# THE MEDIATING EFFECT OF SOFT TQM ON THE RELATIONSHIP BETWEEN LEAN PRACTICES AND INNOVATION SKILLS IN LEBANESE HOSPITALS

By

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#### Abstract

The main objective of this research is to study the mediating effect of soft total quality management on the relationship between lean practices and innovation skills among the staff of Lebanese hospitals. Lean practices are essential to eliminate wastes and advance the quality of healthcare services through the standardization and continuous improvement strategies of Total Quality Management (TOM). However, there is a need to sustain the effectiveness of such strategies by developing the innovation skills of employees and placing greater emphasis on the soft side of TQM. Thus, a theoretical framework was developed based on the theory of constraints and the resource based view theory. After identifying the gaps of previous literature, a quantitative methodology was applied by surveying 352 employees from public and private hospitals in Lebanon. Primary data collected by self-administered questionnaires was found to be valid and reliable when analyzed through SPSS and AMOS software. Based on the SEM analysis, six hypotheses were accepted while four were rejected. Lean practices through its two dimensions; lean strategies and standardization have shown a significant and positive influence on innovation skills. However, soft TQM has a non-significant influence on innovation skills. On the other hand, lean practices have a significant and positive influence on soft TQM through standardization but not through lean strategies. As for the mediating effect, it was proven that soft TQM mediates the relationship between lean practices and innovation skills at the level of standardization but not of lean strategies. This study contributes by offering good implications for healthcare practitioners at the Lebanese hospitals and healthcare organizations in general, to invest more efforts in implementing lean tools and soft TQM. Finally, future researches are suggested to extend this study at geographical factors and different methodological procedures.

**Keywords:** lean practices, soft total quality management, innovation skills, healthcare organizations, Lebanon

#### Abstrak

Objektif utama kajian ini adalah untuk mengkaji kesan pengantara pengurusan kualiti menyeluruh insaniah terhadap hubungan di antara amalan-amalan kejat dan kemahiran inovasi dalam kalangan pekerja-pekerja hospital di Lebanon. Amalanamalan kejat adalah penting untuk menghapuskan pembaziran dan memajukan lagi kualiti perkhidmatan penjagaan kesihatan melalui penyeragaman dan strategistrategi pembaikan berterusan dalam Pengurusan Kualiti Menyeluruh (PKM).Walau bagaimanapun, kelestarian keberkesanan strategi-strategi tersebut amat diperlukan dengan langkah membangunkan kemahiran inovasi pekerja dan memberikan penekanan terhadap PKM insaniah. Justeru itu, rangka kerja teori telah dibangunkan berdasarkan teori kekangan dan teori berasaskan sumber. Setelah mengenal pasti jurang dalam literatur terdahulu, metodologi kuantitatif telah digunakan dengan menjalankan kaji selidik ke atas 352 orang pekerja daripada hospital awam dan swasta di Lebanon. Data primer yang dikumpul melalui soal selidik didapati sah dan boleh dipercayai apabila dianalisis dengan menggunakan SPSS dan AMOS software. Berdasarkan analisis SEM, enam hipotesis telah diterima manakala empat lagi ditolak. Amalan-amalan kejat melalui dua dimensi iaitu strategi kejat dan penyeragaman telah menunjukkan pengaruh yang signifikan dan positif terhadap kemahiran inovasi. Walau bagaimanapun, PKM insaniah tidak mempunyai pengaruh yang signifikan ke atas kemahiran inovasi. Manakala amalan kejat pula didapati mempunyai pengaruh yang signifikan dan positif terhadap PKM insaniah melalui penyeragaman, tetapi tidak dalam strategi kejat. Bagi kesan pengantara, telah dibuktikan bahawa PKM insaniah merupakan pengantara hubungan antara amalan-amalan kejat dan kemahiran inovasi pada peringkat penyeragaman tetapi bagi strategi kejat. Hasil kajian ini secara umumnya dapat memberikan tidak implikasi yang baik kepada pengamal penjagaan kesihatan hospital dan organisasi penjagaan kesihatan di Lebanon supaya mempertingkatkan usaha untuk melaksanakan pelengkapan kejat dan PKM insaniah. Akhir sekali, bagi kajian akan datang dicadangkan untuk melihat lebih terperinci terhadap faktor geografi dan pendekatan metodologi yang berbeza.

**Kata kunci:** amalan-amalan kejat, pengurusan kualiti menyeluruh insaniah, kemahiran inovasi, organisasi penjagaan kesihatan, Lebanon

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# CHAPTER ONE

# INTRODUCTION

#### 1.1 Introduction

Innovation is the manner of transforming the resources of an organization through the creativity of the human resources into new assets and wealth. In the recent past, innovation was about technology, quality control and cost. But today, it tends to be associated with the human resource innovative skills (Nishihara & Oshawa, 2012; O'Connell, 2011). It is a multi-disciplinary activity that requires the participation of all individual tasks in order to bring out products and services that totally satisfy the end customer (Zeinali, 2010).

Jiménez et al. (2008) claimed that innovation begins when employees contribute by their knowledge inside the organization. This generates a common approach in a process of divergence and convergence which in turn foster innovation. Increasingly, emphasis has been placed on the need for high-performance work organization where employees can participate in decision making and improvements. This concept of participation is consistent with the total quality management (TQM) principles, where Kaoru Ishikawa had created a Japanese version of TQM that stressed the benefits of broad employee's participation, permitting bottom up as well as top-down involvement (Aikens, 2011).

Rowley et al. (2011) reviewed existing frameworks regarding types of innovation. Their finding focused on two pillars; product and process innovation. Conceptually, product

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