THE APPLICABILITY OF AN EXTENDED TECHNOLOGY ACCEPTANCE MODEL FOR ELECTRONIC MEDICAL RECORDS IN JORDAN

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Abstrak


Kata Kunci: Rekod Perubatan Elektronik, Kekuatan Kendiri, Anggapan Kawalan Tingkah Laku
Abstract

Electronic Medical Record (EMR) is able to reduce medical errors, cost and time for data storage and retrieval. It is also capable of improving information workflow and work efficiency. Despite the benefits of using EMR, low acceptance among doctors is a common problem in many countries including Jordan. The present acceptance studies of EMR have yet to integrate Self-Efficacy and Perceived Behavioural Control as individual capabilities that influence Perceived Usefulness and Perceived Ease of Use among doctors in Jordan. Therefore, the main objective of this study is to develop an extended Technology Acceptance Model that measures doctor’s acceptance of EMR in private hospitals in Jordan by incorporating three perspectives: individual capabilities, technological, and behavioural. Self-Efficacy and Perceived Behavioural Control were added as factors of individual capabilities perspective while Perceived Usefulness and Perceived Ease of Use were included as technological perspective, and Behavioural Intention as a factor for behavioural perspective. This study applied a Cross-Sectional survey, and used the Random Sampling technique to select the sample in the targeted hospitals in Jordan. This study also used self-administered questionnaires. In validating the model, the data were analysed using the Structural Equation Model, based on the Partial Least Square approach. The findings indicated that Perceived Usefulness has a positive direct effect on Behavioural Intention to use EMR, and Self-Efficacy has a direct effect on Perceived Ease of Use. Furthermore, Perceived Behavioural Control has a direct positive effect on Perceived Usefulness and Perceived Ease of Use. These outcomes could assist the healthcare top management in restructuring their strategic planning to improve the EMR implementation. In future, this model can be further tested and extended in other Information Technology (IT) applications, which means that this model can be generalized into the IT domain.

Keywords: Technology Acceptance Model, Self-Efficacy, Perceived Behavioural Control
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<table>
<thead>
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<th>Description</th>
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<tbody>
<tr>
<td>ATT</td>
<td>Attitude</td>
</tr>
<tr>
<td>AVE</td>
<td>Average Variance Extracted</td>
</tr>
<tr>
<td>BI</td>
<td>Behavioral Intention to use</td>
</tr>
<tr>
<td>CAOS</td>
<td>Computer Assistance Orthopedic Surgery System</td>
</tr>
<tr>
<td>CDS</td>
<td>Clinical Decision Support</td>
</tr>
<tr>
<td>CPOE</td>
<td>Computerized Physician Order Entry</td>
</tr>
<tr>
<td>EHCR</td>
<td>Electronic Health Care Records</td>
</tr>
<tr>
<td>EMR</td>
<td>Electronic Medical Record</td>
</tr>
<tr>
<td>GoF</td>
<td>Goodness of Fit</td>
</tr>
<tr>
<td>HIS</td>
<td>Hospital Information System</td>
</tr>
<tr>
<td>IOM</td>
<td>Institution of Medicine</td>
</tr>
<tr>
<td>IS</td>
<td>Information System</td>
</tr>
<tr>
<td>KHCC</td>
<td>King Hussein Cancer Center</td>
</tr>
<tr>
<td>KMO</td>
<td>Kaiser Meyer Olkin</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>PLS</td>
<td>Partial Least Squares</td>
</tr>
<tr>
<td>PBC</td>
<td>Perceived Behavioral Control</td>
</tr>
<tr>
<td>PEOU</td>
<td>Perceived Ease Of Use</td>
</tr>
<tr>
<td>PHR</td>
<td>Personal Health Records</td>
</tr>
<tr>
<td>PISA</td>
<td>Programme for International Student Assessment</td>
</tr>
<tr>
<td>PU</td>
<td>Perceived Usefulness</td>
</tr>
<tr>
<td>RMS</td>
<td>Royal Medical Service</td>
</tr>
<tr>
<td>SCT</td>
<td>Social Cognitive Theory</td>
</tr>
<tr>
<td>SE</td>
<td>Self-Efficacy</td>
</tr>
<tr>
<td>SH</td>
<td>Specialty Hospital</td>
</tr>
<tr>
<td>SEM</td>
<td>Structural Equation Model</td>
</tr>
<tr>
<td>TAM</td>
<td>Technology Acceptance Model</td>
</tr>
<tr>
<td>TPB</td>
<td>Theory of Planned Behavior</td>
</tr>
<tr>
<td>TRA</td>
<td>Theory of Reasoned Action</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
</tbody>
</table>
UAE United Arab Emirates
UK United Kingdom
CHAPTER ONE
INTRODUCTION

1.1 Overview

Discussions in this chapter are divided into thirteen sections. The next section elaborates a review of the healthcare organizations in Jordan, in which facts regarding the industry are outlined. Accordingly, the following sections in this chapter and next refer to these facts. Then, Section 1.3 elaborates an introductory induction to the research. Section 1.4 follows by conveying the background of the research problem, which is outlined in Section 1.5. With reference to the problem, Section 1.6 outlines the proposed solution. In detail, this study attempts to answer a few research questions, which are specified in Section 1.7. The objectives to achieve are formulated in Section 1.8, which are aimed at solving the identified problem. To achieve the objectives, the theoretical framework as outlined in Section 1.9 is appropriate. While the scope of the study is defined in Section 1.10, Section 1.11 defines the research framework. The significance of the study is discussed in Section 1.12. Finally, Section 1.13 concludes the chapter by outlining the whole thesis.

1.2 Healthcare Organization in Jordan

In Jordan, hospitals are divided into four categories: private, public, military, and governmental university hospitals. The public providers of health services in Jordan are the Ministry of Health (MOH) and the Royal Medical Service (RMS). The MOH is responsible for providing care services to public and governmental university hospitals. Meanwhile, the RMS is responsible for providing care services to military hospitals. Beyond the public providers, the private providers own and operate private
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Lærum, H., Karlsen, T. H., & Faxvaag, A. (2004). Use of and attitudes to a hospital information system by medical secretaries, nurses and physicians deprived of the


