Earthquake: An overview of the damage, lessons learned and challenges. Lowland Technology International Journal, Special Issue on: Nepal Earthquake & Disaster.;18(2):105-118.