

The Nexus Between Ethical Leadership and Employees' Perception of Workplace Safety During COVID-19 Under Mediation and Moderation Model

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Background: Workplace safety is a crucial aspect of employee well-being and organizational success, with ethical leadership playing a key role in shaping employees' perceptions of safety. Today, the underlying mechanisms through which ethical leadership influences workplace safety perception remain underexplored, especially in the Pakistan healthcare industry. Based on the social cognitive theory, this study aims to investigate the relationship between ethical leadership and workplace safety perception and examine the mediating role of media quality, communication climate, and supervisory communication and the moderating role of moral attentiveness.

Methods: An empirical survey method was used to conduct the quantitative study, with respondents representing nursing staff from hospitals in Pakistan. Data was collected using an online questionnaire during COVID-19, and Smart PLS was used to analyze the data.

Results: The study demonstrated that ethical leadership positively and significantly affects workplace safety perception. Media quality, communication climate, and supervisory communication mediate between ethical leadership and workplace safety perception. Moral attentiveness moderates the relationship between ethical leadership and workplace safety perception.

Conclusion: Ethical leadership is an essential tool that improves media quality, communication climate, supervisory communication, and moral attentiveness. The article presents a novel approach to examining the relationship between ethical leadership and workers' safety perceptions under the influence of mediating and moderating variables. By better understanding these dynamics, the study contributes to developing organizational strategies to improve workplace safety and overall employee well-being. In addition, it is a pioneering study exploring ethical leadership's role in influencing workers' perceptions of safety. Overall, the study is a great initiative that fosters the ethical concepts of individuals, thus achieving health protection and safety.

Keywords: ethical leadership, workplace safety, communication climate, supervisory communication, nurses, COVID-19, healthcare policy

Introduction

The healthcare sector has faced considerable pressure over the last few years. Inadequate services, financial loss, and deficient healthcare instruments have become the fundamental barriers to nursing services. Nurses play a critical role in facilitating healthcare services. They develop a supportive working climate that fosters patient safety and well-being.¹ As a result, today, building and sustaining good nursing demands healthcare institutions to combat medical crises, particularly in developing countries such as Pakistan. Pakistan is a dominant country that potentially contributes to the world's economy. However, despite being a key player in the South Asian region, Kamal et al² state that the country still lacks an effective nursing system.

Occupational injuries are a common event that drastically affects workers' health.³ In this regard, this paper is of great value, which makes individuals understand the importance of high workplace safety in nursing. Safety perception

critically refers to the workers' perception of hideous encounters.⁴ Occupational fatalities ruin employees' safety perception. It increases the chances of workplace accidents and injury. With this, occupational safety provides a secure working environment to individuals (ie, health professionals, nurses, doctors, and patients). As a result, today, many organizations are focusing on postulating high safety perceptions for meeting the workers' expectation of protection. Ethical leadership is a fundamental determinant of workers' safety. It satisfies their concerns of reliability and prevention by regulating high-safety performance.⁵

Ethical leadership refers to one's normative behavior, interpersonal relationships, and communication.⁶ It is a phenomenon that makes the leaders improve the employees' performance through moral and ethical means. As nurses and other clinical staff have considerably struggled during the pandemic, numerous ethical issues have inevitably decreased healthcare services. With healthcare workers performing their duties combating numerous moral challenges,⁷ this study is an important one that discusses the concept of ethical leadership for ensuring workers' safety perception. Ethical leadership significantly influences the service outcome of healthcare employees.⁸ Nurses play a crucial role in improving the healthcare service. Ethical leadership enables nurses to prioritize patients' welfare by cultivating and upholding moral values. This trusted relationship enhances the safety culture consciousness, thus progressing the organization's safety performance.⁹

Moreover, given the essential function of leadership in the healthcare industry, media quality also plays a critical role in accomplishing safety goals. Media quality is the extent to which leaders ensure that organizations' meetings are well organized. It provides proper directives to the followers, thus ensuring that the information shared is about the right. The media quality allows the leaders to ensure the organization's demands for ethical conduct by setting up an effective communication climate.¹⁰

Ethical leadership fundamentally ensures the importance of moral conduct by shaping interpersonal relationships through a two-way communication channel. In healthcare, an effective communication network is essential for improving the quality of nursing services. The organization arranged meetings, seminars, and conferences to empower employees' comfort and moral commitment. Ethical leadership demonstrates the approaches that enhance communication opportunities, empowering individuals to share knowledge. Concerning the leadership perspective, knowledge must be shared within the organization to improve the employees' awareness of ethical conflicts.¹¹ Profound media quality ensures a smooth flow of information among the workers. It satisfies the needs of the caregivers by minimizing the likelihood of ethical conflict, unfavorable outcomes, and medical accidents.¹²

With the innumerable hurdles and challenges of the pandemic, healthcare organizations have focused on establishing an ethical climate that flourishes the perception of safety among individuals. Ethical leadership accentuating the importance of moral codes nurtures the organization's environment. Its appropriateness is verified in the interest of the organization's employees.¹³ Ethical leaders establish a climate for subordinates by setting a normative acceptance code of conduct and moral excellence.¹⁴ Moral cues are considered the prime element in building up a safe environment. Moral attentiveness is the degree to which an individual incorporates morality in his experience.¹⁵ The ethical cues help the individual acknowledge the leaders' ethical behavior, fundamentally ensuring a safe working environment.¹⁶

Altogether, ethical leadership is good communication that aligns with healthcare workers' safety perception. Unfortunately, fewer studies have addressed the relationship between ethical leadership and employee safety perception,¹⁷ specifically in healthcare institutions. In this regard, this study is a significant one that bridges the gap by including the variables that support the nursing profession by maintaining a safer working environment. The study presents knowledge of the key concept of ethical leadership and employee safety perception under the mediation and moderation model. The current study builds on ethical leadership and employee safety perception by investigating the mediating effect of media quality, communication climate, and supervisory communication and the moderating effect of moral attentiveness.

Therefore, referring to this scholarly literature, this study starts a progressive debate on the beneficial role of ethical leadership on healthcare workers (ie, nurses). This initiative in nursing answers the critical question that has remained salient over the years. Our paper aims to provide a highly standardized ethical service based on workplace safety, communication, media quality, and moral awareness. However, to our knowledge, no study has been conducted

explaining the relationship of the desired variables (eg, media quality, moral attentiveness, and communication climate) with ethical leadership in the nursing industry of Pakistan.

Given this, this study is a novel innovation in the healthcare sector. When aiming to improve the hospital's working conditions, this study considers the safety climate to be the prime concern of the leaders. Indeed, it makes it vital to evaluate the perceptions of frontline workers for developing a safe environment in medical institutions. The study aims to improve the occupational safety climate by taking into the view of nurses. During the pandemic, the personnel have trouble maintaining a safer environment. Hence, this is a unique contribution in this regard as, for the first time, it sheds light on the most significant determinants of employee safety perception in Pakistan's hospitality sector.

Altogether, ensuring the safety culture in the healthcare sector needs more attention. Hence, in this regard, the study literature encourages the researchers to conceptualize their findings while immensely contributing to this research topic. Significantly, this theoretical model presents a pathway that elevates the role of different variables. The suggested mediator moderator model offers concrete guidance for the organizations by addressing the individual safety perception. This reach increases the researchers' confidence in the research findings, thus motivating them to support the proposed construct. The study also raises the knowledge for health administrators to realize the importance of a safe culture in a workplace setting. Moreover, the study permits healthcare leaders to improve the organization's safety performance in the light of moral cues and ethics.

In conclusion, the study follows the following pattern. Primarily, [Theoretical Background and Hypothesis Development](#) and [Methodology](#) present the literature review and methodology, while [Results](#), [Discussion](#), and [Conclusion](#) discuss the study Results, Discussion, and Conclusion.

Theoretical Background and Hypothesis Development

Ethical Leadership and Workplace Safety Perception

Workplace safety is a serious concern for ethical leaders, as occupational injuries bring severe destructive consequences for individuals. Therefore, today, ensuring occupational safety has become the prime concern of many hospitals. An organization with positive healthcare safety management values the safety perception by boosting the individual's confidence in prevention measures. Gillet et al¹⁸ states that ethical leadership influences the caregivers' behavior, thus improving the patient's perception of the quality of care. Safety plays an integral role in ensuring the service quality of medical institutions. Due to the increasing significance of healthcare safety, the request for high-quality service allows the organization to deliver safe healthcare facilities.

Ethical leadership in hospitality attracts the individuals' attention by considerably focusing on resolving health issues and moralities. Ozden et al¹⁹ indicate that ethical supervisors monitor the behavior of individuals, thereby ensuring the highest standards of safety. By considering fairness and integrity as the prime factors, ethical leadership underpins the ethical standards that make individuals develop positive workplace perceptions regarding safety and treatment. Ethical leaders encourage health workers (ie, nurses and physicians) to look after the patient's health while reinforcing safety performance.⁹ Islam et al²⁰ reveal that ethical leaders boost followers' confidence by enhancing the organization's safety practices.

Ethical leaders promote workplace safety through their idealized influence. Ethical leaders care about the safety and well-being of their subordinates. They endeavor to ensure the highest standards of workplace safety through ethics and moral rules. Indeed, today, upholding the highest standard of ethical values has become the foremost priority of ethical leaders. Ethical leadership positively influences the workers' psychological safety and performance.²¹ It minimizes job-related risks and accidents. It encourages the employees to adhere to safety standards. It promotes safety policies and procedures by ensuring safety performance.⁵

Ensuring the patients' safety is the priority of health professionals. This ethical dilemma requires a solution to adopt ethical leadership in hospitality. Ethical leadership fulfills the requirements of nursing professions by benefiting the patients' health. The positive perception of the moral climate supported by leadership characteristics leads to the successful treatment of patients. Ethical leadership in nursing encourages the development of a high-quality healthcare environment. Safe nursing care prevents injuries. According to Iserson,²² ethical leadership mitigates safety issues by

providing steadfast care to workers. Indeed, that makes ethical leadership in healthcare imperative in overcoming health and safety challenges. Ethical leadership increases the individual willingness to respond to life-threatening emergencies with safety measures.²³ Ethical leaders encourage health professionals to adopt healthy practices, thus improving the patient's well-being.²⁴ Therefore, we conclude the following hypothesis based on the previous studies as follows:

Hypothesis 1: Ethical leadership positively and significantly impacts workplace safety perception.

Ethical Leadership and Media Quality

Many individuals violate the ethical rules if they lack documentation in the code of conduct. In some medical institutions, people intentionally break the rules, adversely affecting the patient's health, safety, and environment.²⁵ This behavior encourages the management to write down violations of the social rules, thus ensuring strict compliance with the law. Media Quality refers to the degree to which organizations' meetings are held with composed mandates. It enables the leaders to share data about moral conduct.

Given the ethical leadership in hospitality, Bhatti et al¹¹ states that ethical leadership is a crucial element that improves media quality. It transmits awareness about the firms' moral values. Today, organizations focus on setting up an ethical code. They organize ethical committees to ensure that everyone meets ethical standards. Indeed, the organization's media quality is a key element in fostering the organization's communication. Where enacted communication is needed, moral standards are the most needed. Ethical leadership portraying a positive image of the organization enables the employees to establish efficient communication with their employees. According to Qian and Jian,²⁶ ethical leaders convey the message by developing a formal communication system. They intend to accommodate diverse values by establishing a conducive environment of perceived openness.

Ethical leadership is vital for driving the firm's communication. In maintaining transparent communication practices, information sharing (eg, positive and negative) is critical for stakeholders (ie, internal and external).²⁷ The organization's media enriches the firms' practices by making them responsible for sharing the most truthful and honest data with their employees.²⁸ The firms' media quality enables ethical leaders to share information on morality and ethics, ultimately leading individuals to perform better. Knowledge sharing is a critical activity that nurtures the employee's actions and performance. If the knowledge is shared effectively, little room is left for errors and failures.²⁹ Ethical leaders share knowledge among all the organization components by developing a safe working environment. In explaining this notion, Zhao and Xia³⁰ reveal that unclear knowledge negatively influences ethical leadership. Organizations facing considerable challenges must adopt new ideas, products, procedures, and knowledge crucial to overcoming the complicated interactions between individuals in times of crisis. Therefore, in this regard, the leader's competencies are vital for increasing the knowledge flow among the individuals, which can affect employee innovation, satisfaction, creativity, and loyalty.³¹ Consequently, the literature review proposes the following hypothesis;

Hypothesis 2: Ethical leadership positively and significantly impacts media quality.

Ethical Leadership, Communication Climate, and Supervisory Communication

The ethical leadership stimulus divine changes in communication setup. It demonstrates valuable norms, values, and actions that open new opportunities for employees for knowledge sharing and high performance.¹¹ An organization's climate is a tool that drives the individuals' behavior. The communication climate reduces the burden on workers by making them morally sensible and enabling them to make straightforward and honest decisions.³² Furthermore, the organization's communication climate motivates the individuals to develop a trusted relationship with the leader. Ethical leaders are open to listening to employees' ideas and opinions, subsequently building up two-way communication in the work setting.³³

Workplace communication ensures that information is respectably shared between the two parties, thus strengthening the organization's workplace environment. In this regard, knowledge sharing through an effective communicative system is recognized as an effort of ethical leadership. Effective implementation of ethical leadership can be viewed as an integral factor in encouraging knowledge-seeking and sharing among workers.¹¹ An effective communication climate

enables leaders to acknowledge the severe challenges of healthcare heroes. It allows them to seek relevant knowledge needed to combat emerging healthcare problems. Employees raise their voices by sharing their ideas, thoughts, and suppositions about work issues. Ethical leaders empower employees to raise their voices against ethical problems, thus fostering an effective communication climate. In explanation, Abu Bakar and Omillion-Hodges¹³ state that ethical leadership influences the voice behavior of the followers by setting up a positive communication climate.

In COVID-19, ethical scandals devastatingly affect the interest of the organization. Deviant behavior and ethical scandals adversely affect the moral communication climate.³⁴ Ethical leadership helps followers distinguish between ethical and unethical behavior based on standardized moral norms and social learning.³⁵ Supervisory communication promotes pro-social behavior while fulfilling the information needs of the followers.³⁶ Stakeholder pro-social behavior is critical to the organization's performance.^{37,38} Supervisory communication satisfies individuals' need for information and directs communication flow to alter their behavior. Supervisory leadership communication is a significant component of the organization's internal communication system. It increases the employee's attitude, skills, and emotional capital by providing tailored information, and supporting their work duties. Not only this, the tangible support that supervisor assistance offers also enhances the performance of the employees by supporting an effective two-way communication system.³⁹ Ethical leadership makes employee-supervisor communication meaningful and empathetic. It leads to positive employee outcomes.⁴⁰ The supervisor using motivating language influences the employees' trust by satisfying their demand for information. Trust in the leaders can bring meaning to the employee's life. Employees are the prime priority of every organization. Therefore, maintaining a trusted relationship with them is the core duty of the leaders and communication managers.⁴¹ The importance of employee trust was evident during the pandemic crisis. Employee supervisory relationship building a trusted relationship overcame all the disruptions and faced uncertainties. Among internal communication, supervisory communication is the most trustworthy source of information for employees. During the pandemic, it has been perceived as the most crucial element for employees. As employees expect that directly hearing from their managers can ease their problems, it is considered a support system for many employees during the pandemic.⁴² Based on the literature findings, we have developed the following hypothesis:

Hypothesis 3: Ethical Leadership positively and significantly impacts communication climate.

Hypothesis 4: Ethical leadership positively and significantly impacts supervisory communication.

Mediating Role of Media Quality, Communication Climate, and Supervisory Communication

The leaders' moral identity and the employees' perception are positively associated.³⁵ Ethical leaders are great communicator who provides information about workplace safety. Ethical leaders adopt communicative techniques that are trustworthy, open, and easily accessible.³⁹ Ethical leadership provides meaningful information to health workers. It provides employees with opportunities for coping with health emergencies. In healthcare, ethical leadership boosts the nurse's trust by offering a conducive environment that treats the individuals fairly.⁴³ Ethical leaders facilitate the communication atmosphere by valuing human life and supporting the feelings of the healthcare workers (ie, nurses).¹²

In crises, when individuals require information from a valid media source, an enriched media quality becomes an effective system for communication for many organizations.²² Providing recent information to healthcare professionals is vital for every organization. Today, arranging a reasonable communication system for conveying information to employees is the top priority of most institutions. As the nurses must ensure the patient's safety, disaster managers in most organizations do their best to convey the possible information to their employees.

In healthcare organizations, media quality addresses the problems of health caregivers while clearly expressing the rules to be followed for strengthening environmental safety. It fosters the individuals' knowledge and skills and provides high-quality service to the patients. To ensure media quality, many organizations have focused on establishing ethical committees for complying with safety measures. Media quality empowers individuals with clear directives that improve employees' moral performance. Undoubtedly, setting up ethical codes and organizing committees drives the relationship between the superior leadership style (ie, ethical leadership) and workplace safety.¹¹

Jha and Singh⁴⁴ state that ethical leadership influences the safety perception of individuals by encouraging employee voice behavior (ie, health workers). Ethical leadership encourages the ethical behavior of subordinates through effective work communication. The communication climate reflecting the normative value of the firm shapes the employees' doings. Ethical leaders provide moral cues to their subordinates. Ethical norms help leaders develop an environment that signals moral values and behavior. Given its increasing potential, an ethical communication climate is critical to transmit the supervisors' moral message.⁴⁵

The communication climate makes the employees comfortable about expressing their opinions in work-related issues. Ethical leadership acknowledges the employers' voice behavior, thus ensuring a safe working environment.⁴⁶ Leaders in healthcare organizations play a vital role in ensuring employee safety compliance. This safety compliance enables the employees to follow the correct safety procedures while performing their tasks.⁴⁷ Ethical leaders have enhanced the organization's safety performance in times of crisis.²² During the pandemic, many organizations have found mandatory breaks (including power naps, seminars, and lunches) before their meetings to improve their workplace environment.⁴⁸ Therefore, practicing an open environment, especially during times of crisis, has created a healthy environment where employees are free to share their emotions regarding increasing healthcare problems. The supervisor support system minimizes common nursing errors by establishing an active feedback culture.¹² The research indicates that leaders' feedback and employees' opinions improve patients' safety.⁴⁹ In contrast, inadequate supervisors' feedback makes the staff feel ignored. Communication problems among leaders can increase the likelihood of causing safety errors.⁵⁰ Indeed, developing a two-way communication climate helps leaders minimize the chances of nursing error, improving health service.⁵¹ Moreover, the exchange of real-time information, advice, and opinions between leaders, supervisors, and employees enables them to make informed decisions that are morally right. Altogether, based on the previous literature, the hypothesis concludes:

H5: Media quality has a positive and significant impact on workplace safety perception.

H5(a): Media quality mediates the relationship between Ethical Leadership and workplace safety perception.

H6: Communication climate positively and significantly impacts workplace safety perception.

H6(a): Communication climate mediates the relationship between ethical leadership and workplace safety perception.

H7: Supervisory communication has a positive and significant impact on workplace safety perception.

H7(a): Supervisory communication mediates the relationship between ethical leadership and workplace safety perception.

The Moderating Role of Moral Attentiveness

Moral attentiveness is the extent to which employees perceive morality in their daily experiences.¹⁵ It is a trait of a person that makes the employees react differently to an ethical dilemma. Moral attentiveness refers to the extent of identifying ethical signals. Individuals with high moral consideration tend to decrease the likelihood of immoral behavior. A high moral identity encourages individuals to make decisions based on morality (ie, ethical leadership). In explanation, Moore et al⁵² states that moral cues make the employees respond to ethical leadership, thus influencing the individuals' ethical behavior.

Moral cues observed from the behavior of ethical leaders are highly accessible to the followers. As leaders' ethical behavior communicates morality, the effectiveness of ethical leadership largely depends upon the followers' attentiveness. Individuals high on moral attentiveness interpret the leaders' behavior based on moral cues (ie, morality). In healthcare, the employee is highly attentive to moral issues and perceives the matter on the ground of morality. For this, they identify information in moral terms and analyze them accordingly. The high moral attentiveness colored by the individual experience leads employees to assess and recognize ethical content. Today, moral cues are well-known to each organization. As a result, organizations previously meeting their self-interest today avoid the employees' unethical behaviors by adopting ethical leadership.⁴⁵ Ethical leadership enhances the individual's moral attentiveness.⁵³ It enables the individual to frame their

decisions through the lens of the ethical climate. Ethical leadership influences the subordinates' moral sense. The employee perceives an ethical foundation of the matter when ethical leadership drives the employee's perception and manifests the establishment of the ethical climate, which is a trait of moral attentiveness. In support, Dawson⁵⁴ states that moral attentiveness positively moderates the relationship between ethical behavior and work climate.

Considering that the ethical climate sends signals of ethical practices to the employees, the level of attention the employees pay prompts the strengthening of ethical leadership. Moral attractiveness among employees helps individuals to solve safety problems. It makes them follow the ethical cue by significantly developing moral sensitivity. It is an influential actor that ensures the development of an ethical communication climate, which leads individuals to regard safety values.⁴⁵ Significantly, moral attentiveness makes the individual morally aware of ethical standards. Individuals with high moral consideration are most likely to detect leaders with low ethical values, subsequently affecting the workplace safety environment. Given the statement, Gan¹⁶ indicates that individuals high in moral attentiveness are less likely to question the leaders' safety behavior (ie, moral justification). Hence, based on the above argument, the literature concludes the following hypothesis;

H8: Moral attentiveness moderate the relationship between ethical leadership and workplace safety perception.

The study conceptual framework, including the hypothesis, is shown in Figure 1.

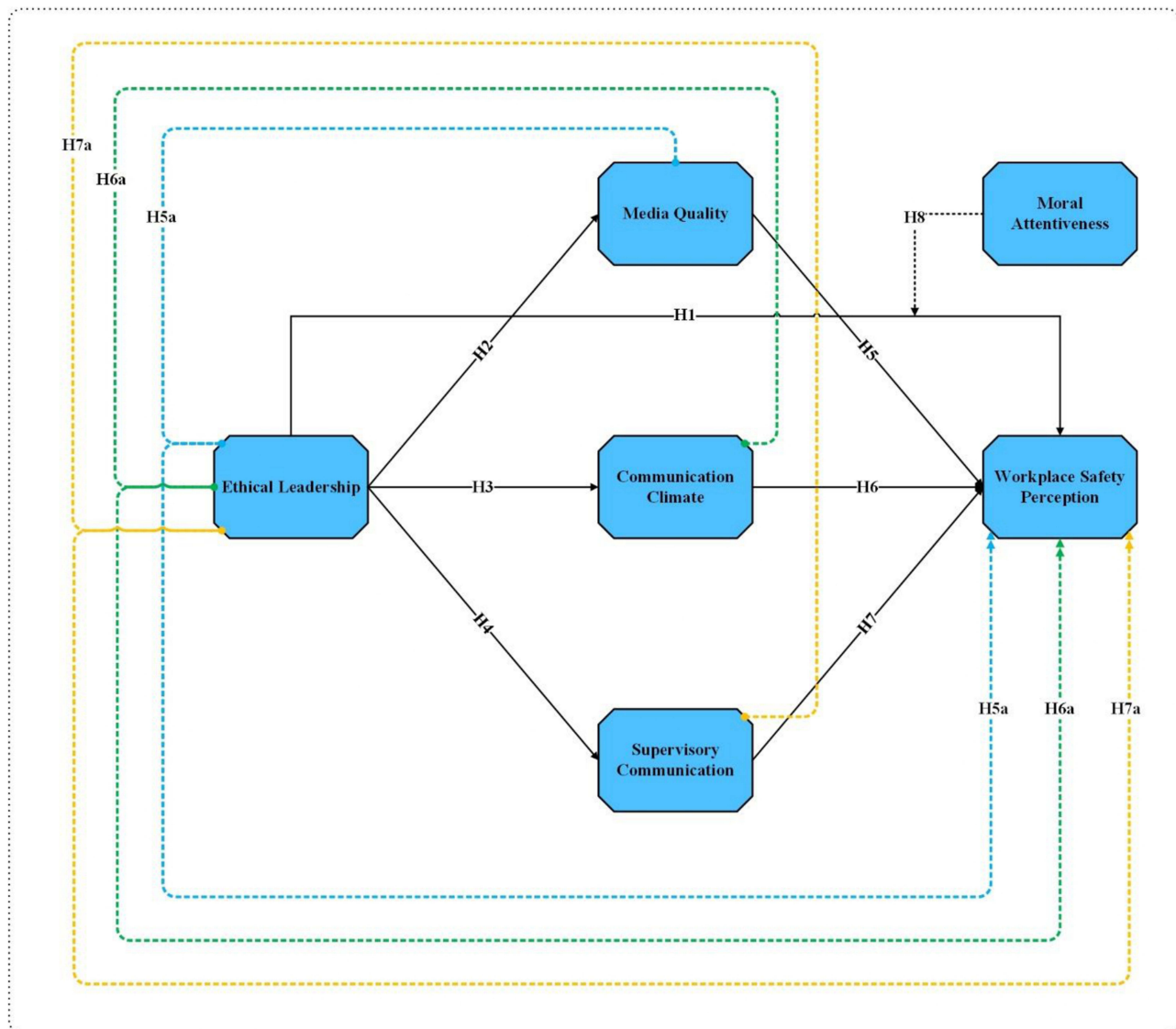


Figure 1 Conceptual Framework.

Methodology

The study methodology is grounded in a deductive approach, which began with a specific theory or hypothesis and sought to validate it through empirical data. Nurses were the primary respondents in this study. Their frontline experiences in the healthcare sector provide invaluable insights, often unveiling intricacies that other professionals might overlook. The data was gathered from respondents in four Pakistani cities: Karachi, Lahore, Peshawar, and Islamabad - the study ensures a comprehensive geographical coverage. We obtained permission from the respective hospitals in Pakistan where the study was conducted. All the involved participants provided informed consent and all data were anonymized to protect their privacy. A cover letter with explanations of the research objectives and the confidentiality of the participants' responses was attached with the survey.

In total, 560 questionnaires were distributed through email/WhatsApp and Google survey link. We received 490 filled questionnaires with a response rate of 87.5%, but 469 valid questionnaires were available for data analysis. [Table 1](#) provides the complete details of the demographic characteristics of respondents participating in this study.

[Table 1](#) enables us to understand the characteristics of the respondents. The demographic collected helped us streamline our study results. It provided us with an opportunity to analyze the study outcomes better. The survey results showed that out of 469 respondents, 165 were males and 304 were females. The sample size included people of different age groups. The demographics showed that 18.1% population belonged to the 19–30 age group, 28.8% were of 31–40 age, the majority population, which is 34.5%, belonged to the 41–50 age and the remaining 18.6% ranged between the 51–60 age. Likewise, the study also recorded the marital and educational status of the candidates. The data was collected from the different candidates with relevant academic backgrounds. The results revealed that out of 469 responses, the majority (ie, 35.4%) had an associate degree in nursing, and others had a Diploma, Bachelor's, and master's degree. Altogether, it is to be noted that this study used the data for academic purposes only. During the analysis, the candidates' confidentiality was highly maintained, and it was ensured that no personal information was disclosed to the third party.

Table 1 Participants Demographic Characteristics

Items	Frequency (N=469)	(%)
<i>Gender</i>		
Male	165	35.2
Female	304	64.8
<i>Age</i>		
19–30	85	18.1
31–40	135	28.8
41–50	162	34.5
51–60	87	18.6
<i>Marital Status</i>		
Single	90	19.2
Married	379	80.8
<i>Education</i>		
Diploma	71	15.1
Associate degree in nursing (ADN)	166	35.4
Bachelor of Science in Nursing (BSN)	145	30.9
Master of Science in Nursing (MSN)	87	18.6

Common Method Bias

This research addressed potential common method bias by applying Harman's single-factor approach. The extracted variance for a single factor is 29.161%, which is below the 50% threshold suggested by Podsakoff et al.⁵⁵ The results indicate that common method bias is not a concern in this study.

Study Measurement

A five-point Likert-type scaled survey questionnaire (strongly disagree to strongly agree) was devised to measure the construct. The questionnaire was refined based on reviews of subject specialists. The study adopted the ten items measurement scale of ethical leadership from the studies of van Gils et al.⁵⁶ Media quality, supervisory communication and communication climate was measured on the fifteen adopted from the studies of Doo and Chai.⁵⁷ Workplace safety perception was measured on the eight-item scale which was adopted from the study of Dilliard et al.⁵⁸ Reynolds¹⁵ 11-item scale was used for the measurement of moral attentiveness.

Results

Reliability and validity analysis play a crucial role in ensuring the accuracy and consistency of research results. Reliability analysis focuses on the stability and consistency of data obtained from research instruments, such as questionnaires. Methods to assess reliability include Cronbach's Alpha and test-retest reliability. Validity analysis, on the other hand, evaluates whether a research instrument measures what it intends to measure. Different types of validity, such as content validity and construct validity, are assessed to ensure that the research instrument. Both reliability and validity analyses contribute to the overall rigor and credibility of a research study.

Table 2 shows the reliability and validity analysis of the constructs. The loading value should be >0.50 to get reliable and valid results.⁵⁹ Reliability and validity values are based on the loading values.⁶⁰ According to the threshold value, the dataset has satisfactory results ranging from 0.643 (MA_3) to 0.818 (MQ_1). The Cronbach's alpha and CR threshold should be >0.70.⁶¹ This dataset shows all values of CR were greater than the threshold, ranging between 0.888 (for

Table 2 Reliability & Validity Analysis

Construct	Items	Loading	α	CR	AVE
Ethical Leadership	EL_1	0.757	0.918	0.931	0.575
	EL_2	0.770			
	EL_3	0.756			
	EL_4	0.763			
	EL_5	0.764			
	EL_6	0.771			
	EL_7	0.760			
	EL_8	0.741			
	EL_9	0.750			
	EL_10	0.752			
Media Quality	MQ_1	0.818	0.848	0.891	0.622
	MQ_2	0.772			
	MQ_3	0.791			
	MQ_4	0.778			
	MQ_5	0.782			
Supervisory Communication	SC_1	0.792	0.852	0.894	0.628
	SC_2	0.777			
	SC_3	0.819			
	SC_4	0.780			
	SC_5	0.794			

(Continued)

Table 2 (Continued).

Construct	Items	Loading	α	CR	AVE
Communication Climate	CC_1	0.770	0.842	0.888	0.612
	CC_2	0.805			
	CC_3	0.776			
	CC_4	0.781			
	CC_5	0.779			
Moral Attentiveness	MA_1	0.700	0.909	0.922	0.517
	MA_2	0.734			
	MA_3	0.643			
	MA_4	0.744			
	MA_5	0.691			
	MA_6	0.736			
	MA_7	0.691			
	MA_8	0.729			
	MA_9	0.731			
	MA_10	0.752			
	MA_11	0.751			
Workplace safety perception	WSP_1	0.761	0.900	0.920	0.588
	WSP_2	0.778			
	WSP_3	0.769			
	WSP_4	0.773			
	WSP_5	0.760			
	WSP_6	0.752			
	WSP_7	0.781			
	WSP_8	0.761			

Communication Climate) and 0.931 (for Ethical Leadership), which were above the threshold of 0.7 as suggested by Nunnally and Bernstein.⁶² Moreover, the average variance extracted (AVE) value should be >0.50. Statistics show that there was no reliability and validity issue between constructs.

Figure 2 is the graphical representation of the measurement model, which shows the variables' factor loading values.

Heterotrait-Monotrait Ratio (HTMT) is another standard for assessing discriminant validity. According to Henseler et al⁶³ if the correlation values are less than 0.90, the HTMT approach best demonstrates discriminant validity between each pair of variables. As demonstrated in Table 3, all the latent constructs' HTMT values were less than 0.90. By assessing discriminant validity using the HTMT method, the study ensures that the constructs in this study are sufficiently different and not overlapping, contributing to the overall quality and rigor of the research (see Table 4).

The model should be tested for multi-collinearity through (VIF) in the second stage of the structural model using PLS-SEM. Variance Influence Factor analysis results are presented in Table 5. Figure 3 shows the results of the structural model.

Hypotheses Testing

The study results explain that ethical leadership positively affects workplace safety perception, media quality, communication climate, and supervisory communication; hypotheses H1, H2, H3, and H4 are accepted at the beta values of 0.274, 0.535, 0.547, and 0.545, respectively (see Table 5). The H5 states that media quality moral attentiveness positively and significantly affects workplace safety perception, accepted at the Beta value of 0.186.

Moreover, the positive impact of communication climate and supervisory communication on workplace safety perception was statistically significant (H6 and H7) and therefore supported at the standard beta value of 0.211 and

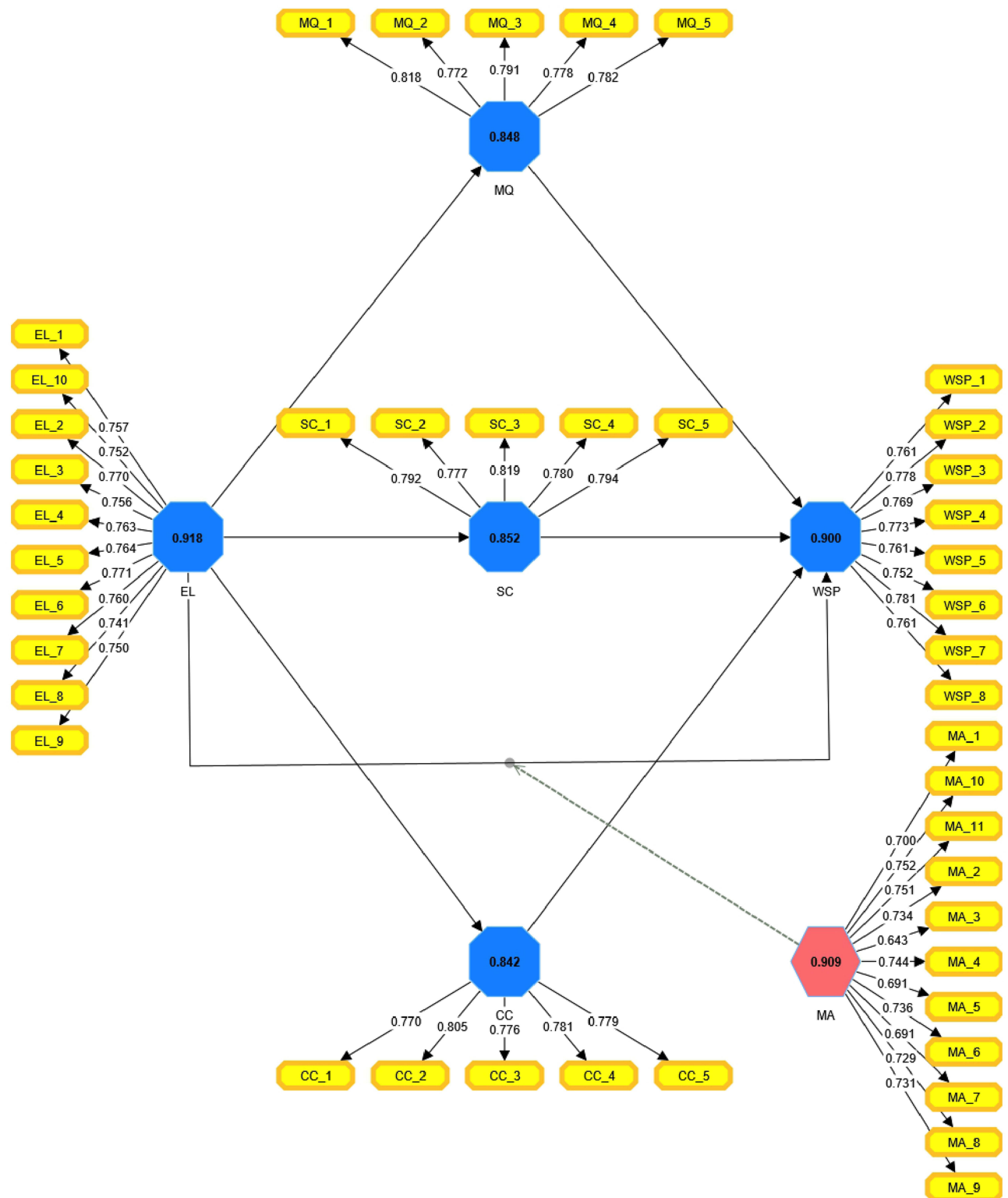


Figure 2 Measurement Model.

Note: Bold values represents Cronbach's alpha.

Table 3 Discriminant Validity Analysis (HTMT)

Constructs	CC	EL	MA	MQ	SC	WSP
1. Ethical Leadership						
2. Media Quality	0.620					
3. Supervisory Communication	0.114	0.179				
4. Communication Climate	0.654	0.603	0.171			
5. Moral Attentiveness	0.628	0.615	0.097	0.618		
6. Workplace safety perception	0.671	0.596	0.086	0.656	0.647	

Table 4 Discriminant Validity Analysis (Cross-Loadings)

Constructs Items	CC	EL	MA	MQ	SC	WSP
CC_1	0.770	0.381	-0.086	0.455	0.416	0.462
CC_2	0.805	0.467	-0.102	0.485	0.410	0.474
CC_3	0.776	0.422	-0.058	0.414	0.414	0.450
CC_4	0.781	0.446	-0.075	0.452	0.438	0.478
CC_5	0.779	0.421	-0.052	0.355	0.400	0.426
EL_1	0.444	0.757	0.092	0.416	0.452	0.430
EL_10	0.371	0.752	0.133	0.388	0.424	0.373
EL_2	0.421	0.770	0.127	0.388	0.411	0.417
EL_3	0.401	0.756	0.120	0.384	0.410	0.426
EL_4	0.427	0.763	0.137	0.420	0.432	0.434
EL_5	0.452	0.764	0.130	0.433	0.395	0.436
EL_6	0.444	0.771	0.099	0.409	0.413	0.425
EL_7	0.403	0.760	0.128	0.405	0.409	0.417
EL_8	0.367	0.741	0.104	0.401	0.401	0.403
EL_9	0.413	0.750	0.151	0.410	0.383	0.366
MA_1	-0.144	0.042	0.700	-0.127	-0.080	-0.051
MA_10	-0.093	0.135	0.752	-0.136	-0.045	-0.069
MA_11	-0.069	0.111	0.751	-0.131	-0.039	-0.070
MA_2	-0.068	0.082	0.734	-0.074	-0.023	-0.057
MA_3	-0.084	0.162	0.643	-0.113	-0.084	-0.003
MA_4	-0.021	0.117	0.744	-0.083	-0.070	-0.082
MA_5	-0.061	0.100	0.691	-0.139	-0.061	-0.034
MA_6	-0.092	0.119	0.736	-0.110	-0.082	-0.059
MA_7	-0.043	0.097	0.691	-0.112	-0.095	-0.027

(Continued)

Table 4 (Continued).

Constructs Items	CC	EL	MA	MQ	SC	WSP
MA_8	-0.070	0.158	0.729	-0.103	-0.046	-0.079
MA_9	-0.043	0.176	0.731	-0.053	-0.036	-0.047
MQ_1	0.456	0.463	-0.088	0.818	0.403	0.486
MQ_2	0.426	0.372	-0.160	0.772	0.373	0.415
MQ_3	0.421	0.413	-0.133	0.791	0.441	0.477
MQ_4	0.458	0.412	-0.135	0.778	0.420	0.435
MQ_5	0.423	0.440	-0.063	0.782	0.432	0.451
SC_1	0.452	0.441	-0.076	0.445	0.792	0.430
SC_2	0.420	0.409	-0.058	0.403	0.777	0.427
SC_3	0.434	0.431	-0.038	0.405	0.819	0.485
SC_4	0.408	0.416	-0.002	0.413	0.780	0.414
SC_5	0.395	0.459	-0.119	0.417	0.794	0.493
WSP_1	0.425	0.413	-0.109	0.460	0.447	0.761
WSP_2	0.442	0.423	-0.082	0.455	0.444	0.778
WSP_3	0.434	0.413	-0.076	0.447	0.451	0.769
WSP_4	0.428	0.393	-0.053	0.428	0.404	0.773
WSP_5	0.485	0.475	-0.090	0.473	0.449	0.760
WSP_6	0.437	0.358	-0.043	0.388	0.406	0.752
WSP_7	0.501	0.442	-0.044	0.443	0.451	0.781
WSP_8	0.435	0.414	-0.023	0.431	0.435	0.761

Note: Bold values show discriminant validity values.

Table 5 Variance Influence Factor

Constructs	CC	EL	MA	MQ	Moderating Effect EL*MA	SC	WSP
CC							1.834
EL	1.000					1.000	2.517
MA							1.144
MQ				1.000			1.869
Moderating Effect EL*MA							1.404
SC							1.807
WSP							

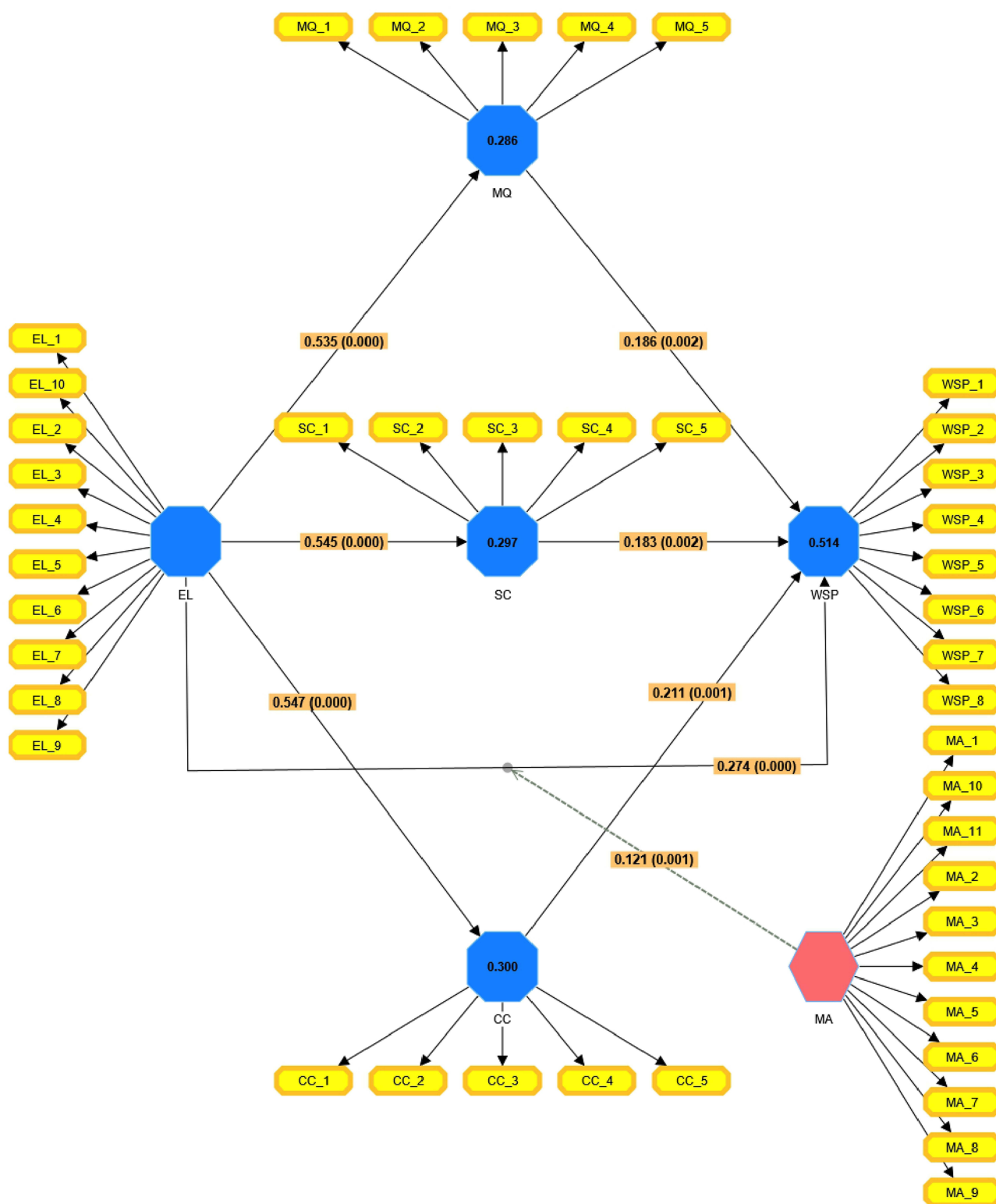


Figure 3 Graphical representation of the structural model.
Note: Bold values represents Standardized Beta Coefficient.

0.183, respectively. The results are outlined in Table 6, while Figure 3 represents the structural model's graphical representation.

The findings of the mediation analysis are presented in Table 7, and all the hypotheses were accepted in this study. H5(a) states that media quality mediates the relationship between ethical leadership and workplace safety perception. H5(a) accepted the beta value of 0.099 and t-value 2.875. H6(b) states that communication climate mediates ethical leadership and workplace safety perception. H7(a) says that supervisory communication mediates the association between ethical leadership and workplace safety perception.

In research studies, when the relationship between two variables depends on a third variable, it indicates that moderation is present. This research tested the moderation effect of the moral attentiveness between ethical leadership and workplace safety perception. The findings of the moderating effect are displayed in Table 8. H8 was accepted at the beta value of 0.121 and p-value (0.001).

An illustration of the interaction effect between ethical leadership and workplace safety perception can be found in Figure 4.

Similarly, the level of variance explained was assessed through (R^2), the level of effect size by (F^2), and the predictive relevance through (Q^2). Table 9 shows the R^2 , Adjusted R^2 , Q^2 and F^2 values. This study's adjusted R^2 value of

Table 6 Hypotheses Testing Direct Effect

Hypothesis	Direct Relationships	Std. Beta	Std. Error	T Values
H1	EL→WSP	0.274	0.070	3.912
H2	EL→MQ	0.535	0.051	10.423
H3	EL→CC	0.547	0.051	10.800
H4	EL→SC	0.545	0.053	10.293
H5	MQ→WSP	0.186	0.060	3.083
H6	CC→WSP	0.211	0.067	3.157
H7	SC→WSP	0.183	0.059	3.081

Table 7 Hypotheses Testing Mediation Effect

Hypothesis	Mediation Relationships	Std. Beta	Std. Error	T Values	P Values
H5(a)	EL→MQ→WSP	0.099	0.035	2.875	**
H6(a)	EL→CC→WSP	0.116	0.039	2.933	**
H7(a)	EL→SC→WSP	0.100	0.035	2.886	**

Note: **Indicates significant path: $p < 0.01$.

Table 8 Hypotheses Testing Interaction Effect

Hypothesis	Interaction Effects	Std. Beta	Std. Error	T Values	P values
H8	Interaction EL↔MA↔WSP	0.121	0.036	3.325	0.001
	Level of the Moderator	Effects	Boot SE	LLCI	ULCI
H8	+1 Std Dev	0.900***	0.052	0.797	1.003
	Mean	0.644***	0.037	0.573	0.717
	-1 Std Dev	0.390***	0.042	0.307	0.472

Note: ***Indicates significant paths: $p < 0.001$.

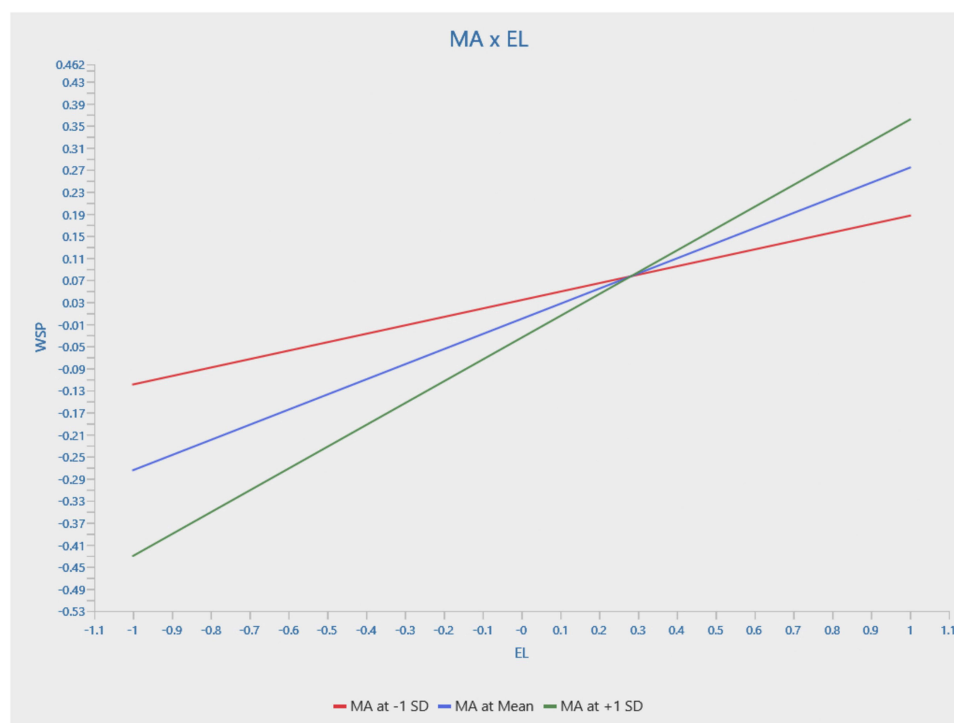


Figure 4 Demonstration of interaction effect (EL*MA).

Abbreviations: MA, Moral Attentiveness; EL, Ethical Leadership; WSP, Workplace safety perception; SD, Standard deviation.

communication climate, media quality, supervisory communication, and workplace safety perception is 0.298, 0.284, 0.295, and 0.508, respectively. Similarly, the predictive relevance (Q^2) was assessed. According to research recommendations, its value will be considered good enough, if it is more than Zero (0). In this study, the value of Q^2 was greater than zero. A graphical representation of R^2 and F^2 is shown in Figure 5, while a graphical representation of Q^2 is shown in Figure 6.

Table 9 Quality Criteria

Latent variables	R^2_{Adj}	Q^2	F^2
CC	0.298	0.181	
MQ	0.284	0.175	
SC	0.295	0.184	
WSP	0.508	0.298	
CC→WSP			0.050
EL→WSP			0.062
MQ→WSP			0.038
Mod Effect EL*MA→WSP			0.033
MQ→WSP			0.038
SC→WSP			0.038
EL→CC			0.428
EL→MQ			0.400
EL→SC			0.422

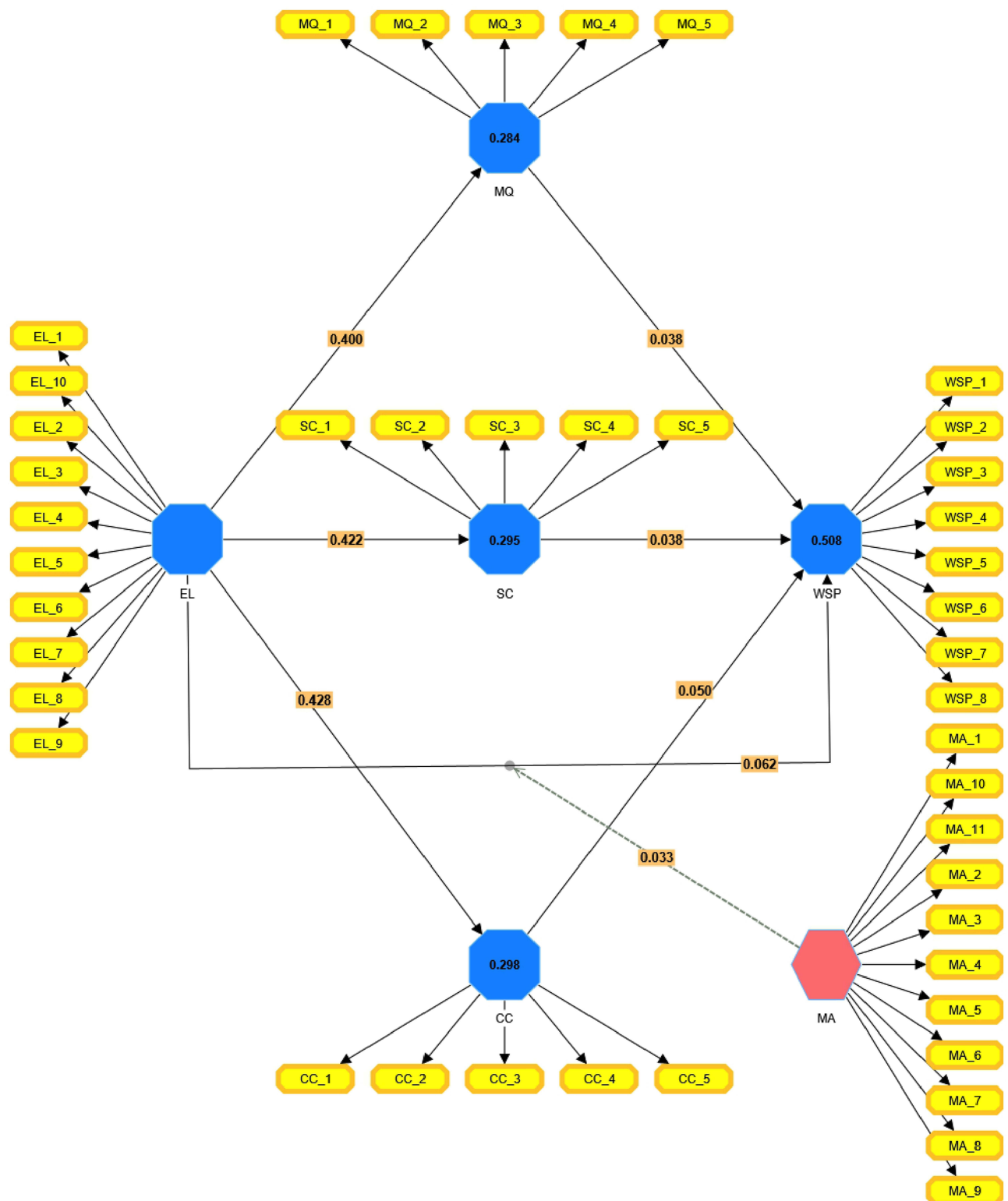


Figure 5 Graphical representation of R^2 and F^2 .

Note: Bold values in a circle represent Adjusted R-Square values, while other bold values show F-Square.

Discussion

A great leader has a clear goal that guides their actions. A leader welcomes good ideas and ensures the hearty involvement of his employees by ethically setting principles that guide the firm's actions. Hence, in this regard, the

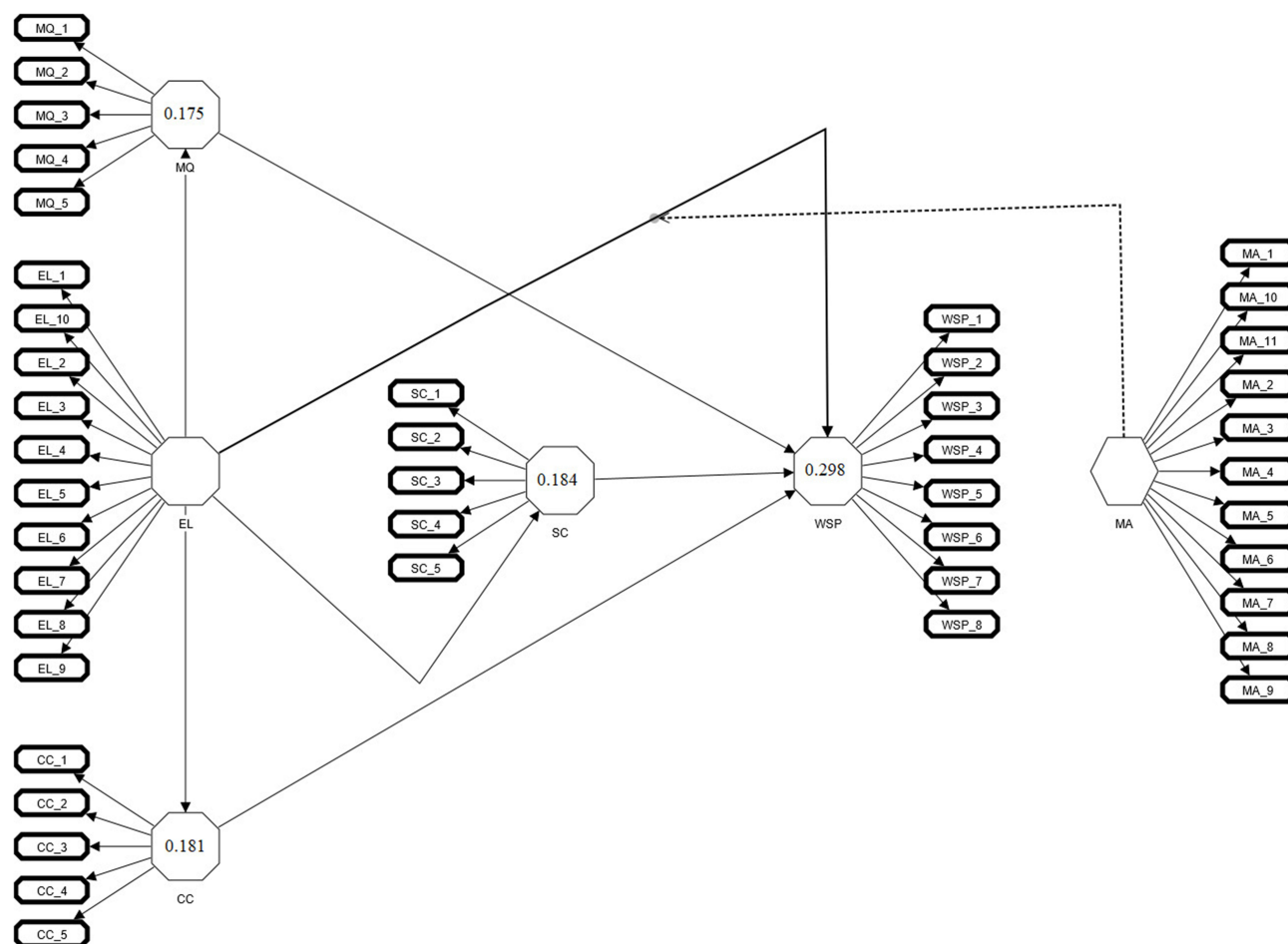


Figure 6 Graphical representation of Q^2 .

present study examines the effect of ethical leadership in the context of safety perception. Discussion sheds light on the current study findings considering the previous literature. It makes the readers understand the high exhibition of ethical leadership. Ethical leaders are moral person who does ethically right things and encourage others to follow ethical rules. Ethical leaders are role models who strategically influence followers through visible actions, rewards, and values. They significantly alter the followers' personalities by improving their psychological safety perception.⁶⁴

COVID-19 has devastatingly affected the world, thus leading many organizations to face considerable ethical dilemmas.⁷ One of the challenges that demand ethical decisions is ensuring patients' safety.⁶⁵ Such decisions are complex and require moral determinations, knowledge, and skills. Today, many institutions have struggled to provide proper care to their patients. But unfortunately, most of them have failed to recognize the existential threat of coronavirus on staff. The ignorant leaders and incomplete information have led to this inadequacy of enhancing the employees' perception of safety. Most healthcare staff put patients first. The safety precautions not only make them prioritize patient safety first but also make it imperative for them to cope with the obligations, workload, and demands of their professions by effectively balancing their work and spare time and protecting their health and overall life.⁶⁶

Leaders are the catalyst of providing valuable healthcare service, support, and inspiration to their followers. In healthcare organizations, ethical leadership enhances the nurses' safety performance.⁶⁷ Concerning the increasing importance of ethical leaders, our study concludes that ethical leadership is a vital factor influencing employees' outcomes, such as workplace safety perception. With this, ethical leaders take care of the combined interests of all the workers. It makes employees follow the moral code of conduct. Ali et al⁶⁸ states that ethical leaders possess the quality to share moral content with their workers. It describes the productive role of organizational media quality in promoting

a leader's relationship with their employees. Besides setting personal goals, media quality encourages employees to share negative and positive constructs. It makes the employees perform their duties by following the leaders' directions.⁶⁹ It increases firms' information-sharing activity by making the employees ethically shape their actions.⁷⁰ Indeed, the previous studies support our analysis, where our results concluded a positive association between ethical leadership, workplace safety perception, and media quality (ie, H1 and H2).

Furthermore, our findings also confirmed that ethical leaders influence the organization's communication environment. It promotes the notion that information inside the organization facilitates the compliance of moral knowledge and behavior.⁴⁵ In healthcare, ethical leadership enables employees to express their needs through personalized care plans and knowledgeable approaches. At the organizational level, effective communication is essential in preventing healthcare issues and interventions. Most organizations adopted effective communication strategies during the pandemic to enhance the employee's interpersonal skillsets. Díaz-Silveira et al⁷¹ suggest that leaders maintain a healthy practice by ensuring effective communication to prioritize the close relationship between the leaders and employees. Effective communication provides the communication expectation of the supervisor regarding the firm's ethical practices. Supervisory communication spreads the expected value through moral and ethical shared perception, manifesting an ethical climate. Owing to the critical role of ethical leadership, our findings are supported by Goswami et al⁷² who state that the perception of the organizational members of the moral code influences the supervisor's communication. Hence, concerning the significance of media quality, communication climate, and supervisory communication, our results accept H3, H4, and H (5, 5a, 6, 6a, 7, 7a) through recording positive results.

Furthermore, the literature addition broadens the scope of the study by examining the relationship between moral attentiveness, ethical leadership, and workplace safety. Moral sensitivity is a fundamental factor that helps the individual recognize moral issues. Ethical leaders pay attention to the employees' moral direction by taking notice of ethical problems. They promote the approach of self-conscious moral orientation.⁷³ Moral attentiveness is a persuasive phenomenon that enhances individual moral efficacy and safety perception. Leaders in the healthcare department, particularly the nurses, play a dominant role in ensuring the safety of the hospital. The nurses look up to experienced colleagues and leaders for safety compliance⁴⁷ (ie, H8). Consequently, based on these study results, we conclude that all the hypotheses are significantly supported and accepted.

Conclusion

Occupational fatalities have threatened the world's health safety. Ethical leadership supports the nursing profession concerning individuals' and organizations' safety. Hence, today, it has become essential to identify and understand the underlying factors influencing working safety perception. This fundamental study shapes the prospect of workplace safety by significantly advancing knowledge on ethical leadership. Its focus is on the exhibition of ethical leadership in the hospitality sector of Pakistan, especially among nurses. With this, it presents significant outcomes where the study findings showed a positive relationship between ethical leadership, workplace safety perception, media quality, communication climate, and supervisory communication. Also, it revealed a positive mediating and moderating role of media quality, communication climate, supervisory communication, and media attentiveness, respectively. Progressively, this paper opens a new avenue for future workers by emphasizing the role of ethical leadership in workers' safety perception. As ethical leadership is an essential tool for improvement in media quality and communication climate, the findings suggest that organizations embrace the significance of ethical leadership in satisfying the employees' concern for safety.

Study Limitation

Despite bringing meaningful outcomes, this study has a few limitations. The study highlights these limitations to help scholars in designing future studies. Firstly, the finding of the study is limited to the healthcare sector. The research was conducted in the Pakistan nursing sector. Due to this, it was unclear to what extent our study findings could be generalized. Thus, this data limitation implies a causal relationship between ethical relationships and workplace safety perception. It is recommended that the study be conducted in various organizational settings, such as the chemical, construction, and pharmaceutical industries. Additionally, only a limited number of influencing factors were considered in this study to understand the concept of ethical leadership. Therefore, multiple variables can be studied under this topic.

The study can be tested under the framework of different factors, which can result in a significant outcome. Lastly, the article examines the same unit or group for analysis (ie, nurses). So, future researchers can critically study the other groups to find whether ethical leadership is effective towards workplace safety perception.

Practical Implications

The study findings provide significant implications for stakeholders, nursing administration, practitioners, policymakers, and organizational leaders. In the article, the notion of safety perception confirms that leaders should be aware of the needs of the nursing units. The results show that healthcare management should plan accordingly to empower their nurses on safety perception. Furthermore, the study results profoundly shed light on ethical leadership enhancing the organization's communication climate. This study will assist the organization's members understand the importance of ethical leadership in establishing effective communication during turbulent times. Through the leadership lens, this study suggests leaders develop an efficient communication connection with their subordinates. It provides strategic advice to organization management, policymakers, and practitioners to implement meaningful, empathetic, and self-directive communication guidelines to facilitate employee performance. Indeed, this study directs the nursing administration to adopt effective strategies for communication to achieve workplace safety goals.

Moreover, it suggests that leaders should clearly state their expectations, moral visions, and goals with their employees. The well-designed standards raise the moral intensity of the individuals' thus making them exhibit high moral attentiveness. During COVID-19, nursing services demanded organizations adopt new approaches with clinical ethics and moral cues. It made the nursing organization rethink its ethical considerations, values, and interests and take procedures managing moral issues. It also suggests that healthcare institutions establish moral cues for the employee's guidance to build connectedness further. The study advises organizations to pay attention to their employees' moral concepts to become morally attentive personnel by reaping the benefits of morality. This ethically intense situation will enhance the employee safety perception. Given the organization's prosperity, all these recommendations play an integral role in restoring the employee perception of safety under the positive model of ethical leadership.

Data Sharing Statement

The datasets obtained and analyzed during the current study are available from the corresponding author on reasonable request via email.

Ethics Approval and Informed Consent

This study was approved by the ethical committee of the School of Management, Nanjing University of Posts and Telecommunications. This study adheres to the Helsinki declaration. Participates in this research voluntarily and conduct anonymously. The informed consent was obtained from the study participants.

Consent for Publication

The details in the present study can be published, and that the persons providing consent have been shown the article contents to be published.

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Author Contributions

All authors made substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; took part in drafting the article or revising it critically for important intellectual content; agreed to submit to the current journal; gave final approval of the version to be published; and agree to be accountable for all aspects of the work.

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Disclosure

The authors report no conflicts of interest in this work.

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