



Title: A Study of Innovation Competency Among Healthcare Sector Employees in Saudi Arabia

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1. Introduction

Innovation is an essential catalyst for transformation in healthcare, allowing systems to address evolving challenges, integrate new technology, enhance patient outcomes, and provide increased value throughout the sector. In accordance with Saudi Arabia's Vision 2030, the healthcare industry is experiencing significant reforms, with innovation identified as a fundamental component of national development.

Nonetheless, despite the increasing focus, there is still a paucity of empirical knowledge regarding the innovative skill levels of healthcare personnel in the Kingdom. This study seeks to evaluate the existing level of innovation competency among several professional jobs within the Saudi healthcare industry.

2. Problem Statement

Innovation in healthcare is crucial for enhancing patient outcomes, enhancing efficiency, and responding to emerging difficulties. For innovation to flourish, a common comprehension of its definition must first be established across various roles and institutions. The Saudi Arabian healthcare industry exhibits ambiguity over the definition and scope of innovation, resulting in discrepancies in its perception and implementation.

Moreover, although innovation is frequently promoted, there is insufficient data regarding the actual proficiency levels of healthcare workers in this domain—that is, their capacity to produce, accept, and apply new ideas efficiently. In the absence of this underlying understanding, healthcare organizations and policymakers struggle to formulate effective policies, training programs, or performance criteria. This knowledge deficit constitutes a substantial obstacle to cultivating an innovation-ready workforce inside the Saudi healthcare system.

3. Research Objectives

- 1) To evaluate the existing degree of innovation competency among healthcare sector workers in Saudi Arabia and to investigate whether there is a uniform comprehension of what defines "innovation" in the workplace.
- 2) To examine disparities in innovation competency between clinical and non-clinical personnel.

3) To examine the impact of variables such as training, professional experience, and departmental affiliation on innovation competency.

4) To pinpoint potential development areas and provide strategies that strengthen innovation competency within the healthcare workforce.

4. Research Questions

1) What degree of innovation competency do healthcare sector workers currently possess, in Saudi Arabia?

2) Are there substantial disparities in innovation competency between clinical and non-clinical workers?

3) To what degree do elements such as innovation training, years of experience, and departmental affiliation affect degrees of innovation competency?

4) Is there a uniform comprehension of the term “innovation” among healthcare workers across various roles?

5. Justification for Choosing the Topic

As Saudi Arabia tirelessly invests in digital transformation and healthcare innovation, worker readiness emerges as a pivotal success factor. Innovation extends beyond research, patient experience, and information technology; it must encompass a comprehensive system-wide capability. In numerous healthcare institutions, innovation initiatives are frequently confined to particular departments like R&D, IT, or Quality, resulting in a fragmented or "siloe" methodology. This may lead to neglecting the undiscovered potential of frontline clinical and non-clinical personnel who offer useful, experience-derived insights.

This study aims to evaluate innovation competency across various healthcare jobs to illuminate the current state and uncover latent opportunities for fostering a more inclusive innovation culture. The results will furnish foundational data to guide specialized training programs, institutional strategies, and national policy initiatives. This research ultimately supports Saudi Arabia's Vision 2030 by fostering the development of a more agile, creative, and innovative healthcare workforce.

6. Theoretical Framework

This study utilizes a three-tiered theoretical framework to systematically evaluate innovation competency in Saudi healthcare:

- 1) **Behavioral discovery skills**, using The Innovator's DNA (Dyer et al., 2009), to evaluate individual innovation potential via five fundamental behaviors.
- 2) **Human capital indicators**, evaluating the impact of formal education and professional experience on innovation preparedness.
- 3) **Rogers' diffusion constructs**, examining organizational mechanisms—communication channels, adoption stages, and social systems—that facilitate or hinder innovation spread.

This organized approach facilitates a comprehensive analysis by connecting individual innovation behaviors and workforce characteristics to organizational diffusion efforts. The findings are going to guide the development of strategic recommendations including the establishment of a centralized innovation center to enhance systemic innovation capabilities across various healthcare roles.

7. Methodology

1) Research Design

A cross-sectional quantitative survey will be administered to healthcare employees (clinical, non-clinical, Quality, IT, R&D) across both public and private institutions in Saudi Arabia. This design provides an insight of innovation competencies at a single point in time.

2) Survey Instrument

A. Discovery Skills Scale

- Based on *The Innovator's DNA* model (Dyer, Gregersen & Christensen, 2009), measuring five innovation behaviors: associating, questioning, observing, networking, and experimenting.

Each behavior will be assessed using 4–6 Likert-scale items (1 = Strongly Disagree to 5 = Strongly Agree), derived from credible sources.

B. Human Capital Indicators

- **Self-reported data on:** Formal innovation training (binary and duration in hours), Total years of professional experience and period in currently position
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C. Diffusion Constructs (Rogers' Theory)

- Communication Channels: e.g., "I regularly receive information about new initiatives," drawn from diffusion research.
- Adoption Stages: Measured via self-identification among Rogers' stages—knowledge, persuasion, decision, implementation, confirmation.
- Social System & Adopter Categories: Participants will indicate whether they see themselves as Innovators, Early Adopters, etc.

D. Demographics

- Role type (clinical/non-clinical), department, institution setting (public/private), region, age, gender, Years of professional experience, and whether the worker had previous innovation training or not.

3) Sampling & Administration

- **Population:** Healthcare employees across Saudi Arabia
Sampling: Stratified random sampling to ensure representation across departments and roles.
- **Sample Size:** Minimum $N = 300$ to support robust statistical analysis
Administration:
 - Survey will be disseminated online via online survey
 - Responses will be anonymous and voluntary

8. Conclusion

Innovation is a must in today's healthcare, not a luxury. As Saudi Arabia implements ambitious healthcare changes under Vision 2030, the workforce's capacity for effective innovation emerges as a crucial facilitator of transformation. Without a comprehensive grasp of current innovation competencies, initiatives to cultivate an innovation culture may become disjointed or mismatched.

This study aims to fill that gap by systematically evaluating innovation competency among a varied range of healthcare personnel, employing an integrated approach that incorporates behavioral, organizational, and dissemination aspects. This initiative seeks to produce actionable insights to guide institutional training programs, policy formulation, and the establishment of centralized innovation frameworks inside healthcare institutions.

This research enhances both the theoretical and practical comprehension of innovation within the healthcare sector and advances the overarching objective of establishing a more agile, collaborative, and progressive health system in Saudi Arabia, empowering all employees to engage in the innovation process.

9. References

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