

JOINT PROBLEM SOLVING AND HEALTHCARE DELIVERY IN PRIVATE HOSPITALS IN RIVERS STATE, NIGERIA

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Abstract

This study investigated the relationship between joint problem solving (JPS) and healthcare delivery of private hospitals in Rivers State. The study was conceptualized with JPS as predictor to healthcare delivery measures of patient outcome, care coordination and patient engagement. The study adopted a cross sectional research design with a correlational investigation type. The study population comprised 43 private medical and dental hospitals that are operational in Rivers State as enlisted in Rivers State Ministry of Health Listing. The study surveyed all the 43 private medical and dental hospitals. 3 copies of questionnaire designed in Likert 5-point scale were administered to directors, matrons and procurement managers of the 43 private medical and dental hospitals. Thus, a total of 129 respondents took part in the study. However, data obtained from only 108 respondents was used for the study. The reliability of research instrument was ascertained via Cronbach Alpha test, with all the items scoring above 0.70. Pearson's Product Moment relationship was used to test the hypotheses with the help of the Statistical Packages for Social Sciences Version 25.0. From the analysis, it was revealed that JPS has significant correlation with healthcare delivery. Based on these findings, the study concluded that JPS significantly correlates with healthcare delivery of private hospitals in Rivers State; and recommends that private hospital management should establish structured platforms such as cross-functional teams, joint planning meetings, and multidisciplinary case reviews where clinical and operational staff can collaborate regularly to address systemic challenges.

Keywords: Care coordination, healthcare delivery, joint problem solving, patient engagement, patient outcome

Introduction

The healthcare industry is a vital driver of social and economic development, ensuring the well-being and productivity of populations. The industry is basically divided into public and private sectors. While public sector healthcare is owned by the government, the private sector comprises the activities of agents who are largely outside the control of government (Sayers et al., 2022). This includes clinics and hospitals owned by private employers and those operated by religious missions and other non-governmental organizations (NGOs). These agents play a significant role in providing health services.

As noted by the World Health Organization (2020), private healthcare in Rivers State has faced persistent challenges in delivering quality, timely, and efficient services due to systemic inefficiencies in supply chain management. Joint problem-solving (JPS) as a collaborative approach where hospitals and suppliers work together to identify challenges, co-create solutions and optimize healthcare delivery (Chakraborty, 2018), has become strategic in creating solutions that aim to ameliorate medical supply chain inefficiencies. Private hospitals rely on JPS to ensure uninterrupted availability of drugs, medical equipment and consumables, all of which are pivotal to effective healthcare delivery (Lee et al., 2023).

By leveraging JPS principles, private hospitals can proactively address supply chain disruptions, enhance supplier accountability, and ensure steady flow of essential medical resources (Sanket, & Ankitkumar, 2024). Abdallah et al. (2017) aver that JPS is germane to

Despite the importance of JPS in building and sustaining healthcare delivery, most private hospitals in Rivers State have continued to face challenges related to poor patient outcome, lack of proper care coordination and poor patient engagement. Problems of this nature exist for several reasons, one of which is the absence or inadequacy of empirically studies that systematize how JPS can be used to achieve healthcare delivery among private hospitals in Rivers State.

While several studies indicate the significance of JPS in improving healthcare delivery in different demography (Kerrissey & Novikov, 2024; Bahadurzada, Kerrissey, & Edmondson, 2024; Scheerlinck, Reniers, & Michiels, 2023), existing studies failed to explain the relationship between JPS and healthcare delivery among private hospitals in Rivers State. Thus, this study sought to close this gap by examining the nexus between JPS and healthcare delivery of private hospitals in Rivers State.

Conceptual Framework

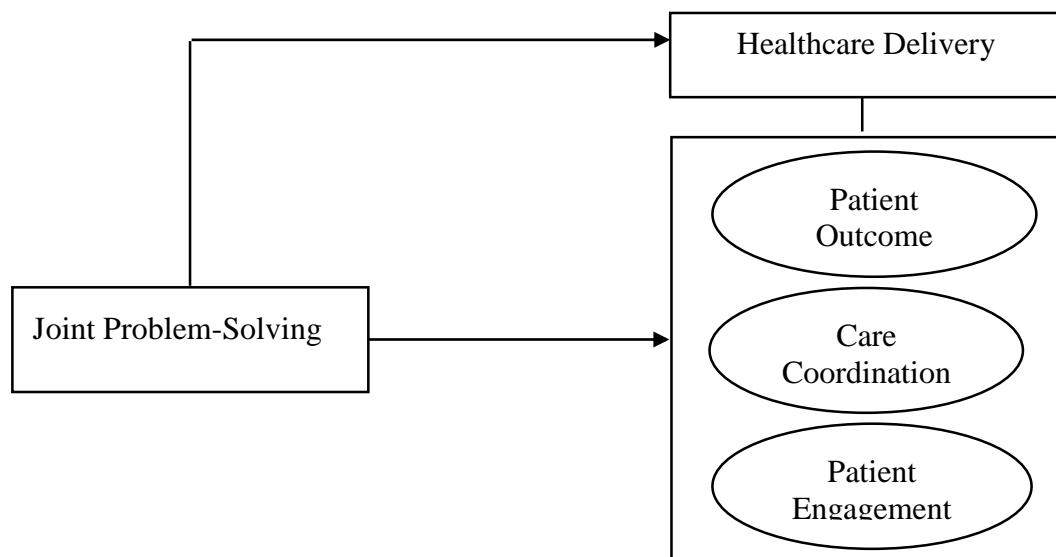


Fig. 1: Conceptual framework of relationship between joint problem-solving and healthcare delivery.
Source: Kerrissey and Novikov (2024).

Theoretical Foundation

Relational view theory of Dyer and Singh (1998) forms the basis of this study. Relational view theory argues that firms can achieve sustainable competitive advantages through inter-organizational relationships rather than relying solely on internal resources. The theory emphasizes collaborative advantage, which is derived from trust, shared knowledge, complementary resources, and effective governance mechanisms in partnerships Chakraborty, 2019).

Unlike traditional theories that focus on competition between firms, relational view highlights that organizations can co-create value by fostering strong, long-term relationships with external stakeholders (Chakraborty, 2019). In the healthcare sector, particularly in private hospitals, supplier relationships are critical to ensuring timely access to medical resources, and reducing procurement inefficiencies, and improving healthcare delivery.

In the context of this study, relational view theory suggests that JPS between private hospitals and suppliers is best is a strategic collaboration that enhances healthcare delivery. The theory suggests that trust and relational governance reduce transaction costs and increase the efficiency of supply chain operations (Kerrissey & Novikov, 2024). Private hospitals rely on suppliers for pharmaceuticals, medical equipment, and consumables, making supplier relationship management crucial for ensuring continuous service delivery.

The theory explains that mutual value recognition between hospitals and suppliers fosters effective problem-solving mechanisms, allowing both parties to resolve supply chain disruptions proactively (Oduro et al., 2020). Therefore, relational view theory effectively explains how JPS foster superior healthcare delivery through strategic supplier collaborations.

Concept of Joint Problem-Solving

JPS is a collaborative approach where multiple stakeholders work together to identify, analyze, and resolve complex challenges in a structured manner (Fiore & Hall, 2024). It is widely used in various fields, including healthcare, business, and supply chain management, to improve efficiency, foster innovation, and enhance decision-making. Kerrissey and Novikov (2024) define JPS as a cooperative orientation that fosters mutual value recognition and enhances performance in dynamic teamwork environments (Kerrissey & Novikov, 2024).

Similarly, Chakraborty (2019) describes JPS as an interactive process between stakeholders that facilitates co-creation, leading to enhanced efficiency and innovation. In the context of supply chain management, Mofrad et al. (2019) define JPS as a structured mechanism for knowledge sharing and trust-building between organizations to enhance supply chain performance. As organizations continue to navigate evolving challenges, adopting JPS as a core strategy can significantly improve performance, collaboration, and overall success.

JPS is anchored on trust and commitment. Trust foster open communication and reduce conflicts among stakeholders; while commitment ensures that parties in a JPS remain engaged in the process and are willing to invest resources to finding sustainable solutions (Abdallah et al., 2017). High levels of trust between hospitals and suppliers lead to better cooperation, improved efficiency, and stronger long-term relationships.

Effective JPS also rely on timely and accurate information exchange between stakeholders. Transparency ensures that all parties have access to relevant data, which facilitates better decision-making and reduces uncertainties (Chakraborty, 2019). In hospital-supplier relationships, sharing information about inventory levels, delivery schedules and financial constraints prevent supply chain disruptions and enhance service delivery.

JPS is most effective when all participants recognize the value that each party brings to the collaboration. This involves acknowledging expertise, contributions and the importance of interdependence in achieving common goals (Kerrissey & Novikov, 2024). JPS plays a crucial role in optimizing supply chain performance, reducing inefficiencies, and ensuring timely delivery of medical resources (Chakraborty, 2018).

Healthcare Delivery

Healthcare delivery is the process of providing medical services to patients, which includes the diagnosis, treatment, and prevention of disease, as well as the promotion and maintenance of health (Coulter, 2017). Healthcare delivery also refers to the system and processes through which healthcare is provided. It encompasses the way healthcare professionals, organizations, and institutions collaborate to ensure the provision of medical care, preventive services, and

A healthcare delivery system is a mechanism for providing services that meet the health-related needs of individuals. This concept integrates various elements such as access to care, quality of services, efficiency, and patient outcomes, playing a critical role in the overall effectiveness of a healthcare system (Buchanan et al., 2023). Healthcare delivery may be viewed in terms of patient outcome, care coordination and patient engagement.

Patient outcome refers to the end result of healthcare interventions and the impact of clinical care on a patient's health status, quality of life, and functional ability. Outcomes are the measurable effects that result from the care provided, encompassing a wide range of health-related variables, including physical, psychological, and social factors. In healthcare research and practice, patient outcomes are often used as indicators to assess the effectiveness of interventions, treatments, and healthcare systems.

Care coordination is a critical component of healthcare delivery systems, focusing on the integration of services to improve patient outcomes. It involves organizing and managing patient care across multiple providers, settings, and levels of care to ensure that patients receive comprehensive, timely, and efficient treatment. The goal is to improve the quality of care, enhance patient satisfaction, reduce unnecessary duplication of services, and lower healthcare costs (Coulter, 2017; Levetown et al., 2019).

Patient engagement encompasses a broad spectrum of behaviors, attitudes, and interactions between patients and their healthcare providers. It is often defined as the process by which patients become actively involved in their healthcare decisions, actions, and self-management practices, as well as the ongoing collaboration with healthcare professionals (Coulter, 2012). According to the Agency for Healthcare Research and Quality (AHRQ), patient engagement is the “involvement of patients in their own care, which leads to better decision-making, more effective management of health conditions, and improved health outcomes” (AHRQ, 2021). This definition underscores the importance of patient participation not only in clinical decision-making but also in the management of their own health outside of the clinical setting.

Empirical Review

Balogun et al. (2025) examined strategic procurement practices in healthcare organizations and their impact on Medicaid and Medicare cost containment among healthcare institutions in the U.S. The authors discovered that coordinated procurement practices such as centralized purchasing, supplier collaboration, and digital tendering platforms, significantly lowered costs related to Medicaid and Medicare services,

Similarly, Bichescu et al. (2025) investigated how IT investment decision practices shape supply chain efficiency. The study discovered that hospitals where IT procurement was aligned with operational needs experienced better integration across pharmacy, lab, and administrative supply chains. In a study on digital transformation and workforce capabilities influence the resilience of hospitals through supply chain integration, Carbonara et al. (2025) found that hospitals with high levels of digital maturity and workforce digital literacy reported significantly better responsiveness to supply shortages and emergency logistics needs.

Also, Kerrissey and Novikov (2024) conducted a longitudinal study on JPS orientation and its effects on teamwork and performance in 1,608 hospital units across the United States. The study measured JPS as mutual value recognition (MVR), and expertise variety (EV), and linked

them to performance outcomes. Findings revealed that JPS enhances teamwork performance both directly and through MVR, with expertise variety serving as a moderator.

In addition, Bahadurzada et al. (2024) investigated the role of psychological safety and JPS in improving patient safety and hospital workforce retention. Findings indicated that psychological safety has a stronger positive effect on patient safety outcomes when combined with a strong JPS culture. The study also found that clinicians with higher JPS levels were more likely to remain in their organizations, reducing turnover. However, the following hypotheses were tested:

H_01 : There is no significant relationship between JPS and patient outcome in private hospitals in Rivers State.

H_02 : There is no significant relationship between JPS and care coordination in private hospitals in Rivers State.

H_03 : There is no significant relationship between JPS and patient engagement in private hospitals in Rivers State

Methodology

This study adopted a cross-sectional research design with a correlational type of investigation. The study population comprised 43 private medical and dental hospitals that are operational in Rivers State. The study adopted a census and administered 3 copies of structured questionnaire to directors, matrons and procurement managers of the 43 private medical and dental hospitals. Thus, 129 respondents provided data for the study. However, only data obtained from 108 respondents was used for analyses. The reliability of the instrument was achieved by the use of Cronbach Alpha coefficient with all items scoring above 0.70. Pearson Product Moment Correlation was used to test the hypotheses. The probability criterion of 0.05 significance level was adopted for accepting the null hypotheses at ($P>0.05$) or rejecting the hypotheses at ($P<0.05$). The analysis was done with the aid of the Statistical Packages for Social Science, version 25.0.

Table 1: Reliability Coefficients of Variable Measures

S/N	Dimension/Measure	No. of Item	Cronbach Alpha
1	Joint Problem Solving	4	0.90
2	Patient Outcome	4	0.91
3	Care Coordination	4	0.84
4	Patient Engagement	4	0.81

Source: Survey Data, 2025

As shown in Table 1, the results of the Cronbach's alpha analysis revealed that all the variables in the study produced high Cronbach's Alpha coefficients indicating that, there is inter-item consistency among the variables in the study. This means that, if this study is conducted again in similar condition, the results would be similar to the results of our study.

Data Analysis and Findings

Table 2: Descriptive Statistics on JPS in Private Hospitals in Rivers State

	N	Sum	Mean	Std. Dev.	Variance
Our hospital and suppliers work together to solve unexpected supply chain problems.	108	430	3.98	1.304	1.701
We frequently collaborate with suppliers to address service delivery challenges.	108	530	4.91	.556	.309
When issues arise, we engage in joint planning sessions with supply chain partners.	108	505	4.68	.577	.333
Problem-solving activities between our hospital and suppliers are conducted in a cooperative manner.	108	528	4.89	.460	.212
Valid N (listwise)		108			

Source: Survey Data, 2025

Results of the analysis in Table 2 indicate that the entire responses generated high mean scores greater than 3.00. This means that private hospitals in Rivers State adopt collaborative approach where individuals work together to address a shared problem, focusing on shared goals and co-creating solutions. Among the indicators however, item 2 has the highest sum of 530 and hence the highest mean score of 4.91. However, item 1 has the highest standard deviation and variance of 1.304 and 1.701 respectively. This means that there are more divergent views in item 1 compared to other items.

Table 3: Descriptive Statistics of Patient Outcome in Private Hospitals in Rivers State

	N	Sum	Mean	Std. Dev.	Variance
Patients generally experience improvements in their health conditions after receiving treatment.	108	510	4.72	.561	.315
The rate of patient recovery in our hospital is consistently high.	108	492	4.56	.715	.511
Our hospital effectively minimizes complications during and after treatment.	108	432	4.00	1.111	1.234
Patients report high satisfaction with the results of their treatments.	108	470	4.35	.812	.660
Valid N (listwise)		108			

Source: Survey Data, 2025

Results of the analysis in Table 3 indicate that the entire responses generated high mean scores greater than 3.00. This means that private hospitals in Rivers State observe that there is active involvement of individuals in their own healthcare, fostering a partnership between patients and the hospitals to achieve better health outcomes. Among the indicators however, item 1 has the highest sum of 510 and hence the highest mean score of 4.72. However, item 3 has the highest standard deviation and variance of 1.111 and 1.234 respectively. This means that there are more divergent views in item 3 compared to other items.

Table 4: Descriptive Statistics of Care Coordination in Private Hospitals in Rivers State

	N	Sum	Mean	Std. Dev.	Variance
Different departments within the hospital collaborate effectively in managing patient care.	108	424	3.93	1.205	1.452
Patient care transitions (e.g., from admission to discharge) are well-organized and efficient.	108	523	4.84	.644	.414
Healthcare professionals in our hospital regularly communicate about patient treatment plans.	108	490	4.54	.689	.475
Our hospital ensures that patients receive continuous care across different services and specialists.	108	521	4.82	.561	.315
Valid N (listwise)	108				

Source: Survey Data, 2025

Results of the analysis in Table 4 indicate that the entire responses generated high mean scores greater than 3.00. This means that private hospitals in Rivers State observe that there are collaborative efforts of multiple individuals and entities to ensure patients receive timely and appropriate healthcare services. Among the indicators however, item 2 has the highest sum of 523 and hence the highest mean score of 4.84. However, item 1 has the highest standard deviation and variance of 1.205 and 1.452 respectively. This means that there are more divergent views in item 1 compared to other items.

Table 5: Descriptive Statistics of Patient Engagement in Private Hospitals in Rivers State

	N	Sum	Mean	Std. Dev.	Variance
Patients are actively involved in decisions about their treatment plans.	108	430	3.98	1.297	1.682
Our hospital provides clear and understandable information to patients about their health conditions.	108	517	4.79	.597	.356
Patients are encouraged to ask questions and express their preferences during consultations.	108	501	4.64	.729	.532
Our hospital seeks regular feedback from patients to improve healthcare services.	108	472	4.37	1.141	1.301
Valid N (listwise)	108				

Source: Survey Data, 2025

Results of the analysis in Table 5 indicate that the entire responses generated high mean scores greater than 3.00. This means that private hospitals in Rivers State observe that there is active involvement of individuals in their own healthcare, fostering a partnership between patients and the hospitals to achieve better health outcomes. Among the indicators however, item 2 has the highest sum of 517 and hence the highest mean score of 4.79. However, item 1 has the highest standard deviation and variance of 1.297 and 1.682 respectively. This means that there are more divergent views in item 1 compared to other items.

Table 6: Correlation between Joint Problem Solving and Patient Outcome

		Joint Problem Solving	Patient Outcome
Joint Problem Solving	Pearson Correlation	1	.647**
	Sig. (2-tailed)		.000
	N	108	108
Patient Outcome	Pearson Correlation	.647**	1
	Sig. (2-tailed)	.000	
	N	108	108

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Survey Data, 2025

Pearson Correlation Analysis was run to assess the relationship between JPS and patient outcome of private hospitals in Rivers State using data obtained from 108 respondents drawn from 43 Private Hospitals in Rivers State. The analysis as shown in Table 6, reveals that JPS has strong, positive and significant relationship with patient outcome of Private Hospitals in Rivers State. This result is evident in the correlation coefficients of 0.647 and probability value of $0.000 < 0.05$. In view of this result, the researchers rejected the hypothesis which denies the existence of significant relationship between JPS and Patient outcome of private hospitals in Rivers State.

Table 7: Correlation between Joint Problem Solving and Care Coordination

		Joint Problem Solving	Care Coordination
Joint Problem Solving	Pearson Correlation	1	.547**
	Sig. (2-tailed)		.000
	N	108	108
Care Coordination	Pearson Correlation	.547**	1
	Sig. (2-tailed)	.000	
	N	108	108

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Survey Data, 2025

Pearson Correlation Analysis was run to assess the relationship between JPS and care coordination of private hospitals in Rivers State using data gathered from 108 respondents drawn from 43 private hospitals in Rivers State. The facts as shown in Table 7 suggests that JPS has a moderate, positive and significant relationship with care coordination of private hospitals in Rivers State. This result is evident in the correlation coefficients of 0.547 and a probability value of $0.000 < 0.05$. In view of this result, the researchers rejected the hypothesis that deny the existence of significant relationship between JPS and care coordination of private hospitals in Rivers State.

Table 8: Correlation between Joint Problem Solving and Patient Engagement

		Joint Problem Solving	Patient Engagement
Joint Problem Solving	Pearson Correlation	1	.734**
	Sig. (2-tailed)		.000
	N	108	108
Patient Engagement	Pearson Correlation	.734**	1
	Sig. (2-tailed)	.000	
	N	108	108

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Survey Data, 2025

Pearson Correlation Analysis was run to assess the relationship between JPS and patient engagement of private hospitals in Rivers State using data collected from 108 respondents drawn from 43 private hospitals in Rivers State. The result of the analysis as shown in Table 8 implies that JPS has a strong, positive and significant relationship with patient engagement of private hospitals in Rivers State. This result is evident in the correlation coefficients of 0.734 and a probability value of $0.000 < 0.05$. Thus, the researchers rejected the hypothesis which states a significant relationship does not exist between JPS and patient engagement of private hospitals in Rivers State.

Discussion of Findings

This study assessed the relationship between JPS and healthcare delivery of private hospitals in Rivers State. The statistical tests conducted to examine the hypothesized relationships between JPS and measures of healthcare delivery revealed that JPS has a strong, positive and significant relationship with patient outcome; a moderate, positive and significant relationship with care coordination; and a strong, positive and significant relationship with patient engagement of private hospitals in Rivers State. These findings support the report of Balogun et al. (2025) who examined strategic procurement practices in healthcare organizations and their impact on Medicaid and Medicare cost containment, and discovered that coordinated procurement practices such as centralized purchasing, supplier collaboration, and digital tendering platforms, significantly lowered costs related to Medicaid and Medicare services.

These findings also align with the findings of Carbonara et al. (2025) who investigated how digital transformation and workforce capabilities influence the resilience of hospitals through supply chain integration and revealed that hospitals with high levels of digital maturity and workforce digital literacy reported significantly better responsiveness to supply shortages and emergency logistics needs. Supply chain integration, especially in terms of real-time information sharing, was found to mediate the relationship between digital adoption and resilience.

The results of this study also confirm the results of Islam (2024) who explored how integrating circular economy principles and digital twin technology enhances supply chain integration in healthcare, and identified significant resilience benefits, showing healthcare providers who utilized simulation-based planning tools (digital twins) and waste-return models (circular economy) experienced better inventory accuracy, faster response to product recalls, and improved supplier coordination.

Conclusion and Recommendations

This study examined the relationship between JPS and healthcare delivery of private hospitals companies in Rivers State. The findings indicate that JPS plays a significant role in increasing healthcare delivery. From the empirical results it was revealed that, JPS positively and significantly relates to healthcare delivery. The evidence suggests that JPS contributes significantly to responsive healthcare systems by encouraging collaboration among healthcare professionals to address clinical and logistical challenges. This collaborative approach enhances decision-making and promotes unified efforts in delivering timely and appropriate healthcare. Conclusively, JPS positively and significantly relates to healthcare delivery measures of patient outcome, care coordination and patient engagement.

From the findings, the study recommends that:

- 1) Private hospital management should establish structured platforms such as cross-functional teams, joint planning meetings, and multidisciplinary case reviews where clinical and operational staff can collaborate regularly to address systemic challenges.
- 2) Private hospital management should encourage inclusive decision-making processes to enhance responsiveness, improve diagnostic and treatment strategies, and reduce avoidable service delays.
- 3) Managers of private hospitals should understand the role of JPS as a panacea for healthcare delivery inefficiencies.

References

- Abdallah, A., Abdullah, M. A., & Saleh, F. I. M. (2017). The effect of trust with suppliers on hospital supply chain performance. *Benchmarking: An International Journal*, 24(3), 694-715.
- Bahadurzada, H., Kerrissey, M. J., & Edmondson, A. C. (2024). Speaking up and taking action: Psychological safety and joint problem-solving orientation in safety improvement. *Healthcare*, 12(8).
- Chakraborty, S. (2018). Enablers of co-creation in hospital-supplier relationships: Empirical study in Indian healthcare context. *Supply Chain Forum: An International Journal*, 19(4), 331-352.
- Chakraborty, S. (2019). Exploring the antecedents of co-creation in hospital-supplier relationship: An empirical study on private sector hospitals in India. *International Journal of Business Information Systems*, 32(4), 393-424.
- Coulter, A. (2017). *Patient engagement - What works?* *Journal of Health Services Research & Policy*, 22(2), 80-85.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of inter-organizational competitive advantage. *Academy of Management Review*, 23(4), 660-679.
- Fiore, S. M., & Hall, K. L. (2024). *Collaborative problem solving* (70–74). Edward Elgar Publishing.
- Gage, B., Glaser, J., & Cotter, K. (2019). Evaluating the effectiveness of rehabilitation: Functional outcomes in physical therapy. *Journal of Rehabilitation Research and Development*, 56(3), 301-309.
- Kerrissey, M. J., & Novikov, Z. (2024). Joint problem-solving orientation, mutual value recognition, and performance in fluid teamwork environments. *Frontiers in Psychology*, 15(1).
- Kumar, V., & Shah, D. (2015). *The influence of customer participation and service quality on customer satisfaction and loyalty*. *Journal of Marketing Research*, 52(5), 689-701.
- Kruse, C. S. (2018). The benefits of electronic health record adoption in healthcare organizations: A systematic review. *Journal of Healthcare Management*, 63(5), 358-373.
- Levetown, M. (2019). *The state of care coordination in pediatric settings*. *Pediatric Clinics of North America*, 66(2), 265-276.
- Odudo, S., Nyarku, K., & Gbadeyan, R. A. (2020). Supplier relationship management and organizational performance of hospitals in an emerging economy context. *Journal of Modelling in Management*, 15(5), 1451-1478.
- Ranney, M. L., Griffeth, V. & Jha, A. K. (2020). *Critical supply shortages: The need for ventilators and personal protective equipment during the COVID-19 pandemic*. *The New England Journal of Medicine*, 382, 401.
- Sanket, J. S., & Ankitkumar, N. P. (2024). Review on pharmaceutical supply chain resilience: strategies for managing disruptions and ensuring continuity. *World Journal of Current Medical and Pharmaceutical Research*, 8–14.
- Sayers, S. A., Tripp, M. & Williams, S. (2022). The role of patient-reported outcomes in clinical practice: Enhancing patient care through systematic assessment. *Journal of Patient-Centered Research and Reviews*, 9(1), 45-56.
- Scheerlinck, G., Reniers, G., & Michiels, H. (2023). Improving buyer-supplier relationships: A supplier's perspective. *Modern Economy and Management*.
- Shah, S. J., Rizzo, S. A. & Johnson, R. C. (2021). *Value-based care and the future of healthcare delivery*. *Journal of Health Economics and Outcomes Research*, 9(1), 12–19.

Smith, T. A., Lee, H. & Thompson, S. (2020). Survival rates as an outcome measure in cancer treatment: A comprehensive review. *Cancer Treatment and Research*, 34(2), 112-126.

Vest, J. R. (2018). *Exploring the role of health information exchange in care coordination. American Journal of Managed Care*, 24(5), 238-244.

World Health Organization (WHO). (2020). *Health systems service delivery*. Retrieved from https://www.who.int/topics/health_systems/delivery/en