Decision Making Concerning the Acquisition and Use of Information and Communication Technology (ICT) in Medical Practices: Do These Differ Between Male and Female General Practitioners (GPs)?

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ABSTRACT

A number of studies both within medical practices as well as the wider small business sector suggest that gender plays a role in both decision-making and the running of the business. Yet despite these apparent differences, the role of gender in the adoption of ICT in medical practices has remained largely ignored. This paper presents a study of 196 GPs (128 males, 68 females) who have adopted ICT in their practice. The results of this study show that the perception of drivers of ICT adoption and use in medical practices appear to differ depending on the gender of the GP. Where male GPs consider that there are 3 distinct underlying reasons for ICT adoption (medical/business efficiency, external pressure, enhanced communication), female GPs couple enhanced communication with medical/business efficiency as the single most important driver for ICT adoption. [Article copies are available for purchase from InfoSci-on-Demand.com]

Keywords: Gender; General Practice; Information and Communication Technology; ICT; Medical Practitioners

INTRODUCTION

The advent of affordable Internet-based information and communications technology (ICT) has led the medical and healthcare sectors to explore the use of such technologies to improve patient care and reduce business inefficiencies within general practice. While the literature provides numerous studies both detailing the design of clinical ICT systems (Pelletier-Fleury...
et al 1999, Baldwin et al 2002, Hsu et al 2005) as well as the uses of such systems within the practice or healthcare facility (Ammenwerth et al 2003, Waring & Wainwright 2002, Shohet & Lavy 2004, Catalan 2004), there are few studies that have examined the decisions behind the adoption of such systems. Despite a number of studies that have explored gender differences in the adoption and use of internet-based technology (Rodgers & Harris 2003, Kolsaker & Payne 2002, Yang & Lester 2005, Oudshoorn et al 2004), the role of gender in the adoption and use of ICT in medical practices remains largely unexplored.

The purpose of this paper is to examine the underlying factors of ICT adoption in general practice and to determine whether these differ between male and female GPs. The paper presents a study of 196 GPs (128 males, 68 females) that have adopted ICT in their practice. A series of factor analyses is applied to the driving forces behind ICT adoption to determine whether the factors underlying those decisions differ from male to female GPs.

THE NATURE OF ICT IN MEDICAL PRACTICE

The nature of ICT in medical practice differs widely in the literature. At the ‘cutting edge’ the use of ICT involves functions such as knowledge management and knowledge translation (Ho et al 2004), video and audio components and the use of imaging equipment (Baldwin et al 2002), multiple site education (Kuruvilla et al 2004) and distance clinical treatment (Caro 2005). At the general practice level ICT has been shown to be an effective tool for the treatment of chronic disease (Christensen & Remler 2007) as well as a mechanism for analysing, integrating and communicating in disease management (Cherry et al 2002).

A number of studies (Lougheed 2004, Kuruvilla et al 2004, Ndubisi & Kahraman 2005, Adogbeji & Akporhonor 2005) have shown that the use of ICT in medical practices is not just the province of developed economies, but is becoming more commonplace in developing economies in Africa, S.E. Asia and South America.

Studies (Lougheed 2004, Stevanovic et al 2005, Keddie & Jones 2005, Ho et al 2004, Ash et al 2004) have shown that the use of ICT within medical practices has moved beyond simply being a clinical tool and now incorporates the wider role of business and practice management. At first glance these may appear to be at odds with one another, clinical aiming at quality and efficiency of medical care and business aiming towards profitability and budgetary concerns. However, recent studies (Bonneville & Pare 2006, Lievens & Jordanova 2004) suggest that for any medical or healthcare function to be truly viable there must be equality between medical and business efficiency. Indeed, Kuruvilla et al (2004) suggest that the use of ICT in general practice not only centralise geographically dispersed resources, thus promoting flexibility and economies of scale, but they promote efficiency, enhance quality of care and encourage partnerships both between practitioners as well as between patients and practitioners.

In line with these views, the benefits attributed to the use of ICT can be seen from two perspectives – medical and general business. From a medical perspective these benefits include contact with other clinicians regarding patient care (Qavi et al 2001, Baldwin et al 2002); elimination of redundancy in patient care (Pelletier-Fleury et al 1999); enhancements to the effectiveness of the practice (Andersson et al 2002) and improvement to patient care (Pelletier-Fleury et al 1999); enhancements to the effectiveness of the practice (Andersson et al 2002) and improvement to patient care (Leung et al 2003). From a general business perspective benefits include the ability to strategically plan and manage the business environment (Gallagher 1998), increase the flexibility of administration and communications (Brunn et al 2002), enhance efficiency (Rees 1998, Tetteh & Burn 2002), and better manage costs (Nelson & Alexander 2002, Pullen et al 2000).
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