



IMPACT OF SUPPLY CHAIN MANAGEMENT ON QUALITY OF HEALTHCARE SERVICES

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Article History: Received: 11.04.2023 Revised: 16.06.2023 Accepted: 13.07.2023

Abstract

The purpose of the study was to investigate and examine the impact of supply chain management on the quality of medical services in hospitals in Kurukshetra Haryana from the perspective of procurement officers. This study also aimed to describe the impact of supply chain management on the quality of health care services, and to consider demographic variables such as gender, age, level of education, and years of experience in the health care field. , used quantitative indicators. Design and hypothesis-testing approach Distributed 500 questionnaires to determine the impact of aspects of supply chain management on quality of health services 27 of his 7 block procurement officers and administrative staff in Kurukshetra Haryana The block turned out to be incomplete. Here 473 respondents were used as the sample size for data analysis. Research results show that aspects of supply chain management have a significant impact on quality, while there are no differences between supply chain management and quality of health care services by gender qualification, age, or experience. It also shows no difference between supply chain management and quality of health services based on gender, age of eligibility and experience.

Keywords: Supply Chain Management (SCM), Healthcare, Quality Services.

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DOI: 10.31838/ecb/2023.12.s3.665

1. Introduction

SCM is now used in various hospitals as a holistic approach covering all aspects. Health care includes the mind and body and the prevention, diagnosis and treatment of disease. Medical logistics includes medical, pharmaceutical, surgical supplies, equipment and other products required by medical personnel such as doctors, nurses and administrative staff. ^[1] All hospitals are now working to identify areas of weakness that can be used to improve the quality of medical and patient care. ^[2] The escalating cost of complying with hospital standards and regulations is a major challenge. SCM aims to optimize the efficiency and effectiveness of the treatment provided. ^[3] The ultimate goal of SCM is transparency of all processes. Accuracy and observability of information must be assured for manufacturers, retailers, insurers, healthcare providers and patients. ^[4] Quality control initiatives have been introduced in the medical sector and hospitals are focusing on achieving quality control ^[5] The healthcare supply chain consists of three major players at various stages: manufacturers, buyers and healthcare providers. Manufacturers include pharmaceutical companies, medical and surgical product companies, equipment manufacturers, and manufacturers of capital goods and information systems. Purchasers include purchasing groups, pharmaceutical wholesalers, medical-surgical distributors, independent distributors, manufacturers and product representatives. Vendors include hospitals, hospitals, system integration distribution networks, alternate hub facilities, and more. ^[6] The hospital strives to provide excellent service and retain all its economically viable customers. In other words, the company strives for accuracy through its continuous efforts to improve the quality of the healthcare system ^[7]. Managers in the healthcare services sector are under increasing pressure to demonstrate that

their services are customer-centric and driven by continuous performance improvement. ^[8]

Service quality can therefore be defined as the difference between customer service expectations and perceived service. When expectations exceed performance, perceived quality becomes unsatisfactory, leading to customer dissatisfaction. ^[9] Supply Chain Management (SCM) deals with different categories of flows. The flow of goods, information and money within and between supply chain partners to meet consumer needs in the most efficient manner ^[10] Quality management is a method of reorganizing the work processes of a healthcare organization in the best possible way in order to achieve optimal quality of results, such as quality of healthcare services, patient satisfaction, staff satisfaction and overall performance. is. ^[11] Improving the quality of health services is a concern not only for patients, but also for governments, administrations, professionals and hospitals, even in developing countries where many lack access to quality services. Patients increasingly expect health care services and compare their experience to countries with better quality (World Health Organization, 2004; Ovretveit and Al Savory, 2006; Kennedy and Fiss, 2009). Year). ^[12] In the global healthcare market, where many patients seek to develop the best quality and services in underdeveloped countries to satisfy the underprivileged, the healthcare lacks financial resources to manage the healthcare supply chain. , and promised coordination among management staff. of healthcare supply chain management and its members. ^[13]

Therefore, this study focuses on the impact of supply chain management on health service quality. This is done through applied research in the private hospital sector and a review of both the theoretical literature and stakeholder views on the

subject. These are the parties involved in private hospital supply and procurement. [14] The purpose of this study was to determine the impact of supply chain management on the quality of health services. [15]

2. Research Methodology

The study will be conducted in multiple hospitals in Haryana (Kurukshetra). The Kurukshetra district has 07 blocks with a total area of 1,530 km², of which 1,456 km² is rural. Of the total population of Kurukshetra, 9, 64,655 live in this district, 279,225 in urban areas and 685,430 in rural areas [15]. It includes 415 villages with 141 state rural facilities covering a total of 31,068 PHCs, CHCs, sub-centers, district hospitals and private facilities. These hospitals will be inspected for the processes and systems used for supply chain management and the quality of medical services. [16] Data is collected from procurement personnel and hospital administrators directly or indirectly involved in the supply chain. A cross-sectional research method to determine the impact of supply chain management on health service quality using a hypothesis-testing approach. The questionnaire was developed as a data collection tool. A total of 500 questionnaires were administered in rural hospitals, 27 of which were incomplete and the sample size was calculated using the standard sample size method. The original research instrument/questionnaire was developed from existing literature/works of relevant focus (e.g. Paul Oguya Odhiambo, 2014, Md. Mobarak Karim, 2020, etc.) [17] and responded Adapted and modified to include socio-demographic information (gender) of the individual and used for data collection. Data is collected every 7 blocks including rural areas. Research examines supply chain management processes, materials, pricing, usage, inventory management, procurement, internal and external logistics, rural

distribution channels, and quality of healthcare services. [18] Therefore, questionnaires were used for analysis and hypothesis testing. Learning tools are available in his four parts. The first part is designed to measure demographic profiles and the second part is designed to measure supply chains and is divided into four dimensions: supplier relationships, compatibility, specifications, trust and security. It is divided and consists of (20) questions. [19] His third part of the questionnaire measures the quality of health care services and is divided into five dimensions: concreteness, responsiveness and safety. Reliability and empathy. Consisting of 25 questions, the fourth part measures the challenges he faces in his SCM implementation. [20] All statements were rated on his 5-point Likert scale of 'agree–disagree'. [21] To ensure the validity of the questionnaire, a self-administered questionnaire was used specifically to collect data for the study. In the survey, five supply chain managers and experts were interviewed and agreed to fill out the questionnaire and comment on the scales used. [22] Ethical approval of the research project was obtained from the M Shafiq • 2017 • Institutional Review Board. [23] Their suggestions were then collected and considered to improve the effectiveness of the questionnaire. A survey was created and data was collected using schedules and surveys. Written consent was obtained from medical institutions prior to interviews to ensure data confidentiality. [24]

Statistical analysis

Proportional analysis of the data was performed utilizing data that was fed into Microsoft Excel 2010.

3. Results

Table 1 of the questionnaire was used to collect data on the demographic characteristics of the respondents. This question included her four questions: the

respondent's gender, age group, educational background, and work history. Sixty-nine percent of respondents were male and 31% female, with 60% aged 25-35, 26% aged 36-45, 9% aged 46-55, and 5% aged 55 and over. Among all samples, most respondents are graduate students. According to years of experience, the majority of survey participants said he has more than 8 years of experience.

Supply Chain Management Practices

Relationship with supplier: According to descriptive analysis, supplier relationships are defined in Table 2 by organizations. 45% of her respondents fully agree that suppliers can respond quickly to increased order volumes. 28% of respondents agree (mean 118.2). 18% of respondents are neutral, 9% disagree, and 49% fully agree that good relationships between vendors and organizations are due to personal relationships, 24% of respondents agree, 9% are neutral, and 18% of respondents agree with this statement. 69% of respondents agreed with this statement and 31% of respondents fully agreed with this statement. Agree fully with SCM systems, with 56% of respondents agreeing that delays in the SCM decision-making process lead to unavailability of goods, and that changes in supplier contract terms create supply and demand issues 44% did. Often evaluate supplier performance in terms of satisfactory availability of goods, with 30% agreeing and being neutral.

Quality of Healthcare Services

Tangible statements: From the results in Table 3, 54% of respondents agreed that their organizations keep an inventory of all customer care materials to avoid stock outs and ensure proper customer care, while 38% fully agree (mean 118.2). Fifty-two

percent of respondents fully agree, and 39% of respondents agree that companies buy devices with the latest technological advances each year (average of 94.6). 41% of respondents agree and 40% strongly agree that companies are investing in annual maintenance contracts (AMCs) and comprehensive maintenance contracts (CMCs) as well as preventive maintenance for medical devices doing. 18% of respondents' organizations plan to reduce and make treatment affordable. 50% of respondents agree that the organization states that he cannot implement SCM operations due to lack of human, financial and material resources. Customers are happy to receive this service from the organization.

Challenges in Implementing SCM

In Table 4, we asked respondents what challenges they faced in implementing SCM. 54% of respondents agreed with 'lack of proper planning', 38% of respondents strongly agreed (mean 157.6), 47% of respondents agreed with the statement about out-of-stock 28% strongly agree and strongly agree (average 94.6) , 53% agree with the lack of funding (average 94.6). The survey also found that 52% of respondents agreed that a shortage of qualified staff was a challenge in implementing his SCM (118.2 average). 68% agree that order requests are poorly filled out, 23% strongly agree (mean 118.2), 57% of respondents agree there is uncertainty in demand (mean 118.2), 25 % disagreed with supply uncertainty (mean 118.2), 49% agreed with the slow arrival of order requisitions (mean 118.2), and 54% of respondents preferred products that physicians chose themselves (average 157.6).

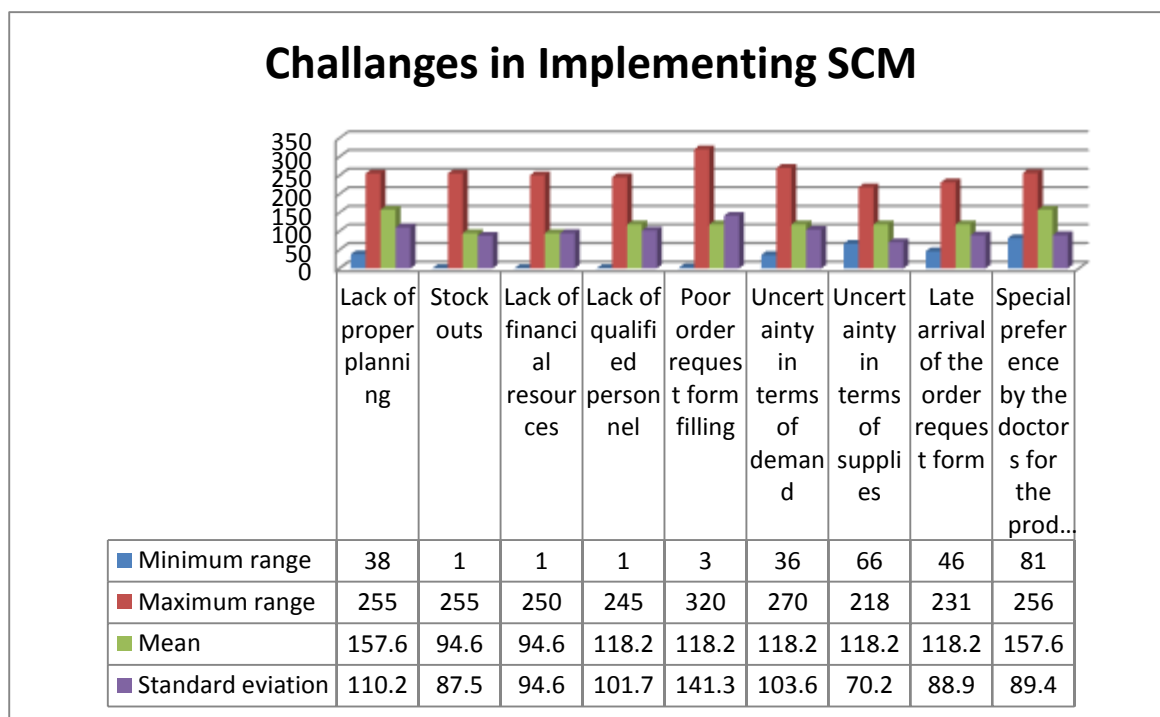


Table-1 Demographic profile descriptive analysis

Variable	Categories	Frequency	Percentage
Gender	Male	328	69%
	Female	145	31%
Age Group	25-35 yr	281	60%
	36-45 yr	124	26%
	46-55 yr	44	9%
	Above 55 yr	24	5%
Educational Qualification	Undergraduate	48	10%
	Graduate	145	31%
	Post Graduate	280	59%
Work experience	0-3 yr	38	8%
	3-6 yr	160	34%
	6-8 yr	93	20%
	>8 yr	182	38%

Table -2 Supply Chain Management Practices

S.No	Relationship with supplier	Division	Quantity	percentage
1	Your company's suppliers can quickly respond to an increase in order size.	SA	212	45%
		A	130	28%
		N	87	18%
		D	44	09%
		SD	0	0
2	Does the good supplier relationship is due personal relations with the employee?	SA	233	49%
		A	113	24%
		N	42	09%
		D	85	18%
		SD	0	0

3	Is the delay in the decision-making process of the supply chain lead to the non-availability of products?	SA	148	31%
		A	325	69%
		N	0	0
		D	0	0
		SD	0	0
4	Does the change in terms and conditions of suppliers create problems in demand and supplies?	SA	79	17%
		A	266	56%
		N	128	27%
		D	0	0
		SD	0	0
5	Does the supply chain system frequently evaluate the supplier performance for satisfactory availability of the products?	SA	205	44%
		A	143	30%
		N	82	17%
		D	43	9%
		SD	0	0

Table -3 Quality of Healthcare Services

S.No	Tangible statements	Division	Quantity	Percentage
1	Do you maintain inventory for all your patient care supplies to avoid shortages to give proper patient care?	SA	245	52%
		A	186	39%
		N	2	0
		D	40	9%
		SD	0	0
2	Do you procure equipment every year with recent technology advancements?	SA	206	43%
		A	132	28%
		N	93	20%
		D	41	9%
		SD	1	0
3	Do you invest in AMC /CMCs and preventive maintenance of medical equipment?	SA	190	40%
		A	194	41%
		N	48	10%
		D	41	9%
		SD	0	0
4	Do you plan Supplies to reduce the cost of treatment for affordability?	SA	144	30%
		A	216	46%
		N	28	6%
		D	85	18%
		SD	0	0
5	Do you state that the Supply chain operations cannot be implemented due to a lack of human, financial, and material resources?	SA	153	32%
		A	238	50%
		N	79	17%
		D	0	0
		SD	3	1%

Table-4 Challenges in Implementing SCM

S.No	Challenges in Implementing SCM-	Minimum range	Maximum range	Mean	Standard deviation
1.	Lack of proper planning	38	255	157.6	110.2
2.	Stock outs	1	255	94.6	87.5
3.	Lack of financial resources	1	250	94.6	94.6
4.	Lack of qualified personnel	1	245	118.2	101.7

5.	Poorly filled order request forms	3	320	118.2	141.3
6.	Uncertainty about demand	36	270	118.2	103.6
7.	Uncertainty about supplies	66	218	118.2	70.2
8.	Delays in receiving order request forms	46	231	118.2	88.9
9.	Special preference by the doctors for the products of their choice	81	256	157.6	89.4

4. Findings & Discussion

The results showed that demographic factors such as gender, age, education level, and work experience did not significantly differ between supply chain management and quality of healthcare services. In terms of supplier relationships, 45% of respondents believe their suppliers are able to respond quickly to increased orders, and 49% of respondents believe that good supplier relationships 69% of respondents agreed that delays in the supply chain decision-making process lead to unavailability of products; 56% of respondents agree that it causes problems, and 44% fully agree We rate supplier performance in terms of the availability of satisfactory products. El-Shoghari and Abdallah (2016) stated that SCM should improve service quality by enabling each agency to track service quality, optimize the use of existing resources, and recruit additional resources to meet demand. (Radwan Chooughri, January 2016) [24]. An organizational view of how SCM impacts quality of service: [25] Quality of service is the most potential metric that can bring many benefits to your customers and your organization that help you achieve your organization's goals. This study investigated the impact of quality of health services. [24] The aim was to assess and analyze the impact of her SCM on the quality of health care services. A sample of 473 respondents was selected to meet these goals. This research provides insight into customer support materials to avoid bottlenecks and ensure proper customer support (average 118.2). Fifty-two percent of respondents fully agreed, and 39% of respondents agreed that companies buy devices with the latest technological advances every year (average of 94.6). 41% of respondents agree and 40% of respondents strongly agree that organizations invest in Annual Maintenance Contracts (AMC) and Comprehensive Maintenance Contracts (CMC) in addition to preventive maintenance

for medical devices Did. 18% of surveyed organizations plan to reduce and make treatment affordable. 50% of respondents agree that the organization states that he cannot implement SCM operations due to lack of human, financial and material resources. It can be said that customer satisfaction depends on the service quality of the organization. [26] Finally, the challenges faced by rural hospitals in Haryana (Kurukshetra) in implementing SCM practices are: Lack of proper planning 54%, shortage %, lack of financial resources 53%, lack of qualified staff 52%, inadequate bill of lading for orders 68% Uncertainty about demand 57% Uncertainty about supply 46% Delay in arrival of order form 49% Special preference for physician's product choice 54% disputed to some extent.

5. Conclusion

This study aims to measure the impact of supply chain management on the quality of rural health services from the perspective of supply chain managers. A descriptive analysis was performed based on the information collected during the study. These results therefore show that most of the components have a positive and significant relationship with the quality of health care services, therefore hospitals in Haryana (Kurukshetra) state have shown that health care related supply chain activities have a significant impact on quality. It suggests that you need to recognize your role. These insights will also help Supply Chain managers recognize the importance of Supply Chain related activities that may improve the quality of healthcare services. In conclusion, the study concludes that the main challenges facing rural hospitals in Haryana are lack of proper planning, overstock, lack of financial resources and lack of qualified staff.

Recommendations

Based on the research findings, the research suggests some recommendations. First, the rural hospital should focus on his SCM practice to improve the quality of medical services. Second, supply chain personnel must play a key role in improving the quality of healthcare services to various customers. Third, her SCM at the hospital should focus on building strong relationships with suppliers through specific policies.

Further study

Only rural hospitals in Haryana (Kurukshetra) were considered in the present study. In future research, it is necessary to consider expanding the scope to include municipal hospitals. Other studies related to the health sector, particularly comparative studies between rural, urban and military health service sectors, may also be conducted.

Acknowledgments

We would like to thank the various procurement officers and managers from all seven blocks for their cooperation and valuable input regarding supply chain management and quality of health services in rural areas.

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