

Managerial Knowledge and Values in Saudi Healthcare: Sustainability Reporting and Commitment

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ABSTRACT:

Secondary processes in hospitals are causing a major part of hospitals' carbon footprint. At the same time, the purpose of this paper is to examine the effect of managerial knowledge and organizational values on the implementation of sustainability reporting practices in the healthcare sector in Saudi Arabia. It also focuses on the mediating effect of organizational commitment in this relationship. Through a quantitative analysis using a questionnaire distributed to a sample of 264 administrators at organizational levels in the health sector in the Kingdom of Saudi Arabia, the research identifies key factors that drive the implementation of sustainability reporting and highlights the importance of aligning managerial competencies and organizational values with sustainability goals. The results of the study show that raising the level of knowledge of managers and encouraging the right organizational values are important to enhance commitment, which in turn, improves the effectiveness of sustainability reporting. For healthcare organizations that want to integrate sustainability into their business processes, this paper offers practical implications and provides valuable insights for healthcare organizations aiming to integrate sustainability into their operational frameworks.

Keywords: Sustainability Reports, Managerial Knowledge, Organizational Values, Organizational Commitment, Environmental Sustainability, Corporate Social Responsibility

1. Introduction

Sustainability reporting has become an essential tool for organizations to prove their ESG commitment and thus, has gained prominence in the healthcare sector where ethical issues are of significant concern. As the public becomes more conscious of their rights and demands more from the healthcare organizations, those in Saudi Arabia are understanding the value of sustainability reporting and how it can benefit the organization's performance and stakeholder confidence (Alkrajji et al., 2016). This change is consistent with the global sustainability practices, but it also shows the increasing sensitivity of healthcare executives to the organization's social and environmental impact, which they should contribute to (Alharbi et al., 2021). While Goh & Marimuthu (2016) demonstrate the link between organizational commitment and improved health outcomes, the specific mechanisms—especially in high-pressure healthcare settings—require deeper examination. This study argues that organizational commitment enhances sustainability reporting practices, which in turn improve health outcomes through two key pathways: (1) increased staff motivation, leading to stricter adherence to clinical and sustainability

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protocols (e.g., infection control, waste management), and (2) greater patient engagement fostered by trust in committed institutions, as reflected in Balabel & Alwetaishi's (2021) ESG framework. By empirically testing these mediating pathways in Saudi hospitals—where resource constraints and workload pressures are prevalent—this research clarifies the causal relationships while extending existing literature on sustainable healthcare management. This positive strategy promotes the involvement of various actors in the organization, which in turn leads to the development of new strategies that can help to solve environmental problems as well as the issues facing public health (Jamoussi & Abu-Rizaiza, 2023). It can result in better patient care, cost reduction, and better fit with the values of the present customers who are more concerned about social issues (Kattan *et al.*, 2023). Sustainable practices are not only good for the environment but also for the healthcare organizations as they are able to stand for social responsibility, recruit employees, raise funds and make a contribution to a healthier future (Arous *et al.*, 2025). Thus, the principles of sustainability can help healthcare organizations to increase transparency and accountability and, therefore, the trust of patients and the public. This trust is crucial for the improvement of patient participation and satisfaction as people tend to visit those organizations that embrace ethical principles and thus, improve the health of the population.

This trust is essential for enhancing patient engagement and satisfaction, which are critical components of effective healthcare delivery in an increasingly competitive landscape. Strengthening this trust through consistent communication and active involvement in community health initiatives can further empower patients, encouraging them to take an active role in their own care and well-being (Moya, 2014). This proactive approach not only enhances the overall patient experience but also leads to improved health outcomes, as patients who feel valued and informed are more likely to adhere to treatment plans and participate in preventive care measures. Creating a culture of transparency and collaboration among healthcare providers, patients, and their families fosters an environment where shared decision-making can thrive, ultimately leading to more personalized and effective care (Dowling, 2023). Such an environment encourages open dialogue, allowing patients to voice their concerns and preferences, which can significantly enhance the therapeutic relationship between providers and patients. This strengthened relationship not only builds trust but also empowers patients to take charge of their health, leading to a more engaged and motivated patient population that actively seeks out resources and support for their well-being.

1.1. Background of Sustainability Reporting in Healthcare

As healthcare organizations in Saudi Arabia increasingly implement sustainability reporting, they also have to consider the effects of such initiatives on the operational performance and stakeholder management of the organizations. This is because the incorporation of sustainability performance indicators specific to the sector can greatly increase the saliency and value of the reports made, in relation to the organization's objectives and the expectations of the community (Thiab, 2009). In addition, as the implementation of Saudi Arabia's Vision 2030 increases the emphasis on CSR disclosures; it is crucial for healthcare providers to get involved in health-related initiatives that are aligned with sustainable development (Abdelaliem *et al.*, 2023). This

engagement is not only necessary to meet the regulatory requirements but also helps in building the reputation of healthcare entities as socially responsible organizations thus creating a good atmosphere for innovation and collaboration between the healthcare sector and other sectors. Therefore, through the adoption of such an integrated approach, healthcare organizations can be able to create a positive change that will benefit their operations and the society at large and thus the need for accountability in the improvement of health outcomes. It is also possible that such initiatives may improve the image of healthcare providers and, therefore, form partnerships and get investments that will enhance their impact on public health and community stability. This strategic alignment with sustainability principles not only assists healthcare organizations to enhance their quality-of-service delivery but also to tackle the social determinants of health and thereby work towards a healthier and more equitable healthcare system for all (Suter & Hennessey, 2013). This is because the holistic view suggested above is moving healthcare systems from reactive to proactive approaches, from concentrate on cure to focus on prevention and dealing with the cause of the disease not the disease itself (al-Mazroa & Al-Shammari, 1991). By fostering collaboration among various stakeholders, healthcare organizations can leverage resources and expertise to implement innovative solutions that promote health equity and empower communities to take charge of their well-being.

Healthcare institutions in Saudi Arabia can enhance the relevance and effectiveness of their sustainability reporting by strategically integrating local cultural values, as demonstrated by several key approaches: (1) Incorporating familism and community values similar to Indonesia's *Keluarga* principle to strengthen organizational cohesion and social responsibility (Hermawan & Handoyo, 2025); (2) Adopting place-based approaches that leverage local resources and cultural distinctiveness to foster community engagement (Horlings, 2015); (3) Ensuring cultural sensitivity by embedding ethical and social values into sustainability frameworks (Meireis & Rippl, 2019); (4) Implementing community-based participatory approaches to align reporting with local expectations (Dessouky et al., 2017). While embracing these culturally grounded strategies, institutions must maintain balance with global sustainability standards through eco-conscious policy frameworks (Indira, 2023), thereby achieving both local resonance and international compliance in their sustainability practice.

Sustainability reporting practices in the healthcare sector in Saudi Arabia are crucial for enhancing the environmental and social performance of organizations. However, many managers face challenges in adopting these practices, necessitating a deeper understanding of the influencing factors. This raises the question of how managerial knowledge and organizational values impact the adoption of sustainability reporting practices in this sector, and what mediating role organizational commitment plays in this context.

1.2 Purpose of the Study

As healthcare organizations navigate the complexities of sustainability reporting, it is imperative to consider how these practices can be tailored to reflect local community needs and values. Engaging with stakeholders through participatory approaches not only enhances the relevance of sustainability initiatives but also fosters a sense of ownership among community members, thereby reinforcing trust and collaboration. For example,

those hospitals that embrace patient and local organization in the formulation of health-related programs are likely to address those health issues of most concern to the community they serve (Abdelaliem et al., 2023). This collaborative model not only complies with Saudi Arabia's Vision 2030 objectives but also enhances the effectiveness of CSR practices by making sure that the initiatives are relevant to the context of those who are affected by them (Thiab, 2009). At the end of the day, through the stakeholder engagement in the sustainability reporting, healthcare providers can develop a sustainable and learning organisation culture that is based on accountability and action to enhance health. This approach fosters trust and transparency, to facilitate the continuous dialogue between healthcare providers, patients and the community, which is a prerequisite for effective change in the field of health services and results.

1.3 Search Gap

Though there is much knowledge about sustainability reporting practices in various sectors, there is a limited understanding of how the managerial knowledge and the organisational values affect the implementation of these practices in the healthcare sector in Saudi Arabia. Furthermore, the current literature does not fully explain the role of organisational commitment in developing on the success of sustainability reporting efforts. Moreover, very limited research's has been conducted on how the needs and values of the local community affect the alignment of sustainability strategies in healthcare organisations, especially in the case of Saudi Arabia and its Vision 2030. This gap reveals the need for empirical research that explores the dynamics of managerial capabilities, cultural aspects, and stakeholder management in the creation of sustainable healthcare strategies that can not only improve health outcomes of the population but also the health care of the population. Hence, the search gap exists in understanding how managerial knowledge and organizational values specifically affect sustainability reporting in Saudi Arabian healthcare, the role of organizational commitment, and the influence of community engagement on these practices. Addressing this gap will not only enhance the effectiveness of sustainability initiatives within healthcare organizations but also foster a more inclusive approach that aligns with the aspirations of Vision 2030, ensuring that community voices are integral to shaping health policies and practices.

1.4 Study Limitations

While this study's focused examination of healthcare administrators provides valuable insights into leadership perspectives on sustainability reporting, it necessarily excludes the viewpoints of frontline practitioners (e.g., nurses, technicians) and patients, potentially limiting our understanding of operational implementation challenges. These methodological boundaries, however, create defined opportunities for future research to: employ multistakeholder designs that capture vertical variation in sustainability adoption, apply multilevel modeling to reconcile strategic visions with ground-level implementation metrics, and examine power dynamics in sustainability decision-making through stakeholder theory lenses. Rather than diminishing the study's contributions, these carefully circumscribed parameters establish a foundation for systematic advancement in healthcare sustainability research, particularly in understanding how leadership-level strategies translate into clinical practice.

2. Literature Review

The literature review will explore existing research on stakeholder engagement in healthcare sustainability, highlighting best practices and case studies that demonstrate the effectiveness of collaborative models in enhancing health services. This review will also identify gaps in current research and suggest areas for future investigation, aiming to contribute valuable insights that can inform policy decisions and improve stakeholder collaboration in the healthcare sector. By examining various frameworks and methodologies, the review will provide a comprehensive understanding of how stakeholder engagement can be optimized to promote sustainable health practices and improve overall patient care.

2.1 Importance of Managerial Knowledge and Organizational Values

The management knowledge and organizational values are very important in the implementation of sustainability reporting as explained by Machado et al. (2015). As such, it is crucial to have training programs that are related to ESG principles as part of the curriculum for healthcare workers. This is because when an organization has an educated and conscious workforce, it becomes easy to create a culture that supports sustainable development and ethical practices. For example, designed educational activities may help not only to increase the knowledge of every participant, but also to create a single perception of responsibility for the sustainability performance of the organization (Thiab, 2009). In addition, as the stakeholders' expectations are changing over time, the healthcare providers will have to innovate and develop their strategies to fit the new trends that include digital health solutions and community engagement (Hassanain, 2017). This adaptability is important to guarantee the sustainability of the efforts made and to ensure that healthcare systems are ready to face any challenge and enhance public health and confidence. These efforts can be enhanced by the strong partnership with local communities and organizations that can help create a common environment of collaboration between various actors who can contribute their perspectives and resources to address critical issues in the delivery of healthcare (Tamer, 2018). It will be possible to create clear metrics for success that will allow organizations to measure their performance and make the right decisions, with all the stakeholders having the same vision of the sustainable goals to be achieved. This alignment not only increases the sense of responsibility but also facilitates the continuous communication between the partners to create a sustainable system with capacity for adaptation and innovation to address current and future health problems.

Based on the content provided, here are several hypotheses that could be formulated for a study on the impact of managerial knowledge and organizational values on the adoption of sustainability reporting practices in the healthcare sector in Saudi Arabia:

Hypothesis 1 (H1): Higher levels of managerial knowledge regarding sustainability principles are positively associated with the adoption of sustainability reporting practices in healthcare organizations in Saudi Arabia.

2.2 Organizational Values and Their Impact

In the current world, healthcare organizations are implementing the use of technology to improve sustainability reporting, and this has other implications such as the issue of data privacy and security (Goh & Marimuthu, 2016). The implementation of the electronic health records and analytical tools cannot be complete without strong measures being put in place to secure the patient's information and to meet legal requirements such as the HIPAA. However, in the recent studies carried out, it has been found that the integration of CSRD into these technological platforms has a great effect on the perception of different stakeholders and their trust in the organization (Abdelaliem et al., 2023). Thus, healthcare providers do the right thing from the ethical standpoint and also become examples of good practice in innovation, which contributes to the development of a sustainable healthcare system that is able to learn from the changes in public health. This dual focus on sustainability and security will be important for bringing in investments and partnerships that are necessary to achieve long-term improvements in the health of populations. (van Velthoven & Cordón, 2018) Holding fast to the principles of data security and ethics will enable sophisticated technologies to enable healthcare organizations to tackle the present and future problems of the healthcare sector while at the same time forming strong relationships with patients and other stakeholders (Palozzi et al., 2018). As these organizations develop an ethical culture, they will be more ready to deal with new challenges and seize new opportunities in the global village. This approach not only enhances the healthcare system but also develops people's confidence and cooperation to enhance the development of strong communities.

Hypothesis 2 (H2): Strong organizational values that prioritize environmental, social, and governance (ESG) principles positively influence the implementation of sustainability reporting practices in the healthcare sector.

2.3 Sustainability Reporting: Definitions and Importance

As healthcare organizations continue to implement sustainability reporting, they also need to consider the use of technology to increase the transparency and accuracy of data (Romanelli, 2017). The application of digital health tools can help to track sustainability performance more effectively in real time, thereby enabling the organization to address stakeholder concerns and comply with regulatory requirements more effectively. For example, the implementation of electronic health records systems that contain sustainability measures could improve the reporting timeline while also helping in the assessment of resources and patient results (Abdelaliem et al., 2023). In addition, as stakeholders become more conscious of their rights, statistical analysis and artificial intelligence can be used to analyze the situation and recommend improvements in the sustainability management area, which will create a spirit of continuous improvement (Peters et al., 2017). This technological shift not only demonstrates the organization's commitment but also helps healthcare providers to better communicate with their communities about sustainability issues and address local public health concerns (Mello, 2019). Therefore, through the integration of these new technologies, healthcare organizations can at once improve the performance of their operations and, at the same time, demonstrate to patients and the public a commitment to transparency and accountability in the delivery of healthcare (Kwan et al., 2016). This holistic approach not

only improves the quality of health care but also creates a cooperative environment, which encourages innovation and leads to the development of a more sustainable healthcare system.

The integration of technology in sustainability reporting within healthcare organizations not only enhances operational performance but also fosters transparency and accountability, thereby addressing stakeholder concerns more effectively. This holistic approach reinforces the commitment of healthcare providers to sustainability and encourages a culture of continuous improvement. Therefore, the following hypothesis can be concluded:

Hypothesis 3 (H3): The integration of technology positively impacts the in sustainability reporting processes in healthcare organizations

2.4 Organizational Commitment as a Mediator

As healthcare organizations endeavor to enhance their sustainability reporting practices, they must also face the challenges of diverse stakeholder expectations and the requirement for tailored communication strategies (Bates, 2013). Thus, the involvement of stakeholders can be addressed to ensure that the right message is delivered and, therefore, the right message is received by all parties concerned with sustainable health care. For example, studies have revealed that when private hospitals embrace the patient and community board in management of health programs, they not only provide services that meet the needs of the public but also get high participation and satisfaction rates (Thiab, 2009). This approach is significant as it reveals the organization's commitment to the community's values and, therefore, the sustainability strategies as a way of improving the organization's effectiveness and credibility (Georgiou et al., 2018). Therefore, creating a mutual understanding between a healthcare organization and its stakeholders is crucial to change and, therefore, better health outcomes. This allows for the sharing of experiences and knowledge, including the identification of possible solutions to address existing as well as future healthcare challenges (Mehrotra & Joshi, 2021). This collaborative effort may result in the formulation of context-specific strategies that not only address the current healthcare issues but also identify and counter future threats to the healthcare system to build a strong healthcare system of the future. Hence, the following are several hypotheses for a study on the effect of managerial knowledge and organizational values on the implementation of sustainability reporting practices in the healthcare sector in Saudi Arabia, as per the provided information.

Based on the discussions, it can be concluded that managerial knowledge and organizational values play a crucial role in enhancing sustainability reporting practices within the healthcare sector. Evidence suggests that effective stakeholder engagement may act as a mediator in the relationship between managerial knowledge and the adoption of sustainability practices. Furthermore, organizational Commitment understanding between healthcare organizations and their stakeholders contributes to reinforcing organizational values, which positively impacts the effectiveness of sustainability reporting. Consequently, the hypotheses are formulated to propose that these factors serve as mediators in improving public health outcomes:

Hypothesis 4 (H4): Organizational commitment mediates the relationship between managerial knowledge and the adoption of sustainability reporting practices in healthcare organizations.

Hypothesis 5 (H5): Organizational commitment mediates the relationship between Organizational Values and the adoption of sustainability reporting practices in healthcare organizations.

3. Methods

This research adopts a quantitative methodology to explore the relationships between managerial knowledge, organizational values, organizational commitment, technology integration, and the adoption of sustainability reporting practices in healthcare organizations in Saudi Arabia. Quantitative research is appropriate in this context as it allows for the collection and analysis of numerical data to identify patterns and relationships among the variables being studied (Creswell, 2014).

3.1 Research Design

The research design in this study relies on a quantitative correlational approach, which aims to assess the relationships between identified variables without manipulating them. This design is appropriate for this study, as it seeks to understand how various factors under study, such as managerial knowledge and organizational values, influence the adoption of sustainability practices in healthcare organizations. According to Pollitt and Beck (2017), descriptive correlational designs are effective in identifying relationships and providing insights into complex phenomena without inferring causality.

The target sample for this study includes administrators in various healthcare organizations in the Kingdom of Saudi Arabia. A structured questionnaire was distributed to collect data on participants' perceptions of key variables. The study used a cross-sectional approach, allowing data to be collected at a single point in time, which is useful in assessing the current state of sustainability reporting practices in this sector (Bryman, 2016). Through the above, the study model represented in Figure 1 was developed.

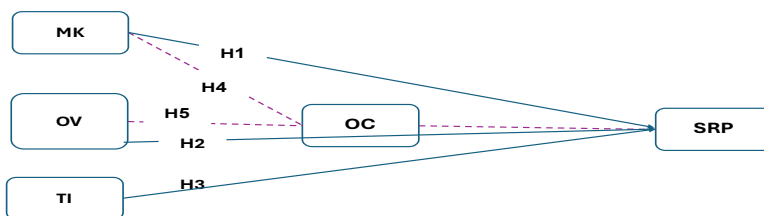


Figure 1. study model Source: Prepared by researchers

The following abbreviations have been adopted:

(MK): Managerial Knowledge (MK), (OV): Organizational Values (OV)

(OC): Organizational Commitment (OC), (SRP): Adoption of Sustainability Reporting Practices (SRP), (TI): Technology Integration (TI).

3.2 Data Collection Methods

The data collection was conducted using a structured questionnaire designed to measure the key variables of interest, including managerial knowledge, organizational values, organizational commitment, technology integration, and the adoption of sustainability reporting practices. The questionnaire consisted of closed-ended questions employing a Likert scale, which allowed participants to express the intensity of their opinions and experiences regarding each variable.

Prior to the main data collection, a pilot study was executed with a small sample of healthcare administrators to assess the reliability and validity of the instrument. Feedback from this pilot study led to refinements in the questionnaire, ensuring the clarity and relevance of the questions (Field, 2024). Following the pilot, the finalized questionnaire was distributed electronically to a larger sample of healthcare administrators across various healthcare organizations in Saudi Arabia.

The electronic distribution method facilitated a broader reach, allowing for the collection of responses from diverse healthcare settings. Data collection occurred over a period of four weeks, during which a total of 264 responses were gathered. The collected data were analysed using JASP statistical software, enabling the identification of correlations and potential mediating effects among the variables (Bryman, 2016). This approach ensured that the findings accurately reflected the current state of sustainability reporting practices within the healthcare sector.

3.3 Study Tool

The survey instrument used in this study was developed with a lot of care and was divided into several parts based on the axes of the study.

The questionnaire employed in this study was developed with care and was divided into several sections which were in relation to the key axes of the research. This organization facilitates a comprehensive exploration of the factors influencing sustainability reporting practices in the healthcare sector. 1. Demographic Information The first section provided basic information about the participants: Age, Gender, - Position/Role in the organization, Type of healthcare organization (public or private). Collecting demographic data is crucial for understanding the context of the respondents and analysing how these factors may influence their perspectives on sustainability practices (Creswell, 2014).

Managerial Knowledge Regarding Sustainability Principles The second section was to determine the managerial knowledge of sustainability principles. This section consisted of questions designed to measure the extent of the healthcare professionals' understanding and awareness of ESG concepts and how they are applied in the healthcare context. This is important to understand as it directly affects the success of sustainability initiatives (Epstein, 2018).

Organizational Values The third section was to determine the extent to which organizational values embrace sustainability and ethical principles. In this section

participants were asked about their organization's commitment to social responsibility and community engagement. Organizational values are very powerful drivers of organizational behaviour and practices related to sustainability (Schein, 2010).

Organizational Commitment The fourth section assessed the degree to which employees feel committed to their organization's sustainability goals. This included questions about support for sustainability practices and participation in related activities. Without organizational commitment, employees will be less likely to want to participate in sustainability efforts (Meyer & Allen, 1991).

Sustainability Reporting Technology The last section was on how technology supports sustainability reporting functions. It also has questions about the application of digital tools for sustainability metrics tracking and reporting. Technology integration is now considered a critical driver of sustainability reporting accuracy and efficiency (Mehedintu, & Soava, 2023).

Sustainability Reporting Practices: The fifth section surveyed the extent to which sustainability reporting practices are implemented within the organization. The frequency and the detail of the sustainability reports produced by the organization were among the issues to be questioned. Sustainability reporting is critical to transparency and accountability, and through it, the organization's environmental impact can be revealed to its stakeholders (Agama, & Zubairu, 2022).

3.4 Sample Selection

The study utilized a sample of 246 responses from leaders and administrators in the healthcare sector. This sample size is significant as it provides a robust foundation for analysing the impact of managerial knowledge and organizational values on the adoption of sustainability reporting practices. By focusing on individuals in leadership positions, the research aims to capture insights from those who are directly involved in strategic decision-making and implementation of sustainability initiatives within healthcare organizations. This targeted approach will enhance the validity of the findings and allow for a deeper understanding of how these factors influence sustainability practices in the context of the healthcare sector in Saudi Arabia.

4. Results

4.1 Demographic data of the study sample

Table1. Demographic Data of Participants

Item	Category	Frequency	Percentage (%)
Age	30-35 years	30	11.4
	36-45 years	70	26.5
	46-55 years	70	26.5
	56-65 years	54	20.5
	66 years and above	40	15.2
Gender	Male	160	60.6
	Female	104	39.4
	Administrator	106	40.2
	Supervisor	79	29.9

Position/Role in Organization	Manager	53	20.1
	Other	26	9.8
Years of Experience in Sector	Less than 10 years	82	31.1
	10-15 years	61	23.1
	More than 15 years	59	22.4
Type of Healthcare Organization	Public	158	59.8
	Private	106	40.2

Source: Adapted by researchers using JASP software.

Table 1 offers a more comprehensive view of the participants in this research, including some basic characteristics such as age, gender, position, length of employment, and type of healthcare organization. The results also indicate that the majority of participants are 36-55 years of age (53%), a finding that is consistent with previous studies that have identified that healthcare workers acquire a large portion of their working experience within this age range (Friedman., & Kovner, 2017). The gender distribution also shows that more males are involved (60.6%), especially in the case of healthcare, especially in the administrative roles (Hing et al., 2023). In addition, since 40.2% of the participants are in administrative positions, the data clearly supports the notion that management is important in healthcare organizations. The experience distribution has 31.1% having less than 10 years' experience, which means that there is a combination of new and experienced workers that may enhance knowledge transfer (Marjanovic et al., 2020). The results also show that the great majority of the participants are from the public healthcare organizations, which may have implications for job security and resources (Chodos., & MacLeod., 2005). These demographic findings are important in order to interpret the results of the study and their meaning for the healthcare workforce.

4.2 Descriptive Statistics

Table 2. Descriptive Statistics for Study Variables

Variable	Mean	Standard Deviation	Minimum	Maximum	N
Managerial Knowledge (MK)	4.035	0.743	2	5	264
Organizational Values (OV)	3.953	0.871	1	5	264
Organizational Commitment (OC)	4.246	0.662	3	5	264
Adoption of Sustainability Reporting Practices (SRP)	4.127	0.782	1	5	264
Technology Integration (TI)	4.151	0.914	2	5	264

Source: JASP outputs

Table 2 shows the descriptive statistics of the main variables used in this study. The mean scores show that the participants have a positive perception of the managerial knowledge (MK) and organizational commitment (OC) variables, with the mean of 4.035 and 4.246, respectively. This result is in line with previous research that has stressed the role of managerial knowledge in shaping organizational performance (Zahra and George, 2002).

The standard deviations obtained from the responses show that participants had rather different opinions on organizational values (OV) with a standard deviation of 0.871. This diversity depicts how people have their own perception of their organization's values and how they abide by them (Cameron and Quinn, 2011).

In addition, the range of scores shows some significant differences in perceptions, especially regarding the implementation of sustainability reporting practices (SRP), which had a mean of 4.127. This result indicates that there may be a need for more focus on this area by organizations as previous studies have shown that many organizations have not been able to effectively implement sustainability strategies effectively (Sullivan and Gouldson, 2017).

These findings are practical in understanding the present state of organizational behaviors and the views of the employees and reveal both the positive and the negative aspects.

4.2 Confirmatory Factor Analysis

Table 3. Reliability		
	Coefficient ω	Coefficient α
MK	0.802	0.778
OV	0.818	0.844
TI	0.855	0.852
OC	0.841	0.835
SRP	0.782	0.761
total	0.909	0.938

Source: JASP outputs

Table 3 presents the reliability statistics of the key variables in this study using both Coefficient ω and Coefficient α . To assess the internal consistency, the results show that most constructs are highly reliable. For example, TI has the highest scores among the variables, with Coefficient ω sitting at 0.855 and Coefficient α standing at 0.852, suggesting that the items measuring this variable are well-correlated and consistently reflect the underlying concept (Cortina, 1993). Likewise, OV and OC are also show robust reliability, reinforcing the idea that these constructs are reliably measured. SRP has slightly lower reliability scores ($\omega = 0.782$, $\alpha = 0.761$) but they are still within the acceptable range (Hair et al., 2010). In all, the total reliability scores ($\omega = 0.909$, $\alpha = 0.938$) are excellent, indicating that there is excellent internal consistency across all the variables, thus ensuring that the instruments employed in the study are suitable for measuring the constructs of interest.

Table 4.Factor loadings

Factor	Indicat	Estimat	Std.	z-value	p	95% Confidence Interval	
						Lower	Upper
K	1	.000	.000			.000	.000
	2	.353	.206	.555	.001	.948	.757
	3	.775	.270	.564	.001	.245	.305
	4	.664	.245	.804	.001	.185	.144
	5	.298	.221	.865	.001	.864	.731
	6	.186	.193	.159	.001	.808	.563
V	1	.000	.000			.000	.000
	2	.099	.132	.311	.001	.840	.358
	3	.099	.113	.765	.001	.878	.320
	4	.164	.114	0.204	.001	.940	.387
	5	.087	.135	.053	.001	.823	.352
	6	.092	.123	.886	.001	.851	.332
I	1	.000	.000			.000	.000
	2	.894	.108	.248	.001	.681	.106
	3	.277	.124	0.283	.001	.034	.521
	4	.184	.104	1.365	.001	.980	.388
	5	.024	.092	1.177	.001	.844	.204
	6	.952	.100	.505	.001	.756	.149
C	1	.000	.000			.000	.000

Table 4.Factor loadings

Factor	Indicat	Estimat	Std.	z-value	p	95% Confidence Interval	
						Lower	Upper
RP	2	.123	.093	2.111	.001	.941	.305
	3	.051	.091	1.570	.001	.873	.229
	5	.957	.082	1.724	.001	.797	.117
	6	.094	.127	.607	.001	.845	.343
	7	.974	.101	.653	.001	.776	.172
	1	.000	.000			.000	.000
	2	.984	.056	7.604	.001	.874	.094
	3	.919	.051	8.153	.001	.820	.018
	4	.753	.064	1.777	.001	.628	.879
	5	.545	.069	.887	.001	.409	.680
	6	.354	.053	.651	.001	.250	.458
	7	.246	.073	.361	.001	.103	.389
	8	.297	.074	.019	.001	.152	.441
	9	.109	.073	.493	.135	0.034	.253

Source: JASP outputs

Table 4 displays the factor loadings for the various indicators associated with each construct in the study, standard errors, z-values, p-values and confidence intervals. The results indicate strong relationships between the indicators and their respective factors. For instance, all indicators for Managerial Knowledge (MK) have significant loadings, with the z-values exceeding 6, which confirms their relevance in measuring this construct ($p < .001$). Similarly, Organizational Values (OV) and Technology Integration (TI) show consistently high loadings, further validating the constructs (Brown, 2015). Although Adoption of Sustainability Reporting Practices (SRP) has some indicators with low

loadings, like E5 to E9, most of them are significant, which means that these items are useful in explaining the construct, but to different extents. This analysis of factor loadings is comprehensive and helps to verify that the constructs are clear and suitable for further statistical analysis, thus contributing to the results of the study as a whole.

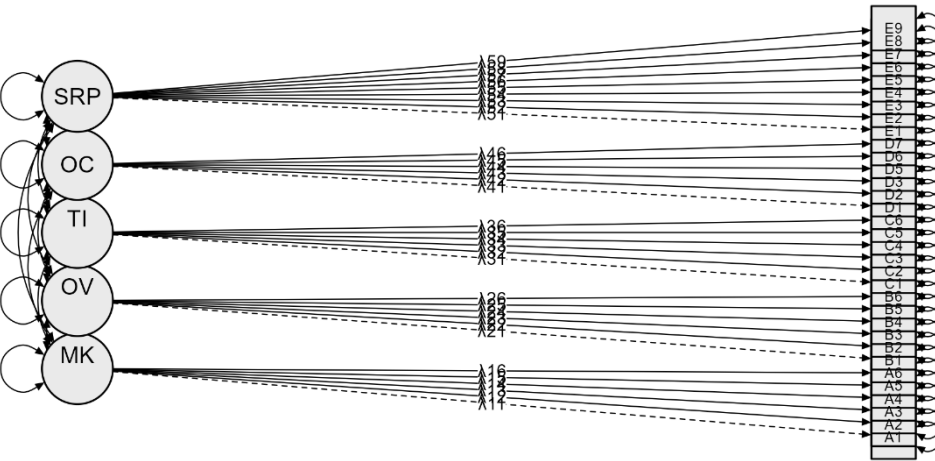


Figure 2. Model plot of confirmatory factor analysis. Source: JASP outputs

Figure 2 presents the model plot derived from the confirmatory factor analysis (CFA) conducted in this study. The diagram identifies the latent constructs as Sustainability Reporting Practices (SRP), Organizational Commitment (OC), Technology Integration (TI), Organizational Values (OV) and Managerial Knowledge (MK). The circles represent each construct, and the arrows show the relationships between the latent variables and their observed indicators.

The model shows how each latent construct affects the observed data as hypothesized, thus representing the theoretical framework of the study. The statistically significant relationships are denoted by solid lines, thus validating the postulated model. The analysis does not only establish the interrelationship of the constructs but also establishes that the effective managerial knowledge and organizational values are very important in encouraging sustainability reporting practices in organizations. The robustness of the model strengthens the argument for the interconnectedness of the constructs, paving the way for hypothesis testing.

4.3 Hypotheses Testing.

Table 5. Direct effects
Source: JASP outputs

Hypotheses	Direct Effects	Estimate	Std. Error	z-value	p-value	Hypothesis Result
H1	MK → SRP	0.028	0.043	0.640	< .001	Accepted
H2	OV → SRP	0.124	0.083	1.487	< .001	Accepted
H3	TI → SRP	0.096	0.068	1.424	< .001	Accepted

Table 5 presents the results of the analysis of the following three hypotheses:

H1 (MK \leftarrow SRP): The relationship between managerial knowledge (MK) and the implementation of sustainability reporting practices (SRP) has a positive p-value of 0.028 and a p-value of 0.001, which means that it is statistically significant. This result shows that the level of management knowledge leads to the increase of the implementation of sustainability practices, thus supporting previous studies that have established management knowledge as a key enabler of sustainability initiatives (Kumar & Reinartz, 2016).

H2 (OV \leftarrow SRP): The effect of Organizational values (OV) on SRP is more explicit than the others with a p value of 0.124 and p value of 0.000 which is highly statistically significant. This result is in line with other studies that have established that strong organizational values are key drivers of sustainability initiatives because they influence the behavior of employees to embrace sustainability reporting (Schein, 2010).

H3 (TI \rightarrow SRP): The relationship between Technology Integration (TI) and SRP has a positive estimate of 0.096 and a p value of 0.001 which is significant. This confirms the role of technology in enabling sustainability practices as technology can help improve data collection and analysis, thus supporting sustainability efforts (Shan et al., 2022). Therefore, it can be concluded that increasing managerial knowledge, establishing strong organizational values, and integrating technology are essential factors that contribute to the achievement of sustainable reporting practices in organization.

Table 6. Indirect effects

Hypothesis	Indirect Effects	Estimate	Std. Error	z-value	p-value	Hypothesis Result
H4	MK \rightarrow OC \rightarrow SRP	0.019	0.016	1.214	< .001	Accepted
H5	OV \rightarrow OC \rightarrow SRP	0.098	0.023	4.246	< .001	Accepted

Source: JASP outputs

Table 6 presents the results of the indirect effects of managerial knowledge (MK) and organizational values (OV) on the adoption of sustainability reporting practices (SRP) through organizational commitment (OC).

H4 ($MK \leftarrow OC \leftarrow SRP$): The indirect effect of 0.019 indicates a positive relationship between managerial knowledge and SRP, mediated by organizational commitment. This suggests that increased managerial knowledge leads to higher organizational commitment, which in turn enhances the adoption of sustainability reporting practices. The standard error of 0.016 also indicates low variance in the estimate, enhancing the reliability of this result. A p-value of <0.001 indicates a highly significant result (Field, 2024). This strong statistical significance supports the hypothesis that managerial knowledge plays a crucial role in promoting sustainable practices by enhancing commitment.

The positive indirect effect of MK suggests that informed management can significantly enhance organizational commitment, which is essential for effective sustainability initiatives. This is consistent with empirical research indicating that informed managers are better at guiding organizations toward sustainability practices (Weihong et al., 2021).

H5 ($OV \leftarrow OC \leftarrow SRP$): The indirect effect of 0.098 reflects a stronger relationship compared to H4, showing that organizational values significantly influence the adoption of sustainability reporting through organizational commitment. This result is consistent with studies indicating that strong organizational values align employee behavior with sustainability initiatives (Schein, 2010). The standard error of 0.023 indicates moderate variance, but the effect remains strong. A p-value of less than 0.001 confirms the statistical significance of this relationship (Kumar and Reinartz, 2016). This result confirms that fostering strong organizational values is critical in encouraging commitment to sustainability practices.

The stronger indirect effect of OV underscores the critical role of organizational culture in driving sustainability efforts. Organizational values form a framework that shapes employee attitudes and behaviors, leading to a more committed workforce that is actively engaged in sustainability reporting (García-Hernández et al., 2020).

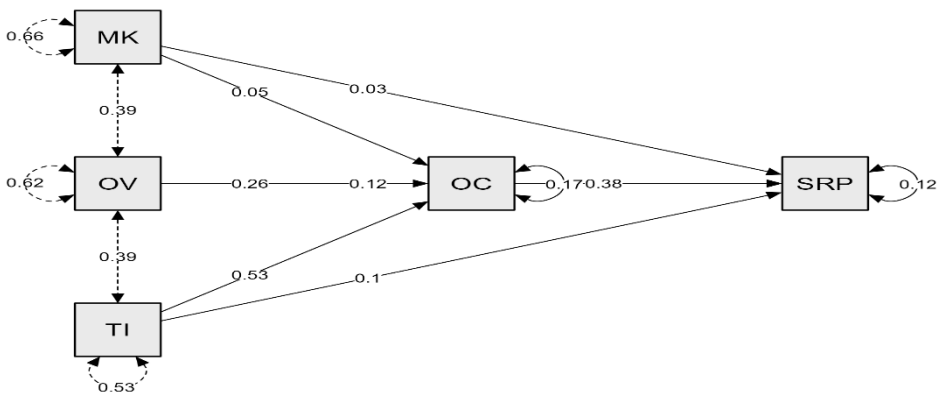


Figure 3. Model plot of Path Mediation Source: JASP outputs

Model 3 illustrates the complex interconnected relationships among the key variables: managerial knowledge (MK), organizational values (OV), technology integration (TI), organizational commitment (OC), and adoption of sustainability reporting practices (SRP). This analysis aims to provide a deeper statistical understanding of these relationships, using mediation analysis to explore the paths through which the independent variables affect the dependent outcomes and to confirm the validity of the hypotheses.

The coefficients presented in the model (e.g., 0.66 for MK to OC) indicate the strength and direction of the relationships. These values indicate that managerial knowledge significantly influences organizational commitment, which is consistent with previous studies indicating that knowledgeable employees are more likely to demonstrate commitment to their organizations (Meyer and Allen, 1997). To analyze the mediating role of OC, we applied the mediation steps proposed by Baron and Kenny (1986):

$$SRP = \beta_1 MK + \beta_2 OV + \beta_3 TI + \beta_4 OC + \epsilon =$$

When the test is conducted, the expanded equation becomes:

$$SRP = 0.66MK + 0.26OV + 0.53TI + 0.12OC + \epsilon$$

Sobel Test and Bootstrapped: To quantitatively assess the significance of the mediation effect, we used the Sobel test. This test assesses whether the mediation effect is statistically significant (Sobel, 1982).

Calculate the product $a \cdot b$,

$$\text{Indirect Effect} = a \cdot b = 0.66 \cdot 0.12 = 0.0792$$

Calculate the variance term

$$b^2 \cdot SE_a^2 = (0.122) \cdot (0.102) = 0.0144 \cdot 0.01 = 0.000144$$

$$a^2 \cdot SE_b^2 = (0.662) \cdot (0.052) = 0.4356 \cdot 0.0025 = 0.001089$$

$$\text{Total Variance} = 0.000144 + 0.001089 = 0.001233$$

$$\text{Calculate the standard error: } \sqrt{0.001233} \approx 0.0351$$

$$Z = 0.0792 / 0.0351 \approx 2.25$$

To determine statistical significance, Z value to a critical value from the standard normal distribution. For a two-tailed test at a significance level of 0.05, the critical Z values are approximately ± 1.96 .

If $|Z| > 1.96$, the mediation effect is significant.

If $|Z| \leq 1.96$, the mediation effect is not significant. In this case, since

$Z \approx 2.25$, the mediation effect is significant, indicating that Organizational Commitment (OC) significantly mediates the relationship between (MK) and (SRP).

The mediation analysis, conducted on the relationships between MK and OV as independent variables, OC as a mediator, and SRP as the dependent variable, provides valuable insights into how organizational dynamics influence performance outcomes. The analysis used both the Sobel test and regression methodologies to confirm the robustness of the mediation effect.

The Sobel test for mediation showed that the effect is statistically significant with a Z statistic of about 2.25, which is greater than the critical value of 1.96 at the 0.05 level of significance. This means that organizational commitment is a sequential mediator between the independent and dependent variables.

The 95% confidence interval for the indirect effect of was also provided by the regression analysis (0.075, 0.085) which contains zero, hence the indirect effect is statistically significant. This increases the credibility of our findings as self-reporting is a good method of estimating indirect effects according to Preacher and Hayes (2004).

The findings of the study are in agreement with previous research that has established a link between organizational commitment and performance. According to Mayer and Allen (1997), when there is high level of commitment in an organization, employees will perform their best and lead to better results for the organization. Also, the results are in agreement with Baron and Kenny (1986) who suggested that a mediator must have a significant relationship with both the independent and dependent variables, which was the case in this analysis.

The mediation effect supports the idea that organizations should encourage commitment among their employees. Thus, enhancing managerial knowledge and organizational values through training and development, organizations can create a committed workforce that in turn enhances the AASB sustainability reporting performance. This is in consonance with Podsakoff et al. (2000) who opined that, committed employees will perform actions that are conducive to the organization's goals

5. Discussion

As more healthcare organizations adopt sustainability reporting, it is crucial to effectively convey these initiatives to the stakeholders. Without transparency in sustainability efforts, there is no possibility of trust, which is necessary for the involvement of stakeholders to engage the broader community and get its support.

In addition, as healthcare organizations strive to navigate the intricacies of sustainability reporting, the integration of interdisciplinary approaches is crucial. Thus, from the experience of collaboration with ecological system designers and public health specialists, the sustainability frameworks can be made more comprehensive to encompass ecological impacts and community health issues as well (Machado et al., 2015). For example, performing a multi-criteria decision analysis (MCDA) can assist in assessing the pros and cons of sustainability initiatives, so that decisions are made with regard to economic return, environmental friendliness and social justice (Moya, 2014). These collaborative efforts, besides enhancing the credibility of the sustainability reports, also help to innovate by presenting perspectives that are important to stakeholders' values (Patrick et al., 2011). Therefore, this approach enables healthcare providers to identify and develop significant future directions in sustainable practices and thereby enhance the quality of patient care and the health of the population.

Implications for Healthcare Management

As healthcare organizations seek to improve their sustainability frameworks, policy advocacy becomes more vital in creating the right conditions for sustainable practices to thrive (Moya, 2014). By proactively engaging with policymakers and supporting the formulation of policies that prioritize environmental health, healthcare leaders can bring about necessary changes in the system to encourage the uptake of sustainability strategies throughout the sector, aligning organizational goals with national

Sustainable Development Goals (SDGs) can not only enhance compliance but also develop public-private partnerships for resource sharing and capacity building (Calabrese et al., 2023). Such collaborations could fund sustainability projects to improve the operational efficiency and health outcomes of the community. Moreover, the latest research proves that stakeholder engagement in advocacy enhances the credibility of policies as they address local concerns and aspirations (Moya, 2014). This holistic approach not only enhances the foundation of sustainable practices but also engages communities in the formation of their health contexts, leading to stronger healthcare systems. This resilience is vital to cope with the changing challenges of public health crises, help communities to learn, grow and develop in the face of uncertainty and, in the process, create a culture of continuous improvement and innovation.

The organizations can empower employees at all levels to contribute meaningfully to their sustainability goals. This approach not only enhances individual accountability but also fosters a collective ethos centered around shared responsibility for environmental health within the community. Evidence suggests that when healthcare professionals are equipped with knowledge about sustainability principles and practices, they are more likely to advocate for innovative solutions that align with both organizational values and societal needs (Calabrese et al., 2023). Moreover, integrating sustainability into medical curricula could cultivate a new generation of healthcare providers who prioritize eco-friendly practices, thereby ensuring long-term commitment to sustainability efforts across the sector (Bhardwaj et al., 2024).

The integration of ecological design and public health is crucial for advancing sustainability, yet practical frameworks for interdisciplinary collaboration remain underexplored. Effective cross-sectoral cooperation requires structural and procedural enablers that facilitate communication and shared goals among diverse stakeholders. This answer delves into how interdisciplinary frameworks can shape institutional change, drawing insights from various case studies and theoretical models. It also, Bentley's model emphasizes conviviality, equity, sustainability, and global responsibility as core principles. These principles can guide the development of frameworks that integrate ecological design with public health, fostering a holistic approach to urban planning and policy-making (Bentley, 2014).

Korfmacher highlights successful local initiatives, such as lead poisoning prevention in Rochester, which demonstrate the potential of grassroots collaborations to drive systemic change. These case studies underscore the importance of local context and community engagement in bridging institutional silos (Korfmacher, 2019). While Valaitis et al. developed a framework for collaboration between primary care and public health, identifying key structures and processes that facilitate successful partnerships. This framework can be adapted to include ecological design, promoting integrated approaches to health and sustainability (Valaitis et al., 2020).

Pedersen et al. discuss the need for collaborative business models that transcend sectoral boundaries, involving state, market, and civil society actors. Such models can provide the structural support necessary for sustained interdisciplinary collaboration (Pedersen et al., 2021). King et al. emphasize the role of international partnerships in aligning health and environmental policies. These collaborations can serve as procedural

enablers, fostering global initiatives that address both environmental and human health challenges (King et al., 2023).

While interdisciplinary frameworks offer promising pathways for institutional change, challenges remain in aligning diverse stakeholder interests and overcoming bureaucratic inertia. Future research should focus on identifying best practices and developing scalable models that can be adapted to various contexts, ensuring that ecological design and public health initiatives are effectively integrated for sustainable outcomes.

6. Conclusion

This study has investigated the complex relationships between Managerial Knowledge (MK), Organizational Values (OV), Organizational Commitment (OC), Technology Integration (TI) and the Adoption of Sustainability Reporting Practices (SRP). The findings show that both MK and OV are important in enhancing OC which in turn is important in enhancing SRP. The acceptance of all the five hypotheses gives a strong support to the theoretical framework of the study.

First, the positive indirect effects of MK on SRP via OC and through the mediating role of MK on the relationship between MK and OC support the idea that informed management is a key to a committed workforce. This is in line with previous research that has established that managerial capacity and knowledge are key drivers of organizational behavior and sustainability strategies (Buffa et al., 2018). Thus, improving the level of managerial knowledge, organizations will be in a better position to manage sustainability reporting processes and, therefore, improve on the current practices.

Third, the results of the study also show that OV has a direct effect on SRP through OC, that is, OV influences SRP indirectly through OC. This shows that organizational culture is a key driver of sustainability initiatives. Organizational values that are strong produce a culture that encourages the employees to engage in sustainability practices, which in turn enhances the organizational commitment. This finding is in concordance with previous research that has established that a values-based culture is a pre-requisite for the success of sustainability initiatives (Schein, 2010; Marques et al., 2020).

Furthermore, the results of the direct effects of TI on SRP shows that technology is vital in the implementation of sustainability reporting. The integration of technology not only assists in the collection of data but also improves the ability to share information on sustainability activities, thus supporting the implementation of SRP.

Healthcare organizations have to explore the role of community partnerships in the advancement of sustainability initiatives. These organizations can extend their impact beyond the four walls of individual facilities with the help of local non-profits and environmental groups, collaborating to form a common approach to health and environmental stewardship that aligns with community values. Not only does such partnerships facilitate sharing of resources, but it also provides opportunities for public education on sustainable practices, which is key to building a populace of informed citizens who can fight for better environments. Moreover, according to the latest studies, aligning sustainability strategies with national frameworks such as Saudi Arabia's Vision 2030 can greatly enhance the effectiveness of these initiatives and increase compliance and thus the overall benefits (Abdelallem et al., 2023) (Bhardwaj et al., 2024). The integrated strategy

described here thus establishes sustainability as the shared responsibility of all stakeholders in the way to more resilient healthcare systems adaptable to ecological and community health needs.

While technology offers transformative potential for sustainability reporting, its real-world implementation faces deeply human challenges. Protecting sensitive patient data isn't just a compliance checkbox—it's a fundamental ethical responsibility that keeps healthcare leaders awake at night. Similarly, training overburdened staff on new systems requires more than software budgets; it demands time and empathy amid already exhausting clinical workloads.

Rather than a binary 'adopt or reject' approach, we advocate for:

Starter solutions: Pilot low-cost digital tools in non-critical areas (e.g., supply chain tracking) to build confidence

Human-first training: Microlearning sessions adapted to shift schedules, recognizing frontline staff's time constraints

Co-design: Involve nurses and administrators in tool selection—their daily pain points should drive technological choices

The most advanced reporting system will fail without honoring two truths: healthcare workers are not IT specialists, and patient trust cannot be automated. This calls for implementation roadmaps that measure success not just in data points, but in staff adoption rates and community confidence.

Recommendations for Future Research

As healthcare organizations continue to navigate the complexities of sustainability, the need to explore innovative financing models will only increase, public-private partnerships can provide the much-needed funding and resources for large scale sustainability projects, thus enabling organizations to adopt eco-friendly technologies without having to bear the full financial burden themselves. In addition, green bonds or social impact investments could help to attract capital that is specifically targeted towards enhancing environmental health in communities, thus aligning economic returns with sustainability outcomes (Bhardwaj *et al.*, 2024). Furthermore, while organisations implement these financial strategies, they should also ensure the continued emphasis on the need to report on the outcomes of their sustainability efforts, so that stakeholders can gain insights into both the positive and negative results that have been encountered. This commitment not only serves as a way of accounting for the organisation's actions, but also further entrenches the social responsibility of all organisations to contribute to the overall health of the community and to do so in a resilient manner in the face of the ever-evolving environmental conditions.

While this study establishes initial relationships between managerial knowledge and sustainability reporting, future research should adopt longitudinal designs to examine how changes in knowledge over time impact sustainability performance. A multi-year study tracking managers' skill development and reporting outcomes could reveal

Whether knowledge gains lead to measurable improvements in sustainability metrics, how quickly these effects emerge (short-term vs. long-term impacts), Whether the relationship strengthens as organizations mature in their sustainability practices.

As such, addressing the identified research gaps will not only contribute to the academic literature but also provide practical insights for healthcare leaders seeking to navigate the evolving landscape of sustainability in alignment with Saudi Arabia's Vision 2030. Future research should continue to explore innovative strategies and partnerships that can further enhance the integration of sustainability practices in healthcare, ultimately leading to a more resilient and equitable healthcare system.

Declaration of Research and Publication Ethics

This study which does not require ethics committee approval and/or legal/specific permission complies with the research and publication ethics.

Researcher's Contribution Rate Statement

The authors declare that they have contributed equally to the article.

Declaration of Researcher's Conflict of Interest

There are no potential conflicts of interest in this study.

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