

## BUSINESS INNOVATION IN HEALTH SERVICES: A LITERATURE REVIEW



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### Abstract

Business innovation in the health sector has enormous potential to fundamentally change how health services are provided and accessed. In this article, we will discuss the importance of business innovation in improving the quality of health services, opening new opportunities, and facing complex challenges in the global health system. Concrete examples of business innovation include telemedicine technology, handheld health devices, and mobile health applications, which have changed the way health services are delivered and accessed. Despite significant benefits, there are still several challenges such as regulatory compliance, building user trust, and cost and accessibility issues that must be overcome. Collaboration between the public, private, and academic sectors and a deep understanding of the challenges and opportunities are critical to achieving the full potential of business innovation in the health sector.

**Keywords:** Business Innovation, Health, Technology, Telemedicine, Accessibility

## INTRODUCTION

The health sector is a very important sector in human life, but technological and demographic changes have presented new challenges in providing effective and affordable health services. In facing this challenge, business innovation in the health sector is becoming increasingly relevant (Downes & Barelka, 2022).

The involvement of business innovation in the development and implementation of new solutions can improve the quality of health care, reduce costs, increase efficiency, and expand accessibility (Kandro, 2023; Lu et al., 2020). Technology, such as telemedicine, handheld health devices, and mobile health applications, has played an important role in facilitating business innovation in the health sector in recent times (Anwar & Abadi, 2023).

Telemedicine technology, for example, has made it easier for healthcare providers to provide diagnosis and treatment remotely via video consultations or text messages. This can help overcome geographic barriers and increase the accessibility of health services, especially in remote areas or with hard-to-reach populations (Jin et al., 2020; Haleem, 2020).

Several handheld health device technologies such as smartwatches and fitness trackers are becoming frequently used in general. In addition to providing continuous recording of an individual's health condition, the device also allows users to be actively involved in monitoring and improving their lifestyle (Hosseini et al., 2023). Mobile health applications have brought innovative solutions in chronic disease management, pregnancy monitoring, and general health promotion (Ventola, 2014)

However, amidst promising technological advances, innovation in the health business also faces significant challenges. Complex regulatory issues, data security concerns, and the level of adoption and acceptance by society are obstacles that must be overcome. Apart from that, cost and accessibility issues are also obstacles in actualizing the full potential of innovation in the health business (Stamatian et al., 2013; Abernethy et al., 2022).

Systematic analysis of business innovation in healthcare is essential to increase knowledge about the role of technology, the barriers faced and the opportunities available (Prahara et al, 2023). Through this research, it is hoped that key factors can be identified that support the successful implementation of innovation in business and make a positive contribution to improving the health system as a whole (Kelly & Young, 2017).

Previous research has revealed findings related to innovation in health businesses. For example, a study by Jin et al. (2020), highlighting that telemedicine technology has succeeded in increasing access to health services and providing solutions for hard-to-reach communities. The research shows that telemedicine can reduce the cost of care and increase accessibility for populations living in remote areas.

Hosseini et al. (2023) conducted another study and concluded that the development of mobile health applications and handheld health devices is an important innovation in the health business. Mobile health applications provide opportunities for individuals to self-monitor their health, access medical information, and participate in health programs. This can increase individuals' awareness of their own health and encourage the adoption of a healthier lifestyle.

Several studies also highlight the importance of using health data in innovation in health businesses. Kandhro (2023) argues that intelligent analysis of health data can provide valuable insights for healthcare providers, helping them make better decisions and improving operational efficiency. The use of technology such as artificial intelligence and data analytics has helped in more targeted diagnosis and treatment as well as more efficient management of health resources (Jin et al., 2020; Haleem, 2020).

**Table 1.**  
**Various Related Studies Published in The Last Three Years**

No	Research Title	Researcher	Year	Journal	Volume
1	Antecedents and consequences of organizational gendering	Downes, M., & Barelka, A.	2022	The International Journal of Business and Management Research	13(1)
2	Literature Reviews, Theoretical Frameworks, and Conceptual Frameworks: An Introduction for New Biology Education Researchers	Luft, J. A. et al.	2022	CBE Life Sciences Education	21(3)

No	Research Title	Researcher	Year	Journal	Volume
3	Monetization of digital health data through a GDPR-compliant and blockchain enabled digital health data marketplace	Maher, M. et al.	2023	International Journal of Information Management Data Insights	3(1)
4	Case Study Method: A Step-by-Step Guide for Business Researchers	Rashid, Y. et al.	2019	International Journal of Qualitative Methods	18
5	Qualitative research: data collection, analysis, and management	Sutton, J., & Austin, Z.	2015	The Canadian Journal of Hospital Pharmacy	68(3)

While there are substantial benefits derived from business innovation in the healthcare sector, the challenges it presents should not be ignored. Roberts et al. (2021) stated that the complexity of regulations, especially those related to the privacy and security of health data, must be considered carefully. Protection of personal data and compliance with privacy regulations are key in building user trust in business innovation in the health sector (Maher et al., 2023).

Business innovation in the health sector has resulted in significant changes in the provision of health services and individual health management (Ramadhani, 2023). Telemedicine technology, handheld health devices, mobile health applications, and intelligent use of health data have opened new opportunities to improve the accessibility, efficiency, and quality of health care. Although there are challenges such as complex regulations, data security issues, societal adoption, and costs that need to be overcome, a systematic review of business innovation in the health sector can provide a more comprehensive understanding and help identify key factors that support the successful implementation of business innovation in the health sector.

## REVIEW OF LITERATURE

When conducting research on business innovation in the healthcare sector, it is important to conduct a thorough literature review in order to understand the latest developments, recognize the challenges faced, and see the opportunities available in the field. By conducting a literature review, several main themes were identified (Jin et al., 2020).

The publication of topics regarding the development of telemedicine as a business innovation in the health sector is increasingly widespread. The results of research conducted by Hosseini et al. (2023) indicates that telemedicine technology is able to increase ease of access to health services and reduce treatment costs, especially for residents who live in remote and hard-to-reach areas. This provides an opportunity to further explore the impact of telemedicine in improving the accessibility of health services and the overall efficiency of the health system.

Mobile health applications and handheld health devices are also unique research subjects. Lu et al. (2020) argued that mobile health applications and handheld health devices provide opportunities for individuals to self-monitor their health and access medical information. This can increase individuals' awareness of their own health and encourage the adoption of a healthier lifestyle. In this context, research can be conducted to explore the influence of mobile health applications and handheld health devices in improving quality of life and managing chronic diseases.

The application of health data in the context of business innovation in the health sector is an interesting aspect for further investigation. Stamatian et al. (2013) emphasized that intelligent health data analysis has the potential to provide valuable information to healthcare providers, assist them in better decision making, and improve operational efficiency. Further studies can be conducted to explore how artificial intelligence technology and data analytics can be applied in diagnosing disease, predicting health risks, and developing personalized therapies.

Taking the above themes into account, research on business innovation in the health sector could include evaluation of the influence of telemedicine technology in increasing the availability of health services, analysis of the utilization of mobile health applications and handheld health devices in strengthening individual health monitoring, exploration of the role

of intelligent health data in improving diagnosis and treatment, as well as studies regarding regulations and data security in implementing business innovation in the health sector (Nasi et al., 2015).

Apart from the themes discussed previously, there are several other aspects that can be the focus of research in business innovation in the health sector. One of them is the application of artificial intelligence and data analytics in the development of personal and responsive health solutions. Roberts et al. (2021) states that this technology has great potential in facilitating more accurate disease diagnosis, predicting health risks, and developing therapies tailored to individual needs. Further research could be conducted to explore how to utilize artificial intelligence and data analytics in medical practice, pharmaceutical research, and efficient health data management.

No less important is the role of business innovation in improving disease prevention and health promotion. In the literature review that has been carried out, there is research that discusses the use of technology to support healthy lifestyles and preventive habits, such as developing mobile applications to monitor physical activity, sleep patterns, as well as implementing disease prevention programs such as healthy diets and stress management. In this context, the focus of research may include evaluating the effectiveness of such programs and identifying factors that influence the adoption and sustainability of preventive programs (Stark et al., 2022).

Aspects of business model development and sustainability of business innovation in the health sector must also be of concern (Atho'illah & Yudha, 2022). In the literature review, there is research that reviews business development strategies, inter-industry collaboration, and financing innovation in the health sector. Further research can be conducted to understand the factors that influence the success and sustainability of business innovation in the health sector, as well as the strategic implications that can be drawn (Lopes et al., 2019).

When conducting effective research, it is also important to consider appropriate research methods. Through a comprehensive literature review, researchers can identify relevant research methods, such as qualitative or quantitative research, field research, case studies, or secondary data analysis. Choosing the right research method will be very helpful

in collecting the data needed to answer research questions and achieve the stated research objectives (Snyder, 2019).

Based on considerations of the themes and aspects discussed above, research on business innovation in the health sector can make an important contribution in developing health services that are more effective, efficient and responsive to community needs.

## **RESEARCH METHOD**

The method applied in research on business innovation in the health sector begins with conducting a comprehensive literature review. At this stage, researchers searched for and examined relevant studies and articles related to business innovation in the health sector. The aim is to gain an in-depth understanding of the latest developments, obstacles, opportunities and key themes that have been identified in the realm of business innovation in the health sector (Snyder, 2019).

After completing the literature review, the researcher then determined the specific research focus. The selection of this research focus was based on the findings and knowledge gaps revealed in previous literature reviews. Having a clear research focus will help in formulating research questions that will be answered in this research (Luft et al., 2022).

Next, the researcher will choose a research method that suits the research focus that has been determined. Choice of research methods may include qualitative research, quantitative research, field research, case studies, or secondary data analysis. The decision to choose a research method will depend on the research objectives, the type of data needed, and the availability of resources (Taherdoost, 2021).

The next stage, the researcher will choose a research method that is in accordance with the research focus that has been determined. Choice of research methods may include qualitative research, quantitative research, field research, case studies, or secondary data analysis. Determining this research method will depend on the research objectives, the type of data required, and the availability of resources (Sutton & Austin, 2015).

After the data has been successfully collected, the researcher will carry out data analysis according to the research method that has been chosen. If this research adopts qualitative methods, the data analysis process will include coding and categorizing findings

that emerge from interviews or document analysis. On the other hand, if this research follows a quantitative approach, data analysis will involve utilizing statistical techniques to process survey data or other numerical data. The emphasis of data analysis is to answer research questions and reveal relevant findings (Snyder, 2019).

After analyzing the data, the next step is to interpret the findings and relate them to the research questions and the broader research context. Researchers will reach conclusions based on the results of data analysis and provide an in-depth interpretation of business innovation in the health sector along with the practical implications that can be applied (Snyder, 2019).

The final stage in this process is the preparation of a systematic and comprehensive research report. The research report will include an introductory section, research methodology, main findings, interpretations, conclusions, and recommendations for further research or implementation of business innovation in the health sector (Rashid et al., 2019).

Based on this research approach, it is hoped that researchers can produce valuable information regarding business innovation in the health sector, and ultimately, make a significant contribution to the development of health services that are more effective and responsive to community needs.

## **RESULTS AND DISCUSSION**

After going through the research stages using the methods previously explained, the following are the results and discussions obtained from research on business innovation in the health sector:

### **1. Literature Review Findings:**

- a. Based on the literature summary, it appears that the development of digital technology such as telemedicine, health applications and electronic medical records has a crucial role in business innovation in the health sector. These technologies have made access to health services easier, improved the quality of services, and reduced costs.
- b. The main challenges that arise in implementing business innovation in the health sector are issues of data security and privacy. Protection of medical data and personal

information is a priority that requires serious attention to increase the adoption of business innovation in the health sector.

- c. The resulting literature also reflects the importance of collaboration between the public and private sectors, as well as partnerships among diverse stakeholders such as hospitals, technology companies, and government agencies. These strategies have proven effective in driving business innovation in the health sector.

## 2. Survey Results:

- a. A survey conducted among healthcare entrepreneurs, medical professionals and patients revealed that the majority of respondents had a positive view of business innovation in the healthcare sector. They see innovation as a means to improve access, quality and effectiveness of health services.
- b. Respondents emphasized the main barriers to adopting business innovations, such as implementation costs, complex regulations, and lack of understanding of the benefits of these innovations.
- c. The survey also shows that telemedicine technology and health applications are the types of innovation most interested in by respondents. They see great potential in using this technology to expand the reach of health services and improve patient comfort.

## 3. Interview Results:

- a. The results of interviews with actors and implementers involved in business innovation in the health sector reveal several key factors that contribute to innovation success. These factors include strong management commitment, availability of adequate resources, the existence of supportive regulations, and the ability to adapt to market and technological changes.
- b. Respondents also emphasized the importance of involving stakeholders, including patients, in the business innovation development process. They highlight the need to understand patient needs and expectations and ensure their participation in designing innovative solutions.

## 4. Secondary Data Analysis Results:

- a. Secondary data analyzed from various sources, including hospital information systems and previous research data, shows the increasing use of digital technology in

healthcare. These data illustrate the increasingly widespread adoption of telemedicine, health apps, and integrated health information systems.

- b. The data clearly indicates that business innovation in the health sector has provided significant benefits, such as increased operational efficiency, reduced medical errors, and increased patient satisfaction.

Based on this analysis, it appears that there is harmony between the results found from literature reviews, surveys, interviews, and secondary data processing. These results reveal that business innovations in the health sector, especially those supported by digital technology, have significant potential to improve all aspects of health services. Even so, there are still a number of challenges that need to be faced, such as data security and privacy issues, implementation costs, and regulatory complexity.

It is important to note that collaboration between the public and private sectors, and the active participation of diverse stakeholders, is considered a crucial factor in driving the adoption of business innovations in the health sector. This approach is able to create an ecosystem that supports the successful development and implementation of innovation.

This research provides an illustration that business innovation in the health sector has great potential to improve health services and operational efficiency. The adoption of digital technologies, such as telemedicine and health applications, is a significant trend and is of interest to various stakeholders. However, challenges such as data security and implementation costs still need to be resolved. To optimize business innovation in the health sector, collaboration and active participation from various stakeholders is key in creating an ecosystem that supports the successful development and implementation of innovation.

## **CONCLUSION**

From the results of analysis and discussion in research regarding business innovation in the health sector, it can be concluded as follows:

1. Business innovation in the health sector, especially those supported by digital technology, has great potential to improve the overall quality of health services. The application of technology such as telemedicine, health applications, and integrated

health information systems can expand accessibility, improve quality, and optimize the efficiency of health services.

2. The main challenges in implementing business innovation in the health sector are related to data security and privacy. The importance of maintaining the security of medical data and personal information must be prioritized to create trust that allows wider adoption of innovations.
3. Collaboration between the public and private sectors, as well as cooperation between various stakeholders such as hospitals, technology companies and government agencies, can be an effective strategy in encouraging business innovation in the health sector. Through this collaboration, an ecosystem that supports the successful development and implementation of innovation can be realized.
4. Active participation of various stakeholders, including health entrepreneurs, medical professionals, and patients, is essential in designing business innovations in the health sector. Understanding patient needs and expectations and involving them in the design of innovative solutions is key to success.
5. Business innovation in the health sector has provided significant benefits, such as increased operational efficiency, reduced medical errors, and increased patient satisfaction. However, there are still several challenges that need to be overcome, such as implementation costs and complex regulations, for the innovation to be adopted more widely.

To optimize business innovation in the health sector, continuous efforts are needed to strengthen data security, encourage collaboration between various stakeholders, and prioritize patient needs. With close collaboration between the public and private sectors and the active participation of all parties, business innovation in the health sector has great potential to significantly change and improve health services.

## REFERENCES

- Abernethy, A., Adams, L., Barrett, M., Bechtel, C., Brennan, P., Butte, A., Faulkner, J., Fontaine, E., Friedhoff, S., Halamka, J., Howell, M., Johnson, K., Long, P., McGraw, D., Miller, R., Lee, P., Perlin, J., Rucker, D., Sandy, L., ... Valdes, K. (2022). The Promise of Digital Health: Then, Now, and the Future. *NAM Perspectives*, 6(22). <https://doi.org/10.31478/202206e>

- Anwar, J., & Abadi, F. (2023). Transformational Leadership, Knowledge Sharing, and Innovation Capability: Improving the Performance of MSME Organizations in East Nusa Tenggara Province. *Indonesian Interdisciplinary Journal of Sharia Economics (IJSE)*, 6(3), 1894-1920. <https://doi.org/10.31538/ijse.v6i3.3423>
- Atho'llah, A., & Yudha, A. T. R. (2022). Development of Business Scale: Empirical Evidence from Business Center UINSA Surabaya. *Indonesian Interdisciplinary Journal of Sharia Economics (IJSE)*, 5(2), 422-440. <https://doi.org/10.31538/ijse.v5i2.1809>
- Downes, M., & Barelka, A. J. (2022). Antecedents and consequences of organizational gendering. *The International Journal of Business and Management Research*, 13(December 2020), 1–17.
- Haleem, A. (2020). *Telemedicine for Healthcare: Capability, feature, barrier, and applications*. January. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8590973/pdf/main.pdf>
- Hosseini, M. M., Hosseini, S. T. M., Qayumi, K., Hosseinzadeh, S., & Tabar, S. S. S. (2023). Smartwatches in healthcare medicine: assistance and monitoring; a scoping review. *BMC Medical Informatics and Decision Making*, 23(1), 1–26. <https://doi.org/10.1186/s12911-023-02350-w>
- Jin, M. X., Kim, S. Y., Miller, L. J., Behari, G., & Correa, R. (2020). Telemedicine: Current Impact on the Future. *Cureus*, August, 1–6. <https://doi.org/10.7759/cureus.9891>
- Kandhro, A. H. (2023). *Medical Technology Education — Current Trends and Future Perspectives Indexed and abstracted in Pak Medinet , CAB Abstracts , Global Health UK , Pakistan Science Abstracts and WHO Index Medicus for the Eastern Mediterranean Region ( IMEMR ) Annals of Jinn*. September.
- Kelly, C. J., & Young, A. J. (2017). Digital Medicine: Review. *Future Healthcare Journal*, 4(2), 121–126.
- Lopes, C. M., Scavarda, A. J., Vaccaro, G. L. R., Pohlmann, C. R., & Korzenowski, A. L. (2019). Perspective of business models and innovation for sustainability transition in hospitals. *Sustainability (Switzerland)*, 11(1), 1–19. <https://doi.org/10.3390/su11010005>
- Lu, L., Zhang, J., Xie, Y., Gao, F., Xu, S., Wu, X., & Ye, Z. (2020). Wearable health devices in health care: Narrative systematic review. *JMIR MHealth and UHealth*, 8(11). <https://doi.org/10.2196/18907>
- Luft, J. A., Jeong, S., Idsardi, R., & Gardner, G. (2022). Literature Reviews, Theoretical Frameworks, and Conceptual Frameworks: An Introduction for New Biology Education Researchers. *CBE Life Sciences Education*, 21(3), rm33. <https://doi.org/10.1187/cbe.21-05-0134>
- Maher, M., Khan, I., & Prikshat, V. (2023). Monetisation of digital health data through a GDPR-compliant and blockchain enabled digital health data marketplace: A proposal to enhance patient's engagement with health data repositories. *International Journal*

*of Information Management Data Insights*, 3(1), 100159.  
<https://doi.org/10.1016/j.jjime.2023.100159>

- Nasi, G., Cucciniello, M., & Guerrazzi, C. (2015). The role of mobile technologies in health care processes: The case of cancer supportive care. *Journal of Medical Internet Research*, 17(2). <https://doi.org/10.2196/jmir.3757>
- Prahara, R. S, Kurnawan, M. V. A. B, Muhammad, F. F., & Syahrial, M. V. A. (2023). Green Industry as a Tourism-Based MSME Development Strategy in Supporting a Sustainable Future (Case Study in Cowindo Sendang District, Tulungagung District, East Java). *Majapahit Journal of Islamic Finance and Management*, 3(1), 111-126. <https://doi.org/10.31538/mjifm.v3i1.33>
- Ramadhani, K. (2023). Ethos and Work Ethics of Puger Kulon Village Fishermen from an Islamic Business Ethics Perspective. *Majapahit Journal of Islamic Finance and Management*, 3(2), 209-228. <https://doi.org/10.31538/mjifm.v3i2.40>
- Rashid, Y., Rashid, A., Warraich, M. A., Sabir, S. S., & Waseem, A. (2019). Case Study Method: A Step-by-Step Guide for Business Researchers. *International Journal of Qualitative Methods*, 18, 1–13. <https://doi.org/10.1177/1609406919862424>
- Roberts, A. E., Davenport, T. A., Wong, T., Moon, H. W., Hickie, I. B., & LaMonica, H. M. (2021). Evaluating the quality and safety of health-related apps and e-tools: Adapting the Mobile App Rating Scale and developing a quality assurance protocol. *Internet Interventions*, 24, 100379. <https://doi.org/10.1016/j.invent.2021.100379>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104(July), 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Stamatian, F., Baba, C. O., & Timofe, M. P. (2013). Barriers in the implementation of health information systems: A scoping review. *Transylvanian Review of Administrative Sciences, SPEC. ISSUE*, 156–173.
- Stark, A. L., Geukes, C., & Dockweiler, C. (2022). Digital Health Promotion and Prevention in Settings: Scoping Review. *Journal of Medical Internet Research*, 24(1). <https://doi.org/10.2196/21063>
- Sutton, J., & Austin, Z. (2015). Qualitative research: data collection, analysis, and management. *The Canadian Journal of Hospital Pharmacy*, 68(3), 226–231.
- Taherdoost, H. (2021). Data Collection Methods and Tools for Research; A Step-by-Step Guide to Choose Data Collection Technique for Academic and Business Research Projects. *International Journal of Academic Research in Management (IJARM)*, 10(1), 10–38. [www.elvedit.com](http://www.elvedit.com)
- Ventola, C. L. (2014). Mobile devices and apps for health care professionals: Uses and benefits. *P and T*, 39(5), 356–364.