The Role Of Supply Chain In Healthcare Quality Service Among Jordanian Public Hospitals.

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Abstract.
Customer satisfaction and customer relationships are important com-ponent for government hospitals to enhance their service quality. By utilizing SERVQUAL theory, this study aimed to investigate the relationship between hospital supply chain management and health care quality service in Jordanian government hospitals. Participating in the survey were three hundred sixty-two managerial staff members from Jordan's 32 public hospitals employed in the supply chain management department. The accumulated information was first cleaned up using SPSS (version 21). After that, the hypothesized pathways in this investigation were tested simultaneously utilizing the partial least squares structural equation modelling (PLS-SEM) method and the bootstrap techniques. The analysis of all the data showed clearly that one of the independent variables that significantly impact service quality is the hospital supply chain. On the other hand, supply chain significantly affects the level of care that can be expected at government hospitals in Jordan. In addition, the findings of this research have real-world implications for patients and healthcare providers alike, as they illuminate the fundamentals of the connection between SC and hospital service quality within Jordan's public healthcare facilities, ultimately helping to mould a healthier and more prosperous future for Jordan.

Keywords: Supply Chain management, Quality Services, public Hospital, Jordan, health care

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1. Introduction

Due to increased social and national attention, many government measures have been implemented, including mandatory hospital certification and medical service quality criteria (Peng et al., 2020). In recent decades, hospitals have needed to inte-grate quality strategies, prompting many efforts to develop reliable service quality measurement methods (Taylor et al., 2020). Healthcare providers face customer dissatisfaction, rising costs, competition, and payment. These factors force healthcare organizations to create a system that can meet these demands while deal-ing with constant change, technological advancements, rising healthcare costs, com-petitiveness, and customer satisfaction. Thus, supply chain management is becoming more vital to health care.

Additionally, improving medical care and treatment services is crucial locally and globally. Governments and healthcare have adopted total service quality (El-Jardali & Fadlallah, 2017). To improve health care, health organizations need management concepts that improve health quality. Health organizations can use supply chain management. Supply chain management (SCM) optimizes goods, information, and finance flows between supply chain partners to meet customer needs. Organizational practices form the supply chain. External practices go beyond regulatory require-ments to integrate the organization with its suppliers at origin and follow customs (Abdallah et al., 2017). To ensure product quality, the supply chain integrates and coordinates processes across all entities (Peng et al., 2020).

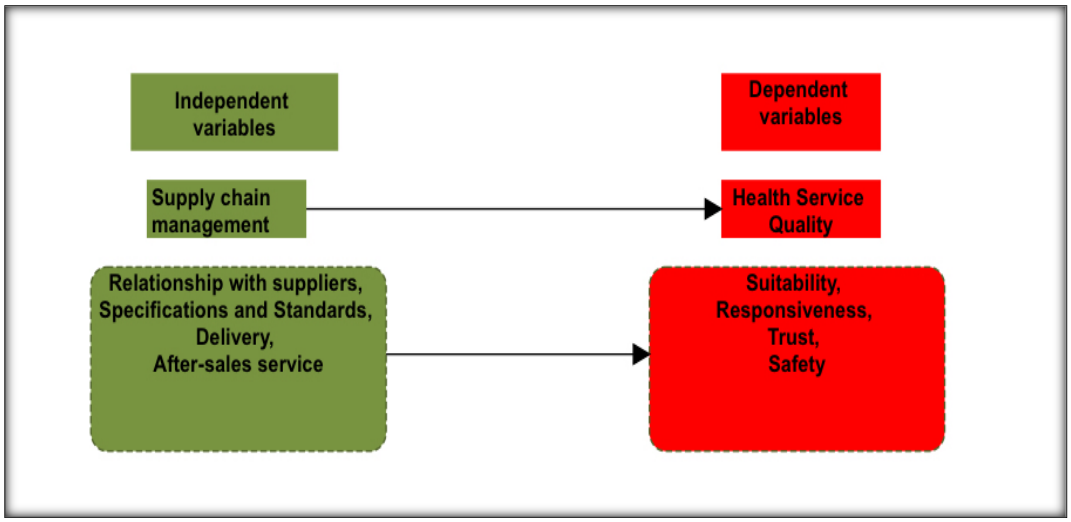
Medical Care Hospital provides quality data like patient surveys, infection rates, death rates, and health grades. It also provides physician patient ratings and hospital quality information (Dranove & Sfekas, 2008). These data sources help patients choose the best healthcare providers by reducing information asymmetry (Dranove & Jin, 2010). Globalization—its growth, new conditions, and development—is the biggest change organizations face today (Kubi & Doku, 2010). The rapid growth in work patterns and interactions between these factors prompted organizations to de-velop new ways to handle the sudden and appropriate changes brought about by economic changes (Alshourah, 2021).The Operations Management Journal has covered service quality (QM) and supply chain (SC) changes in organizations (Alfalla-luque & Medina-lópez, 2009). Management philosophies go beyond methods (Fadlallah et al., 2016). QM should be essential for the supply chain to deliver quality products quickly, efficiently, and competitively (Kaliani Sundram et al., 2016). Their goal is to improve supply and service quality (Fernandes et al., 2017). According to the 2020 Jordanian Ministry of Health statistical report, deaths increased in 2016 (6,693), 2019 (7,294), and 2020 (7,294). (7,644). This indicates an abnormal population increase in Jordan, the arrival of many refugees, an increase in epidemic diseases like Corona, and a poor health service (Ministry of Public Sector, 2020).

TQ strategies can improve service quality (Debattista et al., 2016). Total quality man-agement (TQM) is gaining popularity worldwide among businesses and governments (Al-Shdaifat, 2015). As Kubi et al. (2010) noted, users' perceptions of information quality vary, so emphasizing quality only in foreign markets is insufficient. Supplying at the right time, place, cost, and with useful information gives you a competitive edge. Thus, it's crucial to promptly meet customer demands for quantity, quality, and price (Fernandes et al., 2017). The researcher examines the impact of SC on health service quality in an applied study on the Jordanian government hospital sector, which serves a large portion of the population, and reviews the theoretical literature on the subject.

2. Theoretical background

The Based on the SERVQUAL theory , the recent study model examines the impact of the supply chain management as an independent variable measured by (suppliers, specifications and standards after sale-service and delivery) on the hospital service quality in terms of

(Tangibility, Reliabil-ity, Assurance Responsiveness and Empathy) . The suggested model built based on the studies (Al-Damen, 2017; Al-Saa'da et al., 2013; DeLone & McLean, 2003) will be empirically examined in the Jordanian con-text in the governmental hospitals in Jordan. The theoretical frame-work is shown in



Research Business Model (Prepared by Researcher)

3. Literature Review

In this article, the author discusses some of the prior studies that have examined the correlation between hospital SCM and medical care service quality in public hospitals in Jordan. As a result, the study's author presents several concepts related to SC, qual-ity management, and the standard of care provided by healthcare providers. Theory and prior research are discussed in this section. The evolution of supply chain man-agement and related concepts are discussed.

3.1Health Quality service

One of the fundamental tenets of contemporary management theory is quality management, which emphasizes a persistent emphasis on learning from customer feedback to evolve and improve (Wagner et al., 2014). As defined by the American Society for Quality (ASQ), "quality management" is "a collaborative approach to business performance based on the combined abilities of management and staff, with the ultimate aim of fostering a culture of continuous improvement in both quali-ty and productivity through collaborative teams (Abbas, 2020). In order to modify and have an impact on the percentage of disease cases, fatalities, disabilities, and malnutrition, requirements must be met and correct performance must be delivered in a safe, community-acceptable way at a reasonable cost. [13] Is how the World Health Organization characterizes high-quality health care. Numerous studies exam-ining the difficulty of gauging patient satisfaction with hospital care have highlighted the need to keep an eye on quality concerns and keep hospital administrators ap-prised of potential issues so they can be addressed (Parand et al., 2014). In the tradi-tional sense, healthcare quality means adhering to established guidelines set forth by the medical community. Good medical care refers to the standard of medical practi-tioners and nursing as it is practised and taught by medical leaders during a certain era of a country's social, cultural, and economic development (McGlynn, 2020).

3.2 Hospital Supply Chain

The Different researchers and thinkers on the supply chain have approached the topic from different theoretical perspectives, and their ideas, ideologies, and concepts are expressed in the theoretical frameworks. The Supply Chain Management Council defines SC as "the sequence of activities required to move raw materials from a source to an end user." In addition, all suppliers and service providers must work to-gether to ensure a smooth supply chain, from acquiring raw materials to the final delivery of finished goods (Mathur et al., 2018). SC established a natural progression of

creative value activities from adding inputs to the final delivery of the last product Abdel-Basset et al. (2018). According to Burns et al. (2021), the supply chain (SC) includes all of the companies, locations, departments, and tasks involved in making and delivering a product or service, from the primary source of raw materials to the end user.

3.3The Relationship between Supply Chain and Health Services Quality

As Ben Daya et al. (2020) noted in their analysis of the Internet of Things' (IoT) potential benefits for supply chain management, the supply chain (SC) is one of the application areas with substantial potential to reap the benefits of IoT. Based on the findings of this literature review, they suggested potential research subjects who would gain from the rapid technological advances in SC. [19]. Value chain practices and quality management were analyzed, as was the effect of information exchange and management on the performance of SMEs by Zhou and Li (2020). Several significant new insights were uncovered as a result of this study. It starts with an examination of how the rate of innovation and the success of a company's share of the market affect communication throughout the supply chain, as well as quality control and the amount of money invested by suppliers. Second, a company's location, which could be anywhere from a coastal metropolis to a provincial capital in the interior, can have a significant impact on its supply chain procedures and results. Third, supplier-specific investment projects by small and medium-sized firms may be impacted by the competitive environment. Fourth, the stage of development of the company has no bearing on the decisions made by SMEs in regards to supply chain information exchange, quality management, and supplier investment (i.e., presenta-tion, growth, or maturity). SCM dimensions (supplier connection, compatibility, specifications and standards, delivery, and after-sale service) were found to affect three aspects of healthcare quality (response, confidence, and security) in private hospitals in Jordan (Al-Saa'da et al., 2013). From our purchasing department. The research also aspires to explain the differences in SCM and medical service quality that can be traced back to certain demographics. Their research revealed that the four factors of supply chain management have an impact on the morality of health care (supplier relationship, specifications and standards, delivery, and after-sale service).In con-trast, the results demonstrate that supply chain management and the quality of health services are unaffected by a person's gender, level of education, age, or level of experience. Abu-kharmeh assessed the quality of medical facilities in Jordan (2012). Five criteria were used to determine quality: specificity, dependability, re-sponsiveness, confidence, and empathy. Based on the findings, the standard of care patients received in Jordanian hospitals was pretty average. Except for the response and assurance variables, which were both high, the quality dimensions of the service were also moderate. Regarding changes in supply chain management, De Vries and Huijsman (2011) investigated whether or not the industrial sector and healthcare services share commonalities.

4 Methodology

Researchers use the study design to select details and types of references to answer research questions, identify variable relationships, and guide data analysis hypotheses (Cooper & Schindler, 2011). Sekaran and Bougie (2016) define a research design as a framework or plan for collecting and analysing data to meet the research goal. This study examines how supply chain management, and ser-vice quality relate. Quantitative research is a good way to confirm or deny a phe-nomenon. Quantitative methods use concepts and variables to measure participants' behaviour and personality. This method specifies conceptual problem-solving meth-ods using measuring tools. Statistics are also used to assess significance. Quantitative research methods test a hypothesis for the sample and population. Quantitative re-search uses questionnaires and numerical data generation graphs to collect and ana-lyse data (Saunders, Lewis, & Thornhill, 2009).

The current study uses a survey to collect respondent data from a cross-sectional study. One-time survey data collection saves resources (Sekaran & Bougie, 2016). Surveys allow researchers to collect data that can be quantified using statistical soft-ware (Saunders et al., 2009). From March to May 2022, this study collected data. The questionnaire collects a lot of quantitative data in less time and cost than an interview and observation. This study used closed questions, where respondents chose from a list of statements. Closed questions allow respondents to make quick deci-sions. Closed questions help researcher's code data for analysis (Sekaran & Bougie, 2016).

5 Data Analysis

The goals of this study were accomplished through the use of descriptive and inferential statistical methods of analysis. As previously discussed in the research design, descriptive statistics describe things, people, groups, organisations, and environments and shed light on the relationships between different variables. Using inferential statistics, a researcher can extrapolate results beyond the sample size. In this research, however, Smart-PLS (Ringle, Wende, & Will, 2005) and PLS-Graph (Chin, Marcolin, & Newsted, 2003)—two of the most popular PLS-SEM software programs—were used to conduct the analysis and display the findings.

Table 1. Cross Loading Analysis

Construct Dimensions	Items	factor loading	CR	AVE	Construct Dimensions
supplier	SP1	0.89	0.921	0.744	supplier
	SP2	0.85			
	SP3	0.90			
	SP4	0.81			
Standard and specification	SS1	0.76	0.888	0.666	Standard and specification
	SS2	0.84			
	SS3	0.86			
	SS4	0.81			
After sale Service	ASS1	0.82	0.853	0.614	After sale Service
	ASS2	0.93			
	ASS3	0.90			
	ASS4	0.35			
Delivery	D1	0.87	0.926	0.806	Delivery
	D2	0.94			
	D3	0.88			
Tangibility	TAN1	0.85	0.940	0.796	Tangibility
	TAN2	0.90			
	TAN3	0.91			
	TAN4	0.91			
Reliability	REL1	0.75	0.893	0.626	Reliability
	REL2	0.82			
	REL3	0.83			
	REL4	0.82			
	REL5	0.73			
Assurance	ACUR2	0.71	0.881	0.652	Assurance
	ACUR3	0.88			
	ACUR4	0.87			
	ACUR5	0.76			
Responsiveness	RES1	0.81	0.888	0.666	Responsiveness
	RES2	0.83			
	RES3	0.82			
	RES4	0.80			

As was the case with the previous rule of thumb for interpreting internal consistency of reliability using composite reliability coefficient, Bagozzi and Yi (1988) and Hair et al. (2011) recommended that the coefficient be greater than or equal to.70. As can be seen in Table 4.7, the internal consistency of the latent variables in this study is sufficient, with all composite reliability coefficients for the study's constructs being more significant than the cutoff value of.704.

Discussions and Recommendation

This study illuminates SCM and SQ in Jordanian government hospitals. However, this study has many drawbacks. The survey, a cross-sectional data gathering instrument, collected participants' perceptions at one point, therefore a longitudinal basis for future studies can fix this issue. Since the study only collected data from Jordanian state hospitals, the conclusions cannot be generalized across cultures. To solve this problem, examine the cross-level model in other hospitals or sectors in Jordan or other cultures or nations. Thus, it would be interesting to see if the relative prediction in this research applies to different places and compare exceptional results from the nation-al background or regional differences.

Thirdly, the study design used the quantitative technique to establish variable correlations. SCM and service quality studies in health care and hospitals should focus on "depth" rather than "quantitative width" like this study. This quantitative study collected data from questionnaire replies. Qualitative research can also illuminate concerns. By combining qualitative and quantitative methods, numerous mean-ingful directions can be found.

7 Conclusion

Hospitals in Jordan are one of the most important issues because of their role in providing health care to the public. The Jordanian government hospitals, which pro-vide health care to a large population, are also considered vital institutions. Due to evolving global and health care standards, service quality development is now mandatory. Management could consider improving hospital supply chain processes to improve government service quality. This study aims to im-prove Jordan's government hospitals and keep high-quality hospital in the workplace. SCM (suppliers, standards and specifications, after-sale service and delivery), and service quality (tangibility, reliability, assurance, responsiveness, empathy) in Jordanian public hospitals were examined to construct a model. SCM awere linked to service quality in this study. Thus, SCM improve service quality in Jordanian government hospitals.

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