



بسم الله الرحمن الرحيم

**Sudan University of Science and Technology**

**College of Graduate Studies**



# **Impact of Critical Total Quality Management Practices on Hospitals' Performance in the Ministry of Health in Saudi Arabia**

**أثر تطبيق ممارسات الجودة الشاملة في أداء المستشفيات بوزارة الصحة  
بالمملكة العربية السعودية**

**A thesis submitted in fulfillment of the  
requirements for the Master degree in  
Total Quality Management in Healthcare**

**By**

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**بسم الله الرحمن الرحيم**

وَيَسْأَلُونَكَ عَنِ الرُّوحِ قُلِ الرُّوحُ مِنْ أَمْرِ رَبِّي وَمَا تُبَيِّنُ مِنَ الْعِلْمِ إِلَّا قَلِيلًا

صدق الله العظيم

(الإسراء 85)

## *DEDICATION*

- *To my dear mother Amna Mahmoud*
  - *To the soul of my honorable father*  
*Shamsuddin Mohammad*
- *To my wife Madina for her support and*  
*encouragement*
- *To my lovely sons Mohannad, Moayad and*  
*Basil*
- *To my sweet girls Reham, Weam, and Rawan*
  - *To my pretty niece Rahaf*
    - *To all those I love*

*Mohammad Shams*

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## ABBREVIATIONS

<b>ADL</b>	<b>Activities of Daily Living</b>
<b>AHRQ</b>	<b>Agency for Healthcare Research and Quality</b>
<b>AMTSL</b>	<b>Active Management of the Third Stage of Labor</b>
<b>CBAHI</b>	<b>Central Board for Accreditation of Healthcare Institutions</b>
<b>CQI</b>	<b>Continuous Quality Improvement</b>
<b>CSFs</b>	<b>Critical Success Factors</b>
<b>DRIP</b>	<b>Data Rich Information Poor</b>
<b>EFQM</b>	<b>European Foundation for Quality Management</b>
<b>IHI</b>	<b>Institute of Healthcare Improvement</b>
<b>IOB</b>	<b>Institute of Banking (),</b>
<b>IOM</b>	<b>Institute of Medicine</b>
<b>ISO</b>	<b>International Standardized Organization</b>
<b>KAMC</b>	<b>King Abdulaziz Medical City (Jeddah and Riyadh, Saudi Arabia)</b>
<b>KAUH</b>	<b>King Abdulaziz University Hospital (Jeddah and Riyadh, Saudi Arabia)</b>
<b>MBNQA</b>	<b>Malcolm Baldrige National Quality Award</b>
<b>MD</b>	<b>Medicinae Doctor (Latin) means: Doctor of Medicine</b>
<b>MOH</b>	<b>Ministry of Health, Saudi Arabia</b>
<b>NHIS</b>	<b>National Health Information System</b>
<b>NWAFH</b>	<b>North West Armed Forces Hospital (Tabuk, Saudi Arabia)</b>
<b>NPSGs</b>	<b>National Patient Safety Goals</b>
<b>PATH</b>	<b>Performance Assessment Tool for Hospitals</b>

<b>PDCA</b>	<b>Plan, Do, Check, Act</b>
<b>PICU</b>	<b>Paediatric Intensive Care Unit</b>
<b>PTT</b>	<b>Post, Telegraphs, and Telephones</b>
<b>QA</b>	<b>Quality Assurance</b>
<b>QI</b>	<b>Quality Improvement</b>
<b>REC</b>	<b>Research and Ethics Committee</b>
<b>SRM</b>	<b>Supplier Relationship Management</b>
<b>SAPC</b>	<b>Saudi Arabian Petrochemicals Company</b>
<b>SMEs</b>	<b>Small and Medium Size Enterprises</b>
<b>SPC</b>	<b>Statistical Process Control</b>
<b>TQM</b>	<b>Total Quality Management</b>
<b>WHO</b>	<b>World Health Organization</b>

## **ABSTRACT**

Total Quality Management (TQM) offers a method for solving quality and patient safety problems of healthcare and bringing significant improvement to hospital performance. However, only few studies have been conducted in the area in developing countries, particularly in Saudi Arabia.

This research is carried out in an attempt to address this gap, exploring the impact of applying TQM practices on hospital performance in the Saudi Ministry of Health hospitals. The study has included four hospitals in Tabuk Region, namely: King Khaled Hospital, King Fahad Hospital, Maternity and Children Hospital and Hagel General Hospital. The four hospitals are selected for this study because they are either accredited by the Central Board for Accreditation of Healthcare Institutions (CBAHI) or currently involved in the accreditation process. The CBAHI was established in 2006 to help improve health services in both public and private hospitals through the accreditation process.

The data collection was administered by the researcher where 400 questionnaires were distributed using a convenient sampling technique in order to access the required data. The response rate was 67.25 % of the total questionnaires distributed. TQM constructs employed in the study were consecutively as follows: Leadership, Employee Management, Information Analysis, Training, Customer Focus, Continuous Improvement, Process Management and Supplier management,

Many hospitals worldwide have adopted TQM to improve hospital performance in terms of increased economic efficiency, improved clinical outcomes, improved customer satisfaction, and increased market acceptance. Therefore, this study has identified the relationship between the implementations of the independent variables (TQM) practices and the dependant variable (Hospital Performance) in the Saudi hospitals.

The findings of the research have revealed that there is a significant positive correlation between the eight practices of Total Quality Management and hospital performance with a correlation coefficient 'r' value of 0.9 (p-value 0.0001). This means that any improvement in TQM practices in the Saudi hospitals will lead to increase in their performance. The findings also show that physicians and nurses have significantly lower perception of quality. This means that Saudi hospitals are facing difficulties in engaging the clinical staff in their quality initiative. Finally, our study reveals that accredited hospitals have applied TQM practices more significantly than unaccredited hospitals.

In conclusion, hospitals can provide safe and high quality care for people who trust doctors and nurses with their lives and the lives of their families. However, this can only be achieved through effective implementation of TQM practices and organization-wide commitment and collaboration to improve the processes and systems of healthcare.

## خلاصة الأطروحة

تقدم إدارة الجودة الشاملة حلول لمشاكل الجودة وسلامة المرضى في الرعاية الصحية جالبةً بذلك تحسين نوعي كبير في أداء المستشفيات؛ إلا أن الدراسات التي أجريت في هذا المجال في الدول النامية عامةً وفي المملكة العربية السعودية خاصةً تعتبر قليلة للغاية.

هذه الدراسة تم إجراؤها في محاولة لملء هذا الفراغ وذلك بالبحث في أثر تطبيق ممارسات إدارة الجودة الشاملة على أداء المستشفيات في المملكة العربية السعودية. شملت هذه الدراسة أربع مستشفيات في منطقة تبوك وهي: مستشفى الملك خالد، مستشفى الملك فهد، مستشفى الولادة والأطفال، ومستشفى محافظة حقل. وقد تم اختيار هذه المستشفيات الأربع لهذه الدراسة لأنها ضمن المستشفيات التي تم ترشيحها للحصول على شهادة الاعتماد من المجلس المركزي لاعتماد المنشآت الصحية. هذا المجلس تم تأسيسه من قبل وزارة الصحة السعودية في العام 2006م بهدف تحسين الخدمات الصحية في المستشفيات الحكومية والخاصة بالمملكة العربية السعودية من خلال عملية الاعتماد.

لجمع بيانات هذه الدراسة، قام الباحث باستخدام الاستبانة التي تم توزيعها على عينة من 400 شخص في المستشفيات الأربع، وكان معدل الاستجابة 67,25% من مجموع الاستبانات التي تم توزيعها، وقد تم اختيار عدد ثمانية ممارسات للجودة الشاملة في هذه الدراسة وهي: القيادة، إدارة الموظفين، تحليل المعلومات، التدريب، التركيز على العميل، التحسين المستمر، إدارة العمليات، إدارة الامدادات.

كثير من المستشفيات حول العالم اعتمدت إدارة الجودة الشاملة كمنهج لتحسين أدائها، وحققت بذلك نتائج تتمثل في الكفاءة الاقتصادية، تحسين نتائج الرعاية الطبية، تحسين رضا العملاء، وزيادة القبول في السوق. لأجل ذلك تبحث هذه الدراسة في علاقة تطبيق ممارسات إدارة الجودة الشاملة كمتغير مستقل وأداء المستشفى كمتغير تابع وذلك في المجال الصحي السعودي.

أظهرت نتائج هذه الدراسة وجود علاقة جوهرية موجبة بين ممارسات إدارة الجودة الشاملة وأداء المستشفى، مما يعني أن العلاقة بين الجودة الشاملة وأداء المستشفى علاقة قوية بشكل كبير، حيث أن أي تحسين في تطبيق ممارسات الجودة الشاملة في مستشفيات وزارة الصحة بالمملكة العربية السعودية سيؤدي بالضرورة إلى تحسين أداء المستشفى. كذلك أظهرت الدراسة أن منظور الأطباء والتمريض للجودة أقل بكثير عن منظور غيرهم من العاملين بالمستشفى، وهذا يعكس بوضوح مدى الصعوبة التي تواجهها مستشفيات المملكة العربية السعودية في إشراك الأطباء والتمريض في برامج تحسين الجودة. وأخيراً بينت الدراسة أن المستشفيات المعتمدة تتفوق كثيراً على نظيرتها غير المعتمدة في تطبيق الجودة الشاملة.

خلصت هذه الدراسة إلى أنه من الممكن للمستشفيات أن تقدم رعاية طبية أعلا جودة وأكثر أماناً للمرضى إذا قامت بتطبيق ممارسات الجودة الشاملة بفاعلية وذلك من خلال التزام جميع العاملين بالجودة وتعاونهم ومشاركتهم في تحسين جميع العمليات والإجراءات وأنظمة العمل بالمستشفى.