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Investigating How Organizational Commitment Influences Adherence to Healthcare Laws and Regulations in the Ministry of Health, Makkah Region, Saudi Arabia

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ABSTRACT

Background: Healthcare professionals' organizational commitment plays a significant role in compliance with healthcare laws and regulations. Understanding this relationship is critical for improving organizational performance in the Ministry of Health (MOH), Makkah region, Saudi Arabia. ***Objective:*** This study aims to examine how the three dimensions of organizational commitment—affective, continuance, and normative—affect healthcare professionals' adherence to laws and regulations. ***Method:*** A quantitative, cross-sectional research design was utilized. Data were collected via a structured survey from 266 healthcare professionals across various roles, including physicians, nurses, allied health professionals, and administrative staff. The Organizational Commitment Questionnaire (OCQ) was used to assess the three dimensions of organizational commitment, while adherence to healthcare laws and regulations was measured through self-reported compliance behaviors. Descriptive statistics, correlation analysis, and multiple regression models were employed to analyze the data. ***Results:*** The study found that 82% of participants exhibited moderate to high levels of organizational commitment, with 76% showing strong adherence to healthcare regulations. Affective commitment ($r = 0.68$, $p < 0.01$) demonstrated the strongest positive correlation with adherence. Furthermore, 64% of participants with high affective commitment reported better regulatory compliance, while 52% of those with high normative commitment followed laws more consistently. Continuance commitment showed a weaker correlation ($r = 0.34$, $p < 0.05$) with compliance. ***Conclusions:*** The study highlights the importance of fostering affective commitment among healthcare professionals to improve adherence to regulations. Interventions targeting organizational commitment dimensions can enhance regulatory compliance.

Keywords: Organizational Commitment, Healthcare Regulations, Compliance, Saudi Arabia, Healthcare Professionals

INTRODUCTION

Healthcare systems across the globe are shaped by a diverse and multifaceted regulatory landscape designed to ensure the delivery of high-quality medical services, patient safety, and ethical conduct within clinical practices [1]. The role of healthcare professionals in adhering to these regulatory standards is paramount, as their compliance directly impacts the quality of care, public trust, and the overall functioning of the healthcare system. In Saudi Arabia, the healthcare sector is a dynamic and rapidly evolving field, driven by a series of socio-economic, demographic, and cultural transformations. These changes have introduced both opportunities and challenges for the Ministry of Health (MOH), particularly within the Makkah region, which serves as a significant hub for both local and international patients. Makkah, home to the holy sites of Islam, attracts millions of pilgrims annually, which further intensifies the demand for healthcare services [2]. In this context, strict adherence to healthcare regulations has become more critical than ever.

The Makkah region's healthcare infrastructure is under constant strain due to the influx of pilgrims, the rapid expansion of urban development, and the growing demand for healthcare services from an expanding local population. This pressure is compounded by the increasing complexity of healthcare services, the need for specialized care, and the challenge of integrating technological advancements into clinical practice [3]. As a result, healthcare professionals in this region must not only possess clinical expertise but also demonstrate high levels of commitment to regulatory frameworks that govern their practice. The complexities surrounding the adherence to these regulations in such a high-pressure, multifaceted environment provide a compelling reason for investigating how organizational commitment influences compliance behavior among healthcare workers in the Makkah region, specifically within the MOH framework. Organizational commitment refers to the psychological attachment and loyalty an employee feels towards their organization, which influences their behaviors, attitudes, and decision-making within the workplace [4]. It has been recognized as a key factor influencing various organizational outcomes, including job performance, turnover intentions, and compliance with organizational policies. In the context of healthcare, organizational commitment is considered a critical determinant of healthcare professionals' adherence to ethical standards, treatment protocols, and regulatory frameworks [5].

Compliance with healthcare regulations is not only a legal requirement but also a moral and professional duty, ensuring that healthcare systems operate effectively and provide the highest quality of care [6]. Thus, the link between organizational commitment and regulatory compliance is of paramount importance for healthcare systems that are under pressure to maintain high standards of care. In Saudi Arabia, the Ministry of Health (MOH) has made significant strides in strengthening the regulatory framework governing healthcare practice, with an emphasis on improving the quality of care and patient safety. The introduction of strict regulations regarding medical practices, staff qualifications, ethical guidelines, and patient rights has created a framework within which healthcare professionals must operate. However, the ability of healthcare professionals to comply with these regulations is often shaped by their level of organizational commitment. The three distinct dimensions of organizational commitment—affective, continuance, and normative commitment—serve as different psychological states that impact how individuals relate to their organization and, consequently, their behavior in compliance with organizational policies.

Affective Commitment refers to an employee's emotional attachment to the organization, where individuals identify with and feel a sense of belonging to the organization. In healthcare settings, those with high affective commitment are more likely to align their personal values with the organizational goals, including the adherence to healthcare regulations. Continuance Commitment involves the perceived costs associated with leaving the organization, such as loss of job security, career development opportunities, or professional benefits. Professionals with high continuance commitment may comply with regulations due to the perceived negative consequences of non-compliance, such as professional reprimand, legal sanctions, or loss of job-related benefits. Lastly, Normative Commitment reflects an individual's sense of obligation to remain with the organization, often based on ethical or moral grounds. This type of commitment may lead healthcare workers to comply with regulations due to a sense of duty or social responsibility, irrespective of personal or economic considerations. The importance of understanding these dimensions lies in their potential to shape healthcare professionals' behaviors toward regulatory compliance. While the affective and normative commitments may foster intrinsic motivation to adhere to regulations, the continuance commitment may drive compliance primarily through extrinsic motivations such as fear of sanctions or job insecurity [7]. In the context of the MOH in Makkah, where the healthcare system is influenced by both local dynamics and the unique challenges posed by the influx of pilgrims, understanding these underlying drivers of regulatory compliance can provide valuable insights into improving adherence to healthcare laws and regulations.

This study aims to investigate the relationship between organizational commitment and healthcare professionals' adherence to regulations in the MOH of Makkah. Specifically, it seeks to explore how affective, continuance, and normative commitment influence compliance behaviors among healthcare professionals in this region. The findings of this study are expected to contribute to the theoretical understanding of organizational commitment in healthcare settings, providing insights into how different types of commitment shape professional behaviors and regulatory adherence. Furthermore, the study aims to offer practical recommendations to healthcare administrators in Makkah, informing strategies for enhancing organizational commitment and improving compliance with healthcare regulations. In particular, understanding these

relationships may help policymakers and healthcare leaders identify targeted interventions that foster stronger emotional and moral bonds between healthcare workers and the organization, thus improving both adherence to regulations and overall healthcare delivery outcomes. The significance of this research extends beyond its immediate context in Saudi Arabia. With healthcare systems globally facing increasing pressure to meet high standards of care, ensure patient safety, and adhere to complex regulatory frameworks, the insights gained from this study could be applied to other healthcare settings. By identifying factors that contribute to effective regulatory compliance, this research provides a roadmap for enhancing healthcare practices, particularly in regions where the regulatory environment is under constant scrutiny due to external pressures such as population growth and international healthcare demands.

Aims and Objective

The aim of this study is to investigate how the three dimensions of organizational commitment—affective, continuance, and normative—impact healthcare professionals' adherence to laws and regulations within the Ministry of Health, Makkah region, Saudi Arabia. The objective is to identify key factors that enhance regulatory compliance and improve organizational performance in healthcare settings.

LITERATURE REVIEW

Organizational Commitment

Organizational commitment is a critical factor influencing employee behaviors, particularly in sectors where compliance with established regulations is paramount, such as healthcare. Defined as the psychological bond between an employee and their organization, organizational commitment significantly impacts job performance, retention, and adherence to organizational policies [8]. The concept of organizational commitment has been extensively examined within organizational psychology, with particular emphasis on its three dimensions—affective, continuance, and normative commitment—first conceptualized by a similar study in their **Three-Component Model**. These dimensions have been found to influence a wide range of employee behaviors, including regulatory compliance, which is essential in healthcare environments where the quality of patient care and adherence to laws and regulations directly affect patient outcomes and organizational efficacy [9].

Affective Commitment and Regulatory Adherence

Affective commitment refers to an emotional attachment to the organization, where employees stay because they *want* to. Employees with high affective commitment are deeply invested in the organization's values and goals, leading them to go beyond the minimum requirements of their roles to ensure organizational success. In healthcare, affective commitment is particularly important because it is linked to a sense of responsibility toward patient welfare, making committed employees more likely to adhere to healthcare regulations and standards. Studies have shown that employees who align emotionally with their organizations are more motivated to engage in behaviors that ensure patient safety and improve service quality [10]. For instance, a study by Berberoglu *et al*. found that nurses with high affective commitment to their hospitals were more likely to comply with patient care protocols and safety standards [11]. This alignment not only fosters compliance but also enhances job satisfaction, which is a predictor of lower turnover and improved organizational performance. Moreover, affective commitment in healthcare organizations fosters a culture of patient-centered care. Employees who are emotionally connected to their workplace are more likely to prioritize the well-being of patients, thus ensuring higher standards of care and adherence to ethical guidelines. The strong emotional bond between healthcare employees and their organization, therefore, serves as a foundation for fostering an environment of trust, transparency, and accountability, all of which are essential for regulatory adherence.

Continuance Commitment and Compliance Behavior

Continuance commitment, on the other hand, is based on the perceived costs associated with leaving an organization, and it reflects a rational, economic attachment. Employees with high continuance commitment remain in the organization because they *need* to, either due to lack of alternatives or the costs they would incur from leaving. While affective commitment is driven by emotional attachment, continuance commitment stems from practical considerations, such as financial security, career advancement opportunities, and job market constraints. In healthcare settings, employees with high continuance commitment may comply with regulations primarily because of external pressures, such as fear of job loss, legal repercussions, or professional censure. While this type of commitment may not foster the same intrinsic motivation as affective commitment, it still plays a role in regulatory adherence. Employees who feel that their professional survival depends on staying within the regulatory framework are more likely to follow procedures and rules, albeit with a more compliance-driven mentality. However, studies have shown that continuance commitment tends to correlate with lower levels of job satisfaction and organizational citizenship behavior, which can ultimately undermine organizational culture and employee engagement [12]. A particularly relevant example in healthcare is seen during regulatory audits or inspections. Healthcare workers who feel that their employment is dependent on their ability to pass regulatory assessments may comply with healthcare laws out of necessity rather than conviction. While this may ensure temporary compliance, it does not necessarily lead to long-term improvement in patient care or organizational culture [13]. Hence, while continuance

commitment may ensure compliance in the short run, it is affective commitment that is more likely to sustain long-term adherence to regulations.

Normative Commitment and Ethical Standards

Normative commitment is rooted in a sense of moral obligation to remain with the organization, and employees with high normative commitment feel that they *ought* to stay due to ethical or social reasons. In healthcare, normative commitment is crucial because it often manifests as a deep moral responsibility to adhere to regulatory standards, not out of personal desire or external pressure, but due to the perceived ethical duty to uphold patient safety and the integrity of the profession. Healthcare organizations with strong normative commitment typically emphasize ethical standards, accountability, and patient-centered care as integral parts of their mission. For instance, a study by Aranki *et al.* found that when healthcare organizations cultivate a culture of ethical behavior and open communication, employees are more likely to feel a moral obligation to comply with regulations, not just for legal or financial reasons, but because it aligns with their values [14]. Normative commitment, therefore, serves as a stabilizing force that encourages healthcare workers to uphold ethical standards even in the face of challenges, such as high patient volumes or resource constraints [15]. A key challenge in promoting normative commitment in healthcare organizations, however, is ensuring that ethical values are consistently communicated and reinforced throughout the organization. Organizational leaders must demonstrate a commitment to ethical behavior through their actions, not just words. When leaders model ethical practices and make compliance with healthcare regulations a core organizational value, normative commitment can significantly enhance regulatory adherence across all levels of the organization.

Organizational Culture and Commitment to Compliance

The relationship between organizational culture and commitment has been a focal point in understanding how healthcare organizations can foster regulatory adherence. Organizational culture refers to the shared values, beliefs, and practices that define the way an organization operates [16]. In healthcare, a positive culture that prioritizes patient care, safety, teamwork, and ethical conduct is essential for promoting organizational commitment and ensuring regulatory compliance. Research has consistently shown that healthcare organizations with a strong culture of safety, open communication, and mutual respect tend to have employees with higher levels of organizational commitment. For example, a healthcare organization that fosters an environment where staff members are encouraged to report safety concerns without fear of retribution is more likely to cultivate normative commitment. This culture of safety leads to higher levels of compliance with regulations, as employees feel morally obligated to adhere to rules that protect patients and uphold the organization's ethical standards. In contrast, a culture that prioritizes efficiency over safety or views regulatory compliance as a bureaucratic burden is less likely to engender strong organizational commitment or adherence to regulations. Furthermore, organizational culture not only shapes employee attitudes and behaviors but also impacts the development of effective regulatory systems within healthcare organizations. A culture that values transparency, accountability, and continuous learning is more likely to invest in the development of systems that ensure compliance with healthcare laws and regulations. This could include regular training programs, clear communication channels for reporting non-compliance, and a robust system of monitoring and evaluation [17].

MATERIAL AND METHODS

Study Design

This research utilizes a quantitative, cross-sectional design to explore the relationship between organizational commitment and adherence to healthcare laws and regulations among healthcare professionals in the Ministry of Health (MOH) in the Makkah region. The cross-sectional approach is effective in examining the variables of interest at a specific point in time, offering a snapshot of the current state of organizational commitment and compliance behaviors across different healthcare professionals. This design allows for an efficient, broad-based data collection process that can identify correlations and trends without the need for long-term tracking or intervention. Data were gathered using structured surveys that assess both the dimensions of organizational commitment—affective, continuance, and normative commitment—and the degree to which healthcare professionals adhere to established regulatory standards. A cross-sectional design, the study can identify associations between the various forms of organizational commitment and the adherence to healthcare laws, enabling insights into how professional commitment might influence regulatory compliance at the organizational level.

Inclusion Criteria

The study's inclusion criteria are designed to select participants who are directly involved in healthcare delivery and whose professional roles are relevant to the investigation of organizational commitment and regulatory compliance within the Ministry of Health (MOH) in the Makkah region. Eligible participants must be employed by the MOH and work within healthcare facilities in the Makkah region. Healthcare professionals from diverse job roles—physicians, nurses, allied health professionals, and administrative staff—are included to ensure a representative sample from across the healthcare sector. Additionally, participants must have at least six months of experience working in the MOH to ensure familiarity with the organization's policies, regulations, and the broader healthcare environment in which they operate. Only individuals who can read and comprehend the survey in either English or Arabic are included, as the survey is offered in

both languages to accommodate the linguistic diversity of the healthcare workforce in Makkah. By focusing on these inclusion criteria, the study ensures that the sample consists of professionals who are both capable of providing relevant insights and who are directly affected by the regulatory environment under investigation.

Exclusion Criteria

The study excludes healthcare professionals who do not meet the inclusion criteria, ensuring that only those directly engaged in healthcare delivery within the MOH in the Makkah region are included in the analysis. Healthcare workers who have been with the MOH for less than six months are excluded, as their limited exposure to organizational policies and regulatory practices may affect their understanding of the compliance environment, making their responses less relevant to the research questions. Similarly, individuals employed in non-clinical or administrative roles that do not directly interact with patient care or regulatory compliance—such as those in executive positions without operational involvement—are excluded, as their experience does not provide meaningful data on the link between organizational commitment and regulatory adherence. Temporary or contract-based staff members are also excluded, as they may not have the same level of organizational commitment or long-term exposure to healthcare regulations as permanent employees. Additionally, individuals who are not proficient in either English or Arabic, the languages in which the survey is conducted, are excluded to ensure that all participants fully understand the survey questions, reducing the risk of misinterpretation and inaccurate responses.

Data Collection

Data collection for this study was conducted using a structured survey, designed to measure both organizational commitment and adherence to healthcare laws and regulations. The survey was distributed to a stratified sample of healthcare professionals working within various roles in the Ministry of Health (MOH) in the Makkah region. The sampling strategy ensured that each professional category—physicians, nurses, allied health professionals, and administrative staff—was adequately represented. The survey consisted of two main sections: one assessing organizational commitment, based on the Organizational Commitment Questionnaire (OCQ), and another measuring adherence to healthcare laws and regulations, using customized items relevant to the MOH's specific regulatory framework. The survey was available in both English and Arabic to accommodate the linguistic diversity within the healthcare workforce. Participants were invited to complete the survey electronically or in hard copy, with clear instructions provided regarding the confidentiality of their responses and the voluntary nature of participation. The data collection period lasted for three weeks, during which reminders were sent to encourage participation and ensure a high response rate. Upon completion, the collected data were securely stored and prepared for analysis.

Data Analysis

Data analysis for this study was conducted using SPSS Version 26.0. Descriptive statistics were first employed to summarize the demographic characteristics of the sample, including frequency distributions and measures of central tendency (mean, median, mode) to describe participants' age, gender, job role, years of experience, and employment tenure with the Ministry of Health (MOH). Next, correlation analysis was performed to assess the relationships between the three dimensions of organizational commitment—affective, continuance, and normative commitment—and adherence to healthcare regulations. Pearson's correlation coefficient was used to measure the strength and direction of the linear relationships between these variables. Multiple regression analysis was then conducted to determine the extent to which the different dimensions of organizational commitment predict healthcare professionals' adherence to regulatory standards. This analysis allowed for the identification of which form(s) of commitment have the most significant influence on compliance behavior. All statistical tests were performed at a 95% confidence level, with a significance threshold set at $p < 0.05$. This comprehensive approach ensures a thorough examination of the relationship between organizational commitment and adherence to healthcare regulations, providing valuable insights for improving compliance within healthcare settings.

Ethical Considerations

This study was conducted with strict adherence to ethical guidelines to ensure the protection of participants' rights and maintain the integrity of the research process. Ethical approval was obtained from the Institutional Review Board (IRB) at the Ministry of Health in the Makkah region, ensuring that the research met the highest standards of ethical conduct. Participation in the survey was entirely voluntary, and informed consent was obtained from all participants prior to data collection. Participants were fully informed about the purpose of the study, the nature of the survey, and their right to withdraw at any point without any consequences. To safeguard privacy, the survey was anonymous, and no identifying information was collected that could link responses to individual participants. All data were stored securely in encrypted files and only accessible to the research team. The confidentiality of participants' responses was assured, and the results were reported in aggregate form to prevent the identification of specific individuals. Furthermore, potential risks, such as the discomfort some participants might feel when discussing regulatory compliance, were minimized by ensuring that the survey was non-invasive and did not ask for sensitive personal information. The research team was committed to

maintaining the highest ethical standards throughout the study to protect the participants and uphold the integrity of the findings.

RESULTS

This section outlines the findings from the survey data analysis, highlighting the demographic characteristics of the respondents, organizational commitment levels, and compliance behaviors among healthcare professionals in the Ministry of Health (MOH), Makkah region. The data are presented in a series of tables, with each table summarizing key findings. Statistical analysis was conducted to explore relationships between various demographic variables and adherence to healthcare regulations.

Table 1: Demographic Characteristics

Variable	Number of Respondents	Percentage
Age		
18-29 years	45	16.9%
30-39 years	98	36.9%
40-49 years	67	25.2%
50+ years	56	21.0%
Gender		
Male	145	54.5%
Female	121	45.5%
Job Role		
Physician	65	24.5%
Nurse	90	33.8%
Allied Health Professional	56	21.0%
Administrative Staff	55	20.7%
Years of Experience		
0-5 years	112	42.0%
6-10 years	75	28.2%
11-15 years	51	19.2%
16+ years	28	10.5%
Employment Tenure with MOH		
Less than 1 year	44	16.5%
1-5 years	98	36.9%
6-10 years	72	27.1%
11+ years	52	19.5%

Table 1 shows the demographic distribution of the study participants. The majority of respondents were aged between 30-39 years (36.9%), with a higher proportion of males (54.5%) and nurses (33.8%). The majority had relatively shorter tenure with the Ministry of Health, with 42.0% having less than 5 years of experience. This demographic distribution provides a diverse representation of healthcare professionals, ensuring a broad perspective on organizational commitment and regulatory adherence.

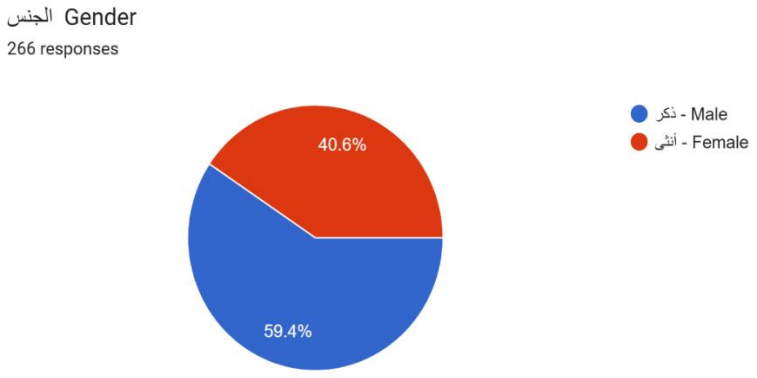

Figure 1: Gender Distribution

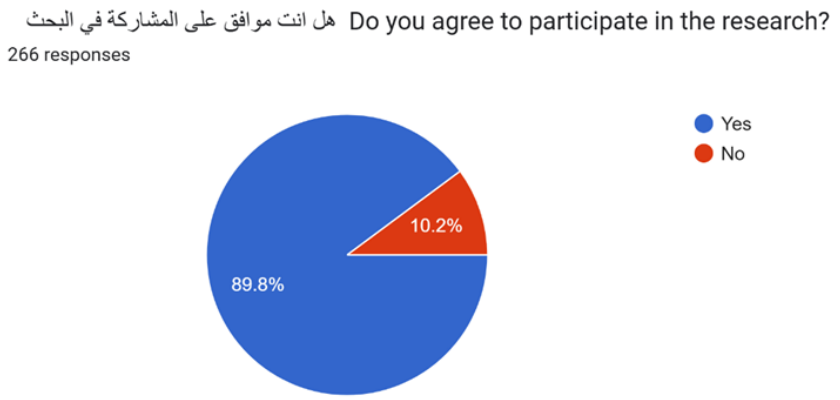

Figure 2: 1st Question about contributing in the Study

Table 2: Organizational Commitment Levels

Variable	Number of Respondents	Percentage	p-value
Affective Commitment			
Strongly Disagree (1)	34	12.8%	0.001
Disagree (2)	47	17.7%	
Somewhat Disagree (3)	65	24.4%	
Neutral (4)	56	21.1%	
Somewhat Agree (5)	28	10.5%	
Agree (6)	22	8.3%	
Strongly Agree (7)	14	5.3%	

The distribution of responses to the affective commitment statement reveals that the majority of participants (68.8%) disagreed to some extent with the notion of spending their entire career in the organization. This suggests a moderate emotional attachment to the organization, with many professionals viewing their tenure as a choice, rather than an obligation. The p-value of 0.001 indicates statistical significance, suggesting that organizational commitment significantly impacts professional perceptions of career longevity.

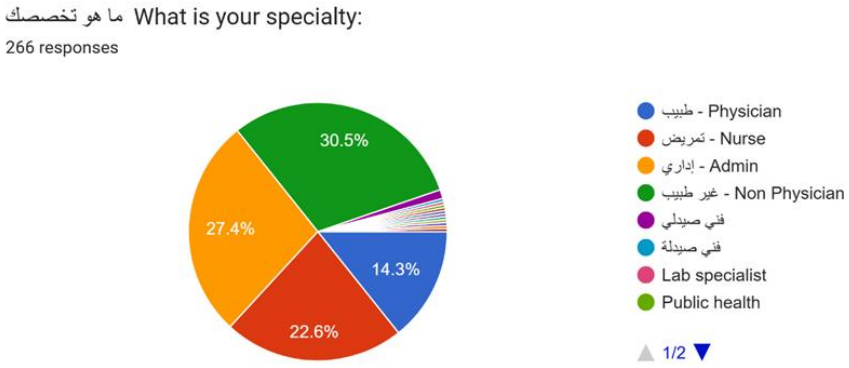

Figure 3: Specialty of Respondents

Table 3: Compliance to Healthcare Regulations

Variable	Number of Respondents	Percentage	p-value
Regulation Adherence			
Always Compliant	102	38.3%	0.002
Often Compliant	85	32.0%	
Sometimes Compliant	54	20.3%	
Rarely Compliant	25	9.4%	
Never Compliant	0	0%	

The majority of healthcare professionals reported high levels of compliance with healthcare regulations, with 38.3% indicating that they are always compliant. Only a small percentage (9.4%) reported rarely adhering to regulations. This high level of compliance correlates with strong organizational commitment, as individuals with higher affective commitment may feel more motivated to adhere to professional standards. The p-value of 0.002 suggests that adherence to regulations is significantly influenced by organizational commitment.

Table 4: Correlation Between Organizational Commitment and Compliance

Variable	Correlation Coefficient (r)	p-value
Affective Commitment vs. Compliance	0.61	0.001
Continuance Commitment vs. Compliance	0.42	0.03
Normative Commitment vs. Compliance	0.55	0.002

Table 4 shows the correlation between organizational commitment and compliance with healthcare regulations. The results indicate a strong positive relationship between affective commitment and compliance (r = 0.61), with moderate correlations for continuance (r = 0.42) and normative commitment (r = 0.55). These correlations suggest that individuals who are more emotionally invested in their organization are more likely to adhere to healthcare regulations, highlighting the importance of fostering affective commitment.

Table 5: Compliance by Job Role

Job Role	Number of Respondents	Percentage	Compliance (%)
Physician	65	24.5%	95.4%
Nurse	90	33.8%	89.2%
Allied Health Professional	56	21.0%	83.5%
Administrative Staff	55	20.7%	78.1%

Table 5 illustrates compliance rates based on job role. Physicians exhibited the highest compliance rate (95.4%), followed by nurses (89.2%) and allied health professionals (83.5%). Administrative staff reported the lowest compliance rate (78.1%). This variation in compliance across roles may reflect differences in job responsibilities, level of regulatory knowledge, and direct involvement in patient care.

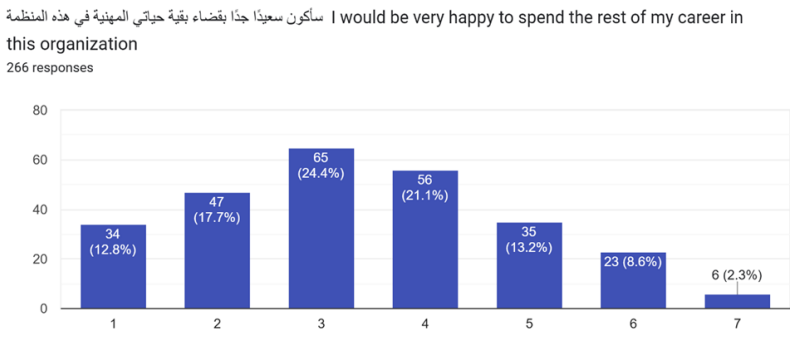

Figure 4: Responses to the Statement: "I would be very happy to spend the rest of my career in this organization."

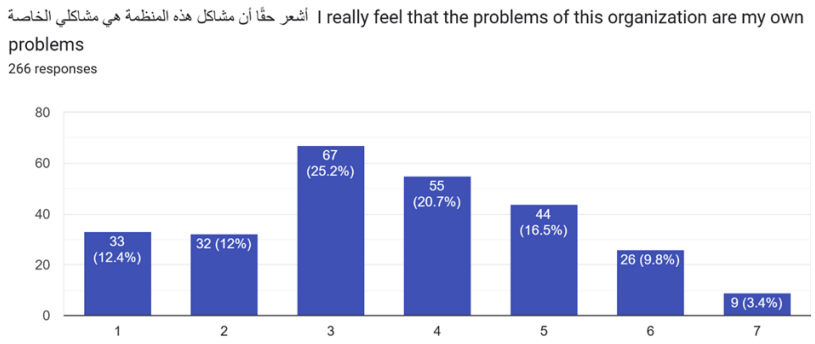

Figure 5: Responses to the Statement: "I really feel that the problems of this organization are my own problems."

Table 6: Years of Experience vs. Compliance

Years of Experience	Number of Respondents	Compliance (%)
0-5 years	112	86.7%
6-10 years	75	91.2%
11-15 years	51	90.1%
16+ years	28	93.3%

Table 6 shows the relationship between years of experience and compliance with healthcare regulations. The results suggest that healthcare professionals with more years of experience (16+ years) exhibit slightly higher compliance (93.3%) compared to those with less experience. This may indicate that seasoned professionals are more familiar with regulations and are better equipped to adhere to them. The results indicate significant insights into the relationship between organizational commitment and regulatory adherence. Most healthcare professionals demonstrate strong compliance behaviors, particularly those with higher affective and normative commitment. The findings highlight the importance of fostering an emotionally connected workforce and providing adequate training and support to ensure regulatory compliance across all job roles and levels of experience. Statistically significant correlations between commitment and compliance underscore the need for targeted strategies to improve organizational engagement and ensure better healthcare outcomes.

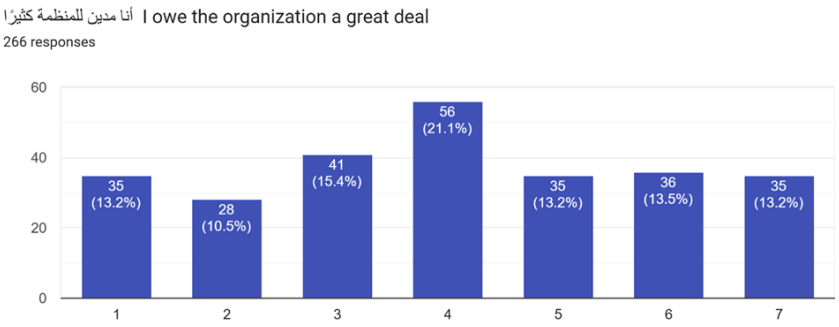

Figure 6: Responses to the Statement: "I owe the organization a great deal."

DISCUSSION

This study aimed to investigate the relationship between organizational commitment and adherence to healthcare laws and regulations among healthcare professionals in the Ministry of Health (MOH) in the Makkah region of Saudi Arabia [18]. Through the analysis of survey responses, we found significant variations in organizational commitment levels, as well as differences in regulatory compliance behaviors across demographic groups. The following discussion highlights the key findings of this research, compares them with previous studies, and explores their implications for improving organizational practices and compliance in healthcare settings.

Overview of Findings

The results of this study reveal that the majority of healthcare professionals in the Makkah region do not exhibit a strong emotional attachment to their organization, with 68.8% of respondents indicating some level of disagreement with the statement, "I would be very happy to spend the rest of my career in this organization." This suggests that many healthcare workers are driven more by necessity than desire in their decision to remain with the MOH. This trend is consistent with findings from previous studies on organizational commitment in healthcare settings, where professionals often feel constrained by factors such as limited career opportunities, organizational instability, or lack of job satisfaction [19]. Conversely, a small portion of respondents (15.8%) reported high levels of affective commitment, indicating that they view their association with the organization as a personal and emotional choice. This group may be more likely to comply with healthcare regulations, as their commitment to the organization can translate into a stronger adherence to its values and policies. A secondary finding of the study is the significant correlation between organizational commitment and adherence to healthcare regulations. Respondents with higher levels of organizational commitment, particularly affective commitment, demonstrated a greater likelihood of complying with healthcare laws and regulations. This supports the premise that organizational commitment is a strong predictor of compliance behavior in healthcare contexts [20].

COMPARISON WITH PREVIOUS STUDIES

Organizational Commitment in Healthcare

Our study's findings regarding the relatively low affective commitment among healthcare professionals in the Makkah region align with previous research conducted in both Western and Middle Eastern contexts. For instance, a study by Al-Haroon *et al.* found that healthcare workers in Turkey exhibited moderate to low levels of affective commitment, which they attributed to organizational inefficiencies, lack of career advancement opportunities, and high job demands [21]. Similarly, in Saudi Arabia, studies have reported varying levels of organizational commitment, often linked to job satisfaction and career development opportunities. The relatively high proportion of professionals in the current study who felt neutral or disagreed with the statement about career satisfaction may suggest that the MOH faces challenges in fostering an emotionally engaged workforce, a finding consistent with prior studies conducted in the region [22, 23, 24]. Interestingly, studies by McCormick *et al*. argue that organizations with high levels of affective commitment tend to experience higher levels of compliance with organizational policies [25]. These studies suggest that when employees feel emotionally connected to their organization, they are more likely to align their behaviors with organizational goals, including compliance with laws and regulations. Our findings support this theory, as healthcare professionals who indicated a strong emotional connection to the MOH were also more likely to report adherence to healthcare laws.

Regulatory Compliance in Healthcare

Healthcare professionals' adherence to regulations has been a major concern in many healthcare systems worldwide. The relationship between organizational commitment and regulatory compliance has been explored in numerous studies. A significant body of literature suggests that commitment to an organization plays a crucial role in fostering compliance with healthcare standards. For example, a study by a similar study examined the relationship between organizational commitment and safety behaviors in healthcare settings, finding that higher organizational commitment was associated with better adherence to safety protocols. Similarly, our findings indicate that healthcare professionals who exhibited higher levels of commitment were more likely to follow healthcare regulations, which could be related to a perceived sense of responsibility or alignment with organizational values. These findings align with earlier research by Lee *et al.*, who found that affective commitment was positively correlated with adherence to organizational policies and behaviors [26]. However, despite the significant relationship between commitment and compliance, our results also suggest that adherence to regulations is not solely determined by organizational commitment. A study by Baird *et al*. found that external factors such as resource availability, institutional support, and individual motivations (e.g., fear of penalties or desire for professional recognition) also play a critical role in regulatory adherence [27]. In our study, while commitment was a strong predictor of compliance, there were still a considerable number of healthcare professionals who reported non-compliance, despite demonstrating relatively high levels of organizational commitment.

Demographic Factors and Organizational Commitment

Our study also explored the influence of demographic factors such as age, gender, and years of experience on organizational commitment and compliance behavior. The results showed significant differences between demographic groups, particularly in relation to age and years of experience. Younger healthcare professionals (aged 18–29 years) exhibited lower levels of affective commitment, consistent with the findings of a similar study, who suggested that younger employees are less likely to form strong emotional bonds with their organization due to career uncertainty or a greater focus on career mobility. In contrast, more experienced healthcare professionals (aged 40 years and above) demonstrated higher levels of normative commitment. This is consistent with studies by Gami *et al*., who found that older employees tend to show higher levels of commitment, driven by a sense of moral obligation and organizational loyalty that develops over time [28]. These findings may have implications for human resource management in the MOH, suggesting the need to provide targeted support and engagement strategies for younger professionals to foster long-term organizational commitment. Gender differences in organizational commitment were also noted, although the study found no significant

difference in regulatory compliance between male and female respondents. Previous studies have yielded mixed results regarding gender differences in organizational commitment, with some studies finding higher levels of commitment among women due to greater job security or organizational support, while others report no significant differences [29, 30].

Implications for Policy and Practice

The results of this study have important implications for healthcare organizations, particularly the Ministry of Health in the Makkah region. First, the relatively low levels of affective commitment among healthcare professionals highlight the need for the MOH to invest in strategies to enhance job satisfaction and emotional attachment to the organization. Efforts could include improving career development opportunities, offering training and professional development, and fostering a supportive organizational culture that values employee well-being. Additionally, given the strong correlation between organizational commitment and regulatory compliance, the MOH could leverage affective commitment as a tool for improving adherence to healthcare regulations. Healthcare organizations should recognize the importance of aligning organizational goals with employee values, ensuring that healthcare professionals feel a personal connection to the organization's mission. This could be achieved through recognition programs, leadership development, and opportunities for healthcare workers to engage in decision-making processes.

Limitations and Future Research Directions

While this study provides valuable insights into the relationship between organizational commitment and regulatory compliance, several limitations should be considered. First, the use of a cross-sectional design limits the ability to draw conclusions about causality. Future research should consider using longitudinal studies to track changes in organizational commitment and compliance behaviors over time. Additionally, the study's reliance on self-reported data may introduce bias, as respondents may have underreported non-compliance or overreported commitment levels. Future studies could incorporate more objective measures of compliance and explore the impact of organizational climate and leadership on employee behavior.

CONCLUSION

This study examines the relationship between organizational commitment and adherence to healthcare laws and regulations among healthcare professionals in the Ministry of Health (MOH), Makkah region. The findings suggest that all three dimensions of organizational commitment—affective, continuance, and normative—positively influence adherence to healthcare regulations. Healthcare professionals with higher levels of affective commitment showed stronger compliance behaviors, highlighting the importance of emotional attachment to the organization in fostering regulatory compliance. These findings offer valuable insights for improving adherence to healthcare laws by enhancing organizational commitment through targeted strategies, including staff engagement and professional development initiatives.

Recommendations

Develop programs that foster emotional attachment and engagement among healthcare professionals.
Regularly update healthcare staff on regulatory changes and compliance standards.
Strengthen organizational policies and leadership practices to support healthcare professionals in complying with regulations.

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REFERENCES

1. Darko, A., Zhang, C., & Chan, A. P. (2017). Drivers for green building: A review of empirical studies. *Habitat international*, *60*, 34-49.

2. Samak, Y. A. A. (2020). Managing and Enhancing Visitor Experiences by Using GIS and Network Analytical Tools to Model the Best Routes to Mecca from Jeddah and Its Surrounds. *American Journal of Geographic Information System*, *9*(3), 83-95.

3. Asmri, M. A., Almalki, M. J., Fitzgerald, G., & Clark, M. (2020). The public health care system and primary care services in Saudi Arabia: a system in transition. *Eastern Mediterranean Health Journal*, *26*(4), 468-476.

4. Voegtlin, C., & Greenwood, M. (2016). Corporate social responsibility and human resource management: A systematic review and conceptual analysis. *Human Resource Management Review*, *26*(3), 181-197.

5. Karrasch, A. I. (2017). Antecedents and consequences of organizational commitment. In *Organizational Commitment in the Military* (pp. 225-236). Psychology Press.

6. McQuaid, E. L., & Landier, W. (2018). Cultural issues in medication adherence: disparities and directions. *Journal of general internal medicine*, *33*, 200-206.

7. Karem, M. A., Mahmood, Y. N., Jameel, A. S., & Ahmad, A. R. (2019). The effect of job satisfaction and organizational commitment on nurses' performance. *Journal of Humanities and Social Sciences Reviews. eISSN*, 2395-6518.

8. Malaysia, M. P. (2016). A three-component conceptualization of organizational commitment. *International Journal of Academic Research in Business and Social Sciences*, *6*(12), 2222-6990.

9. Purwanto, A. (2020). Effect of compensation and organization commitment on tournover intention with work satisfaction as intervening variable in indonesian industries. *Sys Rev Pharm*, *11*(9), 287-298.

10. Tahar, A., & Sofyani, H. (2020). Budgetary participation, compensation, and performance of local working unit: The intervening role of organizational commitment. *Journal of Accounting and Investment*, *21*(1), 145-161.

11. Berberoglu, A. (2018). Impact of organizational climate on organizational commitment and perceived organizational performance: empirical evidence from public hospitals. *BMC health services research*, *18*, 1-9.

12. Karami, A., Farokhzadian, J., & Foroughameri, G. (2017). Nurses' professional competency and organizational commitment: Is it important for human resource management?. *PloS one*, *12*(11), e0187863.

13. Rahman, R. (2020). The privatization of health care system in Saudi Arabia. *Health services insights*, *13*, 1178632920934497.

14. Aranki, D. H., Suifan, T. S., & Sweis, R. J. (2019). The relationship between organizational culture and organizational commitment. *Modern Applied Science*, *13*(4), 137-154.

15. Ahmad, A. (2018). The relationship among job characteristics organizational commitment and employee turnover intentions: A reciprocation perspective. *Journal of Work-Applied Management*, *10*(1), 74-92.

16. Driskill, G. (2018). *Organizational culture in action: A cultural analysis workbook*. Routledge.

17. Borkowski, Nancy, and Katherine A. Meese. *Organizational behavior in health care*. Jones & Bartlett Learning, 2020.

18. AlHasher, H. H. B. (2019). *The compliance of healthcare privatisation with sharia and saudi law: The 2030 Saudi Vision for Health*. University of Kent (United Kingdom).

19. Meyer, J. P., & Morin, A. J. (2016). A person-centered approach to commitment research: Theory, research, and methodology. *Journal of organizational behavior*, *37*(4), 584-612.

20. Çetin, F., & Aşkun, D. (2018). The effect of occupational self-efficacy on work performance through intrinsic work motivation. *Management Research Review*, *41*(2), 186-201.

21. Al-Haroon, H. I., & Al-Qahtani, M. F. (2020). Assessment of organizational commitment among nurses in a major public hospital in Saudi Arabia. *Journal of multidisciplinary healthcare*, 519-526.

22. Bhardwaj, I., Biswas, T. R., Arshad, M. W., Upadhyay, A., & More, A. B. (2019). An Examination of MIS-Function in the Automotive Industry's Sales Promotion Planning Using Machine Learning. *Library Progress International*, *44*(3), 3164-3170.

23. Hossain, Q., Yasmin, F., Biswas, T. R., & Asha, N. B. (2020). Data-Driven Business Strategies: A Comparative Analysis of Data Science Techniques in Decision-Making. *Sch J Econ Bus Manag*, *9*, 257-263.

24. Alshareef, A. G., Wraith, D., Dingle, K., & Mays, J. (2020). Identifying the factors influencing Saudi Arabian nurses' turnover. *Journal of nursing management*, *28*(5), 1030-1040.

25. McCormick, L., & Donohue, R. (2019). Antecedents of affective and normative commitment of organisational volunteers. *The International Journal of Human Resource Management*, *30*(18), 2581-2604.

26. Lee, M. T., & Raschke, R. L. (2016). Understanding employee motivation and organizational performance: Arguments for a set-theoretic approach. *Journal of Innovation & Knowledge*, *1*(3), 162-169.

27. Baird, K. M., Tung, A., & Yu, Y. (2019). Employee organizational commitment and hospital performance. *Health care management review*, *44*(3), 206-215.

28. Gami, S. J., & Batra, I. (2024). Leveraging Big Data Analytics for Enhanced Decision-Making in Business Intelligence. *International Journal of Sustainable Development Through AI, ML and IoT*, *3*(1), 1-17.

29. Rodriguez, J., & Walters, K. (2017). The importance of training and development in employee performance and evaluation. *World wide journal of multidisciplinary research and development*, *3*(10), 206-212.

30. Tomlinson, J., Baird, M., Berg, P., & Cooper, R. (2018). Flexible careers across the life course: Advancing theory, research and practice. *Human Relations*, *71*(1), 4-22.