Chapter 8

The Effect of Gender on Associations between Driving Forces to Adopt ICT and Benefits Derived from that Adoption in Medical Practices in Australia[1]

Rob Macgregor
University of Wollongong, Australia

Peter Hyland
University of Wollongong, Australia

Charles Harvey
University of Wollongong, Australia

ABSTRACT

Like other Small to Medium Enterprises (SMEs), medical practices can gain a great deal by adopting and using Information and Communication Technologies (ICTs). Unlike other SMEs, little is known about General Practitioners' (GPs) perceptions of the benefits of ICT use or about the differences between these perceptions by male and female GPs. This chapter reports a survey of these perceptions of the drivers for and benefits of ICT use by male and female GPs in Australia.

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 (GP). This has been recognised by the World Health Assembly, who, in 1997, saw technology as one of many parts of sustainable health systems and, in 2005, saw technology as a means of leveraging health-for-all through the interchange of information and communications (Kirigia, Seddoh, Gatwiri, Muthuri & Seddoh, 2005). From the late 90's studies began to appear detailing the design of clinical ICT systems (see for example Baldwin, Clarke & Jones, 2002; Pelletier-Fleury et al., 1999; Hsu et al. 2005), the use of such systems within medical practices (Ammenwerth, Mansmann, Iller, & Eichstadter, 2003; Catalan, 2004; Shohet & Lavy, 2004; Waring and Wainwright, 2002;) and, more recently, the decision-making behind ICT adoption (Didham, Martin, Wood, Harrison, 2004; MacGregor, Harvie, Hyland and Lee, 2007; Pan & Pokharel, 2007). Studies, for example, in New Zealand (Didham et al 2004), showed that time, costs and perceived lack of IT skill were important considerations for GPs when evaluating ICTs. Lee Cain, Chockley and Burstin (2005) found practice size and standardisation of work were of concern to many doctors, while Simon et al (2007) found practice size (both in terms of patient numbers and staff numbers) and the type of care being offered were statistically associated with the perception of both drivers for and barriers against ICT adoption.

Along with the studies examining the ICT adoption process, there have been a number of studies detailing the potential benefits derivable from ICT adoption and use in general practices. El-Sayed & Westrup (2003), for example, suggest that ICT use in medical practices improves communication within and outside the practice, makes the business side of the practice more ef-

fective and helps build new business initiatives. Baldwin et al (2002) suggest that ICTs support and enable complex interactions between GPs, consultants, patients, nurses and, in some cases, equipment. Fors & Moreno (2002) suggest that ICTs, in medical practices, alter day-to-day procedures, making the overall final product more effective, while Ray & Mukherjee (2007) note the use of ICT to promote governance and planning.

While there have been studies investigating both the driving forces behind ICT adoption and the benefits derived from that adoption, there have been no studies that have attempted to determine whether giving priority to one driving force over another leads to a perception of improvement to specific benefits. Similarly, while there have been a number of studies that have explored gender differences in the adoption and use of internet-based technology (Kolsaker & Payne, 2002; Rodgers & Harris, 2003; Oudshoorn, Rommes, & Stienstra, 2004; Yang & Lester, 2005), there have been no studies aimed at determining the relationship between priority given to driving forces and perceived benefits of ICT adoption between male and female GPs.

The purpose of this chapter is to determine whether the relationship between priority given to driving forces and perceived benefits of ICT adoption differs between male and female GPs. The chapter begins by examining the nature of ICT in medical practices, in particular the driving forces behind the adoption process and benefits derivable from their adoption and use. As medical practices in Australia are almost all specialised small businesses, the chapter examines gender differences both from a small business perspective as well as from a medical perspective. The chapter presents a study of 196 GPs (128 males, 68 females) who have adopted ICT in their practice. A series of factor analyses is applied to the driving forces behind ICT adoption to determine the groupings of driving forces and the groupings of benefits for male and female GP respondents. Using these groupings a partial least square model was developed and tested to determine whether

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