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INVESTIGATING THE ANTECEDENTS OF PERCEIVED THREATS AND USER RESISTANCE TO HEALTH INFORMATION TECHNOLOGY: TOWARDS A COMPREHENSIVE USER RESISTANCE MODEL

Research in Progress

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Abstract

Health Information Technology (HIT) has the potential to improve healthcare delivery by reducing medical errors, improving service quality, and lowering healthcare cost. Despite evident integration benefits of HIT, use of HIT by medical staff and hospitals remain low, user resistance being one of the major factors involved. The literature indicates that user resistance to HIT is predicated by their perception. However, we do not fully understand how some users' perception is formed. In this study, we aim to investigate the organisational factors, the personal traits of the user, HIT-related factors, and the factors related to the interaction between physicians and nurses and the organisation that lead to perceived threat, risk, and dissatisfaction. The study develops a comprehensive model that builds on, and extends, existing theories of user resistance. The model will be developed by studying user resistance from a post-implementation perspective using a qualitative approach, in which qualitative data collection and analysis methods will be used. The study will lead to a better understanding of the phenomenon, as it will contribute to identifying the core reasons for resistance, which in turn will help organisations solve the root causes of the problem.

Keywords: User resistance, Health information technology, Post-Adoption, Perceived threats

1 Introduction

Health Information Technology (HIT) such as Computerised Patient Order Entry (CPOE) and Electronic Medical Record (EMR) systems have the potential to improve the quality of healthcare delivery by reducing medical errors, increasing patient safety, improving service management, and lowering healthcare delivery cost (Beglaryan et al. 2017; Gewald et al. 2017; Koppel, 2016). Harnessing the potential benefits of HIT is a unifying goal among government agencies, healthcare providers, and patients (Brenner et al., 2015; Hersh et al., 2016). Despite evident benefits of HIT and the governmental support of HIT investment (Beglaryan et al., 2017; Ndifon et al., 2016), medical staff and hospitals adoption of HIT remains low (Almoaber and Amyot, 2017; Esmaeilzadeh et al. 2015; Gagnon et al., 2016). User resistance is one of the major reasons for the low usage of HIT (Ben-Zion et al., 2014; Kruse et al., 2016; Samhan, 2015). There are many examples of promising information technologies that failed to diffuse widely because of user resistance (Bhattacherjee et al., 2013; Lapointe and Rivard, 2005; Ngafeeson and Midha, 2014). For example, a hospital failed to implement an EMR system because of user resistance, specially related to conflicts between nurses and physicians, on the one hand, and between physicians and administration on the other (Lapointe and Rivard, 2005). Similar patterns of

organizational conflict resulting in resistance were also encountered at various other hospitals (Bhattacherjee et al., 2013; Esmaeilzadeh et al., 2015; Samhan, 2015).

User resistance is one of the most significant causes of failures across all types of Information Technology (IT) projects (Ali et al., 2016; Elmes et al., 2005; Meissonier and Houzé, 2010). There is a common conception among Information Systems (IS) scholars that user resistance must be mitigated to gain the desired benefit from new IT projects (Lin et al., 2012; Selander and Henfridsson, 2012). Organisation managers and IT project implementers must take into consideration IT user resistance when they introduce new IT projects to the organisation (Rivard and Lapointe, 2012). To better manage the implementation of new IT projects, it is imperative to recognize the behaviours of resistance and understand the reasons behind user resistance (Ngafeeson and Midha, 2014; Shang, 2012; Smith et al., 2014).

In IS literature, there are a significant number of studies that focus on IS resistance compared to studies that focus specifically on user resistance to HIT (Samhan, 2015). There are some important differences between user resistance to IT in general, and user resistance to HIT specifically. For example, Lapointe and Rivard (2005) explained that one of the major differences between IT user resistance and HIT user resistance is the power physicians hold in hospitals. In general, physicians have more freedom of choice in using a given system compared to other types of users (Lapointe and Rivard, 2005). Moreover, the organisational and political culture in hospital settings is different from other organisations, and this suggests that the reasons, behaviours, and responses to user resistance to HIT would be different to other IT user resistance (Bhattacherjee and Hikmet, 2007). The unique characteristics in a hospital environment are (1) the fact that hospitals have several actors that are clearly identified and in continuous interaction such as physicians, nurses, health professionals and administrators (Lapointe and Rivard, 2005); (2) the sensitivity and the pressure medical professionals face to provide quality healthcare (Poon et al., 2005); (3) the high level of power and professional autonomy medical professionals have (Boonstra et al., 2014). These factors make it especially challenging to manage and overcome user resistance to HIT (Samhan, 2015). Consequently, this paper focuses on understanding the problem of physicians and nurses' resistance to HIT. It is envisioned that shedding light on this problem will improve the chances of increasing HIT adoption, thereby creating the possibility to attain the promised improvements in healthcare.

The objective of this research is to investigate the circumstances that lead physicians and nurses to perceive HIT as a threat, a risk, and a source of dissatisfaction, thus leading to user resistance. User resistance literature indicates that resistance to HIT is predicated on users' negative perception of the technology (Bhattacherjee and Hikmet, 2007; Lapointe and Rivard, 2005; Ngafeeson and Midha, 2014; Smith et al., 2014). However, very few studies have examined and explained how user perception is formed. Moreover, several researchers have called for further studies to identify the factors that contribute to user perception and to user resistance (Ali et al., 2016; Hsieh, 2015; Laumer et al., 2016b). This research-in-progress (RIP) paper aims to address this gap by building on the Lapointe and Rivard (2005) framework, which indicates that perceived threat evolves from the interactions of initial conditions with the object of resistance. The study, therefore, aims address this gap and extend our understanding of user resistance by deconstructing the initial conditions into the effects of organisational factors, personal user traits, HIT-related factors, and factors related to the interactions among physicians, nurses, and their organisations. Understanding the role of these factors in the perception of threat, risk, and dissatisfaction in HIT is the object of the study.

This study examines user resistance from a post-implementation perspective. Some researchers (Mahmud et al., 2017; Wong, 2013) suggest that the majority of user resistance literature focuses on the post-implementation stage of IS. However, this researcher did not find evidence for this to be the case. Many studies (e.g. Lin et al., 2012; Mahmud et al., 2017; Mehdi et al., 2012) did not in fact specify whether they take a pre- or post-implementation stance. Furthermore, methods used in user resistance

literature were found to be overwhelmingly quantitative. Given the heightened chances of meeting resistance to change during the pre-implementation and implementation phases, where disruption to existing processes is most prevalent, this research studies user resistance from a post-implementation perspective. Focusing on user resistance from a post-implementation perspective (12 months after initial adoption) will allow us to examine the longer term (non-implementation related) factors that could lead to user resistance and potential system abandonment (Eden et al., 2014; Fryling, 2015). Furthermore, at post-implementation stage, users will revaluate their initial perception of the system based on their direct interaction and actual experience with the system (Orlikowski and Gash, 1994; Saeed et al., 2010), thus, providing the researchers with an opportunity to study the actual causes of user resistance.

This research examines user resistance in the healthcare sector by examining the antecedents of perceived threats from a post-implementation perspective and aim to answer the research question: What are the organisational, personal, HIT, and the factors related to the interactions among physicians, nurses, and their organisations that lead physicians and nurses to perceive HIT as a threat?

The potential contributions of this study are:

- The theoretical contribution of this research is of a comprehensive user resistance model that builds on, and extends, existing theories of user resistance.
- This research will help in developing a better understanding of user resistance and user perception in the healthcare sectors.
- The design of resistance mitigation plans for hospital managers responsible for developing and implementing IT projects, especially in the healthcare sector, which will increase the likelihood that HIT will be adopted and used widely.

The remainder of this paper is structured as follows. The next section review user resistance theories and define user resistance. The proposed model is described in the third section. The fourth section discusses the proposed methodology. The final section of this research is the conclusion.

2 Theoretical background

2.1 Definition of user resistance

The term resistance is an expression that has been used across IS reference disciplines such as psychology, sociology, and change management (e.g. Hollander and Einwohner 2004; Mullins, 2007; Oreg, 2003). The IS literature draws their definition of resistance from those reference disciplines (Lapointe and Rivard, 2005). Therefore, in our attempt to define IT user resistance, it is important to look first at how some of IS reference disciplines literature define resistance. First, the word "Resistance" is defined by the Oxford Dictionary as, "*dislike of or opposition to a plan, an idea, etc.; refusal to obey*." (Oxford learners' dictionaries, 2017) In psychology, resistance is defined as, "*an individual's tendency to resist or avoid making changes*" (Oreg, 2003, p.680). Whereas, sociologists define resistance as actions that oppose someone or something that can be expressed verbally, cognitively, or physically (Hollander and Einwohner 2004).

The management literature defines resistance as a force against change at the individual and organisational levels, which brings delays and disruptions to the process of change (Mullins, 2007) and as an intentional act that can emerge at either the individual or organisational level to challenge the wishes of others (Ashforth and Mael 1998; Gibson, 2003). Some management researchers argue that resistance is a natural reaction to anything that upsets the status quo (Hiatt and Creasey, 2003). Others suggest that it can be a positive reaction in which employees provide positive feedback to managers with the intention of improving the proposed change (Piderit, 2000). Nevertheless, much management

literature defines resistance as negative employee behaviours that serve to maintain or re-enforce the current status quo (Waddell and Sohal, 1998).

Reviewing the IS literature shows that there is no clear agreement on a definition for IT resistance. Moreover, many researchers do not provide a clear definition of how they understand IT user resistance in their studies (Lapointe and Beaudry, 2014). Some researchers define user resistance as cognition, such as Bhattacherjee and Hikme (2007), who defined the term as, "*a cognitive force precluding potential behaviour*" (p.727). Others view user resistance as an opposition to change (Kim and Kankanhalli, 2009). However, the majority of IS literature defines user resistance as a behavioural reaction aimed at preventing change or expressing dissatisfaction to a situation perceived as being negative (Lapointe and Rivard, 2005; Markus, 1983; Van Offenbeek et al., 2013). On the one hand, researchers argue that user resistance is more specific than overall resistance to change because user resistance is associated with new IS implementation (Kim and Kankanhalli, 2009; Klaus and Blanton, 2010). On the other hand, a group of researchers argues that it is not limited to specific IT, but rather, a consequence of the change to the status quo (Bhattacherjee and Hikmet, 2007; Van Offenbeek et al., 2013). Moreover, studies have shown that resistance occurs when users perceive change as a threat to the security of their job causing stressful feelings (Meissonier and Houzé, 2010) and resulting in a loss of power (Lapointe and Rivard, 2005).

Defining user resistance can be achieved by breaking down the existing definitions of user resistance in IS literature into smaller components. Doing so will enable us to find a common ground among the existing definitions (Lapointe and Rivard, 2005). This breakdown aims to answer what is resistance, why it happens, and when it happens. In defining user resistance for this study, analysis of 17 peer-reviewed journals that defined user resistance was done. The analysis of user resistance definitions shows that the word behaviour is found in the majority of the definitions. Therefore, the word *behaviour* should be an indispensable part of a user resistance definition. Moreover, the majority of the literature describes resistance as a negative and sometimes emotional reaction. Thus, the word *expression* is an appropriate word used to describe the negative emotional reaction to user resistance. In addition, studies show that the purpose of the resistance is to stop change from taking place. Thus, the word *opposition* is a suitable word to describe the purpose of the resistance behaviour. Many researchers believe that the *IS implementation* is the object of user resistance, so it should be included in the definition of user resistance. In conclusion and for the purpose of this paper, User Resistance in this study is defined as: *the behavioural expression of a user's opposition to change(s) associated with IS implementation.*

The previous sections introduced the topic, provided the aim of this RIP, and defined user resistance. The following section gives an overview of user resistance theories

2.2 Overview of user resistance theory

User resistance is a complex phenomenon. Therefore, IS researchers have developed various theoretical models to improve our understanding of user resistance. A number of user resistance theoretical models consider the role of user perception as an important factor in user resistance, such as the role of perceived threat (Bhattacherjee and Hikmet, 2007; Lapointe and Rivard, 2005; Lin et al., 2012; Markus, 1983), perceived usefulness (Bhattacherjee and Hikmet, 2007; Laumer et al.,2016a; Lin et al., 2012), perceived compatibility (Bhattacherjee and Hikmet, 2007; Laumer et al.,2016a), perceived ease of use (Bhattacherjee and Hikmet, 2007; Laumer et al.,2016a; Laumer et al.,2016b), and perceived dissatisfaction (Ngafeeson and Midha, 2014). These models explain that user resistance is caused by users' negative perceptions regarding a new system's implementation. They suggest that users who perceive that the system will have a negative impact on them, their work, or their position within the organisation will resist the new system (Laumer et al., 2016a; Lin et al., 2012; Ngafeeson and Midha, 2014). However, few of them offer an explanation of how user perception is formed and how it affects user resistance. For instance, Laumer et al. (2016b) dispositional resistance to change model went further

than other models to explain how user personality traits affect user perception. The model explains that users' personality traits, such as routine seeking, emotional reaction, short-term focus, and cognitive rigidity, which directly affect how users perceive new systems and decide whether to resist or accept it. The Laumer et al. (2016b) model is one of the first to measure the influence of personality traits on user resistance.

Researchers have conceptualised that physicians' and nurses' negative perception of the HIT, such as perceived threat to professional autonomy (Walter and Lopez, 2008), perceived risk (Smith et al., 2014), and perceived dissatisfaction (Ngafeeson, 2013) lead to user resistance. The proposed model of this research (Figure 1) builds on and extends user resistance theoretical models, such as models of Bhattacherjee and Hikmet (2007) and Lapointe and Rivard (2005). Bhattacherjee and Hikmet (2007) have theorized that perceived threat of HIT is a key element of user resistance to HIT. In addition, Smith et al. (2014) and Ngafeeson's (2013) research indicates that perceived risk and perceived dissatisfaction lead to user resistance. Lapointe and Rivard's (2005) model explains that user perception, such as perceived threat, evolves from the interaction of initial conditions with the object of resistance. However, these models did not indicate how user perception is formed. This study assists in addressing this gap and build on these models. The study develops a comprehensive model to identify the antecedent of physicians and nurses' perception of HIT**.** In the next section we introduce a model of the antecedent of perceived threat to HIT.

3 Model development (Antecedents of perceived threat of HIT)

To develop the model, we draw from user resistance literature and empirical data to identify the factors that could influence physicians and nurses to perceive HIT as a threat, as a risk, and as a source of dissatisfaction. User resistance literature suggests that four factors can influence user perception of technology. These factors are the organisational factors, the system factors, the personal factors, and the interaction between the organisation, the system, and the personal factors. In this section, the main constructs of the conceptual model are defined.

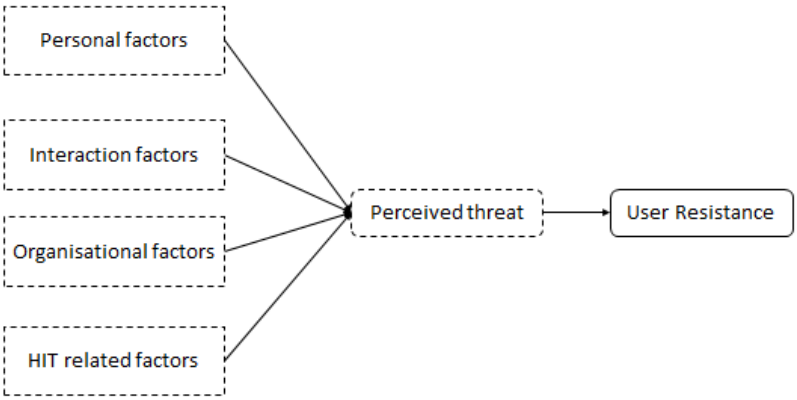


Figure 1. The antecedent of perceived threat

3.1 Personal Factors

Personal factors refer to internal and external factors of people and groups, such as cognitive style, personality traits, and the natural human tendency to resist change (Bhattacherjee, 2012; Markus, 1983). Certain characteristics, such as age, gender, and background, contribute to an individual's perception of the technology (Agarwal and Prasad, 1999; Jiang et al., 2000; Laumer et al., 2016b; Thatcher and Perrewe, 2002). Moreover, people-determined factors suggest that resistance can be due to a user's perceived lack of capability because they lack confidence in their IT skills, or because they have received minimal training on the new system (Bhattacherjee et al., 2013; Klaus and Blanton, 2010). HIT systems

are very complex and sophisticated systems that require users to be comfortable using computers, email, and other online system (Bhattacherjee and Sanford's, 2006). Studies have shown that users who are more familiar with HIT systems such as CPOE felt more confident and comfortable using the system (Bhattacherjee and Hikmet, 2007; Mettler, 2012), while physicians and nurses who have insufficient computer knowledge are more likely to feel emotional, discomfort in the workplace, and anxious of the new system (Esmaeilzadeh et al., 2015; Ngafeeson, 2013). Moreover, studies indicate that users who do not believe in their ability to use the system do not feel they are in control of the situation and the future outcome, and were less motivated to attend technology training sessions, thereby, more likely to resist the system (Ngafeeson, 2013; Poon et al., 2005).

3.2 Interaction Factors

Interaction factors refer to the interaction between characteristics related to the people, the organisation, and the characteristics related to the system (Markus, 1983). HIT will allow patient information and medical records to be shared across the different departments and physicians in a hospital, thus, leading to socio-technical and political factors that lead to resistance. The socio-technical reasons suggest that new systems can lead to change in the organisational structure, hence, changing the organisational culture and the job structure (Markus, 1983). Consequently, users feel that they might lose their social influence in the organisation (Kim and Kankanhalli, 2009). The political factors suggest that the new system implementation causes redistribution of power and resources, such as changing department budgets, individual authority, and employees' roles or positions (Bhattacherjee et al., 2013; Markus, 1983). Moreover, physicians and nurses seek to be in control, but fear that a new system can cause a potential loss of power (Lapointe and Rivard, 2005; Mosadeghrad, 2014), loss of status (Klaus and Blanton, 2010), loss of control over strategic organisational resources (Bhattacherjee and Hikmet, 2007), loss of revenue (Hsieh, 2015), and threatens professional autonomy (Ben-Zion et al., 2014). In general, physicians are considered to have high professional autonomy where they have the freedom to practice their work is based on their individual judgment and without evaluation or oversight from others (Boonstra and Broekhuis, 2010; Boonstra et al., 2014; Lapointe and Rivard 2005; Walter and Lopez, 2008). Furthermore, physicians and nurses are sensitive to any change that threatens their professional autonomy because it is considered to be a privilege that is associated with their social status and economic outcome (Walter and Lopez, 2008). Introducing HIT to a hospital could lead physicians to believe that it will cause them to lose control over how they make medical decisions or that those decisions will be assessed or challenged by others (Boonstra and Broekhuis, 2010).

3.3 Organisational factors

Organisational factors referred to factors related to the culture, structure, or management of the organisation. An implementation of IT projects such as HIT can change the job structure (Bhattacherjee et al., 2013), and change the work routines (Laumer et al., 2016a; Maier et al., 2013). Hospitals must have the capacity to accept changes that could come with new HIT implementation (Ingebrigtsen et al., 2014). Such change requires strong and supporting management to ensure a successful HIT implementation (Keshavjee et al. 2006; Ludwick and Doucette, 2009). In healthcare, managers are legally and morally responsible for patients' safety and ensuring high quality of healthcare (Parand et al., 2014). They play a vital role in the success of large IT implementation such as the implementation of HIT (Wu et al., 2008). Management support includes moral support such as motivating the users to use the system (Boonstra and Broekhuis, 2010), communicate openly and honestly with the users (Jiang et al., 2000; Shang, 2012; Wu et al., 2008), and leading by example (Grublješič and Jaklič, 2015). This is important because as shown in a case study by Lapointe and Rivard (2005), medical professionals tend to dislike change in their work environment and reject advice from other professions such as HIT developers. In addition to management support, this problem can be mitigated by involving the user in

HIT development and implementation. That is because user involvement ensures several important factors that are critical for successful HIT implementation and user satisfaction. For example, user involvement helps to ensure that the system meets requirement specifications, improve the design of the system, and give the user a sense of empowerment and ownership (Kappelman and Guynes, 1995; Vang, 2008). Moreover, user involvement gives the user a feeling of control over the development and implementation of the system, help the user to develop a realistic expectation of the system, and commit the user to the system from the early stages of development (Baronas and Louis, 1988; Markus, 1983).

3.4 HIT related Factors

HIT-related factors refer to factors related to the technology itself (Jiang et al., 2000). And this include the user interface design (Kaplan, 1997), the complexity of the system (Klaus and Blanton, 2010), the reliability of the system (Jiang et al., 2000), the system compatibility with the work requirements (Bhattacherjee et al., 2013; Klaus and Blanton, 2010), and the privacy and security in the system (Angst and Agarwa, 2009). In healthcare context, researchers suggest that inflexible HIT systems and systems that do not meet the work requirements of the user are more likely to face resistance (Staggers, 2009). This is because physicians and nurses are usually overworked (Silver, 2016; Wen et al., 2016). Consequently, HIT that is inflexible and incompatible with their work requirements could lead to an increase in their mental workload (Staggers, 2009; Boonstra and Broekhuis, 2010; Gagnon et al. 2010) in addition to leading them to believe that they have to put more time and effort to learn and use the system (Boonstra and Broekhuis, 2010). The system-determined factors suggest that user perception is induced by external factors, which are the system design and the technology (Jiang et al., 2000). Further analysis suggests that system-determined factors are subjective to user's practical experience with the system and their knowledge of the technology. For example, if physicians and nurses know systems similar to the newly implemented system, they are more likely to find it useful and easy to use (Marinko et al., 1996). This research will examine how HIT-related factors will influence user perception.

3.5 Perceived threat

Perceived threat refers to users' fear of the future because of the expected negative consequences of new HIT Implementation, such as the fear of losing power (Lapointe and Rivard, 2005; Markus, 1983), the fear of losing revenue (Hsieh, 2015), the fear of losing status (Klaus and Blanton, 2010), and the fear of losing control (Bhattacherjee and Hikmet, 2007). Several researchers have indicated that perceived threat is a significant cause of user resistance (e.g. Bhattacherjee and Hikmet, 2007; Lapointe and Rivard, 2005; Hsieh, 2015; Lin et al., 2012). Moreover, perceived threat can result in an emotional reaction that is caused by emotional pain or a perception of a dangerous situation (Lapointe and Rivard, 2005). In healthcare, physicians and nurses can perceive a system as a threat for several reasons. For example, physicians and nurses are sensitive to the risk factors that HIT might cause because of their sensitive work environment that requires them to deal with people's lives (Smith et al., 2014). Such risk could be the fear or belief that HIT will have a negative impact on their job performance (Phichitchaisopa and Naenna, 2013). For instance, HIT users can believe that HIT will cause them to loss time in learning the new technology and distract them from performing their tasks (Ngafeeson and Midha, 2014). In addition, there can be a fear of system flaws that can put patients' lives at risk (Cocosila, 2009; Smith et al., 2014; Lapointe and Rivard, 2005). This research will aim to examine how, physicians and nurses may perceive a system as a threat.

4 Proposed Methodology

To meet the objective of this study, we adopt a qualitative method approach to further identify the major factors and to develop the model. As mentioned in Section 1, when observing user resistance, previous studies have tended to use quantitative methods to study user resistance. However, user resistance can

be best observed and analysed using qualitative methods. User resistance can be covert or passive (Lapointe and Beaudry, 2014; Selander and Henfridsson, 2012), requiring a nuanced qualitative approach which captures meaning by allowing staff to express resistance without appearing obstructive to the organisation (Cassell and Symon, 2004). Moreover, qualitative research methods are well-suited to answer our research questions because they will allow us to explore new ideas, capture new phenomena, and identify the rich contextualized detail of complex concepts such as physicians' and nurses' resistance (Bhattacherjee, 2012; Cassell and Symon, 2004). This research will use semi-structured interview to build three case studies of three types of hospitals (university, public, and private hospitals) that have implemented and used a HIT system. Furthermore, interviews are useful in allowing people to be free to describe their perceptions (King, 2004) therefore, effective in allowing the interviewer to understand the perception of physicians and nurses' and the circumstances that lead them to view HIT negatively. The focus of this study is on physicians and nurses; hence, we will aim to interview physicians and nurses who have professional experience and knowledge of HIT. A snowball sampling strategy will be used to identify subsequent respondents where each initial respondent will be asked to suggest other respondents who are knowledgeable of HIT. This research will adopt case studies method, where case studies of different types of hospitals will be used to provide a better analysis and results as they allow comparison and maximize variation (Lapointe and Rivard, 2005). In addition, case studies can be used to develop theories from qualitative data (Eisenhardt, 1989). To analyse the data, we will follow qualitative data analysis techniques. For a comprehensive data analysis, we will use the approach recommended by Strauss and Corbin (1990) where three coding procedures are used in the process of analysing qualitative data which are open coding, axial coding, and selective coding. This approach is considered appropriate for this research because it allows for flexibility and rigor which is required for research study engaged in theory building (Sarkar et al., 2000).

5 Conclusion

To conclude, the aim of this research is to investigate the circumstances that lead physicians and nurses to perceive HIT as a threat to their professional autonomy, as a risk, and as a source of dissatisfaction, thus leading to user resistance. A conceptual model has been developed to situate the research objective with respect to existing theory. A literature review of the main issues and causes of user resistance was presented. It is intended that this research will extend our knowledge and understanding of physicians' and nurses' resistance to HIT. Prior research has focused on examining how users' negative perceptions of IT influences users' resistance, but this research focuses on the antecedents of user perceptions and resistance in a healthcare context, which is different from other contexts due to the high level of power and professional autonomy of medical professionals (Boonstra et al., 2014). Examining the antecedents of physicians' and nurses' negative perceptions will help hospital managers to adopt pre-emptive implementation strategies that will anticipate and mitigate against resistance, thereby focusing more on organisational outcomes for the investment in HIT. This will also inform theory and practice around user resistance to IT in other non-healthcare settings.

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