RISK MANAGEMENT IN THE LITERATURE FROM 2020 TO 2024

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ABSTRACT

Risk management derived from public administration and civil protection has its origin in the framework of international conventions, but its practice is far from following the guiding principles. The objective of the present work was to review and establish the risk management network in the literature from 2020 to 2024 to compare the theoretical structure with empirical observations in a sample of students selected by the profile of their academic training. The results show that a structure of prevention, reaction and dissemination of risks is configured based on the uses and customs of vulnerable communities and exposed to risks, as well as the trust that it builds with experts and authorities. Precisely, the contribution of the study contravenes studies on stigma, but opens the discussion on the inclusion of mistrust in a model of preponderant factors. The inclusion of stigma is recommended to establish a comprehensive management of risks in the face of the pandemic at the university of study.

Keywords: *Agenda. COVID-19, Danger, Risk, Resilience, Vulnerability*

INTRODUCTION

Public administration and risk management are two fundamental concepts in the field of governance and decision-making in the public sector (Gibb et al., 2020).

Public administration refers to the set of activities and processes through which the resources and actions of the government are planned, organized, directed and controlled to achieve the established objectives. It involves the management of human, financial and material resources, as well as the design and implementation of public policies (Townsend, Kyle & Stanford, 2020).

Risk management is the process of identifying, evaluating, and reducing potential risks that may affect an organization or project (Quintero Johnson et al., 2021). It consists of identifying threats and opportunities, analyzing their impact and probability of occurrence, and developing strategies to reduce or take advantage of said risks.

In the context of public administration, risk management is applied to identify and address risks associated with government decisions and policies (Banerjee, Kosagisharaf, & Rao, 2021). Some areas in which risk management is relevant in public administration are:

Risk management allows evaluating the possible impacts and consequences of proposed public policies before their implementation (Puhl et al., 2020). This helps identify potential risks and develop strategies to mitigate them.

Public administration is exposed to various types of crises, such as natural disasters, economic crises, or disease outbreaks (Li et al., 2021). Risk management provides tools and approaches to plan and respond effectively to these situations, minimizing negative impacts and protecting the population.

In the digital age, the public administration handles large amounts of sensitive data and is exposed to cyber threats (Pozza, Mucci & Marazziti, 2020). Risk management in this area involves assessing vulnerabilities and adopting appropriate security measures to protect information and ensure confidentiality.

Risk management in public administration also addresses financial risks, such as lack of resources, misuse of public funds, or corruption (Roelen et al., 2020). Controls and supervision mechanisms are applied to mitigate these risks and guarantee the adequate and transparent use of public resources.

Risk management is an important tool within public administration to identify, assess, and address risks associated with government decisions and policies (Kline, 2020). Helps improve efficiency, transparency and accountability in public sector decision-making.

Regarding Civil Defense, the precedent lies in the world war where the countries involved created a Civil Defense Council in the face of the contingencies of the conflict (Farrimond, 2023). It is true that the other powers involved in the war generate their civil defense system in the face of any eventuality derived from the international conflict, but it is in the United States where the Civil Defense Council was created, which trained the population in the face of bombing.

In World War II, the central concern was the sabotage of civilian systems (Choi, Jeffers & Logsdon, 2020). In this scenario, war veterans oversaw civil defense, as well as a national guard to train the population against air attacks, protection of facilities, and avoidance of sabotage.

In the case of Mexico, its entry into the conflict due to a torpedo attack on ships in Mexican waters. General Ávila Camacho institutes the National Guard and declares war on the axis countries. The decree oversees defense and national security. The president becomes the major general. Civil defense is oriented towards training the population to formalize a threat management and crisis management system in the face of conflicts that threaten the territory, the homeland, order, integrity, identity or national sovereignty.

The structure of national defense included authorities, committees, and civil and military sectors oriented to the national defense of the territory, the homeland, and the population (Earnshaw et al., 2022). Unlike the US defense and civil guard system, the Mexican civil defense system involves the army directly, even when the commander is the president.

Civil Protection and risk management are closely related, since both focus on prevention, mitigation and response to emergency situations and disasters.

Civil Protection is a set of coordinated measures and actions to prevent and respond to emergency situations and disasters to protect life, property and the environment. It involves the planning, organization, direction and control of resources and actions in risk situations (Robinson et al., 2020).

Risk management refers to the process of identifying, evaluating, and taking action to reduce or reduce potential risks that may lead to adverse events (Saldar and Jazmin, 2020). It implies the analysis of threats, the evaluation of vulnerabilities and the implementation of strategies to prevent or minimize the impacts of disasters.

In the context of Civil Protection, risk management is applied to identify and manage the dangers and threats to which a community or region is exposed (Logie, 2020). Some areas in which risk management is relevant in Civil Protection are:

1. Risk assessment: Risk management allows the identification and evaluation of the risks present in a specific area, such as natural risks (earthquakes, floods, forest fires) or technological risks (industrial accidents, chemical leaks). This helps determine the necessary prevention and preparedness measures.

2. Emergency planning: Risk management facilitates the development of emergency and contingency plans (Asadi-Aliabadi, Tehrani-Banihashemi & Moradi-Lakeh 2020). These plans established the procedures and actions to follow in case of disasters, as well as the coordination between different entities and agencies responsible for Civil Protection.

3. Education and awareness: Risk management promotes education and awareness about hazards and prevention measures (Jamieson et al., 2021). This includes disseminating information on how to act during an emergency, training the population in first aid, and promoting safe practices at home and in the community.

4. Response and recovery: Risk management is also applied in the response phase and after a disaster (Wypler & Hoffelmeyer, 2020). Helps coordinate available resources, conducts damage and needs assessments, and establishes reconstruction and rehabilitation strategies.

Civil Protection and risk management work together to prevent, mitigate and respond to emergency situations and disasters (Siriwardhane & Khan, 2021). Risk management provides the necessary tools and approaches to identify and address risks, while Civil Protection is in charge of implementing measures and actions to protect the population and minimize negative impacts in case of adverse events.

The epidemiological traffic light and risk management are related in the context of the COVID-19 pandemic and the response of public health authorities.

Risk management involves identifying, evaluating and taking measures to mitigate risks and threats that may affect public health (Rewerska-Juśko & Rejdak, 2022). In the context of the pandemic, risk management seeks to reduce the spread of the virus, protect the vulnerable population, and guarantee the capacity of the health system to care for patients.

The epidemiological traffic light is a classification system that uses colors to indicate the level of risk and the control measures that must be implemented in a certain region or locality based on the epidemiological situation of COVID-19 (Moffitt et al., 2022). Usually, the traffic light is based on indicators such as the number of cases, the positivity rate, hospital occupancy, and other relevant factors.

In the COVID-19 era, public administration, civil protection and risk management were oriented through the epidemiological traffic light (Fouad et al., 2021). Consequently, the public and media agenda focused on the strategies according to the color of the traffic light.

The epidemiological traffic light is based on the evaluation of various indicators to determine the level of risk of contagion and spread of the virus in a certain geographical area (Pandya & Redcay, 2022). This evaluation is a fundamental part of risk management since it allows identifying the most affected areas and focusing prevention and control efforts where they are most needed.
The epidemiological traffic light establishes specific measures that must be applied at each level of risk, such as mobility restrictions, closure of establishments, limitation of capacity, mandatory use of masks, among others (Jaspal, 2021). These measures are part of risk management by seeking to reduce exposure and contagion of the population, thus reducing the risks associated with the pandemic.

The epidemiological traffic light is periodically updated based on the evolution of the epidemiological situation (Goldberg, 2020). This involves constant risk assessment and dynamic management that adjusts to changing conditions. Risk management provides the conceptual framework and tools necessary to carry out this continuous monitoring and adaptation.
In risk management, different scales are used to assess and categorize risks. These scales allow a better understanding and communication of the risk levels associated with a given event or situation.

1. Qualitative scale: This scale is based on general descriptions or categories to assess the level of risk (Hargreaves & Logie, 2020). For example, categories such as "low", "medium" and "high" can be used to classify risks. This scale provides an overview but does not offer a precise numerical quantification.

2. Semi-quantitative scale: In this scale, numerical values or ranges are assigned to risk categories (Miconi et al., 2021). It can be a scale of 1 to 5 or 1 to 10, with higher values indicating a higher level of risk. This scale provides greater precision in the evaluation, but it is still not a complete quantitative measure.

3. Quantitative scale: This scale uses precise numerical values to quantify the level of risk (Pereira, 2021). Probabilities and consequences can be used to calculate a numerical risk index. For example, a scale of 1 to 100, where a higher value indicates a higher level of risk. This scale allows for more detailed quantitative analysis and more accurate comparisons between different risks.

4. Risk Matrix: This tool uses a combination of qualitative and semi-quantitative scales (Mukumbam, 2021). A matrix is constructed where the probability and consequence categories are crossed, assigning a specific risk level to each combination. For example, categories such as "high probability, low consequence" or "medium probability, high consequence" can be used to classify risks.
The objective of this work was to review the literature related to public administration, civil protection, risk management and the epidemiological traffic light to be able to anticipate the strategies relevant to a health crisis such as the COVID-19 pandemic.

Method
A cross-sectional, exploratory and psychometric study was carried out with a sample of students (M = 27.3 and SD 4.56 age; M = 4'892.32 USD SD = 345.34 USD) considering their affiliation to the postgraduate course in risk management at a public university in the center of Mexico.

The Risk Management Scale was extracted. It includes assertions around the translation of risk events, disaster risks, risk communication and impact on exposed communities. Each of the statements includes response options ranging from 0 = “not satisfactory” to “5 = “quite satisfactory”. The confidence of the scale reached sufficient alpha and omega values of .768 for the general and between .753 and .756 for the other subscales. In addition, validity gained factorial weights between .436 and .652.

Respondents were contacted through their institutional email. The objectives were explained to them and they were introduced to those responsible for the project in a zoom session. The confidentiality and anonymity of your participation is guaranteed in writing, as well as the warning that your participation would be paid to us. The homogenization of the concepts of risks, protection, vulnerability and resilience was carried out through focus groups of 10 people. The application of the scale was in three phases following the Delphi technique. In the first phase, the respondents rated the statements of risks of contagion, illness, and death from COVID-19. In the second phase, they compared their ratings with those of the general average. The third phase ratified their qualifications or modified them.

The data was captured in excel and processed in JASP version 14. The parameters were calculated to explain the relationships of interdependence, proximity, gradation and influence. The non-rejection of the hypothesis is established with values close to unity.

Results
Centrality refers to intermediation, proximity, gradation and influence between the nodes that make up risk management. In this sense, the underlying node as central is identity as the guiding axis of risk management.

In other words, the history of knowledge or academic, professional and labor training are the guiding principles of risk management.
If risk management consists of the translation of data, information, knowledge and knowledge, then identity is a guiding principle that explains trust towards health authorities. In this way, the identity together with the identity the degree of hospitalization would be another explanatory factor of risk management as the guiding axis of the health agenda.

The structure of a network is read from left to right and is interpreted as the start and end of a learning process. In this sense, the network begins with the dissemination of risks and the reaction towards them to culminate with the prevention of risks. In this process, risk management is a reading of the learning process of the respondents regarding the problem.

Discussion

The contribution of the present to the state of knowledge lies in the establishment of a risk management network in the face of the pandemic. The results show that risk management is based on identity and hospitalization. In other words, confidence in hospitalization and medical training are factors that increase risk management in the face of the health crisis. Such a finding contravenes studies on stigma where it is recognized that those who make decisions about anti-COVID policies are considered incompetent (Sharma et al., 2022). In the present work, it was found that academic, professional and work training are indicators of a work identity that generates trust among respondents when carrying out reactive, diffusive and preventive risk management. In this process that goes from dissemination to prevention, the literature warned that it is possible if identity prevails as the guiding principle (Iversen et al., 2020). In other words, in the event of a risk emergency, the translation of its effects in the communities depends on adjusting the information to the uses and customs of the communities. In this way, the present work found that the academic, professional and labor training of the risk translator is the factor that explains risk management. The findings found allow the generation of policies, strategies and programs for risk management in university communities. In this sense, the inclusion of stigma is recommended as an explanatory factor for mistrust towards authorities, as well as risk management as an explanatory element of trust towards expert managers.

The limits of the study consist in the establishment of a network with students who are not yet experts in the subject and for which it was necessary to homogenize the concepts of risk, stigma, vulnerability, danger and management. Therefore, research with experts makes it possible to establish the central axes of the risk management agenda in the face of health crises.

Conclusion

The objective of this work was the establishment of a risk management network in the face of the pandemic. The results contravene other studies where distrust of the authorities prevails due to their preventive, reactive or diffusive capabilities of COVID-19. The study also corroborates the findings that report a translation and diffusion of risks from local uses and customs. It is recommended to extend the study towards the inclusion of stigma in a comprehensive model to assess risk management in the face of the pandemic. In order to be able to correct the limits of the study related to academic training, it is recommended to establish a comparison with experts in risk management to note the differences and outline risk management and communication policies in the face of COVID-19.

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