Service Management and Time to Care in SMEs in the Health Sector in the Period 2010 - 2020: A Systematic Review of the Scientific Literature

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Abstract

Nowadays, service management and service time are essential in health services. For this reason, a systematic review of the literature was carried out to find out about studies dealing with service management and service time in SMEs in the health sector over the last 10 years. The databases used were Science Direct, EBSCO host, Proquest and Google Student where 40 articles were selected, which show that service management is an efficient method for improving services in SMEs in the health sector. Finally, it is concluded that every organization always seeks continuous improvement of its processes, the benefit is long term, and the first thing is to identify those processes that do not generate value to their activities and this will be achieved through the application of management tools for cost reduction, reductions in inequities, increased quality and efficiency in patient care within health facilities.

Keywords
Activity-based service, Management, Time, health services, health facilities.

1. Introduction
The World Health Organisation states that everyone should receive medical, surgical and psychiatric care in the different health services, whether in public or private facilities. Health is a right for all, and it is the state that must guarantee universal and equal access for the entire population.

Given that healthcare provision is a service that has a social impact, any effort to improve the quality of its services can be considered fundamental (Mendonça and Castro 2021). This leads SMEs in the health sector to seek improvements in their processes from patient admission to care. However, it has been demonstrated that

they are not sufficiently prepared for any eventuality, as in the case of the COVID 19 pandemic, which revealed deficiencies in primary care, waiting time and response capacity for patient care.

As is well known, it is vitally important to consider the time to care from an organisational point of view. In this regard, for Kilic et al. (2016), companies are obliged to perform activities in the shortest time with minimum input and optimal output. Therefore, management principles are directly reflected in the quality of user care, as the energy lost in bureaucratic and unnecessary processes will be transferred to the core process. Consequently, the implementation of electronic prescribing (e-prescribing) is born, a system that helps to minimise expenses, errors and reduce costs. In addition, technology plays an important role in management, as there are integrated IT systems that provide seamless access to user care, which greatly simplifies service delivery (Ostojić et al. 2012).

In modern management, the human resource is the backbone of sustainable development (Mohammadfam and Kianfar 2012). To achieve such development, different approaches such as task allocation, medical appropriateness, and medical readiness for the pursuit of results have been considered (Craig et al. 2015). Indeed, also the performance of employees during the care process provides immediate evidence to the customer about the organisation and its brand as these implications are important in the way customers relate to the organisation. (Da Silva et al. 2015).

According to the above, it is demonstrated that by implementing different management tools or methodologies it is possible to reduce the time of attention in SMEs in the health sector, achieving customer satisfaction thanks to good management at the organisational level. Therefore, the objective of this research is to know the studies of implementation or execution of methodologies on service management and service time in SMEs in the health sector between 2010 and 2020. In this regard, the following questions were posed:

What tools or methods are known for service management in SMEs in the health sector in the last 10 years? What impact does service management have at the organisational level? What are the benefits of implementing management tools for health care services? The answers to these questions will provide a clear picture of the objectives of organisations when implementing management tools or methodologies in the health sector.

2. Service management and service time

In the literature, service management is defined as a set of organisational capabilities that deliver value to customers in the form of services (Adinugraha and Rofiq 2019). In this regard, the organisation must ensure a teamwork strategy, as it is fundamental to achieving satisfactory customer service (Opute 2020). There are various sectors concerned with improving the user experience through timely service management (Garcia at al 2020; Ramirez 2020); however, the organisational process remains one of the challenges for all sectors. In this respect, the various existing service management models cater to the customer's own characteristics, thus, service management processes aim to transform resources into valuable customer services. On the other hand, in terms of service time, it is important to point out that queuing theory is applied in the measurement of service quality to assess the capacity of an organisation and reduce customers' waiting time for service (López and Joa 2018; Yáñez-Mingot and Hernández 2018).

On the other hand, leaders in the healthcare industry, for example, have turned to advanced performance improvement methods such as Lean Six Sigma (LSS) that address the new demands of the business and clinical environment (Lighter 2014). Decisions must also be made where a number of potential solutions are provided from the identified constraints (Crown et al. 2017, 2018).

Now, for the improvement of medical care (Waiting time), a maximum waiting time policy was proposed, so that patients waiting beyond a threshold have their wait shortened (Meng et al. 2017). If sampling with real-time data is used, a new threshold and target time interval will be obtained, allowing us to arrive at the optimal solution of the model. However, it should be noted that one of the management tools that helps to reduce lead time and that is applied in the service industry is the Just in Time system. That is, its approach is based on generating added value to the different processes and improving operations within the organisation in order to be more competitive (Aradhye and Kallurkar 2014).

It should also be noted that another known management methodology is the Kaisen philosophy, where its implementation in healthcare processes is aimed at increasing quality and satisfaction. To this end, a study was carried out to identify points for improvement and priority projects for SMEs in the health sector with

favourable results for change (Hernández 2020). In the case of medical decisions, there is a model called Simulation Event (Beate et al. 2010) to maximise the profitability of the medical system.

3. Methods

A systematic review was conducted (Crown et al. 2018) and the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta Analyses) methodology was used, which focuses on ensuring transparent, comprehensive reporting of systematic reviews and meta-analyses.

The process of systematising the literary information in the databases was developed using the following keywords in English: "activity based service", "Management", "Time", "Health service". In addition, the Boléan operators "OR" and "AND" were added to perform the search. The following search syntaxes were used with the main database sources selected:

Scince Direct: [("activity based service" OR "Management") AND ("Time") AND ("Health Service")].
Proquest: [("activity based service" OR "Management") AND ("Time") AND ("Health Service")].
EBSCO hots: [("activity based service" OR "Management") AND ("Time") AND ("Health Service")].
Google Student: [("activity based service" OR "Management") AND ("Time") AND ("Health Service")].

The exclusion and inclusion criteria considered for the information search are as follows (Figure 1):

1. Type of document: Books and theses were excluded, only scientific articles with an expert audit were considered.
2. Period of antiquity: The range entered was from 2010 to 2020, to exclude those that are not within this limit.
3. Subject: A thorough search was made for articles with "value in health", "Finance", "Procedures" as the title for inclusion.
4. Language: Spanish and English.
5. Subject: In some databases, it was delimited with the word "engineering".
6. Restricted fields: Research that did not provide complete information on the fields of the document (author, abstract, title, full text) were excluded.

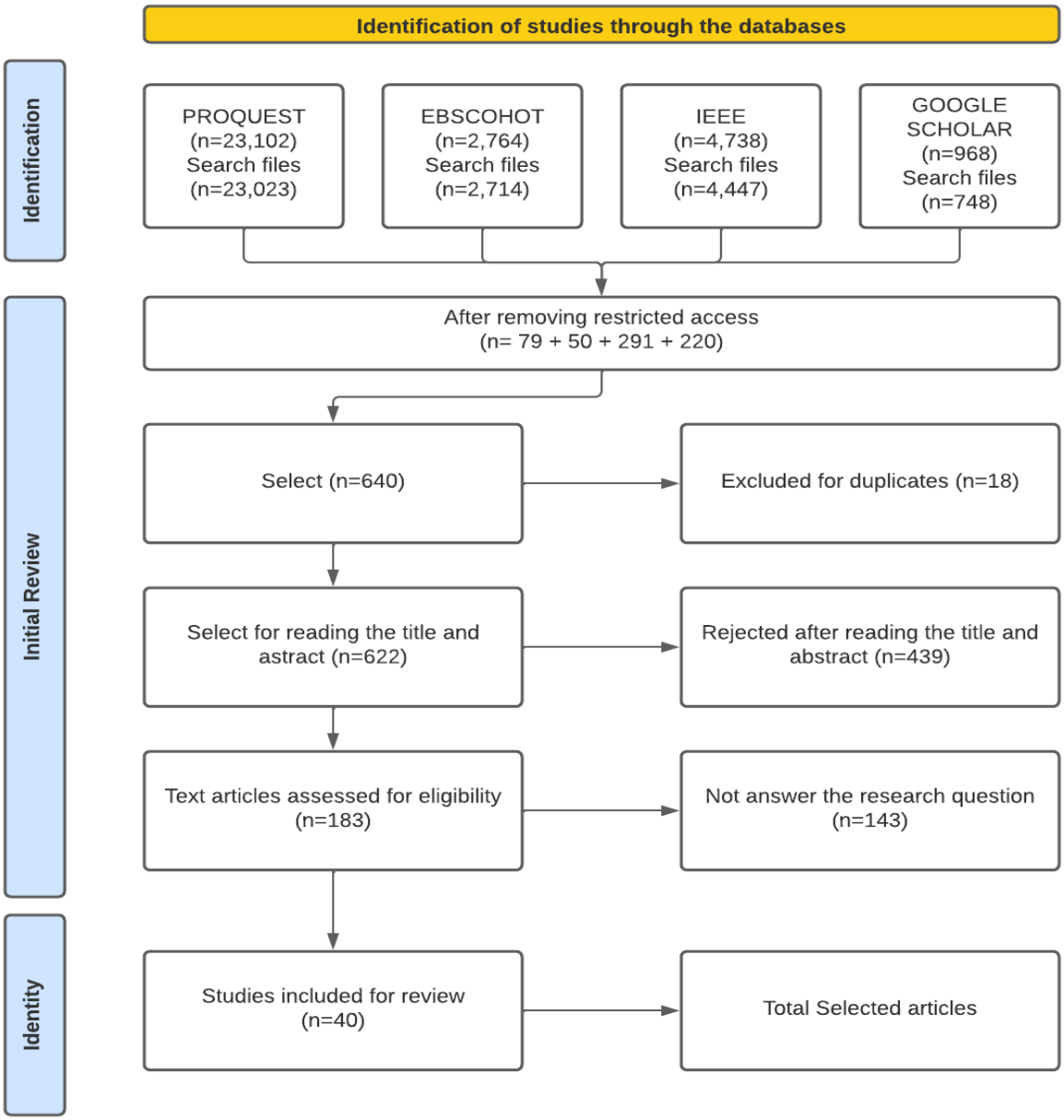

Figure 1. PRISMA flowchart (Source: Own elaboration)

3. Results and Discussion

Once the articles had been searched in the databases according to the key words, the delimitation was carried out in relation to the years of antiquity, as well as the inclusion and exclusion criteria, a total value of 640 sources was obtained. Then, articles that were duplicated (18), after reading titles and the abstract (439) and did not answer the research question (143) were discarded with a final result of 40 articles for analysis and presentation of results.

3.1 Sources by year of publication

After the selection of bibliographic sources, the range of limitation from 2010 to 2020 was considered, where the following results were obtained: 2010, 2013 and 2019 added together, 5 articles were obtained with a representation of 13%, and as an intermediate amount the years 2012 and 2017 represent 20% with a contribution of 8 articles each, it is also observed that the years 2014, 2016 and 2020 have an equal number of

articles (05 units) representing 39% in the 3 years, and the highest percentage of participation is in the years 2015 and 2018 with 15%. Finally, it should be noted that 2011 has no participation in this research (Figure 2).

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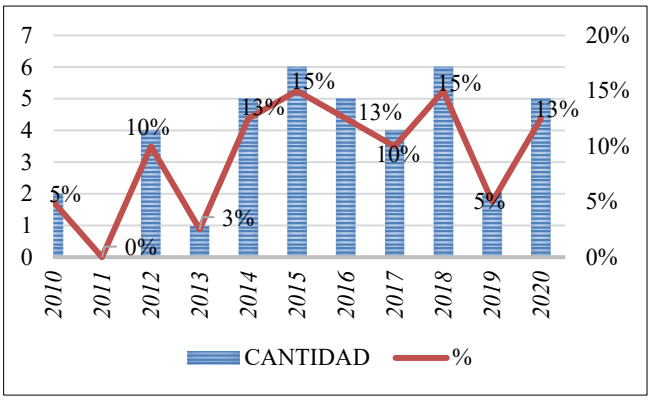

Figure 2. Year of Publication

3.2. Sources according to country of origin.

The figure 3 shows the origin of the selected articles, where Latin America in the south is represented by Brazil with 20% with 08 articles and in the north, the United States represents 23% with 09 articles, indicating that there is a greater concentration of research with respect to the variables consulted, followed by the European and Asian continents with a representation of 3% of these publications**.**

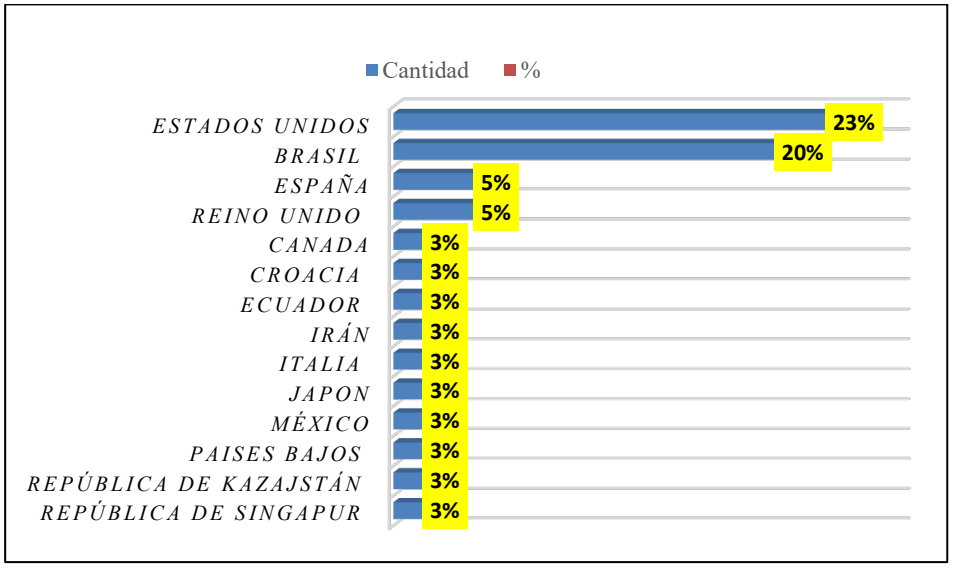

Figure 3. Country of Publication

3.3. Data Base

The following figure 4 results were obtained: Google Student represents 18% with 7 articles, EBSCO host shows 23% with 9 articles, ProQuest consists of 28% with 11 articles, and Science Direct represents 33% with 13 articles of the articles selected for analysis.

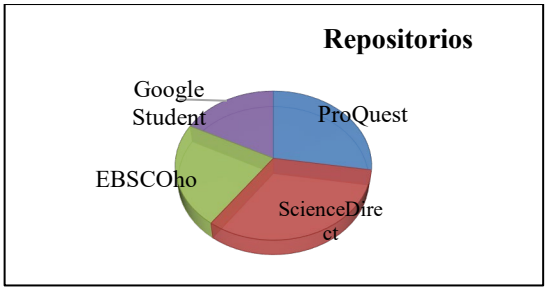

Figure 4. Database

3.4 Type of study

The types of studies: Descriptive and experimental that we have from the selected articles show us the following information; of the 40 sources, 22 of these are descriptive, representing 55%, followed by 18 articles that are experimental with 45%, which will determine that our analytical results are related according to our selected variables. (Figure 5)

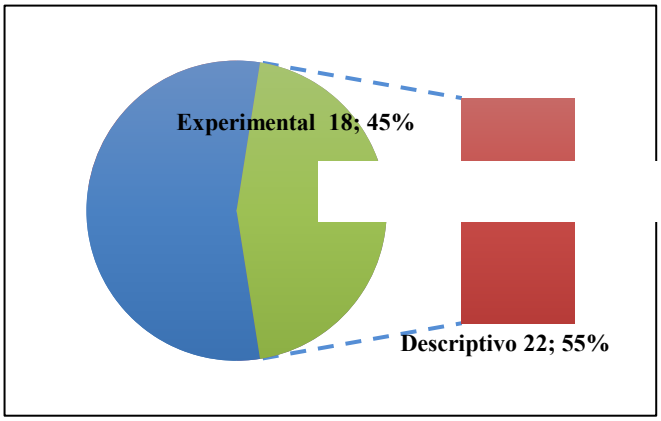

Figure 5. Type of study

3.5 Variables Approach

Of our variables to be studied, the figure 6 shows a greater presentation of the service management variable with 82.5% represented by 33 sources, and of the care time variable there are 7 sources with 17.5% of the total, which indicates that the study is based on service management in the health sector. Now, according to the selected studies, it is indicated that 33 articles have management as a central theme.

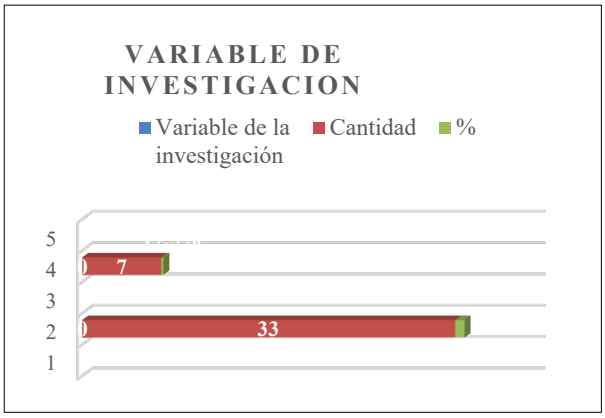

Figure 6. Research variable

3.6 Keywords

Once the syntax [("activity based service" OR "Management") AND ("Time") AND ("Health Service")] has been entered into the SCOPUS database, the VOSviewer tool allows us to visualise the bibliometric networks of the keywords. In most articles, the most relevant terms are displayed: ("organisation and management", "health care delivery", "male", "emergency health service") (Figure 7).

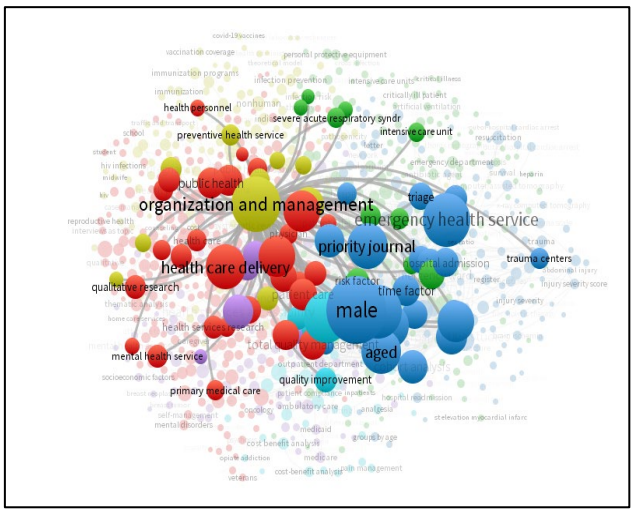

Figure 7. Bibliometric analysis by Keywords

3.7 Research Approach

The following table 1 shows the analysis and relation of the questions posed according to the methodological process, in order to give answers and proceed to distribute them according to each question. Now, each source was represented by a reference code that helps the observation of results. Thus, 17.5% of the selected articles show that the time of care in the health sector can be improved, the use of methodological tools is represented by 32.5%, management systems by 22.5%, information systems and value in health by 17.5% and the benefit in the implementation of tools by 10% of the selected articles.

Table 1. Research Approach by Bibliographic Source

Methodological questions	***Sources (Reference code)***
How to improve service time in SMEs in the health sector?	AT4, AT6, AT7, AT20, AT21, AT27, AT37
What tools or methods are known for service management in SMEs in the health sector in the last 10 years?	AT3, AT9, AT10, AT15, AT17, AT19, AT26, AT28, AT29, AT30, AT32, AT34
What is the organisational impact of service management?	AT2, AT5, AT11, AT13, AT18, AT23, AT33, AT35, AT39, AT40
Are health information and value systems important for management in the health sector?	AT1, AT14, AT16, AT25, AT31, AT36, AT38
What are the benefits of implementing care management tools in health services?	AT8, AT12, AT22, AT24,

Source: Own elaboration

This research analyses the scientific articles of the last decade, locating 40 articles that allow us to answer the research question and show the different tools that have been implemented for the management of service and service time in SMEs in the health sector. In the analysis carried out, it became evident that several of the studies (Lukić 2013; Kuo et al. 2016; Mendonça and Castro 2021; Ostojić et al. 2012; Ursoniu et al. 2012) focus on good service management; this is due to the fact that there are significant deficiencies in the health sector given that it is a context of considerable lack of resources, procedures, evaluation or bureaucratic controls (López and Miret 2018), social or cultural barriers (López et al. 2014). Therefore, the tools serve to identify attributes and criteria that influence management, and by conducting the research, the minimum level of quality, reliability and cost-effectiveness will be known in order to have a better understanding of the phenomenon (Farina et al. 2015). In addition, there are models, methods and indicators supported by (Barreto 2015; Costa et al. 2019; Crown et al. 2017; Mendonça and de Castro 2021; Mohammadfam et al. 2012) that show a quantifiable measure based on reliability, measurement, and approach to patient and user satisfaction. Likewise, the time factor is a fundamental and key performance indicator (Meng et al. 2017), analysing waste with the help of Lean methodologies: JIT (Just in Time), Kanban (Aradhye and Kallurkar 2014), Kaizen (Hernandez 2020), Six sigma (Lighter 2014) and demand variability (Redjem and Marcon 2016) will allow creating solutions that generate productivity, effectiveness and tactical planning for time management (Colla et al. 2019; Hulshof et al. 2016; Kuo et al. 2016; Taboada 2015), along with patient reliability (Garcia and Pomar 2018).

An interesting finding is that healthcare organisations need to be at the forefront of technological advances, as an integrated strategy based on artificial intelligence (Khan and Yairi 2018) aims for resolvability, and healthcare sustainability (Lukić 2013; Ostojić et al. 2012; Souza and Carvalho 2015; Tarride et al. 2010) to provide decent quality of care (Achouri et al. 2018) thanks to the programme, treatment or technology (Garrison et al. 2018) for the cost-utility or so-called cost-benefit analysis (Higgins et al. 2014). Examples include e-prescribing (Kiliç et al. 2016), Jackson's open network (Kim and Kim 2015), X-repo (Ardila et al. 2020) and event simulation (Jahn et al. 2010). However, for successful implementation in management, managers, doctors and nurses must make decisions together (Aljunid et al. 2012; Filler et al. 2020; Ursoniu et al. 2012). Therefore, SMEs in the health sector must provide optimal services for the achievement of patient satisfaction as stated by various authors (Martinez et al. 2020; Aljunid et al. 2012; Carballo 2014; Christopher and Ivascu 2016; Filler et al. 2020; Santos and Menta 2017; Silva et al. 2020; Tazhibayeva et al. 2017; Ursoniu et al. 2012).

5. Conclusions

It is concluded that every organization always seeks continuous improvement of its processes, the benefit is long-term, and the first thing is to focus on those processes that do not generate value to its activities and this is achieved through the application of management tools for cost reduction, increased quality and efficiency in patient care within health facilities.

In this research, the selected articles are directed to the health sector because it is a scenario that has undergone a variety of changes, due to the multiplicity of events over the years that have shown the deficiencies in the operational, welfare and organizational part. However, in terms of experience and expectation, studies were carried out to improve processes for service management in public and private SMEs that expect to provide quality care to patients by working together at the institutional level.

Through this systematic analysis, a contribution is made to the community, providing an overview of service management and service time in SMEs in the health sector through tools and methodologies that serve to achieve the objectives at the organizational level. Likewise, it should be noted that this analysis is the beginning of future research on the variables analyzed. As for the limitations, in the search field, there is little information in the selected sources in the Spanish language; therefore, English terms were chosen. Finally, in the scope of the study, there are no previous research studies with the variables analyzed; however, those with the broadest possible definition of terms in line with the central theme of the search were selected.

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