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# What does it take to achieve healthcare sustainable development?

**Charis Samuel Solomon Koipillai**
*AIMST University*
Email: charis@aimst.edu.my

**Norshahrizan Nordin**
*Universiti Malaysia Perlis*
Email: norshahrizan@unimap.edu.my

**T. Ramayah**
*Universiti Sains Malaysia*
Email: ramayah@usm.my

**Marini Nurbanum Mohamad***
*Universiti Malaya*
Email: marininur@um.edu.my

**Khairul Anuar Mohammad Shah**
*Universiti Sains Malaysia*
Email: khairulms@usm.my

** Corresponding Author*

**Abstract**

**Purpose:** Healthcare sustainable development is rising in popularity as there is a growing number of healthcare facilities seeking means to improve the quality of services. This study aims to identify and provide evidence with reference to the relationship of knowledge management (knowledge growth and knowledge-based decision support) and quality management processes towards healthcare sustainable development.

**Design/methodology/approach:** The methodology of this study used a survey among employees at UniMAP healthcare facility and Smart PLS Version 3.0 for data analysis.

**Findings:** The results of the study identified that knowledge growth and knowledge-based decision support had a significant relationship towards their healthcare sustainable development. However, process improvement and process control did not have a significant relationship towards their healthcare sustainable development.

**Research limitations/implications:** This study provides empirical evidence pertaining to the significance of relationships between quality management processes and knowledge management within a healthcare facility.

**Practical implications:** These empirical findings provide grounding for other healthcare facilities to plan, implement and intensify their knowledge management for heightened healthcare sustainable development.

**Originality/value:** This study established that knowledge-based decision support and knowledge growth is essential within a healthcare facility for their sustainable development. Therefore, healthcare facilities in Malaysia should look at knowledge management as a means towards improving the facility's process flow by improving the employees' ability to access and share the required knowledge and experience for their sustainability.

**Keywords**: Healthcare Sustainable Development, Quality Management Processes, Knowledge Management

## Introduction

As environmental, social, and economic factors are connected to hospital operations, the idea of healthcare sustainable development is growing in popularity (Anderson et al., 2018). However, the healthcare industry has mainly been left on its own, despite the fact that performance requirements and regulations governing operations, social, and environmental issues have become increasingly demanding for most industries (Pantzartzis et al., 2017). As a result, more recent studies are still revealing the connections between healthcare and the environment, society, and economy. Additionally, the healthcare industry has responded by taking ownership of the situation and acting inside healthcare institutions (Rahman, 2018). In the last ten years, healthcare leaders and advocates have acknowledged these issues by bringing to light the healthcare sector's environmental and social impacts, and contribution to healthcare sustainable development (Rodriguez et al., 2020).

Quality management has appeared in many definitions, and presently can be further narrowed down and focused distinctly as quality management processes (Nguyen et al., 2018). Several studies have demonstrated how quality management practices, through process control and continuous improvement, can increase system quality and boost employee and organizational performance (Sadeh, 2017). Furthermore, quality management processes are held to be an innovative method to the manage organizations, given the ever-increasing need to improve healthcare quality and performance. Therefore, increasing number of research has been done on healthcare quality improvement (Ilangakoon et al., 2021). According to Al Ghamdi et al. (2016), billions were spent to improve the healthcare sector worldwide. However, even though a lot of the money have been spent for improvements in the healthcare sector, it is not adequate. Hence, a paradigm shift is needed in the quality of the delivery in the healthcare industry by evaluating their processes to sustain the quality of healthcare services to achieve sustainable development (Zarei et al., 2018). Today, the goals of healthcare sustainable development are gaining in importance and should be a priority to those managing the healthcare facilities. Therefore, quality management processes, knowledge management and healthcare sustainable development goals are three essentially integrated elements for running a healthcare facility efficiently in the modern world. In this research, the applications of quality management processes (process improvement and process control) and knowledge management (knowledge growth and decision support) are sought to be implemented for healthcare sustainable development goals (environmental, economic, and social development).

## Literature Review

### *Quality Management Processes*

Healthcare quality management processes is "the process of managing the entire entailed facility's operation in a worthwhile fashion by applying the various quality measures and standards, so that the healthcare facility functions in a desirable condition" (Hussain et al., 2019). The concepts of Quality and Health has evolved, and even the concept of Quality in Healthcare has also changed (Bris et al., 2016). Healthcare providers are required to incorporate quality management processes within their facility due to its ability in advancing the facility's overall business processes (Ashraf and Ong, 2021). Additionally, it ensures the efficiency of the facility's operations and the appropriate usage of resources for the achievement of healthcare sustainable development (Ahsan and Rahman, 2017). Generally, quality

management processes within the healthcare sector is known for quality improvements and quality control within the facility (Guthmuller et al., 2021).

A trend on the evolution of concepts related to service quality, healthcare and human well-being has been observed in the last few decades among healthcare facilities worldwide (Silva and Fonseca, 2017). In service organisations today, new technologies and strategies are being used to improve processes as they face increasing challenges and hence resulting in improved productivity (Talib et al., 2019). The concept that is used is the concept of process improvement. This concept then gained attention which resulted in more research being done on this area. However, the healthcare sector still faces a lot of challenges to provide their patients quality services. The healthcare sector faces shortage of qualified and experienced doctors and specialists (Voon et al., 2014), ineffective quality services (Zarei et al., 2018), lack of advanced quality equipment (Karamat et al., 2019), heavy costs of expenditure over medical care (Regis et al., 2019) and lack of patient care (Ilangakoon et al., 2021) especially in public healthcare facilities.

Overall, the interest in process improvement is growing in popularity since the year 2000, as the implementation of this concept can improve healthcare performance, improve efficiency and reduce waste in process flow, and improve patient satisfaction (Hallam and Contreras, 2018). Therefore, as an emerging research field, process improvement for enhanced service quality in healthcare sector publications have risen recently (Swarnakar et al., 2021). However, even with the increase in research related to quality management processes in healthcare, there is still gaps in the literature due to limited research on assessing process improvement implementation and the effect on healthcare sustainable development.

Process control is the step undertaken by an organisation in which services are constantly examined, evaluated and perfected to ensure it meets standard specifications and expectations (Narayanamurthy et al., 2018). Thus, process control holds an essential role in the healthcare sector as possible discrepancies or errors in the administering of medical care, could lead to severe ramifications (Akmal et al., 2020). Process control in the healthcare sector is related to the needs of the patients, attaining patients' feedback to improvise, and ensuring that all employees within the facility has a common vision and mission to ensure optimal medical care is administered and the fulfilment of patients' requirements (Shortell et al., 2018). Additionally, some healthcare facilities go the extra mile to ensure they attain certain quality standards, such as ISO 9002 to show their commitment and dedication for ideal healthcare services within the facility. The establishment of standards begins with a clear vision of what ideal services should look like and the set standards are used to monitor compliance within a healthcare facility towards healthcare sustainable development (Voyant et al., 2017).

Additionally, annual benchmarking practices carried out within healthcare facilities help employees determine whether the performance of ongoing processes are stable and ideal by measuring against that of best-in-class healthcare facilities. Therefore, healthcare facilities can identify how the best-in-class achieve those performance levels and utilise information obtained as foundations when setting target strategies towards their sustainable development (Salehi et al., 2018). These days, most healthcare facilities implement process control strategies that is assimilated with quality control strategies for ideal facility-wide quality management processes and to ensure that the facility has all the essential quality tools in place for their sustainability (Ashraf and Ong, 2021). However, there are gaps in literature and empirical evidence pertaining the significance of process control towards healthcare sustainable development in past studies are yet lacking.

***Knowledge Management***

In the healthcare industry, medical knowledge is critical, therefore healthcare facilities are increasingly concerned about the competition related to intangible knowledge (Barros et al., 2020). Furthermore, efficiency and effectiveness of healthcare facilities necessitate seamless knowledge management that enables and encourages knowledge growth and decision support between different actors within a healthcare network (de Vasconcelos Gomes et al., 2021). Thus, the management of knowledge concerning healthcare information can lead to cost efficiency, quality improvement, faster and dependable service (Nagasubramanian et al., 2020). Although healthcare facilities recorded vast amounts of operational data, it lacks appropriate knowledge management means to analyse and process it for their sustainable development (Myllärniemi et al., 2012; Alrahbi et al., 2021).

Knowledge growth is generally known to improve facility-wide effectiveness and performance by focusing on knowledge development, organization, sharing and leveraging (Assem and Pabbi, 2016). Additionally, according to Alrahbi et al. (2021), knowledge growth is essential to establish optimal resource utilization, improve communication among employees and for the continuous enhancement of service quality and patient care. Over the years, the knowledge needs within healthcare facilities have steadily increased and transformed (Oliva et al., 2019). Therefore, new kinds of knowledge are vital to identify the facility's know-how (existing knowledge), in addition to their capability to combine and apply other resources (tangible or intangible) for exponential knowledge growth and the sustainable development of a healthcare facility (Paoloni et al., 2020).

Additionally, since healthcare is a knowledge centered industry, the management of knowledge is particularly important (Hosseini et al., 2019). Therefore, knowledge growth in terms of patients' care, teaching and further research within healthcare facilities that encourages value creation and competitive advantage is key for healthcare (Rodriguez et al., 2020). However, despite breakthroughs in medicine due to recent interest in knowledge growth (Karamitri et al., 2020) and the potential of knowledge growth being addressed in various literatures, it is clear there is a movement toward sustainable healthcare (Pantzartzis, Edum-Fotwe and Price, 2017; Pinzone et al., 2016), and empirical research in this field has been rather scarce and requires further examination (Rodriguez et al., 2020).

Presently considerable research has been dedicated to examining knowledge based decision support by proposing its various attributes within healthcare facilities. Along those lines, Swarnakar et al. (2020) highlighted that top management should encourage employees within a healthcare facility to be aware of both the internal and external settings for changes, opportunities, trends, and risks to ensure the facility has shared values and beliefs when making decisions that affect the facility. Additionally, via knowledge-based decision support, healthcare employees have the support of top management to introduce new problem solving ideas and access to knowledge is made available to all employee (Rodriguez et al., 2020). This enables healthcare employees to utilise available knowledge and make fitting decisions or changes for the betterment of the facility in addition to assisting medical practitioner or employees across various departments (de Vasconcelos Gomes et al., 2021). Based on Alrahbi et al. (2021), knowledge-based decision support encourages discussions and knowledge sharing across various departments before changes are made to internal operations for the support and better understanding of all healthcare employees in addition to paving the path towards the healthcare facility's sustainable development.

Also, according to Abdallah (2020) the sustainable development of individual healthcare facilities is a requirement for their long-term existence as public services providers. However, the presence of inadequate knowledge-based decision support at will affect key activities in terms of operations planning, clinical decisions and patient flow (Nisar et al., 2021). Though,

various previous studies have addressed knowledge-based decision support at various levels of implementation and support; however, a knowledge gap remains (Williams and Radnor, 2021).

***Healthcare Sustainable Development***

The success of healthcare facilities depends a lot on the equal focus of environmental, economic, and social developments (Nicolaescu, 2018). World Health Organization (WHO) declared that it is essential that health related initiatives to facilitate in sustainable development (World Health Organization, 2012). However, Alliance for Natural Health, proposed a definition of healthcare sustainable development more wholly as: "A complex system of interacting approaches to the restoration, management and optimisation of human health that has an ecological base, that is environmentally, economically and socially viable indefinitely, that functions harmoniously both with the human body and the non-human environment, and which does not result in unfair or disproportionate impacts on any significant contributory element of the healthcare system" (Alliance for Natural Health, 2008).

Therefore, these days, there is extra attention is towards the significance of sustainable development in many countries. Despite many that agree on the significance of healthcare sustainable development, there is yet a single, agreed upon definition (Khan et al., 2018). There are several past research that have been conducted on issues of sustainable development in the context of healthcare (Seror, 2001; Townend et al., 2009; Smith, 2012; Rodriguez et al., 2020). However, these literatures have established that there is no standard or generally accepted set of sustainability indicators (metrics). According to the literature reviewed by Guthmuller et al. (2021), healthcare sustainable development can be classified as: "energy consumption; waste; water consumption; hazardous and toxic materials; food and pharmaceuticals; procurement; air emissions; patients; employees; public opinion; social and community". In this study, the classifications by Buffoli et al. (2013) and Guthmuller et al. (2021) will be utilised and categorised into environmental, economic, and social developments to embody healthcare sustainable development.

An analysis of these criteria within healthcare facilities show that most healthcare facilities are trying to comply with international standards related to the environment in terms of health and safety in services (Sindhwani et al., 2022). Additionally, these standards recommend basic compulsory requirements and critical requirements to set best practices so that healthcare facilities can be "best-in-class" in terms of their environmental developments (Singh, 2019). Furthermore, environmental development strategies are activities that cut the use of resources, recycling activities, using renewable resources, protection, and restoration of environment (Sauvé et al., 2016). Although many past literatures have investigated means to improve healthcare facilities and their environmental sustainability, yet, limited empirical studies have provided clear criterions to identify the levels of environmental development strategies within the healthcare facility setting (Dixit et al., 2019).

Sustainability as a key instrument for the healthcare industry has shifted the focus to sustainable development, in terms of environmental, economic, and social issues (Kroezen et al., 2018). The measure of economic development in past literature was based mainly on a healthcare facility's financial performance, however, recent literatures have identified that economic development in healthcare should include activities that promote economic success rather than focusing on financial results only (Brekke et al., 2016). Additionally, according to Sagha Zadeh et al. (2016) as the focus on adaptation for economic development within healthcare facilities continues, the facilities need to identify the strategies that will provide advantages and value to resource conservation and health. If these economic development plans are implemented earlier in the operations and maintenance of the healthcare facility, it could result in reduced operative cost, lesser wastage, and overall savings (Guthmuller et al., 2021).

Social development has also attracted the interest of academicians and practitioners. Largely, social development within the healthcare context is related to" the quality of life and pursues the realization of human well-being" (Montalban-Domingo et al., 2018). Thus, in healthcare facilities, the view of all parties who affect or are affected by issue of social development should be investigated. More research should seek the view of healthcare employees that make healthcare facilities socially sustainable (Pullman and Wikoff, 2017). Social development is important for healthcare facilities because it affects the needs of patients, which directly affects their life quality (Khosravi and Izbirak, 2019). According to WHO (1948), Health is described as "not only the absence of disease or infirmity but also that people's physical, mental and social well-being is in a good state". Therefore, the ecosystem of a healthcare facility will influence the wellbeing of patients, employees' efficiency, and impact to society (Wang et al., 2021).

**Conceptual Framework**

The conceptual framework shows the relationship of quality management processes and knowledge management towards healthcare sustainable development. The conceptual framework for this study is depicted in Figure 1.

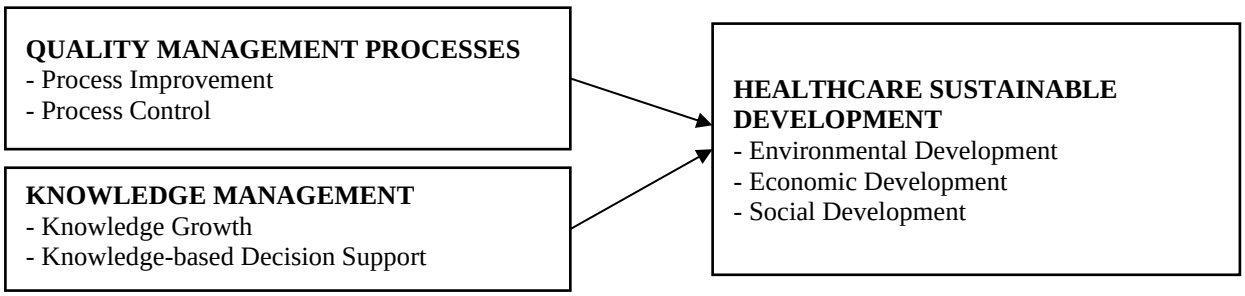


Figure 1: Conceptual Framework

Based on the literature review and conceptual framework, this study considers and aims to investigate the following research questions:

*RQ1.* Does quality management processes have a significant relationship towards healthcare sustainable development?

*RQ2.* Does knowledge management have a significant relationship towards healthcare sustainable development?

**Methods**

This study investigates the perceptions of personnel at different hierarchical levels of the UniMAP Healthcare Centre was investigated through empirical research that is quantitative in nature. The inclusion criteria are all medical and non-medical personnel working in UniMAP Healthcare Centre. The data was collected using self-administered questionnaire that was designed in English and distributed to all 35 employees at the UniMAP healthcare centre at Pauh, Perlis. A close-ended survey questionnaire was utilized to enable the questions to be answered by all the employees in the facility. The construct in the questionnaire were measured using a seven-point scale, from strongly disagree (1) to strongly agree (7) for the construct quality management processes. A five-point scale, from strongly disagree (1) to strongly agree (5) was used for the construct of knowledge management. For the construct of Healthcare Sustainable Development, a seven-point scale, from a small extent (1) to a large extent (7) was utilised. The survey instrument was pretested to make certain that the questions in the questionnaire were clear and reliable.

The unit of analysis is the respective personnel within UniMAP healthcare centre. This study is a cross-sectional inquiry where data was collected at one point of time. All participants were invited by email to respond to the questionnaire. The length of time required for data collection was 3 months. Finally, after the 3 months specified time frame, 28 questionnaires were attained that sums to an estimated 80% response rate. The data was analysed using Smart PLS version 3.0 and a two-step investigation method as recommended by Anderson and Gerbing (1988).

**Findings**

Initially, to assess construct validity, the loadings and cross loadings were evaluated. The cut-off value for loadings of 0.5 is considered significant (Hair et al. 2010). Per se, any item that has a higher loading than 0.5 on two or more factors, will be considered to have a significant cross loading. As seen in Table 1, items KG1, KG2, DS1, PI2, PI5, EN4 and SD4 were removed as the cross loading for each item was below 0.5 and did not have significant cross loadings. Subsequently, the loadings for all items in the study exceeded Chin's (2010) recommended value of 0.6. The composite reliability values that describe the degree of the construct indicators shows that the latent construct ranged from 0.803 to 0.899 and surpassed the recommended value of 0.7 (Hair et al. 2017). The AVE, which indicates the general quantity of variance in the indicators accounted for by the latent constructs, are within the range of 0.545 and 0.707 which surpassed the minimum cut-off value of 0.5 (Hair et al. 2017). Table 1 shows the outcomes of the convergent validity.

Table 1: Results of Measurement Model

| Model Construct | Items | Loadings | CR | AVE |
|---|---|---|---|---|
| Process Improvement | PI1 | 0.733 | 0.803 | 0.577 |
| | PI3 | 0.759 | | |
| | PI4 | 0.786 | | |
| Process Control | PI1 | 0.665 | 0.855 | 0.545 |
| | PI2 | 0.668 | | |
| | PI3 | 0.784 | | |
| | PI4 | 0.879 | | |
| | PI5 | 0.669 | | |
| Knowledge Growth | KG3 | 0.782 | 0.899 | 0.749 |
| | KG4 | 0.868 | | |
| | KG5 | 0.938 | | |
| Knowledge-based Decision Support | DS2 | 0.721 | 0.844 | 0.578 |
| | DS3 | 0.816 | | |
| | DS4 | 0.630 | | |
| | DS5 | 0.854 | | |
| Environmental Development | END1 | 0.933 | 0.875 | 0.707 |
| | END2 | 0.936 | | |
| | END3 | 0.611 | | |
| Economic Development | ECD1 | 0.662 | 0.879 | 0.650 |
| | ECD2 | 0.913 | | |

| | | | | |
|---|---|---|---|---|
| | ECD3 | 0.683 | | |
| | ECD4 | 0.927 | | |
| Social Development | SCD1 | 0.655 | 0.847 | 0.653 |
| | SCD2 | 0.853 | | |
| | SCD3 | 0.895 | | |

The discriminant validity can be examined using HTMT method introduced by Henseler at el. (2015). As depicted in Table 2, the discriminant validity has been established as all the value fulfils the criterion of HTMT90 (Gold et al., 2001) and the results of HTMT indicates that the confidence interval does not show a value of 1 on any of the constructs (Henseler et al., 2015).

Table 2: HTMT Criterion

| Constructs | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Knowledge-based Decision Support | | | | | | | |
| Economic Development | 0.809 | | | | | | |
| Environmental Development | 0.544 | 0.399 | | | | | |
| Knowledge Growth | 0.497 | 0.559 | 0.628 | | | | |
| Process Control | 0.719 | 0.507 | 0.699 | 0.693 | | | |
| Process Improvement | 0.829 | 0.557 | 0.769 | 0.775 | 0.814 | | |
| Social Development | 0.831 | 0.583 | 0.467 | 0.525 | 0.547 | 0.537 | |

Before assessing the structural model, it is vital to confirm that there are no lateral collinearity concerns present in the model. Table 3 exhibits the outcome of the lateral collinearity test. All the Inner VIF values from the independent variables (process improvement, process control, knowledge growth and knowledge-based decision support) that are examined for lateral multicollinearity are less than 5, which shows that lateral multicollinearity is not a concern.

Table 3: Lateral Collinearity Assessment

| Constructs | Healthcare Sustainable Development (VIF) |
|---|---|
| Process Improvement | 2.948 |
| Process Control | 2.723 |
| Knowledge Growth | 3.191 |
| Knowledge-based Decision Support | 3.165 |

The structural model showed the causal relationships between constructs that comprises of approximates for the path coefficients, and the $R^2$ value, that decides the prediction power of the model. Collectively, the $R^2$ and the path coefficients (loadings and significance) specifies

how comprehensively the data supports the hypothesised model (Chin 1998). The $R^2$ value (Environmental Development= 0.364), (Economic Development= 0.293) and (Social Development= 0.275) signifying that the model portrays weak to moderate levels of predictive accuracy. Table 4 exhibits the summary of the structural model.

Table 4: Summary of the Structural Model

| Path | Description | Path Coefficient | Standard Error | T value | Supported |
|---|---|---|---|---|---|
| DS→ECD | Knowledge-based Decision Support → Economic Development | 0.814 | 0.258 | 3.158** | YES |
| DS→END | Knowledge-based Decision Support → Environmental Development | 0.535 | 0.184 | 2.910** | YES |
| DS→SD | Knowledge-based Decision Support → Social Development | 0.369 | 0.122 | 3.036** | YES |
| KG→ ECD | Knowledge Growth → Economic Development | 0.582 | 0.271 | 2.145* | YES |
| KG→ END | Knowledge Growth → Environmental Development | 0.432 | 0.127 | 3.394** | YES |
| KG→SD | Knowledge Growth → Social Development | 0.656 | 0.319 | 2.054* | YES |
| PC→ECD | Process Control → Economic Development | 0.052 | 0.099 | 0.526 | NO |
| PC→END | Process Control → Environmental Development | 0.064 | 0.107 | 0.598 | NO |
| PC→SD | Process Control → Social Development | 0.115 | 0.249 | 0.461 | NO |
| PI→ECD | Process Improvement → Economic Development | 0.065 | 0.149 | 0.437 | NO |
| PI→END | Process Improvement → Environmental Development | 0.091 | 0.102 | 0.890 | NO |
| PI→SD | Process Improvement → Social Development | 0.026 | 0.026 | 0.987 | NO |

Note: *$p \leq 0.05$ and **$p \leq 0.01$

Then, the blindfolding procedure was conducted to see whether the model has certain levels of predictive relevance. According to Fornell and Cha (1994), a $Q^2$ value larger than 0 indicates that the model has predictive relevance, while the values that are less than 0 indicates a deficiency of predictive relevance. According to Hair et al. (2017), the blindfolding method is only applied to the reflective endogenous variables. Based on this study, this method was only applied to three variables; environmental development, economic development and social development had $Q^2$ greater than 0. Table 5 implies that the model in this study has satisfactory predictive relevance.

Table 5: Predictive Relevance for Endogenous Variables

| **Endogenous Variable** | **$Q^2$** |
|---|---|
| Environmental Development | 0.575 |
| Economic Development | 0.474 |
| Social Development | 0.429 |

**Discussion**

To address Research Question 1, this study identified no significant relationship between quality management processes and healthcare sustainable development. One possible explanation is because much funding and collaborative networks of departments, teams and individuals are needed to initiate improvement processes and to control the processes to facilitate continuous changes across a healthcare facility. However, healthcare facilities with a limited number of employees such as UniMAP healthcare centre, lacks human resources and additional funding for long-term quality management processes goals towards their sustainable development. These results are in line with a study by Rodriguez et al. (2020) they noted that the initiatives implemented by healthcare facilities are determined their existing human and financial resources. As most employees having specialized tasks, and existing funding has a specified destination, where it does not usually proceed towards quality management processes and supporting healthcare sustainable development.

To address Research Question 2, the analysis indicated that knowledge-based decision support showed a significantly positive relationship with healthcare sustainable development. A possible reason for the significant relationship is because viable structures and systems within the healthcare facility to encourage feedback from employees exists to ensure top management are aware of arising issues across departments. Additionally, top management are open to discussions, and they are also supportive of their employees' decisions. Therefore, these initiatives encourage a solid bottom-to-top and top-to-bottom support and reliance when running a healthcare facility, resulting in their continuous sustainable development. These findings are in line with the research by Alrahbi et al. (2021), where they acknowledged that knowledge-based decision support encourages discussions and knowledge sharing across all departments before alterations to internal operations are carried out, hence this supports and improves understanding of all healthcare employees while paving the way towards the sustainable development of a healthcare facility.

Additionally, this study identified a positive relationship between knowledge growth and the three aspects of healthcare sustainable development. These results indicate that knowledge growth is key when developing effective action plans and is an essential practice at UniMAP healthcare Centre. Thus, continuous generation and implementation of new knowledge, optimal resource utilization, enhancement of service quality and patient care via new knowledge is present throughout the facility. Findings from this study is in line with the research by Paoloni et al. (2020), where they recognised new kinds of knowledge are vital to

identify the facility's know-how (existing knowledge), in addition to their capability to combine and apply other resources (tangible or intangible) for exponential knowledge growth and the sustainable development of the healthcare facility.

## Conclusion

Founded on the results from this study, it is established that knowledge-based decision support and knowledge growth is significant and important within a healthcare facility for their sustainable development. Therefore, healthcare facilities in Malaysia should look at knowledge management as a means towards vastly improving the facility's process flow by optimizing the employees' capability employees' ability to access and share the required knowledge and experience for their sustainability. Additionally, it is crucial for rightful strategies and channels to be implemented, whereby two-way feedback and communication can be established between employees at all levels and top management for a smooth-running facility towards its sustainability. Furthermore, knowledge growth encourages the sharing of ideas, collaboration, and access to the latest information within the healthcare field. Thus, within the context of a healthcare facility, more support, exposure, and courses should be provided to employees to stimulate innovation and encourages the integration of various changes to evolve the facility towards its sustainability.

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