# The Necessity of Business Intelligence as an Indispensable Factor in the Healthcare Sector

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## Abstract

Business intelligence (BI) is a process for turning data into insights that inform an organization's strategic and tactical decisions. BI aims to give decision-makers the information they need to make better decisions Patient safety analysis, illness surveillance, and fraud identification are just a few healthcare decision-making processes that can be supported by data mining. Thus, the purpose of the current research is to outline the need if BI as an essential factor in the healthcare sector by reviewing various scholarly materials and the findings. The present author conducted one of the most famous qualitative literature approach which has been called as PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) statement. The selecting criteria for eligible prior studies were estimated by whether studies are suitable for the current research, identifying they are peer-reviewed and issued by notable publishers between 2017 and 2022. According to the result based on the PRISMA analysis, BI plays a vital role in the healthcare sector and there are four business intelligence factors (Data, Analytic, Reporting, and Visualization) that will ensure that the healthcare sector provides the right healthcare services to the customers to be addressed in this section include; data, analytics, reporting, and visualization.

## 1. Introduction

Business intelligence (BI) is a process for turning data into insights that inform an organization's strategic and tactical decisions. Business intelligence aims to give decision-makers the information they need to make better decisions (Ain et al., 2019). BI systems are designed to support these goals by providing easy access to data, powerful data visualization tools, and dashboards that track key metrics. BI can be used to answer questions about past performance, such as "What were our

sales last quarter?" or "How many customers service calls did we receive?" It can also be used to answer questions about future performance, such as "What will our sales be next quarter?" or "How many customers service calls will we receive?" BI is not a new concept. The term was first coined in the 1950s, and BI systems were developed in the 1960s. However, the modern BI market is still in its early stages. The BI market is expected to grow from $16.9 billion in 2014 to $26.8 billion in 2019, at a compound annual growth rate (CAGR) of 9.2% (Liang et al., 2018). There are many different vendors that offer BI solutions, and the solutions vary in terms of features, price, and deployment model. However, all BI solutions share the same goal: to help organizations make better decisions by providing easy access to data and powerful data visualization tools.

In the past, the healthcare sector has not adopted Business Intelligence (BI) technologies and procedures as quickly as other sectors have. This is most likely caused by the healthcare industry's complexity, regulation, and lack of consistency among various healthcare institutions (Božič et al., 2019). However, there has recently been a push for BI adoption in the healthcare sector as the sector starts to understand the potential advantages of using data to inform decision-making. The importance of BI in healthcare is growing for a variety of reasons. First, there is pressure on the sector to lower prices and raise standards of care. Second, it is becoming more challenging for physicians and other decision-makers to find pertinent data due to the significant growth in data supplied by electronic health records (EHRs) and other sources (Yiu et al., 2021). Finally, there is a need for better coordination across the care continuum as the healthcare landscape becomes more complex with an increase in the number of stakeholders.

Healthcare businesses can use BI in various ways to address these issues. First, using BI tools can help you find ways to cut costs while still enhancing patient care. Second, BI can assist businesses in making sense of the expanding data supplied by EHRs and other sources. Finally, by giving stakeholders improved visibility into the care process, BI can enhance coordination throughout the care continuum. Data warehousing, one of the most often used BI tools in healthcare, can assist organizations in combining data from many sources and making it more accessible for analysis. Population health management, clinical decision support, and financial planning are just a few decision-making processes that can be supported by data warehousing. Data mining is a well-liked BI method that may be utilized to find patterns and connections in huge data collections. Patient safety analysis, illness surveillance, and fraud identification are just a few healthcare decision-making processes that can be supported by data mining (Lee & Cormier, 2010).

Consequently, business intelligence tools and technologies Data mining is a well-liked BI method that may be utilized to find patterns and connections in huge data collections. Patient safety analysis, illness surveillance, and fraud identification are just a few healthcare decision-making processes that can be supported by data mining. Thus, this research will outline the need if business intelligence as an essential factor in the healthcare sector by reviewing various scholarly materials and the findings.

## 2. Literature Review

All Many academic studies have been undertaken on business intelligence and how it relates to the healthcare industry to improve healthcare for people worldwide. This is due to the United Nations' declaration that the right to improved care is a fundamental human right by which all countries are required to abide, which has increased the use of technology in the healthcare sector.

Salisu et al. (2021) conducted a study that provided a full review of the literature on the implementation of business intelligence systems in small and medium-sized healthcare systems. According to the author, the healthcare industries have been forced to use new technology for their normal decision-making in this age of the fourth industrial revolution, accompanied by the development of the fatal COVID-19 global pandemic. One of the highlighted improvements is the business intelligence system (BIS), which has caught the attention of policymakers and industry experts because of its potential to give decision-makers more intellectual information (Salisu et al., 2021). Consequently, the authors urge the players in the health sector to use business intelligence as the demand for technology in the healthcare industry is rapidly increasing as they draw to a close. The study's main research gap is the need to know the crucial factors influencing the decision to adopt BIS. This study aims to advance the body of knowledge and comprehend the key factors that influence the decision to use BIS. Because it uses a systematic literature review (SLR) and an expert-ranking poll to pinpoint the crucial factors influencing a choice to adopt BIS, this study differs from others that have already been conducted.

Similarly, Gaardboe et al. (2018) researched the components of business intelligence that impact people in the public healthcare system. The authors acknowledge that when it comes to business intelligence, several variables affect individual impact in public healthcare. These include data quality, access and analysis capabilities, decision-making capabilities, and

organization-wide culture. The need to consider the effect of business information on organizational performance in the public healthcare sector constitutes a research gap in this study (Gaardboe et al.,2018). Furthermore, this study needs to consider how business intelligence affects human decisions in the public healthcare sector. In terms of approach, this study's research differs from other earlier ones. This study used a quantitative research approach. Additionally, this study collects data from respondents using a survey research methodology.

Moita et al. (2018) also conducted a significant study on the need for business intelligence in the healthcare sector in the Brazilian healthcare sector. The authors note that the quality SAUDE scale impacted the expectation and perspectives of Brazilian healthcare. In the author's view, business intelligence has impacted the Brazilian healthcare system in several ways. It has helped to improve the quality of care by providing better data and insights into the care process. It has also helped improve the healthcare system's efficiency by providing better data and insights into the care process (Moita et al., 2018). The necessity to look into how the Servqual scale might be used in the Brazilian healthcare system in order to raise the caliber of services rendered constitutes the research gap in this study.

Due to the inclusion of a business intelligence tool to assist in the Servqual scale's adaptation to the Brazilian health system, this study differs from earlier ones. As a result, the Brazilian healthcare system's services will be of higher quality, and patients will be happier. Nuseir et al. (2021) research investigate how business intelligence helped new businesses in the United Arab Emirates (UAE) during the global pandemic. The study's conclusions show that business intelligence significantly and favorably impacts startup success during the COVID-19 epidemic. The research also showed that the association between business analytics and entrepreneur success is mediated by innovativeness (Nuseir et al., 2021). The study's research gap is the need for more investigation of the mediating function of innovation in the connection between business information and entrepreneurial performance in the UAE during COVID-19. This study should be carried out to add to the body of knowledge and ascertain whether the association between business intelligence and startup performance in the UAE during COVID-19 depends on innovativeness.

Lambay and Mohideen (2020) also undertook research to explain the role of big data in the healthcare system due to the inclusion of business intelligence in the healthcare system. From the authors' perspectives, the quality of care and patient outcomes may be enhanced by applying big data analytics in healthcare recommendation systems. Healthcare professionals can find patterns and trends in vast amounts of data, which they can utilize to make treatment recommendations. Big data analytics can also find care gaps and suggest ways to fill them (Lambay & Mohideen, 2020). A thorough overview of the application of big data insights in medical recommendation systems must be given in the scant amount of published research on the subject. The proposed research would close this gap by giving a thorough overview of the application of big data analytics in healthcare recommendation systems. This research will also provide a comparison of the various big data analytics techniques that can be applied in healthcare recommendation systems.

Moreover, in 2018 a similar research by the previous work (Lambay & Mohideen, 2020) was conducted to compare the essential successful facets of the ultimate and healthcare business intelligence systems. The results showed that while both systems have some crucial success characteristics, healthcare business intelligence systems also have specific ones. When establishing a healthcare business intelligence system, the authors conclude that firms should consider the typical and special success criteria. The key success factors of Critical Success Factors (CSFs) for business intelligence (BI) systems in general and healthcare BI systems, in particular, have yet to be subjected to enough comparative research. By conducting a comparison of the CSFs for general and healthcare BI systems, this study seeks to close this gap.

This research is crucial because it will shed light on the similarities and differences between the two categories of BI systems and assist organizations in better understanding the particular opportunities and problems related to BI systems used in the healthcare industry. Ramakrishnan et al. (2020) also contributed significantly to the current research by looking at business intelligence and detailed prowess in the healthcare sector. According to the authors, making data-driven decisions is becoming increasingly important in the healthcare industry as it looks to improve patient outcomes and control costs (Ramakrishnan et al., 2020). Business intelligence and analytics (BI&A) can play a key role in helping organizations accomplish these goals. There needs to be more empirical evidence on applying business intelligence and analytics (BI&A) in healthcare. This research aims to provide insights into the current state of BI&A in healthcare and identify the gaps in its adoption. Additionally, this research will provide a framework for the successful adoption of BI&A in healthcare.

Khuntia et al. (2019) also outline the concept of business intelligence in the healthcare system. According to the philosophy behind business intelligence in healthcare, firms can use data and analytics to enhance performance. Business intelligence is the application of data and analytics to decision-making and performance improvement in the healthcare industry (Khuntia et al., 2019). There is a void in the literature in this field since healthcare business management needs to be better understood. By offering a practical manual for doing business in the healthcare industry, this research will aid in filling this gap. This study differs from other ones since it emphasizes business in healthcare from a practical standpoint

rather than a theoretical one. Likewise, El-Adaileh and Foster (2019) also conducted research examining successful business intelligence adoption by critically reviewing current literary works. The authors suggested that many crucial elements help ensure success, but there is no one magic formula for putting into practice a business intelligence effort. Initially, it is critical to have specific, attainable goals for the project. Second, involving all project stakeholders and guarantee their buy-in is essential. Thirdly, having a solid and expandable technical architecture in place is crucial. Finally, a group of knowledgeable and committed BI experts must be able to move the project ahead (El-Adaileh & Foster, 2019). The aforementioned study's research gap is the limited sample size research that has thoroughly examined the success elements of BI installations. By performing a thorough literature assessment of the elements that contribute to successful BI implementations, this study aims to fill this research gap.

Prior research group performed research to examine the entrepreneurial business intelligence applications in the healthcare industries. According to the authors, business intelligence solutions are becoming increasingly popular among healthcare businesses to improve decision-making (Isazad Mashinchi et al., 2019). These companies can spot patterns and trends in the data that might otherwise go undetected. They can better manage resources, save expenses, and provide better patient care. The study needs to include more information about how business intelligence tools are employed in healthcare businesses is the study's research gap. Research on the effects of business intelligence applications on healthcare companies is also lacking. By shedding light on the use of business intelligence tools in healthcare companies, this study will add to the corpus of knowledge.

Another important study in line with the current research topic was the study performed by Arefin et al. (2020). According to scholars, healthcare firms' organizational learning cultures and business intelligence systems are frequently underdeveloped in an emerging economy (Arefin et al., 2020). This can cause various issues, such as a lack of knowledge about recommended procedures, a lack of accountability and openness, and an inability to change course when necessary. As a result, healthcare institutions in emerging markets might do less well than those in developed ones. There need to be more studies on the relationship between organizational learning culture and business intelligence systems of healthcare organizations in an emerging economy. The existing studies are mostly conducted in developed economies. This research will contribute to the literature by providing insights into the relationship between these two variables in an emerging economy context. This research will also differ from the existing studies in terms of its focus on healthcare organizations.

Additionally, Russia et al. (2018) outlines the concept of big data incorporation in the private healthcare sector. In the authors' views, the healthcare sector is just beginning to tap into the potential of big data. However, some challenges need to be addressed before the full potential of big data can be realized. These challenges include the need for better data management practices, more robust analytical tools, and more skilled data analysts (Ratia et al., 2018). The preceding study has a research gap because it needs to consider the potential of Big Data in the private healthcare industry. By examining how big data can be utilized to enhance patient care, reduce costs, and enhance outcomes, this research will bring new insight into the possibilities of big data in the private healthcare industry. The prior study also conducted a similar study to the above by Ratia et al. (2018) by elaborating on the three concepts: data analytics and business intelligence. According to the author's perspectives, healthcare data analytics is the process of deriving insights from large data sets to improve patient care and outcomes. Business intelligence is a set of tools and techniques used to collect, store, analyze, and present data in a way that helps businesses make better decisions (El Morr & Ali-Hassan, 2019). Research on the application of business intelligence and data analytics in healthcare needs to be completed. Investigating how these technologies can be utilized to enhance healthcare outcomes will add to the body of literature. This study will differ from previous ones in that it will concentrate on business intelligence and data analytics in healthcare rather than other facets.

Kuba &Temple also adds to the scholarly works by examining the American healthcare industry concerning digital technologies and informatics. The author acknowledges that the American healthcare industry is a complex and ever-changing sector constantly impacted by new digital technologies and informatics (Kudyba &Temple, 2021). The study needs to include more information on how digital technologies and informatics are applied in the US healthcare sector constitutes the study's research gap. This study will show how these technologies are applied to enhance healthcare outcomes and delivery. This research will also explore the difficulties and possibilities of using these technologies in healthcare.

Ultimately, Gaardboe and Svarre (2018) conducted a study to investigate intelligent business final-user in public health facilities. End-users in the field of public health come in various forms, each with unique requirements. However, a few broad groups of end consumers can be found. Policymakers, healthcare professionals, public health researchers, and members of the general public are some of these (Gaardboe & Svarre, 2018). The research gap in this above research is that the study needs to examine the impact of BI on the public health sector. In particular, the study does not investigate how BI can be used to improve the efficiency and effectiveness of the public health sector.

## 3. Methodology

The present author conducted one of the most famous qualitative literature approach which has been called as PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) statement. The selecting criteria for eligible prior studies was estimated by whether studies are suitable for the current research, identifying they are peer-reviewed and issued by notable publishers between 2017 and 2022. Scientific authors can utilize PRISMA to assist them describe a wide range of systematic studies and meta, generally used to measure the benefits and hazards of a national healthcare intervention. It is the goal of PRISMA to make it easier for researchers to disclose their findings clearly and comprehensively (Kim & Kang, 2022).

The QUOROM standard was replaced by PRISMA. It has the comparability of a review of the literature. As a result, scientists must devise specific goals for their studies, as well as a collection of inclusion and intended that address the research topic. Relevant articles were found and eliminated during the review step. According to pre-determined categories, publications are assessed. The PRISMA statement aims to assist researchers in better documenting systematic reviews as well as meta-analyses in scientific journals. When publishing systematic reviews and meta-analyses, PRISMA is most commonly used for clinical studies, but it could be used to describe reviews of other kinds of research, such as diagnostic or empirical evidence, as long as they follow the PRISMA guidelines (Hong, 2021). PRISMA is highly recommended for authors performing methodical reviews and meta-analyses who want to better communicate their findings. Editors and reviewers of other publications: However, PRISMA isn't a tool for evaluating the quality of systematic reviews, only the critical evaluation of published ones. Studies were searched in major databases such as, Google Scholar, ProQuest and Business Complete databases.
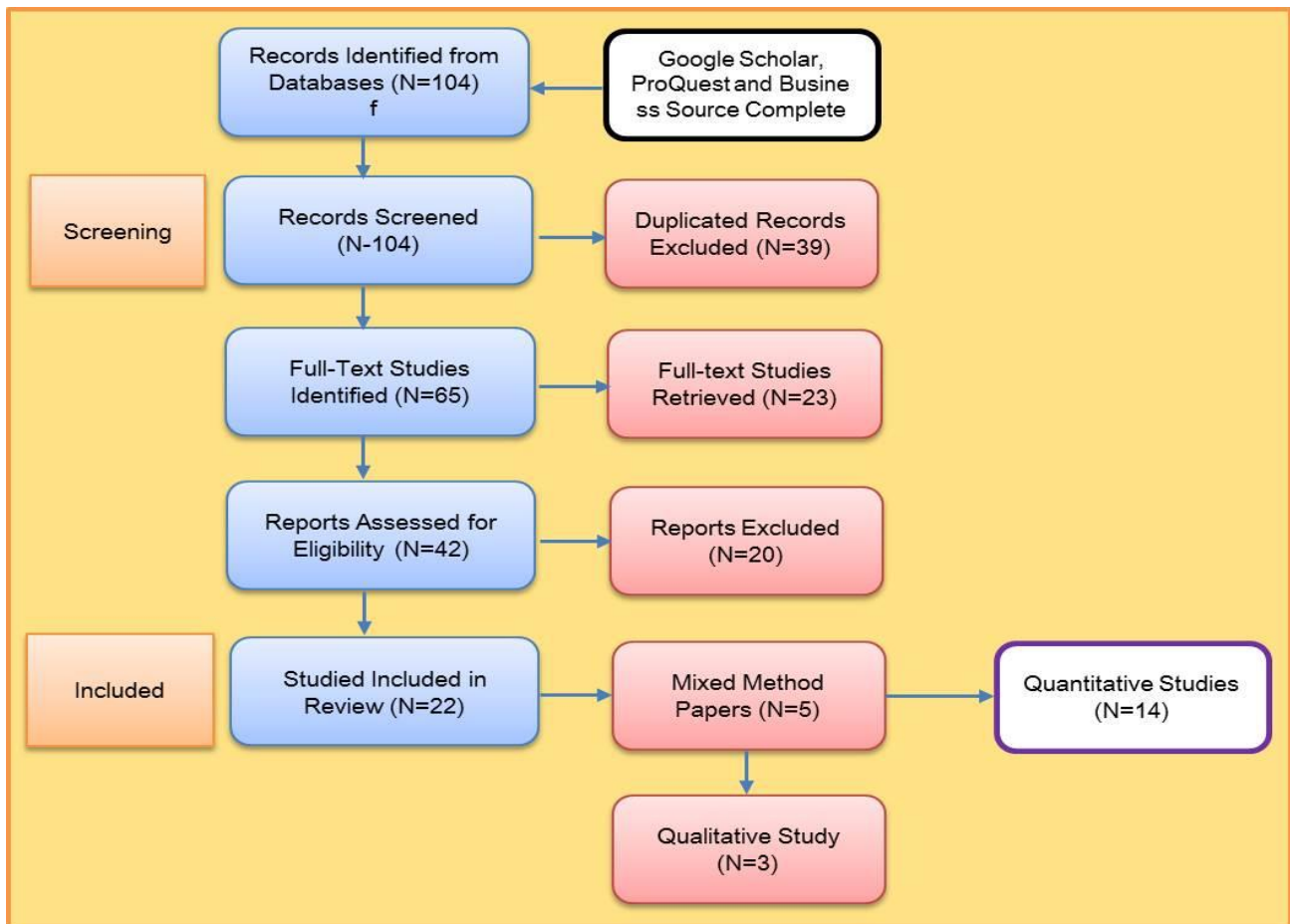


**Figure 1:** The Procedure of Data Extract (PRISMA)

The present author conducted one of the most famous qualitative literature approach which has been called as PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) statement. The selecting criteria for eligible prior studies was estimated by whether studies are suitable for the current research, identifying they are peer-reviewed and issued.

Currently, researchers have gathered textual data based on the existing literature content, including mostly published journals and books. Because it was necessary, the database was primarily used to collect data from peer-reviewed sources. to increase adequate validity (Kang, 2021). In addition, this study is based on PRISMA statements that identify prior studies within their limitations. The PRISMA statement may work as a significant checklist with providing brief evidence for the review process which means that the current research can be ensured by being based on numerous eligible resources that were already screened thoroughly. For this reason, this research tried to exclude some conference sources for the analysis. Also, those included in this research were within an interpretive dimension. Through these critical standards, the present author was able to analyze the obtained dataset as a qualitative approach (Nguyen et al., 2022).

## 4. Findings

The four business intelligence factors that will ensure that the healthcare sector provides the right healthcare services to the customers to be addressed in this section include; data, analytics, reporting and visualization.

### 4.1. Data

This is the most important factor, as it forms the foundation for all other Business Intelligence activities. Data can come from a variety of sources, including internal data sources (e.g., financial data, customer data), external data sources (e.g., industry data, market data, etc.), and public data sources (e.g., census data, government data). Healthcare data can be used several ways to ensure that customers receive the right healthcare services (Ajah & Nweke, 2019; Bordeleau et al., 2020).

One way that data can be used to improve healthcare services is by tracking patient outcomes. It enables the detection of potential areas for treatment improvement. By monitoring the results, it is feasible to determine which therapies are effective and which are not. In order to enhance patient outcomes, adjustments to how care is provided can be made using this information (Alhashmi et al., 2020). Secondly, keeping track of patient results can help ensure that resources are being spent efficiently. Resources may be distributed more wisely, ensuring they are being used as efficiently as possible by knowing which therapies produce the best results (Kamble et al., 2018).

Third, tracking patient outcomes through the existing data can help monitor trends in the population's health. By tracking outcomes over time, it is possible to identify any changes in the population's health and investigate the causes. This information can then inform public health policy (Shahbaz et al.,2019). Fourth, tracking patient outcomes can provide valuable information for research. Understanding which treatments result in the best outcomes makes it possible to carry out further research into these treatments to improve them.

Customer satisfaction data can also be tracked and analyzed to improve healthcare services. This data can be used to determine the most popular services and ensure that patients who require them are given access to them (Liyanage et al., 2019). This information can also track healthcare market trends and pinpoint areas needing improvement. Overall, there are several reasons why keeping track of patient outcomes is vital. It makes it possible to pinpoint areas where care should be enhanced, ensures that resources are being spent wisely, and offers insightful data for the study.

### 4.2. Analytics

This is analyzing data to uncover patterns, trends, and insights. Analytics can be performed using various methods, including statistical methods, data mining, and machine learning. Healthcare is one of the most data-rich industries, and healthcare analytics is a rapidly growing field using data to improve patient care and outcomes. There are many ways that analytics can be used in healthcare, but some common applications include: identifying risks, predicting patient demands, and improving patients' outcomes, among many others (Ramakrishnan et al., 2020; Rikhardsson & Yigitbasioglu, 2018).

First, analytics can be used in healthcare to identify at-risk patients. Healthcare analytics can be used to identify patients who are at risk of developing certain conditions or diseases. This information can then be used to proactively provide those patients with the care and resources they need to prevent or manage their condition. Similarly, analytics can identify patterns in a patient's health data that may indicate a risk for a certain condition. For example, a patient's weight, blood pressure, and cholesterol levels may all be indicators of heart disease (Khedr et al., 2017). By identifying these patterns,

healthcare providers can proactively provide care and resources to patients at risk of developing a disease. This kind of predictive analytics can contribute to better patient outcomes through early intervention and care. By halting the progression of diseases into more critical stages, it can also aid in lowering healthcare expenses.

Secondly, analytics can be used in predicting patient demand. Healthcare institutions can use analytics to forecast the number of patients needing to be seen for particular diseases or procedures. Healthcare firms can use this information to properly staff their facilities and prepare for rising demand (Wang et al., 2017). Healthcare organizations can better manage their resources to fulfil the requirements of their patients by knowing which illnesses or procedures are most likely to cause patient demand. Furthermore, by anticipating patient demand, healthcare institutions may plan for expansion and make sure they have the resources necessary to meet patients' requirements.

Analytics can also be used to track and analyze patient outcomes to identify areas of care that need improvement. By tracking outcomes, healthcare providers can identify which care processes are working well and which could be improved. Additionally, this information can be used to develop and implement strategies to improve patient care and outcomes (Liu et al., 2018). For example, if a healthcare provider notices that a particular care process is resulting in poor patient outcomes, they can use analytics to investigate the issue. By analyzing the data, they may identify a problem with the care process or how it is being implemented. Once the problem is identified, the healthcare provider can develop and implement a plan to improve the care process and patient outcomes.

As a result, analytics can be utilized to monitor and evaluate a population's health. This data can spot patterns and create plans for enhancing population health. Analytics can be used, for instance, to monitor a population's susceptibility to disease. To create plans to stop the disease from spreading, use this knowledge. Analytics can also monitor a population's health results (Abraham et al., 2019). This data can pinpoint regions where a population's health could be enhanced. Analytics can also monitor a population's socioeconomic determinants of health. The strategies developed using this information can improve a population's health. Analytics may be used, for instance, to monitor a population's socioeconomic standing. The strategies developed using this information can improve a population's health.

## 4.3. Reporting

This is the process of presenting the results of analytics clearly and concisely. Reports can be presented in various formats, including charts, tables, and graphs. One of the most important aspects of reporting is choosing the right format to communicate the analysis results in a way that is easy for the reader to understand (Ratia et al.,2018). For example, a graph may be the best way to visually represent data with a clear trend, while a table might be the best way to present more detailed and complex data. Making sure the report is simple to read and comprehend is also crucial. This calls for speaking simply and directly while avoiding jargon (Kamruzzaman, 2020). The report should also be visually appealing, using colours and other eye-catching images.

In the healthcare sector, business intelligence can be used to report on various factors that can impact patients' quality of care. For example, BI can be used to track and report on patient satisfaction levels, staff turnover, and the number of errors made during care (Teixeira et al., 2019). By tracking these factors, healthcare providers can identify areas where improvements are needed and change how they deliver care. This, in turn, can lead to better patient outcomes and higher satisfaction with the care received.

In addition to tracking and reporting on patient satisfaction, business intelligence can also be used to monitor and analyze the financial performance of a healthcare organization (Galetsi et al., 2019). This information can be used to decide where to allocate resources, how to price products and services, and which areas of the business are most profitable (Abraham et al., 2019). By understanding the organization's financial performance, healthcare providers can make better decisions about how to run their business and improve the quality of care they provide.

## 4.4. Visualization

The process of data visualization is a powerful tool that can be used to gain insights into data sets. Using graphical representations, data visualizations can help identify patterns, trends, and relationships within data (Yee et al., 2022). This can be extremely helpful in understanding complex data sets, and can also help to communicate findings to others. Various tools can be used to create data visualizations, including data visualization software, infographics, and dashboards. Each tool has its strengths and weaknesses, and it is important to choose the right tool for the job. Data visualizations can be an extremely powerful tool for understanding data and can also be used to communicate findings to others (Manikam et al., 2019).

There are many different ways that visualization can be used in healthcare. One way is to use visualizations to understand patterns in patient data. This can help providers to identify trends in patient health and to make predictions about future needs. Another way is to use visualizations to understand the relationships between different variables. This can help providers to identify risk factors for certain diseases and to develop strategies for preventing them (Isazad Mashinchi et al., 2019).

Visualization can also be used to improve communication between providers and patients. Patients often have difficulty understanding complex medical information. Visualizations can help to make this information more accessible and easier to understand. Additionally, visualizations can engage patients in their care (Marzouk & Hanafy, 2022). Patients who can see their data and understand how it relates to their health are more likely to be motivated to change their lifestyle or take medication as prescribed. Many different software programs can be used to create visualizations. Some of these programs are designed specifically for healthcare data, while others can be used for any data (Tariq et al.,2020). The choice of software will depend on the healthcare organization's needs and the staff's skills.

A visualization is a powerful tool that can be used to improve business intelligence in the healthcare sector. By understanding patterns in patient data, identifying relationships between different variables, and engaging patients in their care, healthcare providers can make better decisions about their care.

**Table 1:** Four Research Findings from the Current Literature Dataset

| Cluster | Factor | Supporting Studies |
|---|---|---|
| 1 | Data | (Ajah & Nweke, 2019; Alhashmi et al., 2020; Kamble et al., 2018; Shahbaz et al., 2019; Liyanage et al., 2019; Bordeleau et al., 2020) |
| 2 | Analytics | (Ramakrishnan et al., 2020; Khedr et al., 2017; Wang et al., 2017; Liu et al., 2018; Abraham et al., 2019). |
| 3 | Reporting | (Ratia et al., 2018; Kamruzzaman, 2020; Teixeira et al., 2019; Galetsi et al., 2019; Abraham et al., 2019; Rikhardsson & Yigitbasioglu, 2018) |
| 4 | Visualization | (Yee et al., 2022; Manikam et al., 2019; Isazad Mashinchi et al., 2019; Marzouk & Hanafy, 2022; Tariq et al., 2020) |

## 5. Discussions

A practitioner is someone who engages in a particular activity or profession. For example, a practitioner may be a medical doctor, a lawyer, or a teacher. There are several repercussions for practitioners who operate in businesses. They must first and foremost be familiar with the legal guidelines governing the creation and management of corporations. Although these laws differ from nation to nation, some universal rules apply in most jurisdictions. For instance, practitioners should be familiar with the conditions for forming a corporation and the many types of firms that can be established. They also need to know the laws governing business administration, particularly the rights of shareholders and directors.

Businesses are required to adhere to all applicable laws and regulations. This includes maintaining proper financial records and submitting all necessary reports to the appropriate authorities. Practitioners must be aware of the annual tax return filing obligations and the tax ramifications of running a business. Businesses must maintain accurate financial records to comply with laws and regulations. This includes keeping track of income and expenses and assets and liabilities. Financial records must be submitted to the appropriate authorities regularly. Taxes are a major business concern (von Bary et al.,2019). They must file annual tax returns and pay taxes on their income. Taxes can have a significant impact on the profitability of a business. Practitioners must be aware of the business's legal and financial requirements. They must make sure that businesses comply with all applicable laws and regulations. They also need to be familiar with the tax implications of running a business.

When it comes to the legal and financial implications of working with companies, practitioners need to be aware of the reputational risks associated with a company. This includes ensuring that the company is not involved in illegal or unethical activities and that its business practices are above reproach (Hamouche, 2021).

For example, if a practitioner is associated with a company that is later found to be engaged in illegal activities, the practitioner's reputation will also be tarnished. Similarly, if a company is found to have engaged in unethical business practices, the practitioner's association with that company will damage his or her reputation.

For example, if a practitioner is associated with a company that is later found to be engaged in illegal activities, the practitioner's reputation will also be tarnished. Similarly, if a company is found to have engaged in unethical business practices, the practitioner's association with that company will damage his or her reputation. By taking these precautions, practitioners can protect themselves from the legal and financial risks associated with working with companies (Trabold et al., 2020).

Several risks are associated with investing in or lending money to a company. The first is that the company may default on its obligations, meaning that the investor or lender will not be repaid. This could lead to a loss of money for the investor or lender. The second risk is that the company may not be able to meet its financial obligations, which could lead to bankruptcy (Sorrentino et al., 2018). This could also lead to the investor or lender losing money. Finally, the company may be unsuccessful and unable to repay the loan or meet its financial obligations. This could also lead to the investor or lender losing money.

First, the study did not include a control or comparison group. This means that it is impossible to say definitively whether business intelligence was the sole or main factor responsible for the success of the healthcare organizations in the study. Other factors, such as the healthcare organization's management team, the quality of care, or the availability of resources, also played a role. Second, the study relied on self-reported data from healthcare organizations. Some of the data were inaccurate or biased.

Additionally, the study only looked at a small number of healthcare organizations. While this allowed for a detailed analysis of each organization, the findings may only be generalizable to some healthcare organizations. The study also did not examine the long-term effects of business intelligence on healthcare organizations. The benefits of business intelligence may diminish over time, or other negative consequences have yet to be discovered. Despite these limitations, the study provides valuable insights into the potential benefits of business intelligence for healthcare organizations.

Business Intelligence (BI) plays a vital role in the healthcare sector. The pressure to lower prices and raise standards of care, the challenge of making sense of big data and the need for better coordination across the care continuum are just some reasons why BI is essential in healthcare (Ain et al., 2019). Healthcare businesses can use BI in various ways to address these issues. For example, data warehousing can help organizations combine data from many sources and make it more accessible for analysis. Population health management, clinical decision support, and financial planning are just a few decision-making processes that can be supported by data warehousing. Data mining is another popular BI method that can be used to find patterns and connections in large data sets. Patient safety analysis, illness surveillance, and fraud detection are just a few healthcare decision-making processes that can be supported by data mining.

In conclusion, BI is essential in the healthcare sector (von Bary et al., 2019). The pressure to lower prices and raise standards of care, the challenge of making sense of big data and the need for better coordination across the care continuum are just some reasons why BI is essential in healthcare. Healthcare businesses can use BI in various ways to address these issues. For example, data warehousing can help organizations combine data from many sources and make it more accessible for analysis. Population health management, clinical decision support, and financial planning are just a few decision-making processes that can be supported by data warehousing. Data mining is another popular BI method that can be used to find patterns and connections in large data sets. Patient safety analysis, illness surveillance, and fraud detection are just a few healthcare decision-making processes that can be supported by data mining (Trabold et al., 2020).

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