

Research Title

**Enhancing Risk Management through Facilities Management: A Case Study on COVID-19
Response in SABIC Industrial Organization**

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Introduction

Right now, during a period in which recessionary phenomena are becoming even more severe, managerial activity needs new progressive ways and processes that would assist in minimizing the adverse impact that known risk variables have on the operation and development of firms. At the same time, the availability of a system that would assist in ensuring that they are protected from hazards is a factor that is related to their ability to achieve effective performance and sustainable development. A mechanism of this kind may be an efficient risk management system that is based on the most recent techniques for improving the quality of risk management in an organization. This form of mechanism would be called a prospective mechanism (Cherkasov, 2017). The extent to which risk influences the performance of an organization is contingent upon several different internal and external environmental elements respectively (Agamirova et al, 2017). What makes the requirement for professional crisis management even more important is the fact that this is the case. To put it another way, it is essential to understand what risk is, how to correctly evaluate its magnitude and prevent the harm that it may cause, how to effectively manage risk, and how to establish a system that provides protection against hazards.

The importance of establishing a well-structured and independent risk management system within an organization is a topic that requires little to no evidence to be substantiated. This is especially true considering the current economic downturn that is occurring within the industrial sector (Dudinskaya, 2016). It is possible that the organization will eventually run into some significant difficulties because of the absence of an efficient risk management system, it is possible that a particular risk that was underestimated could develop into a structural risk, which would then cause considerable damage to the entire organization (Eliseeva, 2016). However, it is important to recognize that it is impossible to totally avoid risk within the production sphere. As a result, a reasonable objective in the risk management process of most firms is not to completely avoid hazards but rather to attempt to restrict and reduce the impact that they have (MARKOVA, 2018)

According to Cocchiara (2020), the workplace was in a state of perpetual change because of the transformation that Covid-19 had brought about in the workplace. According to NST Business's 2020 report, flexible working is inextricably linked to the concept of flexible workspace. The authors Davidescu et al. (2020) emphasized that job flexibility should be considered "business as usual" and should not be viewed as something that may be utilized only during times of crisis.

Employees will still choose to return to the workplace, even if they continue to work remotely, even though working remotely will become more common in the future, particularly during the height of the Covid-19 (Gallup, 2020) survey. During that time, the workplace will become more complex and dynamic, and employees will be divided into two teams: one that is located on-site, and another that is distributed. According to Jones Lang LaSalle (JLL), 2020, the implementation of FWA will become the norm in the workplace, which will influence the appearance and atmosphere of the office for Covid-19. Therefore, the current workplace needs to be modified so that it is more flexible and adaptive to accommodate the hybrid workforce and dynamic so that it can allow the practice of working remotely during and after the COVID-19 conference.

According to the FM point of view, FWA has prompted FM to innovate to facilitate the incorporation of flexible working arrangement norms and procedures within the premises of corporate enterprises. FM is also responsible for preparing the working environment in a manner that is in accordance with the policies and Standard Operating Procedures (SOP) of the Covid-19 organization while also catering to the requirements of the users. As a result of the, FM needs to determine what modifications or enhancements are necessary to guarantee that the workplace is prepared for the implementation of FWA during COVID-19. This must be done before all workers return to their workplaces and to enable a speedy resume of company operations (JLL, 2020). This study intends to investigate the essential components that facilitate FWA, as well as the concerns and obstacles that arose throughout the process of preparing the workplace for FWA during the COVID-19 conference, and to make recommendations about a more effective approach to the implementation of FWA in the workplace. It was claimed by Ciarniene et al. (2018) that FWA is a strategic strategy that firms can take to cut expenses and successfully deal with a variety of

demands, while simultaneously providing additional value to both the organizations and the employees of those organizations.

Thus, in recent years, the global community has faced extraordinary health and economic adversities as a direct result of the widespread outbreak of the COVID-19 pandemic, an unprecedented event that has significantly impacted numerous productive and service-oriented sectors, forcing various institutions to implement adaptable policies and methodologies to effectively manage crises and their associated risks. Facilities Management has become an essential part of business continuity by creating and maintaining a safe working environment that follows precautionary measures and meeting the changing needs of the business landscape during crises. Considering this situation, the present research undertakes a thorough examination of the critical significance of enhancing risk management strategies through the lens of facility management, specifically through a detailed case study focused on the response of SABIC Industrial Company to the challenges posed by the COVID-19 pandemic. The primary objective of this study is to elucidate the essential role that SABIC's facilities management played during the tumultuous period of the pandemic, as well as to identify the most significant elements and obstacles that accompanied the implementation of flexible work arrangements, which became increasingly necessary in response to the rapidly changing circumstances. Furthermore, this research aims to provide practical recommendations that could significantly contribute to the advancement and refinement of risk management policies within industrial enterprises in the future, thereby ensuring that they are better equipped to navigate potential challenges and uncertainties that may arise in subsequent crises.

Research problem

As a result of the unprecedented global Covid-19 pandemic, which has effectively exposed and underscored significant deficiencies in the existing infrastructure, emergency response systems, and crisis management frameworks that govern operations within various industrial facilities, industrial enterprises are facing an increasing number of challenges related to risk management. One of the most important elements in supporting risk management strategies is facility management, which is essential for maintaining business operations, providing a safe

workplace for workers, and reducing the negative effects of emergencies on people, property, and manufacturing processes.

Given this urgent situation, it is now essential to greatly improve the integration of risk management procedures with facilities management as a highly successful strategic approach to raise the degree of institutional readiness and enable a prompt and effective response to crises as they occur. Because SABIC is one of the most well-known and significant industrial companies in Saudi Arabia and the surrounding region, the main goal of this study is to examine how facilities management practices can be used to improve and enhance risk management procedures in industrial settings. To do this, the case study of SABIC and its response to the COVID-19 pandemic will be carefully examined.

Inquiring about how well facilities management supports and promotes different risk management activities during emergency health crises and evaluating how well SABIC has integrated practices that bridge the gap between facilities management and risk management during the turbulent COVID-19 crisis are the main issues this study aims to address. Additionally, this study aims to identify the various difficulties the company faced in managing the pandemic's complexities and assess how these difficulties affected important elements like workforce safety, business continuity, and the smooth running of production processes.

To achieve effective prevention measures, improve the speed and efficacy of response actions, minimize potential losses, and support a swift recovery process after the crisis has been resolved, industrial enterprises must adopt flexible and adaptive management models that emphasize integration among their diverse departments in the face of crises. This identified problem starkly reflects the urgent need for these models.

Hence, the problem of the study lies in answering the following main question: What is the function of Facility Management in augmenting risk management at SABIC during the COVID-19 pandemic?

Research Questions

A pivotal Question

- What is the function of Facility Management in augmenting risk management at SABIC during the COVID-19 pandemic?

Auxiliary Questions

- What is the effect of the operational adaptability of facility management on enhancing risk management at SABIC during the COVID-19 pandemic?
- How does the Health, Safety and Security Department within Facility Management contribute to mitigating risks during a crisis?
- To what extent does the continuity of services render by Facility Management influence risk management support and business continuity in SABIC?

Research significant

Scientific Importance

The significance of this study within the realm of scientific inquiry is underscored by its concentrated examination of a contemporary topic that is intricately intertwined with the pressing realities of modern crises, particularly focusing on the integrated relationship that exists between risk management and facility management within the context of industrial enterprises during health crises, such as the unprecedented Covid-19 pandemic. Through its investigation, this study aspires to enrich the theoretical discourse present in both Arab and international literature pertaining to this particular field by illuminating the potential of employing facilities management as a supportive and ancillary component that bolsters risk management activities within industrial enterprises, a subject that has regrettably not garnered adequate attention in prior research endeavors. Moreover, the scientific relevance of the study is further accentuated by its deliberate selection of SABIC as a case study, which stands out as one of the foremost industrial corporations both regionally and globally, thereby imparting a substantial scientific dimension to the findings of this research that can subsequently be leveraged to cultivate innovative management models and theoretical frameworks aimed at enhancing the capabilities of institutions to effectively

confront crises and adeptly manage risks in an integrated and scientifically informed manner, grounded in actual operational practices. Consequently, the study endeavors to address a significant lacuna in the existing body of research, which has demonstrated a notable scarcity of investigations that have explored facilities management as an efficacious instrument for the management of crises and risks within industrial facilities.

Practical Importance

From a practical standpoint, the significance of this study is manifested through its provision of actionable recommendations and pragmatic solutions that industrial enterprises are able to adopt in order to enhance their emergency systems, respond adeptly to crises, ensure the continuity of their operations, and mitigate both human and material losses that may arise during such challenging times. The study meticulously reviews a realistic and empirical experience of SABIC during the tumultuous COVID-19 pandemic, elucidating the specific procedures and measures that the company has implemented in managing its logistics facilities and services in a manner that is cohesively integrated with risk management practices. In addition, this study makes a notable contribution by offering a practical guide that can be utilized by other industrial enterprises not only within Saudi Arabia but also internationally, particularly those that encounter analogous challenges concerning employee safety, the continuity of supply chains, and the minimization of production disruptions in the face of crises. The practical importance of this research is also emphasized by its potential to support decision-makers and managers within facilities and risk departments of industrial enterprises by furnishing them with an integrated framework that is designed to assist in the development of proactive and adaptable plans, thereby enabling them to effectively navigate future crises, all in alignment with the strategic objectives outlined in the Kingdom's Vision 2030, which aims to establish resilient and productive institutions capable of efficiently and effectively responding to emergency changes.

Research Objectives

The principal objective

- Investigating the function of facilities management in enhancing risk management in SABIC during the COVID-19 pandemic.

Sub-objectives

- To ascertain the impact of facility management operational adaptability in enhancing risk management at SABIC during the pandemic.
- Analyzing the contribution of the Health, Safety and Security Department within Facility Management to the mitigation of risks during the COVID-19 crisis.
- Evaluating the role of the continuity of services rendered by Facility Management in bolstering risk management and business continuity in SABIC.

Research Hypothesis

A principal hypothesis

- There exists a statistically significant correlation between facility management and enhanced risk management at SABIC during the COVID-19 pandemic.

Sub hypotheses

- H1: There exists a statistically significant correlation between the operational adaptability of facility management and the enhancement of risk management at SABIC during the COVID-19 pandemic.
- H2: There exists a statistically significant correlation between the management of health, safety, and security within facilities management and the enhancement of risk management in SABIC.
- H3: There exists a statistically significant correlation between the continuity of services rendered by facilities management and the enhancement of risk management in SABIC during the crisis.

Previous studies

A study by (Sekak et al, 2024) entitled” LESSONS LEARNED FROM COVID-19 PANDEMICS IN MALAYSIA'S FACILITIES MANAGEMENT ORGANISATION” Under the circumstances of the COVID-19 pandemic, the construction industry is required to take a strong response. As more and more people become aware of the virus's ability to spread, there has been

a growing demand for quality improvement across a variety of industries. Facilities Management (FM) is tasked with the primary responsibility of ensuring that the constructed surroundings are productive, comfortable, secure, and environmentally friendly. Additionally, FM is responsible for ensuring that the environment is protected. Within the scope of this study, we intend to investigate the lessons that were learned from the measures that FM organizations put into place during the COVID-19 epidemic. Specifically, a quantitative technique approach is utilized in this research. A total of 317 FM companies in Selangor were given questionnaires, and 36% of them responded to provide their information. For the duration of the pandemic, most facilities managers were found to have a comprehensive understanding of FM organization management, according to the findings. To handle future pandemics and disruptions, it is of the utmost necessity to thoroughly determine the lessons acquired in FM during the COVID-19 pandemic and to proactively equip and strategize themselves to deal with them. This may be accomplished by fostering the capacity and resilience to adapt to environmental shocks. It is of the utmost importance to put the plan into action since it will serve as a guiding principle for actions that will be taken in the future. An industry proposition for a fair and impartial method to managing future pandemics in Malaysia has been shaped because of the effort and the information learned from previous pandemics.

A study by (Aladayleh , 2023) entitled” Global trends of the research on COVID-19 risks effect in sustainable facility management fields: A bibliometric analysis “In this study, bibliometric analysis was utilized to analyze global research trends about the impact of COVID-19 threats in the disciplines of sustainable facility management. A total of 208 publications concerning the impact of COVID-19 threats on sustainable facility control fields were published in the Scopus database between the years 2019 and 2021. To analyze the co-occurrence of all keywords, the VOS viewer software was utilized, and the Bibliophagy software was utilized to help obtain the connection that was the most pertinent by utilizing the three-field plot. There were 73 keywords that were identified and organized into six clusters, such as the effect of COVID-19 risks on human health, supply chain in construction projects and industry, disaster risk management in a changing climate, sustainable supply chain benchmarking, facility management and quality control, and finally, sensitivity analysis and decision-making. The results show that authors from 51 different countries contributed to the collection of information.

A study by (Kasana , 2023) entitled” Successful change management strategies for unforeseen events: Impact of COVID-19 on facility management “Within the scope of this study, the successful change methods that were implemented in response to unforeseen circumstances or events are identified. As a result of the practically universal impact that COVID-19 has on the field of facility management, the researchers analyzed these unanticipated modifications via the lens of COVID-19. In addition to conducting in-depth follow-up interviews with 28 organizations, the study team gathered survey data from approximately 900 organizations located in more than 60 nations. A total of twenty-two criteria were categorized into three distinct groups: organizational characteristics, organizational change management practices, and adoption measures. To conduct a more in-depth investigation into the connection between the data and the change adoption measures, the research team utilized three random forest models and three logistic regression models. The findings suggest that the appointment of a change agent, the backing of leaders, and the timeline for executing the change were three organizational change practices that were highly significant to the overall success and achievement of the adoption process. According to the findings of the investigation, the sort of unplanned change effort in question influences the degree to which it is adopted over the long term throughout the business. To ensure the successful implementation of unplanned change initiatives, organizations ought to give serious consideration to the utilization of a formal change management methodology. Even though the change may not have been anticipated, this paper emphasizes the significance of an effective transition, the active participation and support of top leaders, and the schedule for implementing the change.

A study by (Ling,Tam,2022) entitled “ Agility of facilities management organizations during the COVID-19 pandemic “The purpose of this study is to analyze the degree to which facilities management (FM) organizations in Singapore were agile within the context of the COVID-19 pandemic, to investigate the agile techniques that were implemented, and to extract lessons learned for managing facilities during future pandemics. Arrangement, methodology, and strategy Additionally, in-depth interviews with FM specialists were conducted in conjunction with the use of a questionnaire to collect data. The results Significant hurdles were faced by the FM industry, including an increase in operating costs and a shortage of FM staff. It was determined that FM businesses were agile because they were able to overcome obstacles in a short amount of time, made rapid changes to their service offerings as the situation changed, actively engaged facility owners, and adopted tactics that were flexible and responsive. In addition to it, they

implemented health-focused employee care. Restrictions and consequences of the research During the course of the pandemic, the research was carried out. When the COVID-19 epidemic is over, it is possible that the ultimate decision about the agility of FM organizations and the strategies that are the most effective will be revealed. Aspects that are applicable in A crystallization of the lessons learned by FM in order to manage future pandemics were reached. Among these are the reduction of reliance on human labor, the acceleration of technological adoption, and the enhancement of individualized employee involvement. The value of originality by testing and validating the agility theory and its six metrics of agility, which include flexibility, velocity, responsiveness, collaboration, visibility, and competence, can be utilized by FM businesses to be agile in the face of a crisis or disruption. This study contributed to the body of knowledge by testing and acknowledging the possibility. A new construction, health-centric employee care, has been discovered, which is the source of its originality. This new building is required to further enhance the performance of FM firms in the event of a pandemic. To foster resiliency among employees, health-centric employee care includes policies that aim to minimize the spread of the virus within the workforce as well as tailored employee support.

A study by (Sarvari, 2022) entitled “A global survey of infection control and mitigation measures for combating the transmission of COVID-19 pandemic in buildings under facilities management services “The purpose of the research that is being detailed in this article is to create efficient infection control and mitigation strategies to stop the spread of the COVID-19 pandemic in the built environment. To provide a response to the topic of how the facilities management business might contribute to the reduction of the transmission of coronavirus, this study will be conducted. For the objective of gathering information from a wide range of important stakeholders, an online survey questionnaire was made available to people all over the world from the 8th of April to the 25th of July 2020. SPSS was used to perform an analysis on the data that was collected. Using a questionnaire-based survey, several different approaches to the prevention and control of infectious disease transmission are evaluated about the effectiveness of these approaches for maintaining a healthy and safe built environment. The training procedures, the operation and maintenance, and the design and construction were the three categories that were used to classify these approaches. All the offered approaches have a favorable impact on all different kinds of structures, as demonstrated by the findings. For low-risk buildings, these strategies have an equivalent influence; however, for high-risk and extremely high-risk structures, the most

significant impact is exerted by training regimens, as well as design and construction measures. Furthermore, the training protocols and the steps that are implemented during operation and maintenance will have the greatest impact on buildings that are at medium risk. The findings have the potential to facilitate the formulation of decisions that are more reasonable in respect to the control of the COVID-19 pandemic outbreak in all shapes and sizes of buildings.

A study by (Hohenstein , 2022) entitled “Supply chain risk management in the COVID-19 pandemic: strategies and empirical lessons for improving global logistics service providers’ performance “Under the circumstances of the COVID19 pandemic, the construction industry is required to take a strong response. As more and more people become aware of the virus's ability to spread, there has been a growing demand for quality improvement across a variety of industries. Facilities Management (FM) is tasked with the primary responsibility of ensuring that the constructed surroundings are productive, comfortable, secure, and environmentally friendly. Additionally, FM is responsible for ensuring that the environment is protected. Within the scope of this study, we intend to investigate the lessons that were learned from the measures that FM organizations put into place during the COVID19 epidemic. Specifically, a quantitative technique approach is utilized in this research. A total of 317 FM companies in Selangor were given questionnaires, and 36% of them responded to provide their information. For the duration of the pandemic, most facilities managers were found to have a comprehensive understanding of FM organization management, according to the findings. To handle future pandemics and disruptions, it is of the utmost necessity to thoroughly determine the lessons acquired in FM during the COVID19 pandemic and to proactively equip and strategize themselves to deal with them. This may be accomplished by fostering the capacity and resilience to adapt to environmental shocks. It is of the utmost importance to put the plan into action since it will serve as a guiding principle for actions that will be taken in the future. An industry proposition for a fair and impartial method to managing future pandemics in Malaysia has been shaped as a result of the effort and the information learned from previous pandemics.

A study by (Amos, 2021) entitled “Enhancing the role of facilities management in the fight against the COVID-19 (SARS-CoV-2) pandemic in developing countries’ public hospitals” The objective of this paper is to provide a review of the ongoing COVID-19 epidemic, with a specific focus on underdeveloped countries in Africa. The objective of this study is to provide evidence

that demonstrates how the provision of facilities management (FM) services in public hospitals can be enhanced to combat the COVID-19 epidemic. This study includes a review of the most recent material on COVID-19 and FM, as well as updates from trustworthy media sources. The purpose of this study is to provide a technical perspective on how FM might be enhanced in the fight against the COVID-19 pandemic by critically synthesizing the knowledge that is currently available on the pandemic. The epidemic caused by COVID-19 presents the health care systems of most African countries with problems and realities that have never been seen before. There is a lack of a coherent and comprehensive FM plan to combat the pandemic, despite the substantial efforts that are being made by several different international countries. There is a requirement for FM interventions that are both timely and actionable to establish the necessary antiviral-built environment. The material contained in this report is case-specific and is based on the data and information that was available at the time that the article was being written. The recommendations that were made in the report are helpful for a worse future trajectory of the pandemic, despite the fact that they were made. It is important for administrators of health care facilities to have knowledge of the proposed measures so that they can be informed and assisted in their battle against the COVID-19 pandemic. The purpose of this paper is to give the initial step towards obtaining a comprehensive understanding of FM and the COVID-19 pandemic. In the fight against this worldwide epidemic, it provides advice that can be helpful for the FM practices of public hospitals in most underdeveloped nations. It is the intention of the authors to conduct additional empirical research in the future to conduct more objective evaluations of FM and the COVID-19 pandemic.

Theoretical Premises of the Study

1. Risk Management Theory.

The theory of risk management emerges as a fundamental and indispensable pillar of this comprehensive study, as is primarily concerned with the systematic identification of the myriad risks that encircle institutions, followed by a rigorous analysis of these risks and an evaluation of their potential impacts, culminating in the formulation of appropriate and effective strategies aimed at managing and mitigating these identified risks. This theoretical perspective asserts that industrial enterprises are invariably confronted with a plethora of risks within their operational environment,

encompassing various dimensions such as operational, environmental, health-related, and security risks; thus, necessitating the development of comprehensive and strategic plans to effectively manage these risks. In this regard, it becomes increasingly vital to forge a synergistic integration between facility management and risk management, given that the former serves as a pivotal supporting element in the implementation of emergency response plans and in the maintenance of a sustainable and safe operational environment. Furthermore, the theory posits that the efficacy of risk management is predominantly contingent upon the degree of coordination and collaboration that exists among the various departments within the organization. This aspect is critically examined within the context of this study, particularly in relation to SABIC's experiential insights garnered during the tumultuous COVID-19 crisis(Nocco, 2022)

2. Organizational Resilience Theory.

The organizational resilience theory represents one of the essential and influential theoretical constructs that can be effectively harnessed in the context of this study, as it centers its focus on the inherent capacity of institutions to adapt and respond to extraordinary circumstances and unforeseen crises, thereby ensuring the continuity of business operations while simultaneously mitigating the adverse effects that may arise as a result of such crises. The theoretical underpinnings suggest that institutions that embrace and implement a flexible and adaptive management structure—capable of fostering coordination and collaboration among their diverse departments, including both facilities management and risk management, are demonstrably better equipped to confront sudden crises and navigate the inherent fluctuations that may occur within their operational landscape. From this analytical perspective, the organizational resilience theory serves as a pertinent framework for elucidating the vital role played by SABIC's facilities management in enhancing the organization's overall resilience throughout the duration of the COVID-19 pandemic, whether through the provision of a safe and secure work environment or by ensuring the sustainability of operational services that are integral to the continuity of production processes(Xie, 2022).

3. Business Continuity Management Theory.

The theory of business continuity management underscores the critical importance of devising and implementing robust and meticulously structured plans to effectively address

potential crises and disasters, all while ensuring the uninterrupted continuation of the organization's core operations and minimizing any disruptions to production or service delivery. This theoretical framework posits that organizations which possess comprehensive and integrated plans—specifically those that delineate distinct roles and responsibilities for facility management—are demonstrably more adept at navigating crises and maintaining a safe, efficient, and effective operating environment. In this context, the role of facility management emerges as a central and pivotal element within the overarching business continuity plan, given its significant contributions to the provision of essential cleaning and sterilization services, the maintenance of critical infrastructure, and the assurance of a safe and compliant work environment during pronounced health crises. This theoretical perspective significantly enriches the study by facilitating a nuanced analysis of the measures undertaken by SABIC in managing its facilities in a manner that is fully integrated with its overarching business continuity plans throughout the challenging period marked by the COVID-19 crisis (Graham& Loke, 2022).

4. Integrated Facilities Management Model.

The integrated facilities management model represents a contemporary and sophisticated organizational and administrative paradigm that is fundamentally predicated upon the essential principle of orchestrating all utility services within the organizational structure, which encompasses a diverse array of functions including, but not limited to, maintenance, security, cleaning, and logistics services, all of which must be meticulously aligned with the overarching operational and administrative exigencies of the organization, particularly in times of crisis when such coordination is of paramount importance. This model posits that facilities management transcends the limitations of traditional roles, extending its influence to actively enhance and bolster the implementation of crisis management strategies and the assurance of business continuity, thereby playing a critical role in the overall resilience of the organization. Furthermore, the model substantiates the assertion that the synergistic integration of utility services significantly amplifies the operational efficiency of the institution during periods of crisis, while simultaneously serving to diminish the response time to emergent risks and challenges. In this context, the model serves as a valuable analytical framework for investigating how SABIC's integrated facilities management practices contribute to the formulation and execution of strategies aimed at addressing the multifaceted challenges posed by the COVID-19 pandemic, while also ensuring the

sustainable continuity of operational services throughout this unprecedented global health crisis(Mannino, 2021)

Research Methodology and Methods

1. Research Method

This study adopts the descriptive analytical method, which is considered one of the most appropriate approaches for studying administrative and organizational phenomena. It enables the researcher to describe the phenomenon as it exists, analyze its various dimensions, and identify the relationships between its variables. This method was selected to suit the nature of the study, which aims to examine the role of facilities management in enhancing risk management within industrial organizations during health crises, with a specific focus on the experience of SABIC during the COVID-19 pandemic.

2. Study Population and Sample

The study population consists of all employees working in SABIC's facilities management, risk management, and operational departments involved in emergency plans and business continuity management. A purposive sampling technique was used to select participants, as these individuals are directly involved in the study's subject and are most capable of providing accurate and reliable information reflecting the organization's experience during the pandemic.

3. Data Collection Tool

The study relies on a questionnaire as the primary tool for data collection from the study sample. The questionnaire was developed in accordance with scientific research standards used in descriptive analytical studies and included a set of closed-ended items designed to measure participants' views and attitudes related to the study topic. The questionnaire was reviewed and validated by a panel of academic and professional experts in the fields of business management and risk management to ensure its linguistic clarity, methodological soundness, and suitability for the study objectives.

4. Statistical Analysis Methods

After collecting the data, it will be processed and analyzed using the Statistical Package for the Social Sciences (SPSS). The study will employ a range of appropriate statistical techniques based on the nature of the data and study objectives, including:

- Frequencies and percentages to describe the demographic characteristics of the sample.
- Means and standard deviations to assess participants' responses.
- Independent sample T-tests and one-way ANOVA to examine differences between group means.
- Pearson correlation coefficient to measure the strength of relationships between variables.
- Regression analysis to determine the impact of independent variables on dependent variables.

5. Study Boundaries

- Topical Boundaries: The study is limited to examining the relationship between facilities management and risk management during health crises, with a particular application to the COVID-19 pandemic.
- Spatial Boundaries: The study will be conducted within SABIC industrial organization in the Kingdom of Saudi Arabia.
- Temporal Boundaries: The study will be implemented during the year 2025.

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