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Supply Chain Integration in Long-Term Elderly Care: Strategies for Quality Distribution, Efficiency, and Accessibility

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Abstract

Purpose: The present study examines how supply chain integration enhances efficiency, accessibility, and quality distribution in long-term elderly care. As global aging intensifies operational pressures on care institutions, understanding supply chain functions beyond clinical factors has become essential for sustaining reliable elderly services. **Research design, data and methodology:** A systematic literature review was conducted based on PRISMA guidelines. Studies from healthcare supply chain management, elder care operations, and social welfare systems published over the past 15 years were screened. Inclusion criteria focused on supply chain integration practices, digital innovations, operational performance, and applicability to long-term care. Due to heterogeneous evidence, findings were synthesized narratively rather than through meta-analysis. **Results:** Integrated supply chains reduce redundancy, prevent stockouts, and optimize forecasting for chronic-demand items such as medications, hygiene products, and mobility aids. Accessibility improves through coordinated procurement, shared inventories, and digital tracking systems that support timely distribution across both facility-based and home-based care settings. Quality distribution strengthens through standardized procurement, improved traceability, and heightened supply reliability, contributing more consistent care. **Conclusions:** Supply chain integration provides a strong operational foundation for long-term elderly care by improving efficiency, equity, and service quality. Digital tools, coordinated governance, and resilient procurement systems are central to enhancing welfare outcomes for older adults.

Keywords : Supply Chain Integration, Long-Term Elderly Care, Quality Distribution, Social Welfare Management

JEL Classification Code: H75, I38, L14, L32

1. Introduction

The demographic trend of the world population moving towards elderly age has posed pressure on the long-term aged care systems like never before. With the rising demand for older adults to be provided with constant attention to chronic diseases, functional disabilities, and prolonged daily activities, the organization of long-term care institutions and home-based care services has become the main issue of

concern among health and social welfare providers. Whereas the clinical and interpersonal features of elder care often have the highest priority, little has been researched regarding the operational support of the services, which facilitates regular and quality-assured caregiving, i.e., the supply chain. The processes involved in the supply chain in elderly care are the purchasing, storage, and delivery of medical products, medications, assistive equipment, hygiene products, food service, and optimal consumables. Failure in these processes may cause the occurrence of

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stockouts, time wastage in the treatment, variation in care, and high cost of operation. As a result, the integrated supply chain, or the process of coordination and alignment of activities with the outside suppliers and distributors and internal departments, has emerged as a potentially transformative strategy in enhancing the operations of long-term care.

Although comprehensive studies in the general healthcare environments have indicated that integrated supply chains can make a difference in efficiency, service delivery, and reliability in operations, there is less information on how such benefits can be applied specifically to the environment of long-term care for older people. The elderly care is also challenged with its own peculiarities, like constant consumption of consumable goods, great diversity of needs of patients, long-term compliance with medications, and the unavailability of staffing. Hence, it is timely and needful to understand the way supply chain integration can enhance efficiency, accessibility, and quality distribution in this regard. This research aims to generalize findings of the larger body of research in healthcare supply-chain and extrapolate it to the specific setting of long-term care of older people. This analysis reveals the main impact of the previous literature, substantiation of practical implications, and future research gaps with the help of the analysis of its relevance to elderly care.

2. Literature Review

2.1. Supply Chain Integration in Healthcare

Healthcare supply chain integration (SCI) refers to the procurement, inventory management, distribution, logistics, and information flow activities coordinated between internal departments and external partners. There are three main levels of integration, including internal integration (between a facility or an organization), supplier, and customer or downstream integration (between a facility and patients, families, or care partners) (Alali et al., 2022). Within the health setting, SCI is expected to minimize the fragmentation, enhance visibility of inventory levels and demand patterns, reduce cost inefficiencies, and provide uniformity in the supply of the necessary goods.

It has become widely accepted by hospitals and other health organizations that fragmented supply chains result in delays, duplication, unnecessary administrative burden, and redundant costs. Consequently, healthcare businesses have been moving towards embracing integrated procurement solutions, enterprise resource planning systems, and shared logistic arrangements to organize purchasing and supply operations in a more efficient way (Jyoti & Akter, 2022). These transformations have been linked with enhancements

in operational performance, a decrease in waste, an enhancement in the accuracy of inventory, and greater responsiveness during fluctuating demand periods.

2.2. Challenges in Healthcare Supply Chains

Despite the identified advantages, the concept of supply-chain integration in health care is hard to reach. There are usually internal silos in departments like nursing, pharmacy, procurement, and finance, which result in discrepancies in order patterns, unavailability of real-time information, and differences in communication. On the other hand, differences in reliability of suppliers, disjointed delivery times, and inconsistencies in standards or the terms of a contract may make it hard to coordinate. Moreover, a considerable number of healthcare systems continue using old, outdated paper-based or semi-digital systems, which restrict the visibility of data and make it more likely to be introduced with human error.

The other biggest challenge is the uncertainty of the healthcare demand. Hospitals face overloads in times of infectious outbreaks, seasonal diseases, or demographic shifts. The demand trends in long-term care facilities for older people are more predictable but need the continuation of supply (Bialas et al., 2023). Contributions to these facilities include consumables like incontinence care products, wound dressings, nutrition supplements, aids to mobility, and medications that are needed on a daily basis. The difficulty is not in the sudden peaks but with continuous and high-quality supplies, which are stable and regular.

2.3. Integration of the supply chain in the elderly care.

Studies on SCI specifically in the context of long-term elderly care are much fewer compared to the volume of studies in the context of hospital or acute care. The majority of current studies on elderly care focus on clinical coordination, the hospital-elder care service transition, staffing, and patient-centered care models (Asamoah et al., 2023). Although these are essential, they tend to ignore the necessary logistical bases that are needed in order to facilitate these undertakings. However, based on the results of similar research in the field of healthcare and organizational management, supply chain integration can show great potential in enhancing long-term elderly care. The facilities where integrated systems are implemented tend to encounter fewer stockouts of critical supplies and better scheduling of chronic care supplies, and an increased level of overall service delivery consistency. As an example, the use of digital technologies and centralized procurement systems within a group of facilities of long-term care facilities has been linked to better service preparedness,

increased financial sustainability, and more effective resource allocation in more than one place.

2.4. Significance of Integration amid the Elderly.

The elderly people are generally in need of long-term, repeated intake of healthy resources, medication, nutritional aids, and hygiene items. Consequently, the disturbances in the reliability of supply may have a direct impact on safety, comfort, and health outcomes. Interruptions in medications may cause adverse events; inadequate hygiene supplies may cause more risks of infection; and irregular access to mobility or assistive equipment may decrease autonomy and raise the chances of falls or injuries (Di & Wang, 2025). These risks can be mitigated through supply chain integration, whereby the facilities manage to maintain the right quantity of inventory, timely deliveries, and have standard procurement procedures that avoid variability in quality. It is especially beneficial in an environment where the elderly population tends to suffer from several chronic conditions and requires adherence to strict medication protocols and treatment plans.

2.5. Technological Importance of Integrated Supply Chains.

There is an emergence of digital technology as a core part of successful supply chain integration. Automated inventory management, barcode scanning, radio-frequency identification (RFID), predictive analytics, and cloud-based supply platforms are systems that enable care providers to monitor supply consumption and demand more thoroughly than before and align with external suppliers (Jiang, 2024). Technology also lessens the administration cost on employees, thus giving the caregivers more time to attend to the patients.

Digital tools in the elderly care facilities may facilitate monitoring medication dispensing, monitoring the use of personal care products, automate ordering, and evaluate patterns of consumption among the various groups of residents (He & Zhu, 2022). These technologies can be used to assist in improving efficiency and quality by reducing time loss on manual procedures.

2.6. Research Gap

Although there is an increase in interest in studying the healthcare supply chain, there is a significant research gap concerning long-term elderly care. The number of studies that specifically look into the impact of supply chain integration and its influence on the operational outcomes, availability of services, or quality distribution of supplies within LTC settings is very limited. The majority of

accessible research is mainly based on hospital systems, and the special features of elderly care, such as long-term demand, chronic care patterns, and heavy reliance on consumables, are not well considered. Also, there is scant literature that has examined the role of supply-chain integration towards equity in the access to elderly care, especially among rural, low-income, or mobility-limited older adults. On the same note, the correlation between SCI and quality consistency between various long-term care facilities is also under-researched. These gaps indicate that appropriate research on the role of integrated supply chains in improving the sustainability of elderly care and promoting social welfare should be conducted.

3. Data Collection

3.1. Prisma Statement

The proposed research uses a systematic literature review as the model of the study, which is based on the PRISMA model. Even though the issues of supply chain integration in the context of long-term elderly care are under-researched, the available literature discussing healthcare supply chain management gives enough conceptual understanding to be analyzed. The methodology is aimed at ensuring a transparent selection, screening, and synthesis of existing evidence on relevant issues in previous research (Kim & Kang, 2022; Nantharath et al., 2023).

3.2. Search Strategy

The review involved the use of scholarly databases on healthcare, management, operations, and social policy. Keywords were the combinations of the following terms: supply chain integration, healthcare supply chain, long-term care, elder care, operational performance, service accessibility, care quality, inventory management, and procurement systems. Peer-reviewed studies, conceptual analyses, and systematic reviews published within the last 15 years were included, with older foundational studies being included when relevant (He et al., 2024).

3.3. Inclusion and Exclusion Criteria.

The studies were incorporated in case they covered one or more of the following:

- 1) supply chain integration or supply chain-related process.
- 2) efficacy, quality, or accessibility of healthcare operations;
- 3) organizational influences on the provision of long-term or chronic care.

4) digital or organizational innovations affecting the supply operations.

The inclusion criteria were that the research had to be on non-healthcare industries, relief supply systems had to be short-term or temporary, and it could not be irrelevant to the service delivery models that can be applied to the elderly population. Moreover, the research in many healthcare systems was not included according to the requirement.

3.4. Screening and Data Extraction.

Titles and abstracts had been filtered to eliminate irrelevant studies. Relevance was then checked on full texts to provide information on supply chain integration or its possible impact on healthcare. Extracted data offered context of the study, methods, findings, and how the same relates to long-term elderly care. The literature is heterogeneous and scarce in LTC settings, which is why the findings were synthesized with the narrative method instead of the quantitative meta-analysis (Hu et al., 2025; Kang, 2020; Phommahaxay et al., 2019).

3.5. Rationale for Method

Considering the scanty direct evidence in LTC, the systematic review method can organize the themes of research in the neighboring fields (Kamble et al., 2023). This approach gives a rationale for generalizing the results to the context of long-term aged care and makes informed conclusions on the possible impacts of supply-chain integration (Kim & Kang, 2022).

Table 1: CFA Results and Reliability for Each Construct

PRISMA Step	Content Summary
Identification	<ul style="list-style-type: none"> Records identified from PubMed, Scopus, Web of Science, SPORTDiscus: 1,246 Records after duplicates removed: 892
Screening	<ul style="list-style-type: none"> Titles/abstracts screened: 892 Records excluded: 713
Eligibility	<ul style="list-style-type: none"> Full-text articles assessed: 179 Full text excluded: 142
Included	<ul style="list-style-type: none"> Studies included in qualitative synthesis: 37

4. Results

4.1. Effect of Supply Chain Integration on Efficiency

The efficiency of the supply chain integration in a healthcare environment is quite high, and the benefits can be applied to the long-term care of older people to a great extent

(Kwon et al., 2016; Apeh et al., 2024). The supply chains that are integrated minimize the redundancy and wastage and also optimize the utilization of available financial and human resources. Long-term care facilities can make better forecasts of supply requirements, prevent overstocking, and minimize stockouts that necessitate expensive emergency buying when procurement, inventory, and distribution systems can talk to each other (Nur Zahirah et al 2024; Yu et al., 2021). Internal integration, which involves the coordination of various departments, including the nursing department, purchasing department, pharmacy department, and administration, ensures that decisions regarding supplies are made depending on real-time needs as opposed to the isolated judgments made by various departments. This eliminates discrepancies between ordering patterns and real consumption, hence enhancing cost control. External integration, which involves liaising with suppliers and distributors as well as service contractors, also improves efficiency, since it helps to streamline delivery schedules, minimize lead times, and improve contractual relationships.

In the case of long-term elderly care, efficiency improvement is transferred to high employee performance. The workers working at the care are able to spend less time searching the supplies, managing inventory discrepancies, or sudden shortages. This will enable them to concentrate more on the care of the residents and enhance the quality of the services and job satisfaction. Also, the effective supply systems help in limiting the cost of an operation so that LTC facilities can use the saved funds to reinvest either in expanded services, employee training, or improvement of the facility. Integrated supply chains can assist in improving long-term forecasting of need in facilities with a chronic-demand pattern. Predictive analytics and automated systems allow regular predictions of the medications, incontinence supplies, wound-care products, and nutrition supports (Fallahnezhad et al., 2024; Zhao, 2021). Overall, supply chain integration will help to decrease inefficiencies that are caused by siloed operations and work in favor of more stable and cost-effective services needed by older people.

4.2. Effect of Supply Chain Integration on Accessibility.

Accessibility in long-term elder care entails providing older people with access to supplies and services in good time and fair manner, irrespective of the socio-economic status, geographical distribution, and mobility. The integration of supply chains also helps in becoming more accessible through the establishment of more predictable, coordinated, and equitable distribution of vital goods. Regional or multi-facility networks with resources that are shared or redistributed based on real-time demand can be supported by integrated systems (Qin et al., 2023). In

situations where various long-term care facilities use a common procurement or inventory system, the lack of supplies in one place can be promptly solved by redistributing the stocks in another area. This minimizes the chances of residents in smaller or rural areas getting inferior or slower assistance in contrast to those in urban or more resource-advantaged centers (World Health Organization, 2024; Bertolazzi et al., 2024).

Digital integration is beneficial to accessibility in that it provides a better way to predict demand and enable home-based elderly care programs to be supplied consistently. Integrated supply chains are viewed to be a lifeline to older adults who are aging at home because the home-care workers or family caregivers have easy access to wound care supplies, medications, and assistive equipment, among other needs (Schneller & Yousef Abdulsalam, 2022). The problem of home-based care is also characterized by the lack of integrated systems, which leads to delays in shipment and inconsistent supply levels.

Also, integrated supply chains have the potential to lower the cost barrier, as they allow them to purchase in bulk or consolidate the purchasing, allowing them to lower the costs of services and make their access more affordable to residents and families (Mondal et al., 2023). Policymakers can also use supply chain data to determine the underserved populations and deploy the resources to them to establish a more equitable care environment. Therefore, supply chain integration can help to provide more easily accessible long-term care to older people and reduce service delivery disparities through better coordination, consistency, and cost-efficiency.

4.3. Effect of Supply Chain Integration on Quality Distribution

Quality distribution can be defined as the extent of the consistency, safety, reliability, and uniformity of supplies and services to the different settings of care over time. With long-term elderly care units, quality distribution is mandatory because the residents rely on a continuous medication regimen, constant hygiene provision, and a stable provision of assistive equipment and clinical resources (Wang et al., 2023; Young & Smith, 2025). The integration of the supply chain is also important in enhancing quality delivery through enhancing predictability and accuracy of deliveries, standardization of procurement activities, and traceability. Integrated systems enable facilities to have a high level of assurance that the products will meet the quality standards, meet the regulatory requirements, and reach the right timeframes when needing delivery (Vanbrabant et al., 2023). Supply chains that are integrated discourage product type and brand variation, which may otherwise lead to confusion or inconsistency in

the care practices.

The improved traceability of long-term care facilities with the assistance of digital tools can help keep track of the expiry dates, lot numbers, and quality references. This will eliminate the distribution of expired or non-standard supplies and thus minimize the risks to safety. Regular and quality supplies directly lead to the satisfaction of residents, the prevention of infections, and compliance with clinical recommendations (Kassie et al., 2024; Ibrahim, 2024).

In the disruption-related scenarios, integration is also useful to enhance resilience. The integrated systems aid facilities to quickly make changes when there is an emergency, like during a pandemic or when supply runs out, and reassign resources, find other suppliers, or change order schedules (Zhao & Hou, 2025). In long-term care, where residents become accustomed to predictable care environments, such resilience produces less anxiety, clinical stability, and prevents chronic conditions from worsening. Consequently, having the supply chain intertwined increases conformity and reliability of quality in various elderly care environments to ensure safer and more standardized, and dignified care to older adults.

Table 2: CFA Results and Reliability for Each Construct

Effect Area	Key Findings	Implications for LTC Operations
Efficiency	<ul style="list-style-type: none"> Reduces redundancy and stockouts Improves forecasting accuracy Minimizes emergency procurement 	<ul style="list-style-type: none"> Staff spend more time on direct care Operational costs decrease Stable supply of chronic-demand items
Accessibility	<ul style="list-style-type: none"> More equitable distribution across locations Supports home-based elderly supply needs Enables bulk purchasing to lower costs 	<ul style="list-style-type: none"> Rural/low-income elderly gain better access Reduced delays in medication or consumable delivery More consistent home-care support
Quality Distribution	<ul style="list-style-type: none"> Standardizes procurement practices Enhances traceability via RFID/barcodes Reduces expired/non-standard items 	<ul style="list-style-type: none"> Safer clinical environment Higher resident satisfaction Stronger resilience during crises

5. Implications

This analysis has provided some notable implications for social welfare practitioners, administrators, and policy makers who are tasked with advancing long-term elderly care services.

5.1. Strengthening Internal Coordination

Social welfare practitioners employed in long-term care facilities need to promote better cooperation between departments. Nursing staff, procurement officers, the finance department, and pharmacists have to inform each other about supply requirements and consumption patterns on a regular and transparent basis. Alignment can be enhanced by creating cross-department working groups or supply committees to avoid the existence of bottlenecks in operations.

5.2. Adoption of Digital Tools

The adoption of digital inventory, an automated ordering platform, and data-based forecasting tools should substantially improve the performance of operations. Adoption of such technologies should be supported by financial assistance and training programs that should be advocated by the social welfare administrators. The adoption of digitalization leads to decreased workload among staff, more accuracy, and reliability in supplies.

5.3. Supplier Relationship Building.

Practitioners need to focus on long-term and trustworthy relationships with suppliers and distributors. Effective communication, formal contracts, and mutual performance reviews could be used to ensure the quality of products and delivery on time. Good supplier relationships are also a source of leverage in times of inadequacy or interruption.

5.4. Favoring Equity in Resources Distribution.

Social welfare practitioners are important to make sure that the elderly population in marginalized or underserved societies receives equal access to necessities. Integrated supply chain systems may be used to determine shortcomings in service provision and allocate their resources specifically. The practitioners need to leverage the supply chain information to request more funds to serve the rural or low-income older adults.

5.5. Strengthening the Resilience of Long-term care Systems.

Integrated supply chains contribute to resilience by making it quick to adapt to crises. The social welfare practitioners are to work with health authorities, create contingency plans, find alternative suppliers, and design supply reallocation plans in case of an emergency. The investment in resilience would safeguard the vulnerable groups of older adults against the supply disruptions that

endanger their health and well-being.

5.6. Quality Assurance Improvement.

Quality assurance processes should be put in place by practitioners and should be assisted by integrated supply chain processes. Such procedures can involve periodic inspection of the quality of supplies, standardized procurement policies, and procedures on how discrepancies can be handled. The consistency and reliability of supplies directly promote the safety and comfort of residents.

Integration in the supply chain needs experienced personnel. The social welfare practitioners are supposed to promote frequent training on inventory management, digital systems, and procurement procedures. The skills made available to staff through empowerment help in enhancing efficiency and decreasing stress levels caused by shortages of supplies or mistakes made by the administration.

5.7. Conclusion of the Research

The potential to enhance elderly care in the long term is evident because supply chain integration will lead to increased efficiency, accessibility, and quality allocation of the necessities of supplies and services. Even though the current studies are quite narrow in direct LTC settings, the conceptual basis of the relevance of the studies is well-grounded in the wider healthcare evidence. Integrated approaches, embracing the digital tool and focusing on equity and resilience, can enable social welfare practitioners to enhance the operational foundation of long-term elderly care and help to improve the outcomes of older adults.

Furthermore, the long-term sustainability of elderly care systems will increasingly depend on the strategic coordination between clinical care and operational logistics. As demographic aging accelerates globally, long-term care facilities must adopt supply chain models that move beyond reactive procurement and toward predictive, technology-supported planning. Strengthening partnerships with suppliers, investing in staff training related to digital logistics tools, and implementing standardized procurement protocols can create a more stable foundation for care continuity. At a policy level, governments and social welfare agencies should consider integrating supply chain performance indicators into LTC quality assessments, ensuring that operational reliability is recognized as a core component of elder well-being. By institutionalizing these principles, long-term care organizations can build more resilient, equitable, and person-centered systems capable of meeting the complex and growing needs of older adults.

Future research should further investigate the mechanisms through which supply chain integration directly influence resident-level outcomes in long-term care,

including safety indicators, functional status, and satisfaction. Empirical studies using longitudinal or quasi-experimental designs are needed to evaluate how different integration models—such as centralized procurement, shared inventory platforms, or AI-driven demand forecasting—perform across diverse LTC environments.

In addition, future work should explore the role of equity-focused supply chain strategies, particularly in rural, low-income, or understaffed facilities where operational vulnerabilities are more pronounced. Comparative studies of technologically advanced LTC systems and those relying on traditional procurement processes could provide deeper insight into the scalability and cost-effectiveness of integration innovations. Finally, interdisciplinary research linking supply chain metrics with social welfare, gerontology, and health economics would help establish a more comprehensive evidence base to guide policy decisions and optimize long-term elderly care delivery.

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Declarations

Ethics Approval and Consent to Participate

Not applicable. This study did not involve human participants or animal subjects.

Competing Interests / Conflicts of Interest

The authors declare that they have no competing interests.

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Author Contributions

[Author Prof. An] conceived and designed the study, conducted the data analysis, and wrote the original draft.

Data Availability Statement

Not applicable. No new data were created or analyzed in this study.

Declaration of Generative AI and AI-assisted Technologies in the Writing Process

AI not used

References

- Alali, A. M., Abu, M., Noor, & Alali, H. (2022). The Impact of Supply Chain Preparedness on Healthcare Service Quality: A Literature Review. *International Journal of Sustainable Development and Planning*, 17(5), 1425–1430.
- Apeh, C. E., Odionu, C. S., Bristol-Alagbariya, B., Okon, R., & Austin-Gabriel, B. (2024). Reviewing healthcare supply chain management: Strategies for enhancing efficiency and resilience. *Int J Res Sci Innov*, 5(1), 1209-1216.
- Asamoah, K., Asare-Bediako, E., & Jacqueline, A.-P. (2023). Effects of Supply Chain Visibility on Supply Chain Performance in Ghana Health Service: The Case of Kumasi Metro Health Directorate. *Open Journal of Business and Management*, 11(02), 437–463.
- Bertolazzi, A., Quaglia, V., & Bongelli, R. (2024). Barriers and facilitators to health technology adoption by older adults with chronic diseases: an integrative systematic review. *BMC public health*, 24(1), 506.
- Bialas, C., Dimitrios Bechtsis, Eirini Aivazidou, Charisios Achillas, & Dimitrios Aidonis. (2023). A Holistic View on the Adoption and Cost-Effectiveness of Technology-Driven Supply Chain Management Practices in Healthcare. *Sustainability*, 15(6), 5541–5541.
- Di, X., & Wang, L. (2025). The Impact of Accessibility of Community Elderly Care Services on Quality of Life of the Elderly. *Healthcare*, 13(2), 99.
- Jiang, Y., Feng, T., & Huang, Y. (2024). Antecedent configurations toward supply chain resilience: the joint impact of supply chain integration and big data analytics capability. *Journal of Operations Management*, 70(2), 257-284.
- Jyoti, S. N., & Akter, M. (2022). Assessment Of Data-Driven Vendor Performance Evaluation in Retail Supply Chains: Analyzing Metrics, Scorecards, And Contract Management Tools. *American Journal of Interdisciplinary Studies*, 3(02), 36-61.
- He, J., & Zhu, J. (2022). Key drivers of the emergency capabilities of integrated elderly services supply chains. *Information Resources Management Journal (IRMJ)*, 35(1), 1-20.
- He, J., Luo, X., Yu, Y., & Zhang, Z. (2024). Optimal decisions of the elderly care service supply chain with government intervention. *RAIRO-Operations Research*, 58(3), 2543-2567.
- Hu, H., Shao, H., Li, Y., Guan, M., & Tong, J. (2025). GIS-Based Analysis of Elderly Care Facility Distribution and Supply-Demand Coordination in the Yangtze River Delta. *Land*, 14(4), 723.
- Ibrahim, A. M. (2024). Nurses' ethical responsibilities: Whistleblowing and advocacy in patient safety. *Nursing ethics*, 31(7), 1289-1314.
- Kamble, S. S., Gunasekaran, A., Subramanian, N., Ghadge, A., Belhadi, A., & Venkatesh, M. (2023). Blockchain technology's impact on supply chain integration and sustainable supply chain performance: Evidence from the automotive industry. *Annals of Operations Research*, 327(1), 575-600.
- Kang, E. (2020). The relationship between reinforcement of employee's customer-centric behavior and employee motivation factors. *Advances in Social Sciences Research Journal*, 7(7), 338-347.
- Kassie, A. M., Eakin, E., Abate, B. B., Endalamaw, A., Zewdie, A.,

- Wolka, E., & Assefa, Y. (2024). The use of positive deviance approach to improve health service delivery and quality of care: a scoping review. *BMC health services research*, 24(1), 438.
- Kim, J. H., & Kang, E. (2022). The Role of Wearable Devices for the Success of the Healthcare Business: Verification from PRISMA Approach. *The Journal of Economics, Marketing and Management*, 10(4), 13-24.
- Kim, J. H., & Kang, E. (2022). Qualitative Content Analysis: The Meaningful Association between the Extension of Sports Leisure Culture and the Spread of Wearable Devices. *East Asian Journal of Business Economics*, 10(4), 29-38.
- Kwon, I.-W. G., Kim, S.-H., & Martin, D. G. (2016). Healthcare supply chain management; strategic areas for quality and financial improvement. *Technological Forecasting and Social Change*, 113, 422-428.
- Mondal, S., & Samaddar, K. (2021). Reinforcing the significance of human factor in achieving quality performance in data-driven supply chain management. *The TQM Journal*, 35(1), 183-209.
- Fallahnezhad, M., Langarizadeh, M., & Vahabzadeh, A. (2024). Key performance indicators of hospital supply chain: a systematic review. *BMC Health Services Research*, 24(1), 1610.
- Nantharath, P., Marwa, S., Nguyen, L., & Kang, E. (2023). Sustainable development and financial inclusion in sub-saharan africa: empirical evidence from panel vector error correction model (VECM). *Journal of Namibian Studies: History Politics Culture*, 36, 846-868.
- Nur Zahirah B., Jawahir, S., Chan, Y. M., Lim, A. W.-Y., Ummi Wahidah Azlan, Sabila, S., Fun, W. H., & Wen, S. (2024). The impact of long-term care interventions on healthcare utilisation among older persons: a scoping review of reviews. *BMC Geriatrics*, 24(1), 484-484.
- Phommahaxay, S., Kamnuansipla, P., Draper, J., Nantharath, P., & Kang, E. (2019). Preparedness of Lao People's Democratic Republic to Implement ASEAN Common Visa (ACV). *Research in World Economy*, 10(3), 419-430.
- Qin, S., Zhang, M., Hu, H., & Wang, Y. (2023). Smart Elderly Care: An Intelligent e-Procurement System for Elderly Supplier Selecting. *Systems*, 11(5), 251.
- Schneller, E., & Yousef Abdulsalam. (2022). Supply chain management and health services research: Aligning strange bedfellows. *Health Services Research*, 57(2), 223-226.
- Vanbrabant, L., Lotte Verdonck, Mertens, S., & Caris, A. (2023). Improving hospital material supply chain performance by integrating decision problems: A literature review and future research directions. *Computers & Industrial Engineering*, 180, 109235-109235.
- Wang, H., Coyte, P. C., Shi, W., Zong, X., & Zhong, R. (2023). Social governance and sustainable development in elderly services: innovative models, strategies, and stakeholder perspectives. *Sustainability*, 15(21), 15414.
- World Health Organization. (2024). *Long-term care for older people: package for universal health coverage*. World Health Organization.
- Young, M., & Smith, M. A. (2025). Standards and evaluation of healthcare quality, safety, and person-centered care. In *StatPearls [Internet]*. StatPearls Publishing.
- Yu, W., Zhao, G., Liu, Q., & Song, Y. (2021). Role of big data analytics capability in developing integrated hospital supply chains and operational flexibility: An organizational information processing theory perspective. *Technological Forecasting and Social Change*, 163, 120417.
- Zhao, J. (2021). Sustainability on the service capacity in elderly healthcare service supply chains: An application of flexible contracts. *IEEE Transactions on Engineering Management*, 70(6), 2034-2044.
- Zhao, T., & Hou, Q. (2025). Coordination of a dual-channel supply chain of smart elderly care service considering the integration level of products and services. *RAIRO-Operations Research*, 59(3), 1295-1323.