BEHAVIORAL INTENTIONS OF HEALTHCARE STAFF WITH RESPECT TO ICT IN WESTERN REGION OF SRI LANKA

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Abstract

Computers are increasingly widespread, influencing many aspects of our social and work lives, as well as many of our leisure activities. As more tasks involve human computer interaction, computer skills and knowledge have become more positively correlated with both occupational and personal success. In most parts of the globe, especially the developed nations, computers are used in almost all spheres of life.

Healthcare staffs are change agents in healthcare sector. They are key drivers who play crucial role in ICT integration in healthcare. The aim of this study is to examine the behavioral intentions of healthcare staff with respect to ICT in western region of Sri Lanka. A sample of 100 healthcare staff was assessed for their behavioral intentions with respect to ICT using a Likert type questionnaire. There were.64 females (64%) participants and 36 were male (36%). The average number of years of computer use was 8.46 years (SD=5.281). There were 84% participants strongly agree and 16% participant were agree for use ICT regularly for their official work in healthcare. In detail there were 78% male participant and 88% female participant strongly agree for use ICT regularly for their official work in healthcare.

Behavioral intentions of healthcare staff with respect to ICT have positive responses in western region of Sri Lanka. The results of this study showed no gender differences among healthcare staff on behavioral intentions with respect to ICT. They are willing to accept, integration of ICT to the process of healthcare systems. This study clearly depict that behavioral intention of healthcare staff with respect to ICT are not the bottleneck for integration of ICT to the State hospitals in western region of Sri Lanka.

Keywords: eHealth, ICT for healthcare, ICT adaption for hospital, Healthcare staff attitude for ICT, Behavioral intentions of healthcare staff with respect to ICT

1. INTRODUCTION

Computers are increasingly widespread, influencing many aspects of our social and work lives, as well as many of our leisure activities. As more tasks involve human computer interaction, computer skills and knowledge have become more positively correlated with both occupational and personal success.

Contemporary healthcare faces a many changes on account of emerging and re-emerging diseases but nothing will change the way health care is provided more than the current advances in information communication and technology. Nursing, being an integral part of the healthcare delivery system, is exposed continually to a variety of changes (Smedley, 2005). For instance, the introduction of computers can elicit diverse feelings among healthcare staff. A positive attitude could see a rapid adoption with accompanying realization

of the benefits of computerization. A less positive attitude or rejection is likely to retard attempts to modernize service delivery (Kipturgo et al. 2014).

Computers are among the many facets of information communication and technology that have rendered the wide world a village (Bond. 2007). In most parts of the globe. especially the developed nations. computers are used in almost all spheres of life (Kuroda et al. 2007). Computers are ubiquitous accessories in all sectors of the economy. from the banking sector. transport. engineering. education. health sector.

Therefore, as we move into a technology based society. it is important that healthcare staff IT experiences with technology be equitable and unbiased for males and females

The aim of this study is to examine the profile of a sample of state healthcare staff in western region in Sri Lanka. Specifically. the following question will be answered:

1. Do behavioral intentions of healthcare staff with respect to ICT, avoid integration ICT to the healthcare?

2. LITERATURE REVIEW

Introduction of Computer applications to the healthcare systems have international significance. Around the world use of IT are taking place with increased employment of electronic health records, automated administration and increased electronic sharing of patient information. The importance of IT in the National Health Service modernization agenda in UK has been underpinned by several reports and its role in increasing patient safety and reduction of errors (Committee on Identifying and Preventing. 2006). There is also a large and growing body of literature about aspects of health informatics related to policy, hardware, software and implementation. One of the factors identified as significant in the introduction of information technology into health care practice is the attitude of staff that will be required to use it. In the UK surveys undertaken by Medix (a market research company in the health sector) found that the attitudes of doctors and nurses have shown increasingly negative attitudes (Medix. Medix UK plc survey. 2006). Further, it was stated by Rod et al. (2008) that attitudes of health care professionals can be a significant factor in the acceptance and efficiency of use of IT.

Over twenty years ago, Stronge and Brodt (1985) were studying this area in the USA with their Nurses' attitudes towards computers and others have continued this work. using similar instruments with different findings. Sultana (1990), McBride and Nagle (1996) found more positive attitudes in using ICT among students than qualified staff, but Scarpa and Smeltzer (1992) found no differences in attitude with nursing experience or educational level, but had found that experience with computers was significant. In addition, it has been found that attitude changes with gender differences (Schwirian et al., 1989).

In Kenya, the use of computers in hospitals is not a widespread practice. Computerization of hospital services has been embraced in some private hospitals and government hospitals. The extent of such computerization is limited to non-clinical departments such as general administration, finance and procurement. Medical or health records department's computerization serves these non-clinical departments more than it does the clinical ones (Kipturgo et al., 2014).

According to Ragneskog and Gerdner (2006), computers are no longer confined to hospitals but have been introduced in nursing homes and even in long-term facilities. Since nurses

comprise the largest part of the health workforce. their acceptance of information and technology systems will be mandatory for implementation of ICT (Eley et al.. 2009).

3. METHOD

3.1 SAMPLE

The participants in this research were 100 Health care staff enrolled in western region at Lady Ridgway Hospital for Children (LRH) represent Colombo district, Colombo North Teaching Hospital – Ragama represent Gampaha district. hospital from Kaluthara district. Among the 100 participants enrolled in healthcare staffs, 28 were doctors, 28 were paramedical staff. 28 were nurses, and 16 were development officers. All participants were volunteers no intension were given for participants.

There were 64 females (64%) participants and 36 were male (36%). The average number of years of computer use was 8.46 years (SD=5.281).

3.2 PROCEDURE

Data was collected from the participants on a voluntary basis using face to face interview with structured questionnaire. After a brief introduction to the research, interviewed participant with structured questionnaire. On the average, interview took 10 minutes for one participant to complete the survey. There were also no queries from the participants and noted their personal impression about ICT, relating ICT to their work place.

3.3 INSTRUMENT

The instrument included sections on participants' demographic background, computer experience, and the *Computer Attitude Scale* (CAS), developed by Selwyn (1997). Computer experience in this study was measured by asking the participants "On average, how many years have you used the computer?"

The CAS was used to measure behavioral intentions of government healthcare staff with respect to ICT use in western region. It is a questionnaire that consists of four components of computer attitudes. The first component, 'Affect', is measures feelings towards computers. 'Perceived Usefulness' is measure the individual's beliefs about the usefulness of computers in their job. 'Perceived Control', is measure the perceived comfort level or difficulty of using computers. The fourth component, 'Behavioural Intention', is measure behavioral intentions and actions with respect to computers (Table 1). In this research primarily emphasis on fourth component of CAS. Participants responded to the CAS using a five-point scale of strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). The scores from the items on each component were aggregated to provide individual scores on each component. In this study, the negative items were reversed coded in order that meaningful analyses at the sub-scale level could be conducted.

The CAS has been found to be a reliable instrument to measure attitude towards computers. Using the CAS on 131 undergraduate students in early childhood education, Sexton, King, Aldridge and Goodstadt-Killoran (1999) reported that the CAS possessed high reliability (alpha = 0.90).

Table 1: Behavioral intention component items in the *Computer Attitude Scale*

Behavioral intention component (four items)	B1	I would avoid taking a job if I knew it involved working with computers*
	B2	I avoid coming into contact with computers in hospital*
	B3	I only use computers at hospital when I am told to*
	B4	I will use computers regularly for my official work in the hospital.

4. RESULTS AND DISCUSSION

4.1 OVERALL PROFILE OF BEHAVIORAL INTENTIONS OF HEALTHCARE STAFF WITH RESPECT TO ICT

Behavioral intentions of healthcare staff with respect to ICT was measured in terms of the *behavioral intention* components in the CAS (Selwyn, 1997). All 100 participants responded to all items in the CAS and no missing data was found in the survey. Table 2 presents the participants' mean scores with the standard deviations. 36 participant were male and 64 participant were female. The mean years of computer use was 8.46 years (SD = 5.281) and work experience in healthcare was 16.56 (SD = 10.318).

Table 2: Descriptive statistics

Descriptive Statistics

	Mean	Std. Deviation	N
Health Experience	16.56	10.318	100
Computer Experience	8.46	5.281	100
Own Computer	.83	.378	100
Own Laptop / Notebook	.68	.469	100
Own Smartphone / Tab	.54	.501	100
Use Personal Computer	1.35	1.132	100
Use Laptop / Notebook	.78	.690	100
Use Smart Phone / tab	.54	.501	100

'Behavioural Intention',is composed of four items that measure behavioural intentions with respect to computers (Teo. 2008). Frist three items which scoring is reversed. (Table 1)

B1: I would avoid taking a job if I knew it involved working with computers

There were 94% participants strongly disagree and 6% participant were disagree for this item (Table 2). In detail there were 89% male participant and 97% female participant strongly disagree for this item (Table 3). This question was reverse scoring item. Therefore participant had negative response for this item. It depict that most of healthcare staff having positive thinking for works that related to the ICT.

B2: I avoid coming into contact with computers in hospital

There were 99% participants strongly disagree and 1% participant were disagree for this item (Table 2). In detail there were 97% male participant and 100% female participant strongly

disagree for this item (Table 3). This question was reverse scoring item. Therefore participant had negative response for this item. Healthcare staff willing to adapt ICT for their day to day work. It also depict that most of healthcare staff having positive thinking for works that related to the ICT.

B3: I only use computers at hospital when I am told to

There were 91% participants strongly disagree and 9% participant were disagree for this item (Table 2). In detail there were 89% male participant and 92% female participant strongly disagree for this item (Table 3). This question was reverse scoring item. Therefore participant had negative response for this item. Healthcare staff agreeable for doing their job in an efficient and effective way with the help of ICT. They do not wait until advice suppiria to work with ICT. It also depict that most of healthcare staff having positive thinking for working with ICT.

B4: I will use computers regularly for my official work in the hospital.

There were 84% participants strongly agree and 16% participant were agree for this item (Table 2). In detail there were 78% male participant and 88% female participant strongly agree for this item (Table 3). This question wasn't reverse scoring item. Therefore participant had positive response for this item. Healthcare staff willing to adapt ICT for their day to day work. It also depict that most of healthcare staff having positive thinking for works that related to the ICT.

Table 3: Behavioral intention component items – Participant responses

	Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
B1	94%	6%			
B2	99%	1%			
B3	91%	9%			
B4				16%	84%

Table 4: Behavioral intention component items – Participant responses according to gender.

	Gender	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
B1	M	89%	11%			
	F	97%	3%			
B2	M	97%	3%			
	F	100%				
B3	M	89%	11%			
	F	92%	8%			
B4	M				22%	78%
	F				13%	88%

5. CONCLUSION

Healthcare staffs are change agents in healthcare sector. They are key drivers who play crucial role in ICT integration in healthcare. It is important for them to possess positive computer attitudes since attitudes has been found to be linked to usage and intention to use, variables that determine successful technology integration (Teo. 2008).

There were 64 females (64%) participants and 36 were male (36%). The average number of years of computer use was 8.46 years (SD=5.281). There were 84% participants strongly agree and 16% participant were agree for use ICT regularly for their official work in healthcare. In detail there were 78% male participant and 88% female participant strongly agree for use ICT regularly for their official work in healthcare. Behavioral intentions of healthcare staff with respect to ICT have positive responses in western region of Sri Lanka. They are willing to accept integration of ICT to the process of healthcare systems. This study depict that behavioral intention of healthcare staff with respect to ICT are not the bottleneck for integration of ICT to the State hospitals in western in Sri Lanka.

There are several limitations in this study. Firstly, the data collected was through interviewing healthcare staff with structured questionnaire during their working time. Staff responses may be sidelly variance when considered that they response in free time after the work. Secondly, the sample size in this study is relatively small, thus limiting the extent to which the findings of this study may be generalized. Finally, the variables chosen in this study were determined by the selection of the CAS for data collection. As a result, other significant variables that influence behavioral intention with respect to the ICT are excluded, leading to a limited understanding of behavioral intention with respect to ICT.

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