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Safety management practices among Saudi healthcare professionals during pandemic

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ABSTRACT

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The COVID-19 pandemic has greatly impacted organizational processes and activities. Unlike previous pandemics, COVID-19 has affected everyone directly or indirectly. To protect employees from the virus and associated risks, organizations have focused on developing occupational health and safety management systems. While safety policies and practices were already in place before the pandemic, the emergence of new physical and psychological risks has led organizations to amend their safety and health management systems. Governments have introduced health containment measures such as social distancing, working in shifts, and mandatory quarantine to enhance safety for people worldwide. Employers have also introduced safety measures to build confidence in implementation. These safety management practices have influenced employees' behaviors during the pandemic, and this study aims to examine their impact. Specifically, the study aims to determine the impact of management practices on the behavior of healthcare employees regarding their safety in a threatening environment. Additionally, the study seeks to investigate the indirect influence of management practices on employees' behavior through perceived risks and efficacy. It is important to note that there has been a lack of research on the impact of COVID-19 on healthcare workers in Saudi Arabia. This study found that management commitment did not directly influence employee safety behavior. However, management commitment towards workplace safety practices had a significant and direct influence on healthcare employees' perceived risk associated with COVID-19 and their efficacy. Consequently, management commitment was found to indirectly influence employee safety behavior through efficacy.

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1. Introduction

The emergence of the COVID-19 pandemic significantly impacted the organizational processes and activities (Taboe et al., 2020). The world has encountered many pandemics, but COVID-19 is one of the disaster diseases that directly and indirectly affect all people. Since the onset, organizations have focused on developing occupational health and safety management systems to protect employees from the deadly virus and other associated risks (Guidetti et al., 2022). Before the pandemic, all organizations had safety policies and practices, but its emergence introduced new risks, physical and psychological risks affecting employee performance (Maqbool & Khan, 2020). Consequently, the health situation compelled organizations to amend their safety and health management systems to address emerging risks. Correspondingly, since Covid-19 is a communicable respiratory disease declared by the world health organization (WHO) as a global pandemic on January 30th, 2020 (Tahir & Masood, 2020). Hence, the governments, in pursuit of enhancing safety among the people, had to put some measures to ensure protection from the menace (Tambo et al., 2021). Governments globally introduced health containment measures, such as social distancing, working in shifts, and mandatory quarantine. Because of the fear of the unknown, employers responded swiftly by introducing safety measures to build their confidence in implementation (Guidetti et al.,

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2022). On the other hand, safety management practices influenced employees' behaviors during the pandemic which will posit in this research. Therefore, the research examined how the behavior of the employees in terms of their safety in the threatening environment can be directly impacted by the management practices among the healthcare workplace and have an indirect effect through the perceived risks and efficacy (George et al. 2021).

Understanding the efficiency of safety management systems is essential since it influences organizational growth and development. Most importantly, managing employee behavior is essential to building sustainable safety development to comply with prevailing circumstances. Also, sustainable safety management is essential to improving employee productivity which eventually influences organizational growth and development (Lee, 2021, 2022). Maintaining and sustaining employee health and safety in workplaces is essential since it encourages safety behaviors addressing the spread of the virus. However, it emerged during the pandemic that many employers consider safety management systems costly; hence, they do not fully comply with national and international standards (Guidetti et al., 2022). Consequently, the lack of good safety management practices contributes to high employee turnover, affecting organizational productivity.

Various institutions globally, including higher learning institutions, established safety management systems to prevent risks. However, there are inconsistencies in university laboratories regarding safety features. Although they all provide personal protective equipment, they should develop additional policies and measures to protect employees from intentional and unintentional risks (Lestari et al., 2021). Understandably, the emergence of the COVID-19 complicated the safety management systems globally. Organizations should introduce internal and external safety measures to protect employees. Worth noting is that the type of safety management system impacts employees' safety behaviors. For example, establishing compulsory policies and regulations compels employees to adhere to existing regulations and their behavior in the workplace.

2. Literature Review

2.1 Safety management practices and employee safety behavior

During the Covid-19 pandemic, various measures were implemented to ensure employee safety management. Mbunge et al. (2021) discussed social distancing as a key measure to curb the spread of the disease. According to Panpakdee and Palinthorn (2021), social distancing was one of the best-recommended practices to mitigate the pandemic, as recommended by governments worldwide. To understand the risk management perspective, researchers explored the risk perception mechanism to inform government policies to improve social distancing behavior. Mahmood et al. (2021) collected data from residents in Pakistan through internet-based surveys due to the government's restrictions on social behavior. Researchers used a structural equation model and linear regressions to infer from the study data. The study found that risk perception highly influenced social distancing behaviors (Abuhashesh et al., 2021), and those who cared about their lives took the measures more seriously. Following the Covid-19 outbreak, most healthcare organizations set their goals in alignment with international standards to protect healthcare personnel against new cases of Covid-19 (Dennerlein et al., 2020). Peiffer-Smadja et al. (2020) found that the Bichat-Claude hospital increased bed capacity to accommodate more patients infected with the coronavirus disease. The hospital also integrated other prevention measures, such as hand hygiene stations at the entrance and posters to create awareness about the disease (Azizi et al., 2021; Haque, 2021). Lasalvia et al. (2021) found that health workers adopted new measures to protect themselves and their families against Covid-19 infections during the pandemic. They limited interactions with other people beyond their official duties due to social stigma. Sotgiu and Dobler (2020) explained that social stigma is the way through which healthcare workers isolate themselves while maintaining their work in their respective healthcare facilities and avoid further interactions with other people. Ünal (2020) discovered that healthcare workers' practices became contagious, and other people observed their practices and tended to follow them. The government also initiated several measures following the pandemic that people were supposed to follow.

2.2 Employee perceived risk and employee safety behavior

According to Yıldırım et al. (2020), healthcare personnel faced a high risk of developing mental health conditions during the Covid-19 pandemic. This was due to their frontline role in dealing with the pandemic. Typically, sick individuals are rushed to hospitals for treatment, where they meet healthcare workers who handle their cases (Ladds et al., 2020). Healthcare workers were aware that most Covid-19 cases would be brought to hospitals, which created a sense of responsibility to take great care of them. This led to fear and tension among healthcare workers due to the initial uncertainty surrounding the disease (Perrotta, 2019). The study involved 204 healthcare personnel, and the findings showed that the perceived risk of the pandemic and fear of the coronavirus positively correlated with stress and depression (Radwan et al., 2021). However, resilience was found to have a negative correlation with the coronavirus' ability to cause mental health issues among healthcare personnel.

Veldhoen and Zuzarte (2021) provide diagnostic labs to test and ensure the health of employees in healthcare places. Negligence and ignorance among healthcare workers were identified as the causes of Covid-19 cases among healthcare workers. The healthcare employees blamed safety management during the pandemic. The study revealed mixed emotions among healthcare workers toward the safety measures introduced by governments during the pandemic, with some perceiving it as a threat while others argued it was not that prominent (West et al., 2020). The study concluded that the workers who had

a diagnostic lab reported fewer cases of Covid-19 (Ali et al., 2020). They were quickly treated whenever Covid-19 cases were identified, leading to greater awareness and more precautions taken to prevent Covid-19.

2.3 Management practices on the perceived risk of Covid-19 on employees

According to a study by Dinić et al. (2021), healthcare physicians played an active role in combating the spread of Covid-19. The study identified several measures that were implemented by health workers to tackle the pandemic, and one of these measures was the use of face masks to prevent the disease from spreading. The study found that the virus causing the disease was highly communicable through coughing and sneezing, making it essential for healthcare workers to cover their mouths and noses to prevent transmission from one worker to another. The use of face masks was recommended to ensure maximum protection and prevent the sharing of bodily fluids such as saliva among workers. Overall, the study emphasized the importance of implementing measures to protect healthcare workers in the fight against Covid-19 that covered their mouth and nose. The study discovered that the people who did not share the same environment had limited chances of contracting the disease because they had adequately protected themselves. The health workers interact with many people in the social arena (Abboah-Offei et al., 2021). The study identified that since they interact with many people, they needed to ensure maximum protection, thus limiting the chances of contracting the disease among the others they interact with. The study findings informed most of the health workers (Cheng et al., 2020). Through the conclusions concerning wearing face masks, they understood that it is their sole responsibility to protect themselves. Wearing face masks is a preventive measure for health workers, and they cannot contract the disease when they wear their face masks. The healthcare workers' safety counts because they are on the frontline to fight against the disease. Therefore, their safety should be urgent, which compels the healthcare management to take necessary initiatives to ensure their protection is upheld (Itodo et al. 2020). The study identified that healthcare workers were at a greater risk of the disease due to their more time dealing with sick patients.

Healthcare physicians have played an active role in the fight against Covid-19, according to a study by Dinić et al. (2021). The study identified various measures employed by health workers to combat the pandemic, including the use of face masks to prevent the spread of the virus. The study revealed that the disease is highly communicable through coughing and sneezing, thus making it critical for healthcare workers to cover their mouths and noses to prevent transmission from one worker to another. The use of face masks was recommended to ensure maximum protection and prevent the sharing of bodily fluids such as saliva among workers. Overall, the study emphasized the importance of implementing measures to safeguard healthcare workers in the fight against Covid-19.

The study further found that the health workers who interacted with many people in the social arena were at a higher risk of contracting the disease (Abboah-Offei et al., 2021). Therefore, it was essential for them to ensure maximum protection to limit the chances of transmitting the disease to others they interact with. The study findings informed most of the health workers (Cheng et al., 2020) that they needed to take responsibility for their protection by wearing face masks, which is a preventive measure for them. This way, they could protect themselves and others they interacted with. Healthcare workers are the frontline fighters against the disease; thus, their safety is of utmost importance (Itodo et al. 2020). The study identified that healthcare workers were at a higher risk of contracting the disease due to their prolonged exposure to sick patients. Therefore, healthcare management should take necessary measures to ensure their protection is upheld.

2.4 Safety management practices and self-efficacy

Self-efficacy plays a vital role in encouraging health workers to cooperate with the World Health Organization and governments to protect society from diseases, as found by Sun et al. (2021). Tadesse et al. (2020) also discovered that most healthcare workers are willing to work harder and follow international safety guidelines to eradicate pandemics. When Covid-19 cases were discovered, healthcare workers had to take care of infected patients while knowing that they were at high risk of contracting the disease. It took a considerable amount of self-efficacy for them to believe in their ability to bring about societal change by eradicating the pandemic. However, they were not afraid because they had adequately adhered to and followed preventive measures, as demonstrated by Zito et al. (2021). They understood that it was their core responsibility to ensure maximum protection for society against infections. The pandemic was a life-threatening disease that took down people's lives within a very short period. Therefore, working in a hospital where the cases were high was very risky, and healthcare workers worked diligently to ensure maximum protection for society against the disease (Zhou et al., 2021). Their self-efficacy is reflected in their willingness to express their caring behavior effectively and ensure that they have fully cared for the patients in the hospitals suffering from the disease infection.

According to Lin et al. (2021), healthcare workers initially responded to the pandemic with fear. Following the WHO's declaration of the pandemic as a global problem, healthcare workers were surprised to learn how the disease was transmitted from one person to another through socialization. They were concerned because they dealt with people, they took maximum care of (Wang et al., 2021). The pandemic led to the closure of most places, including supermarkets, which made it difficult for healthcare workers to acquire foodstuffs and provide their families with basic needs. The curfews implemented by the government also restricted people's movements and posed a considerable problem in relationships. Healthcare workers were blocked up in some places, limiting their ability to travel and see their loved ones (Kumar et al., 2020). Fear dominated them

during the pandemic until the WHO developed the protection guidelines (Rad et al., 2021), clarifying that the disease was only contagious and that healthcare personnel could implement specific safety measures to protect themselves from infection.

2.5 Efficacy and employee safety behavior

Health workers employed at high efficacy levels during the pandemic Pilishvili et al. (2021). The study by Pilishvili et al (2021) observes that the main reason is that they had seen the dangers of the pandemic. To some extent, “seeing is believing”. Now that they had seen many patients suffer from the disease, they had believed in the existence of the disease (Pilishvili et al., 2021). They were willing to make any cooperation to ensure it was prevented from further spreading to other people. This study was conducted resulting from the earlier claims that the disease was a myth, resulting in its diverse effects exaggerated by most people in society. Many people during the first times did not understand the weight of the disease, which caused it to spread even further and more quickly. The health care workers’ high levels of efficacy are seen when the governments discovered a vaccine for disease prevention (Weiner et al., 2020). The study reported that most of them, accounting for roughly 90%, cooperated with the government regulations on the disease. Responding to the government’s need for vaccination, most of them attended to the call and ensured they had obtained the vaccine.

2.6 Management practices on the efficacy of employees

According to Vu et al. (2022), there is a direct correlation between management practices and health workers' practices in healthcare institutions. Managers are responsible for ensuring the safety of patients and healthcare workers, and they follow the guidelines set by the World Health Organization to achieve this. The adherence to these safety rules is essential to protect patients and healthcare workers, and managers enforce them. For example, when a patient is diagnosed with a contagious disease, they are isolated from others, regardless of whether they are health workers or patients (Conroy et al., 2021). The healthcare workers follow the regulations set by the management to ensure maximum protection and prevent the spread of Covid-19. This includes regular handwashing and avoiding touching the face with unwashed hands. The study shows that the positive relationship between the management and healthcare employees is achieved by following the exact safety guidelines set by the management (Cook et al., 2020). Overall, the adherence to safety measures by healthcare workers is vital and directly linked to a positive relationship between the management and employees.

2.7 The relationship between perceived risk and efficacy of employee safety behavior

In their study, Falco et al. (2021) found that healthcare workers were required to undergo COVID-19 testing and hand washing before entering hospital premises to prevent infections. The study concluded that adhering to these measures significantly decreased the chances of contracting the disease. Despite government restrictions, society did not criticize healthcare workers for their cautious behavior (Maher et al., 2021). These workers only interacted with colleagues and family members to minimize exposure to the virus. The workers' strict adherence to social distancing guidelines reduced their risk of contracting the virus, and as a result, many healthcare workers did not have infected relatives (Marchiori, 2020). The World Health Organization guidelines for healthcare workers were followed to the letter to ensure their safety and that of their families. One-meter social distancing was strictly enforced in their respective workplaces.

3. Research Objectives

To practically and theoretically understand the importance of management in implementing the safety procedure during a crisis.

To provide contextual information on the impact of management practices on the workplace safety to employees’ behavior during the pandemic.

To explore quantitatively and identify the impact of the management practices on the safety of the employees’ behavior.

To determine the indirect effect of perceived risk as well as the efficacy of the management practices on behavior of the employees during the pandemic in a healthcare industry.

3.1 Development of Hypotheses

H₁: *Management practices in the workplace have a significant impact on employee behavior.*

H₂: *Management practices in the workplace have an impact associated with perceived risk during COVID-19.*

H₃: *Management practices in the workplace have an impact associated with efficacy during COVID-19.*

H₄: *The perceived risk associated with COVID-19 has an influence on employee safety behavior.*

H₅: *Self-efficacy has an influence on employee safety behavior.*

H₆: *The perceived risk mediates the relationship between workplace safety management practices and employee behavior.*

H₇: *Efficacy mediates the relationship between workplace safety management practices and employee safety behavior.*

Fig. 1 demonstrates the summary of the structure of the proposed hypotheses.

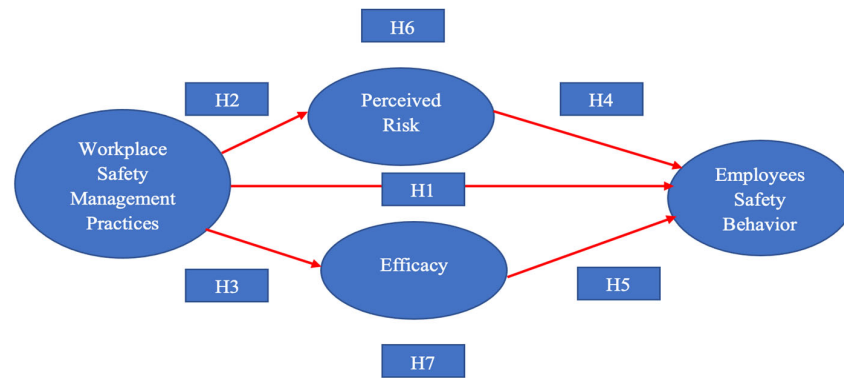


Fig. 1. Research Conceptual Framework

The study investigates the following relationships.

- Workplace safety management practices → Independent variables
- Employees safety behavior → Dependent variable
- Perceived risk → Mediating
- Efficacy → Mediating

4. Research Methodology

4.1 Method

This research is a theory- driven (Toepoel, 2017); focused on systematic measurements and tests to describe the impact of independent variables (Workplace safety management practices, Employees safety behavior, Perceived risk and Efficacy) on enhancing the safety of clinical employees' during the pandemic. Since this research is explanatory in nature and aims objectively to understand what is happening in the real world without interfering in the results (Johnstone, 2018; Saunders, 2019) therefore the quantitative approach is the appropriate method for this research.

4.2 Sample Size

The study aims to sample employees who work in clinical hospitals. The sample population was collected from various health organizations in Saudi Arabia. The convenience sample was 200 from employees who worked or are still working in the health sector in Riyadh regardless of a private or government hospital. There were no gender preferences or level of occupation; but those who worked or were still working with the viral infection during the pandemic.

4.3 Sample criteria

All participants must follow these criteria in order to be including in sample:

- Age of participant not less than 24 years
 - Experience of participant not less than 1year
 - Health worker in health organizations
- However, the sample population that does not meet the criteria was Excluded.

4.4 Data collection and Analysis

Data will be collected through a distributed survey. The outcomes of the survey will be numeric; therefore, it has its characteristics to generate the required number of participants in less time (CIRT, 2020). Additionally, as stated in CIRT in that “numerical quantitative data may be viewed as more credible and results can be generalized if the data are based on random samples and the sample size was sufficient” (CIRT, 2020). Nevertheless, the survey will be designed to be cross sectional and aims to ask participants to fill out the structured survey based on their level of agreement using a 5-point Likert-type scale. The survey will be developed and distributed online through the GOOGLE FORM website.

4.5 Data collection and Procedure

Surveys were distributed individually to health workers in hospitals located in Riyadh city. The data was collected within four months.

5. Results and Discussion

5.1 Data Cleaning

From the target sample of 200 respondents, 107 respondents successfully answered the questionnaire. After the data was collected from the respondents, it was fed into an excel sheet. The data was then evaluated for accuracy and missing data. One respondent was found to have a lot of missing data, and therefore the data for that respondent was removed. The data used for analysis was therefore from 106 respondents. The various data analysis conducted are presented in the following sections.

5.2 Demographic Analysis

This section conducted the analysis of the respondents' demographic characteristics, such as gender, nationality, and religion. The analysis was geared towards understanding the characteristics of the respondent's. The results of the analysis are presented in Table 1.

Table 1
Demographic analysis

		Frequency (n)	Percent (%)
Your Gender	Female	64	60.4
	Male	42	39.6
Your Supervisor's Gender	Female	39	36.8
	Male	67	63.2
Your Nationality	Non-Saudi	11	10.4
	Saudi	95	89.6
Your supervisor's Nationality	Non-Saudi	14	13.2
	Saudi	92	86.8
Health Organization Sector	Government	57	53.8
	Private	34	32.1
	Semi government	15	14.2
Your region	East region	7	6.6
	Middle region	15	14.2
	North region	15	14.2
	West region	66	62.3
Age	19- 29 Years	22	20.8
	39-30 Years	44	41.5
	49-40 Years	28	26.4
	Above 50 Years	12	11.3
Experience	1 – 5 Years	25	23.6
	11 – 15 Years	21	19.8
	16 – 20 Years	17	16
	6 – 10 Years	20	18.9
	Above 20 Years	17	16
Work position	Less than one year	6	5.7
	Admin Director	1	0.9
	Administrative worker	42	39.6
	Architect	1	0.9
	Customs clearance manager	1	0.9
	Engineer	1	0.9
	Faculty member	2	1.9
	First line manger	14	13.2
	Health worker	38	35.8
	Medial manger	4	3.8
	Student oriented	1	0.9
	Teacher	1	0.9
Education level	Bachelor	50	47.2
	Diploma	4	3.8
	Masters	42	39.6
	Ph.D.	8	7.5
	Secondary	2	1.9
	Total	106	100

On the analysis of gender of the respondents, females were the majority respondents comprising 60.4% while male was 39.6%. The gender of the respondent's supervisor was also considered, where male supervisors were the majority (63.2%) while the female supervisors were the minority (36.8%). The nationality of the respondents and that of their supervisor was also analyzed, where for the respondents, majority were Saudi nationality (89.6%) while the non-Saudi only comprised 10.4%. The supervisor's nationality indicated that Saudi were the majority (86.8%) while non-Saudi supervisors were 13.2%. The health organization sector of the respondent indicated that those working on the government were the majority (53.8%) while those working for the private sector followed (32.1%) and lastly those that worked for a semi-government (14.2%). The respondents' regions were also evaluated where the majority were the west region (62.3%) and the least were the east region (6.6%). The experience of the respondents was evaluated based on the years they have worked. The majority were those who had an experienced 1-5 years of experience (23.6%), followed by those who worked for 11-15 years, and the minority were those with an experience less than one year's experience (6%). Different working positions of the respondents were evaluated. The majority respondents were the administrative workers comprising 39.6%, followed by the health workers comprising 35.8% and the least were those who had one representative each (0.9%) comprising architect, customs clearance manager, engineer, student oriented, and teacher. The education level of the respondents was also evaluated. Most of the respondents were those with bachelors (47.2%) followed by those with master's level of education (39.6%) and the least were those that had secondary levels of education (1.9%).

5.3 Analysis of Research Hypothesis

In the previous section, the analysis conducted was aimed at ensuring that the model and study constructs satisfy the model fitness, reliability, and validity requirements. This second section of analysis is aimed at conducting the actual analysis to evaluate the hypothesis of the study. The analysis was conducted using the structural equation modelling (SEM) technique, to determine the strength and direction of the relationship between the variables of the study. The results are summarized.

Table 2
Analysis of Research Hypothesis

Path Relationships	β	Mean	Std. Deviation	T Stat	P Value
EF → ES	0.631	0.637	0.119	5.304	0.000
MC → EF	0.615	0.622	0.076	8.13	0.000
MC → ES	0.092	0.091	0.144	0.637	0.262
MC → PR	0.252	0.277	0.132	1.912	0.028
PR → ES	-0.037	-0.028	0.088	0.422	0.337
Indirect Effects					
MC → EF → ES	0.388	0.399	0.101	3.839	0.000
MC → PR → ES	-0.009	-0.011	0.03	0.314	0.377
Total Effects					
EF → ES	0.631	0.637	0.119	5.304	0.000
MC → EF	0.615	0.622	0.076	8.13	0.000
MC → ES	0.471	0.479	0.094	4.987	0.000
MC → PR	0.252	0.277	0.132	1.912	0.028
PR → ES	-0.037	-0.028	0.088	0.422	0.337

Note: EF=efficacy; PR=perceived risk; MC = management commitment; ES = employee safety behavior

The results of the SEM analysis indicated that the path coefficient between management commitment practices (MC) and employee safety behavior (ES) was positive and statistically insignificant ($\beta = 0.092$, $p = 0.262$). This did not support hypothesis 1 (**H1**) that management practices in the workplace have a significant impact on employee safety behavior. The path coefficient between management commitment practices (MC) and perceived risk (PR) was positive and statistically significant ($\beta = 0.252$, $p = 0.028$). This confirmed hypothesis 2 (**H2**) that management practices in the workplace have an impact associated with perceived risk during covid-19.

The path coefficient between management commitment practices (MC) and efficacy (EF) was positive and statistically significant ($\beta = 0.615$, $p = 0.000$), hence supporting the third hypothesis (**H3**) that management practices in the workplace have impact associated with efficacy during COVID-19. The path coefficient between perceived risk (PR) and employee safety behavior (ES) was negative and statistically insignificant ($\beta = -0.037$, $p = 0.337$).

This did not support hypothesis 4 (**H4**) the perceived risk associated with COVID-19 has influence on employee safety behavior. The path coefficient between efficacy (EF) and employee safety behavior (ES) was positive and statistically significant ($\beta = 0.631$, $p = 0.000$), hence supporting the fifth hypothesis (**H5**) that self-efficacy has influence on employee safety behavior. The indirect path between management commitments (MC) to employee safety (ES) through perceived risk (PR) (MC → PR → ES) was negative and statistically insignificant ($\beta = -0.009$, $p = 0.377$). Since the indirect effect is insignificant, then there is no mediation, which rejects the sixth hypothesis (**H6**) that the perceived risk mediates the relationship between workplace safety management practices and employee behavior.

The indirect path between management commitments (MC) to employee safety behavior (ES) through efficacy (EF) (MC → EF → ES) was positive and statistically significant ($\beta = -0.388, p = 0.000$). This confirms that there is mediation. Then we investigated whether it was full or partial mediation. Since the direct path between MC and EF was significant ($\beta = 0.615, p = 0.000$), and the path between EF and ES was also significant ($\beta = 0.631, p = 0.000$), then efficacy is a partial mediator. This confirms hypothesis 7 (H7) that efficacy mediates the relationship between workplace safety management practices and employee safety behavior.

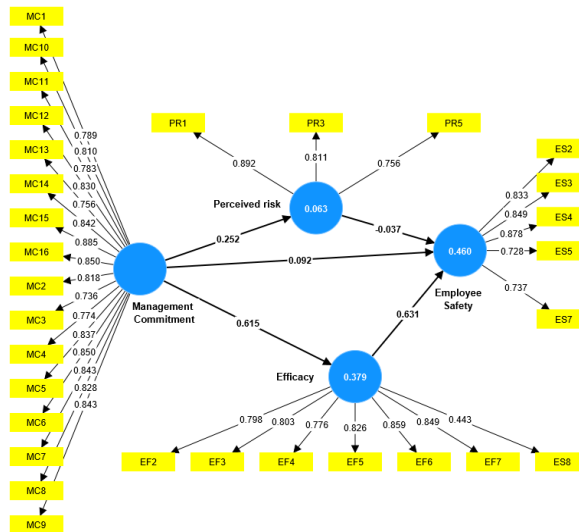


Fig. 4. Analysis of Research Hypothesis

5.4 Summary of Hypothesis

From the analysis of the results conducted, the summary of the set hypothesis is summarized in Table 3 indicating whether the hypothesis was accepted or rejected.

Table 3 Summary of Hypothesis

Hypothesis	Paths	Direct Effects	Indirect Effects	Total Effects	Supported?
H1	MC → ES	0.092	0.388	0.471	No
H2	MC → PR	0.252		0.252	Yes
H3	MC → EF	0.615		0.615	Yes
H4	PR → ES	-0.037		-0.037	No
H5	EF → ES	0.631		0.631	Yes
H6	MC → PR → ES		-0.009		No
H6	MC → EF → ES		0.388		Yes

Note: EF=efficacy; PR=perceived risk; MC = management commitment; ES = employee safety behavior

This research was geared to evaluating the impact of safety management practices on employee safety behavior during Covid-19 pandemic. The research followed the knowledge that the emergence of the Covid-19 pandemic disrupted the way many organizations conducted its operations and activities, throughout the complete supply chain. The safety of the employees became a major concern from the onset of the pandemic onwards. This research was therefore conducted as a means of evaluating how the management practices adopted and implemented by an organization influenced the safety behavior of the employees during the pandemic period. The first important result that was reported is that management commitment has a significant and positive influence on the perceived risk. The management commitment consisted of the workplace safety management practices, which included the safety rules and procedures adopted by the management, the corrective actions taken, and the personal protective equipment used by an organization. Others include the safety training given to the employees regarding the Covid-19 and preventive measures. Adoption of these aspects, according to research, influenced the perceived risk associated with the Covid-19 pandemic. In other words, these aspects made the Covid-19 considered a real threat and dangerous virus and everyone was at risk of being infected. These results echo the findings of Dinić et al. (2021) that due to the perceived threat and risk of the virus, various protective measures were adopted for healthcare workers, such as face masks. Ensuring maximum protection was critical to prevent them from contracting the disease (Abboah-Offei et al., 2021).

Another important finding was that management commitment significantly influenced self efficacy during the Covid-19 period. An increase in the aspects of workplace safety management practices such as rules and procedures adopted and safety training conducted for prevention and workplace safety and health issues, self-efficacy was improved. The efficacy aspects

enhanced included increased opportunities to discuss preventive measures, protocols, and guidelines, as well as the knowledge and ability of following the Covid-19 preventive measures. These findings agree with that of Sun et al. (2021) which argued that the involvement by the management motivated the healthcare workers to work hard towards adopting and observing international guidelines against Covid-19. Additionally, Zito et al., (2021) indicated that participation by the management was a key factor towards effective adoption of the Covid-19 preventive measures. Efficacy was found to significantly influence the employees' safety behavior.

This implies that efficacy aspects such as opportunities to discuss Covid-19 prevention measures, observing organization safety guidelines and protocols, as well as safety and health policies were important in influencing employee safety behavior towards Covid-19. The employee safety behavior promoted by efficacy included correct and high level of safety procedures, and activities aimed at improving the workplace safety. These findings agreed with that of Pilishvili et al. (2021) who indicated that the health workers employed high levels of efficacy during the pandemic. This drove them to undertake necessary measures and efforts to control the spread of the virus. There was health workers and government cooperation to contain the vaccine (Weiner et al., 2020).

Another important finding was that efficacy significantly mediated the effect of management commitment practices on employee safety. This meant that the influence of management commitment on employee safety management practices was partly because of the influence of efficacy. This research argues that in effort to influence employee safety management practices, efficacy is a critical component of the management commitment practices. However, contrary to the previous researchers (Mbunge et al. (2021); Abuhashesh et al., 2021) management commitment was found to have an insignificant influence on the employee safety management behaviour practices. Similarly, the effect of perceived risk was found to be insignificant on the employee safety behavior during the Covid-19 period.

6. Conclusions

The purpose of this study was geared towards investigating the impact of safety management practices on employee safety behavior during the Covid-19 pandemic. Different governments and organizations adopted various health protective measures to protect its people. Healthcare professionals were at the helm of the great effect of the pandemic, due to their responsibilities. This research therefore was carried out in the healthcare setting. The research found out that management commitment in terms of workplace safety management practices has a significant and direct influence on the healthcare employees perceived risk associated with Covid-19 and the healthcare employees' efficacy. However, the management commitment did not have a significant direct influence on the employee safety behavior. Efficacy was found to have a direct and significant influence on employee's safety behavior. Therefore, management commitment was found to influence employee safety behavior through efficacy. The research recommended that healthcare facilities management should adopt the necessary workplace management safety practices such as safety rules, procedures, and personal protective equipment, which would influence efficacy and perceived risk. Enhancing efficacy both by itself and through management commitment would intern influence the healthcare employees' safety behavior such as adopting and implementing safety and preventive measures during the pandemic.

7. Recommendations

From the findings of this research, and with reference to the previous studies, several recommendations could be made about the impact of safety management practices on employee safety behavior during Covid-19 pandemic. The first recommendation for this research is that management commitment in terms of workplace safety management practices is important in influencing the perceived risk and efficacy. This research recommends that during Covid-19 and any other future pandemic, the healthcare facilities management should adopt the necessary workplace management safety practices. These practices could include safety rules and procedures, corrective action, personal protective equipment, regular consultation with employees on protective measures, as well as safety training for the healthcare workers. These practices would help the health workers understand the risk associated with the pandemic, the threat and how dangerous the pandemic is. Additionally, it would trigger and boost efficiency in terms of increasing the healthcare facility's ability to observe required protective procedures, protocols and guidelines to ensure health and safety of healthcare workers. Another recommendation is that efficacy is critical in harnessing the employees' safety behavior. An opportunity should be accorded to the healthcare works to discuss the safety protocols and guidelines and share knowledge, resources, and abilities geared towards increasing healthcare safety during the Covid-19 pandemic. This would enhance the employees' safety behaviors such as high levels of safety practices, participation in promoting prevention and safety measures, and add extra effort to improve safety in the workplace. More importantly, efficacy is critical in making the management workplace safety practices to be effective in bringing results in terms of employees' safety behavior. This is because it improves the healthcare employees to adopt and implement safety and preventive measures during the pandemic.

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