

# Chapter 64

## Improving the Treatment Outcomes for ADHD Patients with IS/IT: An Actor–Network Theory Perspective

**Bader Binhadyan**  
*RMIT University, Australia*

**Indrit Troshani**  
*University of Adelaide, Australia*

**Nilmini Wickramasinghe**  
*RMIT University, Australia*

### ABSTRACT

*The key role for IS/IT in e-health has now been well established; however, within e-health the area of e-mental health is still new and emerging and scholars and practitioners alike are dubious as to the role for IS/IT and its benefits. We propose using Actor-network Theory (ANT) to assist in understanding the enabling role in e-mental health and we focus on one area of mental health, adults with Attention Deficit Hyperactivity Disorder (ADHD). We focus on Saudi Arabia. Attention to ADHD has begun to gain growing attention from Saudi Arabia healthcare providers and researchers. Currently, there is an estimated 15% of school age children suffering from ADHD. More than half of these children are expected to continue to show the symptoms of ADHD through their adolescence and adulthood. ADHD impacts the quality of life these individuals. Technology has the potential to improve mental health services this can be seen in enabling early intervention or treatment for people with mental health issues. Saudi Arabia is investing heavily in e-health and aiming to build a complete patient electronic record by 2020.*

DOI: 10.4018/978-1-4666-8756-1.ch064

## **1. INTRODUCTION**

The rapid developments of the Internet and mobile technologies during the last two decades have enabled healthcare providers and services globally to adapt these technologies in order to facilitate better service delivery (Eysenbach 2001). Recently, the mental health sector is realising the benefit of using technologies. This is because these technologies promise to improve efficiency, accessibility and the opportunities for early intervention and treatment of for many people with mental illnesses (Christensen et al. 2002); such as Attention Deficit Hyperactivity Disorder (ADHD). Although Saudi Arabia has invested billions of dollars to improve the quality and the delivery of e-health in the last 10 years (Altuwaijri 2010), less focus has been given to e-mental health. This is a key void and one this paper sets out to address.

ADHD in Saudi Arabia affects approximately 15% of children (Munshi 2014). ADHD symptoms include hyperactivity and impulsiveness, inattention or both (Barkley 1998) and more than half of these children with ADHD will carry over these ADHD symptoms into adulthood (Rucklidge & Tannock 2002). These symptoms will seriously impact the quality of life for children, teens or adults (Barkley et al. 1990). The most effective treatments of ADHD include medication, education, therapy, and coaching/counselling; the multimodal framework recommended by Canadian Attention Deficit Hyperactivity Disorder Resource Alliance (CADDRA) (CADDRA 2011). The need for better services and increased awareness for people with ADHD in Saudi Arabia has inspired groups of clinicians to establish the Saudi ADHD Society (AFTA Society) in 2009.

AFTA Society is a NFP (Not-For-Profit) organisation with a particular focus on increasing the quality of life of people with ADHD and to educate/train clinicians/parents about the disorder. Their emphasis is on school age children with ADHD. Less attention has been paid to ADHD in Saudi Arabia by researchers and healthcare providers

(Taleb & Farheen 2013; Alqahtani 2010), which has resulted in a lack of public awareness and information regarding ADHD in adults.

The emphasis of this research will be on assisting the current state of ADHD treatment and management in Saudi Arabia, and how the IS/IT solution that is being designed and developed in an Australian context, might be transferred to the Saudi Arabian context. In this research, AFTA Society was chosen to be the case study and Actor-network Theory will be used to assist with the investigation. The research question guiding this study is: How can an IS/IT solution be designed to enable better support in the treatment of ADHD in adults in Saudi Arabia?

## **2. RELATED LITERATURE**

This section provides a brief background of the use of IS/IT in healthcare in general and then specifically in Saudi Arabia, followed by a definition of e-health and the use of technology in mental health services in general, and ADHD in particular. Finally, the relevance of ADHD in adults and what current non-pharmaceutical treatments are used to treat and manage ADHD in adults is presented.

### **2.1. Background**

Technology in healthcare has the potential to assist developed and developing countries to solve many issues they are facing, such as creating easy access to information and services, coping with changing population health patterns and satisfaction and safety of stakeholders and specific population groups. Healthcare is becoming technology-driven (Moumtzoglou 2011) with the possibility of superior healthcare delivery with the adoption of e-business in the form of e-health (Eysenbach 2001).

E-Health covers a broad area in healthcare (Eysenbach 2001). E-mental health is one of the areas that e-health covers. E-mental health is a

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/improving-the-treatment-outcomes-for-adhd-patients-with-isit/138457](http://www.igi-global.com/chapter/improving-the-treatment-outcomes-for-adhd-patients-with-isit/138457)

## Related Content

---

### Challenges and Opportunities of Health Information Exchange (HIE) From Health Consumers' Perspective

Pouyan Esmailzadeh (2018). *International Journal of E-Health and Medical Communications* (pp. 20-42). [www.irma-international.org/article/challenges-and-opportunities-of-health-information-exchange-hie-from-health-consumers-perspective/204541](http://www.irma-international.org/article/challenges-and-opportunities-of-health-information-exchange-hie-from-health-consumers-perspective/204541)

### Quality in Telemedicine Services

Eleni Christodoulou, Sofia Zygaand Maria Athanasopoulou (2012). *Quality Assurance in Healthcare Service Delivery, Nursing and Personalized Medicine: Technologies and Processes* (pp. 203-208). [www.irma-international.org/chapter/quality-telemedicine-services/58734](http://www.irma-international.org/chapter/quality-telemedicine-services/58734)

### Independent Living Support for Disabled and Elderly People using Cell Phones

Begoña García Zapirainand Amaia Mendez Zorrilla (2013). *Handbook of Research on ICTs for Human-Centered Healthcare and Social Care Services* (pp. 379-397). [www.irma-international.org/chapter/independent-living-support-disabled-elderly/77153](http://www.irma-international.org/chapter/independent-living-support-disabled-elderly/77153)

### Sentiment Analysis for Health Care

Muhammad Taimoor Khanand Shehzad Khalid (2015). *International Journal of Privacy and Health Information Management* (pp. 78-91). [www.irma-international.org/article/sentiment-analysis-for-health-care/142225](http://www.irma-international.org/article/sentiment-analysis-for-health-care/142225)

### A Case Study Perspective for Balanced Perioperative Workflow Achievement through Data-Driven Process Improvement

Jim Ryan, Barbara Doster, Sandra Dailyand Carmen Lewis (2016). *International Journal of Healthcare Information Systems and Informatics* (pp. 19-41). [www.irma-international.org/article/a-case-study-perspective-for-balanced-perioperative-workflow-achievement-through-data-driven-process-improvement/163439](http://www.irma-international.org/article/a-case-study-perspective-for-balanced-perioperative-workflow-achievement-through-data-driven-process-improvement/163439)