Designing a Pharmaceutical Supply Chain Traceability and Logistics Management Model Based on the Performance of a Resilient Green Hospital under Crisis Conditions in Greater Tehran

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Original Article

Abstract

INTRODUCTION: This study aims to develop a pharmaceutical supply chain traceability and logistics management model grounded in the performance of a resilient green hospital operating under crisis conditions in Greater Tehran.

METHODS: This exploratory–analytical study is applied in terms of purpose. Given the indeterminate size of the population, a sample of 384 respondents was selected using Morgan's formula. Data were collected using standardized questionnaires, including: the Green Logistics Management questionnaire by Baah et al. (2019), the Supply Chain Traceability questionnaire by Cousins et al. (2019), the Circular Economy Practices questionnaire by Zeng et al. (2017), and the Sustainability Performance questionnaire by Agyabeng-Mensah et al. (2020).Data was analyzed and coded using SPSS and Smart PLS software.

FINDINGS: The results indicate a positive and significant relationship between pharmaceutical supply chain traceability, green logistics management, and the performance of resilient green hospitals under crisis conditions.

CONCLUSION: According to the results, enhancing pharmaceutical supply chain traceability alongside the implementation of green logistics management can significantly improve the performance and resilience of green hospitals during crisis situations.

Keywords: Green logistics management; Performance; Sustainability; Supply chain traceability; Resilient green hospital.

Introduction

The term "green supply chain traceability" refers to the global efforts of organizations to measure and minimize their adverse environmental impacts which the effective outcomes of these efforts can assist organizations in achieving sustainability while balancing environmental and economic performance.

The American Reverse Logistics Executive Council (RLEC) defines green logistics as a method for understanding the environmental impacts of the logistics sector. According to Wu and Dunn, green logistics is an environmentally responsible system that encompasses the implementation of "proactive" logistics procedures, such as the sourcing of raw materials, production, packaging, and distribution of goods, as well as reverse logistics procedures, including the collection and repackaging of waste for reuse.

A green hospital refers to an institution in which all processes, structures, and services are designed and managed based on environmental sustainability principles. Such hospitals aim to reduce operational costs, protect the environment, promote patient health, enhance resource productivity, and optimize energy, water, and

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