

Individuals' IT-Change Readiness in Healthcare Organizations

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IT-change readiness is an essential element of success in organizational information technology (IT) change intervention success for healthcare organizations. Change readiness research typically disregards the needs of individual constituents. We describe the experiences of medical professionals, IT professionals and managers in a medical organization in preparing for major IT-change due to a merger. We conducted a qualitative study in two medical organizations in the Netherlands via 18 in-depth semi-structured interviews using a replication logic. We analyzed the data using selective coding and thematic coding for grounded theory development. Six themes emerged from our study as factors contributing to individuals' IT-change readiness: These are (1) individuals' IT use frequency, (2) IT self-efficacy, (3) IT enjoyment, (4) anticipated IT usefulness, and (6) commitment. IT self-efficacy was influenced positively by people's education level and inversely by their age. We identified sub-themes for given themes and developed propositions for future testing and generalization of our findings. These factors may be used in practice for hiring, promotion and training decisions.

Keywords: individuals' IT-change readiness, medical organizations, mental health, healthcare, information technology, information systems, IT use, IT enjoyment, commitment, IT self-efficacy, anticipated IT usefulness, age, education, IT anxiety, personal IT use, change anxiety, IT mastery enjoyment, IT learning enjoyment, IT-novelty enjoyment, mergers and acquisitions

INTRODUCTION

The healthcare sector relies increasingly on knowledge; therefore, information technology (IT) plays a crucial role in health care (Lenz & Reichert, 2007). IT speeds up knowledge-exchange, storage, and improves information quality. IT use in medical settings reduces errors, enhances productivity, and lowers costs (Bates et al., 1998; Charmaz & Mitchell, 2001; Freudenheim, 2004) and improves financial performance (Menachemi et al., 2005). Despite all these benefits, IT adoption in healthcare is happening much more slowly than in other industries (Furukawa et al., 2014). An important barrier to IT adoption in the healthcare is resistance to IT (Pare et al., 2011). Many authors mentioned examples of resistance to IT in the medical organizations (Freudenheim, 2004; Lapointe & Rivard, 2005; Lapointe & Rivard, 2006; Lorence & Richards, 2003; Massaro, 1993). Therefore, IT-change readiness is as critical for medical professionals as it is for healthcare researchers (Jha et al., 2009; Snyder-Halpern & Fields, 2006). Thus, various researchers investigated change readiness in the medical fields (e.g., Feely et al., 2023; Shah et al.,

2019). Yet, IT-change success in medical organizations requires the participation of different individuals with different roles, such as medical professionals, managers and IT specialists (Boonstra et al., 2018). Therefore, investigation of factors contributing to individuals' IT readiness to change that consider individuals from all three groups is imperative for IT change success in healthcare. Indeed, individuals' change readiness is a critical success determinant of organizational interventions (Armenakis & Harris, 2009; Self & Schraeder, 2009). Yet very little attention is given to the individuals' IT-change readiness (Paré et al., 2011), especially in the healthcare sector. Very few articles (for e.g., Lehrer et al., 2021) investigate IT-based change in the healthcare area. This study fills in this gap, by utilizing socio-technical-system theory, which emphasizes humans' interactions with technical and environmental elements to investigate an organizational system (See Abbas & Michael, 2023 for background on the theory). Using this theoretical approach, we were able to investigate the interaction of individuals with new information technology and the environment (healthcare setting) and the contribution of this interaction to the new organizational system. Socio-technical-system theory has previously been used to investigate similar phenomena within medical settings (e.g., Laukvik et al., 2024). This theory fits this study's goals because individuals' IT-change readiness is related to both information technologies and non-technical factors related to humans and their environment. Furthermore, following Boonstra et al. (2018), who suggested different stakeholders within the healthcare system may have different approaches to IT, we analyzed the responses of three important groups of individuals separately. These three groups are healthcare professionals, managers, and IT professionals. While IT professionals contribute a lot to IT-enabled change, the involvement of non-IT leaders is key to success with organizational change related to IT (Eseryel, 2019).

This study aims to describe the experiences and perceptions of healthcare professionals, managers, and IT professionals within healthcare settings concerning their individual readiness to IT-related change. We develop a research model and propositions from this qualitative study for future quantitative research.

RESEARCH METHOD

Study Design

As the individuals' IT-change readiness is still relatively novel in both the IT field (Paré et al., 2011), and in academic literature in general, qualitative research (specifically a descriptive study) is most appropriate in uncovering the factors that contribute to individuals' IT readiness to change (Morey & Morey, 1994; Myers, 2009; Palmer, 2004; Yauch & Steudel, 2003). We collected data using in-depth semi-structured interviews. Our interview protocol is presented in Table 1. Both authors prepared the interview protocol together. The protocol benefited from the academic and consulting expertise of the first author related to IT-related change. The interview guide was purposefully structured to be open-ended to facilitate a rich discussion. The data were collected by the second author alone. The interviewer is male, and during the data collection, he was a master's degree candidate in the Change Management Master's degree program in the Netherlands. The interviewer had previous experience in researching and collecting data, both as part of his bachelor's program, and as part of the courses he had taken in the master's program before starting his thesis. At the time of the data collection, he had completed two years of training on organizational change. The first author further trained the interviewer on conducting a semi-structured interview and how he can prompt the interviewees to provide in-depth answers. The interviewer pilot-tested the interview with three researchers and received feedback before collecting any data. All interviews were conducted on site, at the healthcare organization's location in the interviewees' native language of Dutch. The interviewer did not have any a priori relationship with the interviewees. Each interview started by the interviewer explaining the goal of the study. The interviewer's main interest was in organizational change and organizational culture elements. Therefore, he went into the field with an understanding of the challenges of organizational change in general but without prior research, preparation, or experience on individuals' IT-change readiness. Before conducting each interview, he obtained informed consent from each of the interviewees making sure they understood that their identity would not be linked to their responses, the data would remain confidential, and that the informants could withdraw from the study, or they may choose not

to provide an answer to questions at any time. All participants choose to fully participate in the study. Each informant was interviewed only once.

TABLE 1
SEMI-STRUCTURED INTERVIEW PROTOCOL

Number	Question
1	Can you tell me your opinion about the upcoming IT-related changes in your organization?
2	What role does IT play in your life?
3	What role does IT play in your organization?
4	To what extent do you feel ready for the proposed changes? Can you expand on this for me please?
5	Do you believe that you can achieve this (IT) change successfully? Why? Why not? Can you tell me more about it?
6	Do you feel that your organization is ready for change? Why? Why not? Can you explain further please?

During the interviews, the investigator listened actively, and asked prompting questions to deepen the responses of the participants. All participants permitted audio-recordings. The second author used audio recordings to transcribe the interviews and translate them from the interviewees' native language of Dutch into English. During the study, the data were kept at the secure drives of a Dutch university under the second authors' account, which complied with the Dutch and European Union regulations related to privacy and security. The original recordings were deleted after the completion of the analysis and only coded data without the identification info of the interviewees were kept in secure online storage. Following Laukvik et al. (2024), we used the consolidated criteria for reporting qualitative research checklist (COREQ) (See Appendix 1) (Tong et al., 2007). This ensured quality reporting of findings.

Sample and Setting

A multiple case-study was designed using a replication logic (Yin, 2003). The study was conducted with two similar healthcare organizations, described in the next section. Interviews were conducted with 18 individuals from three groups of employees (medical professionals, managers, and IT professionals) of two organizations. Selecting interviewees from three sub-groups of the healthcare organization is in line with the previous research that showed that managers, IT professionals and medical professionals may have different IT logics (Boonstra et al., 2018). We used the replication logic (Barlow & Hersen, 1973) by using a similar process to collect data from both organizations. We identified the interviewees using snowball sampling: In each organization, organizational change agents were asked to identify one person who was highly affected by IT related change as a recipient of change, and who knew others in the organization very well. Then each respondent helped provide the next respondent (Arksey & Knight, 1999; Weiss, 1994), ensuring that equal numbers of professionals were interviewed within each of the three relevant roles. The key inclusion criteria for the snowball sampling were that (1) the IT-related change influenced the interviewees' jobs, (2) they were prepared to and (3) able to communicate their experiences. Using this theoretical sampling process, we aimed to enhance the internal of the study (Gersick, 1988).

Each of the 18 in-person interviews took anywhere from 20 minutes to 45 minutes (See Table 2 for respondents' characteristics). The interviewee used an interview protocol that listed a small number of questions, which allowed the interviewee to provide in-depth responses and for the interviewer to prompt for further explanation, where necessary.

TABLE 2
RESPONDENTS' DEMOGRAPHICS

Characteristics	Organization A	Organization B
Gender		
• Female (CIS-gender)	3	5
• Male (CIS-gender)	6	4
• Other	0	0
Role		
• IT professional	3	3
• Medical professional	3	3
• Manager	3	3
Age	26-59	25-55

Case Selection

Using replication logic, two mental healthcare organizations were identified for this multiple case study (See Table 3 for a comparison of the two organizations). These organizations were of similar size, located in the same region, and their challenges and nature of the change were identical. Both organizations were going through a merger process, as a result of which, they expected to have major changes to the IT system they will be using. As both organizations were influenced by the same external environment and internal goals, the analysis of readiness for change was easier to measure and compare. The environment would constitute these organizations' legal, geopolitical, or societal contexts.

TABLE 3
COMPARISON OF THE TWO CASES

Characteristics	Organization A	Organization B
Locations	165	80
Industry	Mental Health Care	Mental Health Care
Clients	3535	2324
Employees	2237	1489

Both organizations were similar in how much they depended on IT dependence and the types of services the staff provided to their patients. Moreover, both organizations were similar in their level of innovativeness in their IT use when considered within the diffusion of innovations theory (Rogers, 2003): They were neither highly innovative nor behind the curve. This improved the external validity of our research in the mental health area.

Data Analysis

We utilized grounded theory method. The second author transcribed all interviews and translated them from Dutch to English. We analyzed the content qualitatively by centering our analysis on the content and on interviewees' meanings benefiting from the context (McTavish & Pirro, 1990; Tesch, 1990). We followed open coding followed by selective coding. The second author identified the sections of the text that were relevant to individuals' readiness to change. The first author and an independent voluntary researcher analyzed the identified texts and looked for similar themes to determine the factors contributing to the individuals' IT readiness to change. To ensure that the identified factors (themes) were antecedents of individuals' IT-Change Readiness, rather than pointing out to a general theme that exist in the organization, the coders used two rules: **Rule 1:** The identified factor would be only coded if the interviewee mentioned the factor directly to answer a question or prompt related to their IT-Change Readiness. These questions include question #4 from the interview protocol "To what extent do you feel ready for the

proposed IT changes? Why (are you ready for these changes?)”. Also included is question #5 from the interview protocol: “Do you believe that you can achieve this (IT) change successfully? Why (do you think you can/cannot achieve it? **Rule 2:** The identified factor could be coded as a theme if the interviewee clearly mentioned the causal connection between the factor and their IT readiness to change. For example, if the interviewee stated, “I became more ready for the change because of Factor X” or “Not having had factor Y caused me to be less ready for this IT-change”. As a result, we excluded from the content analysis any general theme that existed in the organization that was not clearly linked to the IT-change readiness.

TABLE 4
SUMMARY OF EMERGENT FINDINGS

Theme	Sub-theme
1. IT Use	1.1 Frequent IT use 1.2 Personal IT use
2. IT Self-efficacy	2.1 IT knowledge, skills and experience 2.2 IT Anxiety & Change Anxiety 2.3 IT Learning speed
3. Demographics	3.1 Age 3.2 Education level
4. IT Enjoyment	4.1 IT-use enjoyment 4.2 IT-mastery & learning enjoyment 4.3 IT-novelty enjoyment
5. Anticipated IT usefulness	5.1 Anticipated general IT usefulness 5.2 Anticipated specific IT usefulness
6. Commitment	-

After developing our content analysis schema based on the themes, the first author and the voluntary researcher independently coded all the selected excerpts. The coding schema was 100% reliable (Appendix 2). Once both coders reliably coded all the data, the first author and the voluntary coder independently identified sub-themes and finalized them through discussion.

FINDINGS AND DISCUSSIONS

The socio-technical theory enabled us to capture the interactions between technology, humans (professionals, IT professionals and managers), and the environment (organizational and IT-related change). The in-depth semi-structured interviews enabled us to identify major themes, which indicate a relationship between factors contributing to individuals’ IT-change readiness. Several sub-themes corresponded to each theme during the analysis (See Table 4).

We developed propositions based on each theme and sub-theme. We further summarized all the propositions in a model in Figure 5, which could be used in future quantitative research for generalizability to various settings. In the following sub-sections, we present each theme and relevant sub-themes and present sample quotes. We end each section with a proposition related to the theme and a brief discussion of the theme with respect to extant research.

Theme-1: IT Use

10 out of 18 respondents identified their own (or other people’s) IT use behaviors as a reason for their IT-change readiness. The distribution of the individuals across different roles who identified this theme as an important antecedent of individuals’ IT-change readiness are presented in Table 5.

**TABLE 5
THE DISTRIBUTION OF INTERVIEW QUOTES ABOUT IT USE’S INFLUENCE ON
INDIVIDUALS’ IT-CHANGE READINESS ACROSS ORGANIZATIONS AND
INDIVIDUALS’ ROLE**

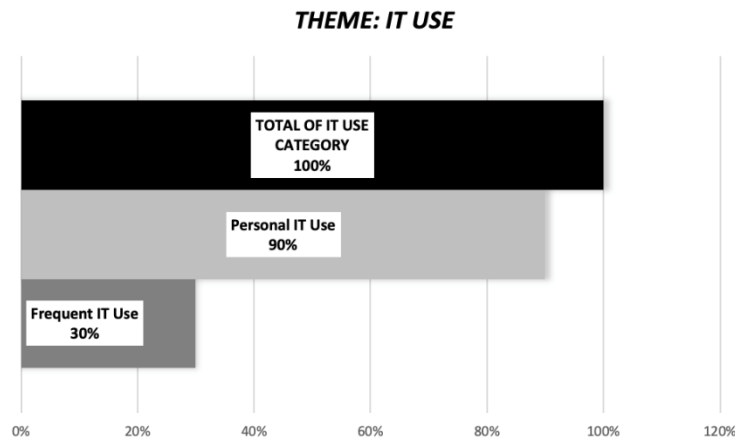
IT USE -> Individuals’ IT-Change Readiness	IT Professionals	Healthcare Professionals	Managers
Total	4	2	4
Organization A	3	1	2
Organization B	1	1	2

The theme of IT Use had two major sub-themes, which are discussed next. The emergent sub-themes related to IT use are presented below in Figure 1. Please note that the sub-themes may not add up to 100% because an individual who talked about IT use influencing their IT-Change Readiness may discuss more than one theme.

Sub-Theme 1.1: Frequent IT Use

Frequent IT Use. The first sub-theme is about the nature of individuals who often use IT. Three individuals (30% of those who referred to the IT use theme) mentioned that since information technologies are highly dynamic and changing, the individuals who use IT a lot tend to be more open and ready towards change in general. One IT employee put it as “*You have to change; IT is always moving forward* [Respondent #2]” Another IT employee stated “*If you work with IT a lot, you will inherently face changes because IT is constantly changing. So, you are more experienced in change*” [Respondent #1]. A manager suggested that IT users differ from non-users with respect to personal traits related to adaptability: “*It is not necessarily just about IT. People who use IT often in private and in their career have different personal characteristics. Big IT users, enthusiastic IT users are different types of people than those that resist IT... I think that’s the real difference between people that use IT and those who don’t, IT users change easier* [Respondent #8]”

**FIGURE 1
THE EMERGENT SUB-THEMES WITHIN THE THEME: IT USE**



Sub-Theme 1.2: Personal IT Use

Nine respondents (i.e., 90% of all individuals who referred to IT use) specifically referred to the impact of individuals' IT use not only at work, but also at home (or in their private lives). For example, when Respondent #3 talked about large IT-related changes, they said "People who are constantly working on their computer, both at work and home will struggle less. Someone who uses computers at home too will find it easier to change compared to those who only use IT in a specific way at work and nowhere else." Respondent #7, a manager, stated "I believe that it helps a lot of people use IT in their private life as well. They see that IT makes things easier, and because of that, find it easier to adapt to changes in IT at work too." Another manager, Respondent #8, reflected that their own IT knowledge and skills affected how ready they feel towards an upcoming change. Since they were familiar with a previous version of a system, they thought they would be comfortable with handling a newer version of the system.

These findings fit well with research in IT use within the medical field. For example, Saigí-Rubió et al. (2014) identified the telemedicine use determinants. Collecting data from Spain, Colombia and Bolivia, they found that medical professionals' (physicians in this case) level of IT use in their personal lives is the strongest determinant of their IT use in their clinical practice.

Therefore, we posit that:

Proposition 1: *Level of IT use is an antecedent of individuals' IT-Change Readiness.*

Proposition 1A: *Individuals who use IT frequently exhibit high individual IT-Change Readiness.*

Proposition 1B: *Individuals who use IT in their personal lives more have high individual IT-change readiness.*

TABLE 6
THE DISTRIBUTION OF INTERVIEW QUOTES ABOUT INDIVIDUALS' IT SELF-EFFICACY'S INFLUENCE ON INDIVIDUALS' IT-CHANGE READINESS ACROSS ORGANIZATIONS AND INDIVIDUALS' ROLES

IT SELF-EFFICACY-> Individuals' IT-Change Readiness	IT Professionals	Medical Professionals	Managers
Total	5	6	5
Organization A	3	3	2
Organization B	2	3	3

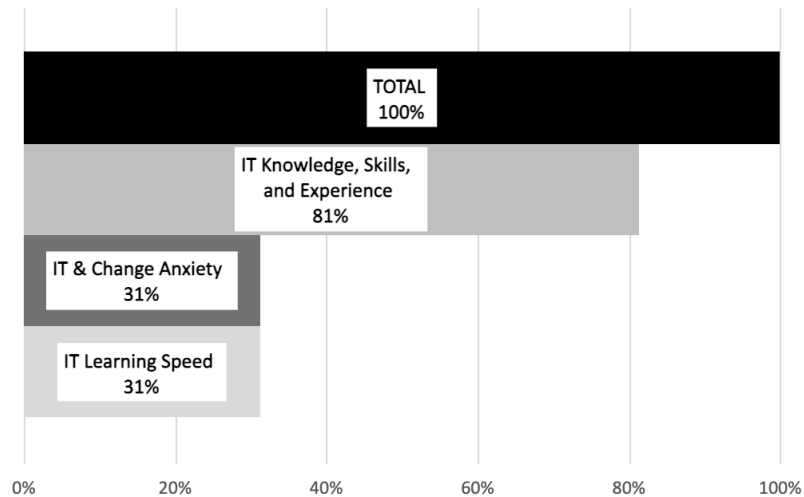
Theme 2: IT Self-Efficacy

The Relationship Between IT Self-Efficacy and Individuals' IT-Change Readiness

IT self-efficacy is defined as "individual's beliefs about their ability to competently use computers [IT]" (Compeau & Higgins, 1995, p. 189). IT self-efficacy emerged as a theme that influences individuals' IT-change readiness positively. Among 18 informants, 16 substantiated that IT self-efficacy contributes to individuals' IT-change readiness. The emphasis on IT self-efficacy was equally present in both organizations. Further, in both organizations, the comments were about evenly distributed among IT professionals, medical professionals and managers (See Table 6).

There were three sub-themes related to IT self-efficacy, which we discussed next. The emergent sub-themes related to IT self-efficacy are presented below in Figure 2. Some individuals' responses include more than one sub-theme, therefore the sum of sub-themes mentioned below are higher than 16.

FIGURE 2
THE EMERGENT SUB-THEMES WITHIN THE THEME: IT SELF-EFFICACY



Sub-Theme 2.1: IT Knowledge, Skills, and Experience. Among the 16 individuals who connected IT self-efficacy to individuals’ IT-change readiness, 13 people highlighted having knowledge, skills, or experience in IT. One of these respondents stated, “*If you already know how to work with computers, and there are changes coming your way, it will be easier for you to just go for it*” [Respondent #4]. Another responded, “I do have the feeling that I am able to handle the IT changes purely because of my knowledge and experience [in IT].” [Respondent #11]

Counter-examples confirming this theme were also present: “Certain people don’t have the knowledge of IT necessary to cope with this change...They have less knowledge of IT and are therefore less ready to change” [Respondent #2]. An IT professional added, “Knowledge in building specific windows systems would have helped me be more ready for change.” [Respondent #12]

In comparing the first sub-theme that we found with research that tries to explain behavioral intention to use new IT in medical fields, all three elements of the first theme (i.e., IT knowledge, skills, and experience) to be an important factor. Melas et al. (2011) found that IT knowledge contributed to intention to use a system moderated by perceived ease of use. Yu et al. (2009) found that in healthcare settings, the care givers’ IT skills influenced their intention to use medical IT applications both directly, and indirectly mediated through ease of use. Further, several authors mentioned the importance of IT experience (Escobar-Rodriguez & Romero-Alonso, 2013; Lai et al., 2016; Lim et al., 2011). To exemplify, in their investigation about ERP system use attitudes in a Spanish public hospital, Escobar-Rodriguez and Bartial-Sopena (2013) found that users’ prior experience with IT influence their attitude towards using IT mediated by perceived usefulness. Similarly, Lai et al. (2016) found that patients’ IT experience contributes to their IT perceived ease of use and perceived usefulness evaluations, thus positively affecting their attitudes towards using an IT. To sum up, our study builds on the extant research on behavior intention to use IT, and attitude towards using IT. Similar to studies in these areas, we find that IT knowledge, skills and experience are important contributors to individuals’ readiness for IT related change.

Sub-Theme 2.2: IT Anxiety & Change Anxiety. Among the 16 interviewees who referred to IT knowledge, skills, and experience in describing their IT self-efficacy, five of them also specifically mentioned their or others’ anxiety or lack thereof related to IT and related to change.

Two individuals mentioned **change anxiety** as follows: Respondent #3 said “I am not afraid of the upcoming changes; I know I have the right IT skills and knowledge in order to adapt to the new situation.” Similarly, Respondent #11 stated “I do have the feeling that I am able to handle the IT changes purely because of my knowledge and experience. I am not afraid of the changes, whatever will be, will be.”

The other three people specifically mentioned **IT anxiety**. One healthcare professional stated, “If you find it difficult to press a lot of buttons because you are afraid you will crease the system, then you will inevitably work slower, and resist more [to IT-based change].” [Respondent #4]. An IT professional describes their experience observing some healthcare professionals as follows: “I do notice that in the field, several people freak out when a screen has a different color, and they don’t know what to do with it. They have more difficulties in adapting to the change because they think they are not capable to adapt”. [Respondent #12] Lastly, a manager pointed out the same issue: “Some people are actually afraid of their keyboard. They are afraid the whole system will crash when they do something wrong. There is a lack of practice³ and knowledge, which leads to an irrational fear of using IT.” [Respondent #18].

Part of our second sub-theme, namely IT anxiety was also identified as an important as part of the TAM model (Aggelidis & Chatzoglou, 2009; Briz-Ponce & García-Peñalvo, 2015; Lim et al., 2011; Lin et al., 2016). Yet, the anxiety towards change in general was not mentioned, and therefore it is an emergent sub-theme that we contribute to this literature stream.

Sub-Theme 2.3: IT-Learning Speed. Five of the 16 individuals who highlighted the impact of IT self-efficacy on individuals’ IT-change readiness discussed the ease or speed with which some individuals learned new information technologies. An IT professional succinctly stated, “My readiness to change is improved because I know I can *learn new IT quickly...*” [Respondent 11] A manager provided a detailed understanding of this situation: “*Some groups are quicker in adapting to IT-based change. For some, a session of two hours is enough to explain how something works while somebody else takes three days. Groups that are quick in adapting to IT-based change have a steeper learning curve and I can imagine that if you already have trouble working with IT, and you are told you are going to need another training because things are going to change, you are going to attend those trainings with more stress and show more resistance [to change].*” [Respondent #17]. Healthcare professionals also mentioned this sub-theme. One Medical professional said “*...I am positive about the change...If I learn something new in IT, I understand it quickly, and I am able to transfer that knowledge to others.*” [Respondent #15] Another Medical professional compared themselves to the others in supporting this theme: “*I am one of the older generations, but we have a lot of young colleagues here, and when I see how spontaneously and easily they pick up IT, I feel that it is more difficult for me. That’s why I still use pen and paper next to my computer.*” [Respondent #13]

In investigating the relationship between our emergent third sub-theme of learning speed and the literature, we found the most similar variable was training. In medical fields, training was a significant variable that was identified by certain researchers (Abdekhooda et al., 2015; Aggelidis & Chatzoglou, 2009; Escobar-Rodriguez & Romero-Alonso, 2013; Holden et al., 2012; Wu et al., 2007) to constitute a significant antecedent of individuals’ new IT use intentions. While training results in learning, our third sub-theme related to IT self-efficacy, i.e. learning speed, is different in the following way. While training availability and quality may be important, these factors describe the availability of an organizational mechanism to support learning. Learning speed, on the other hand, represents an internal and individual-level skill that supports learning, and therefore may be considered as a separate and important variable to augment TAM model within medical fields.

Therefore, we posit that:

Proposition 2: *IT self-efficacy of an individual is an antecedent of their individual IT-change-readiness.*

Proposition 2A: *Individuals who have high IT knowledge, skills and experience exhibit high individual IT-change readiness.*

Proposition 2B: *Individuals who have high IT anxiety have low individual IT-change readiness.*

Proposition 2C: *Individuals who exhibit high anxiety related to IT-based change have low individual IT-readiness.*

Proposition 2D: *Individuals who learn new IT quickly have high individual IT-change readiness.*

Theme 3: Demographics

IT Self-Efficacy as a Moderator of Individuals’ Demographics and Their IT-Change Readiness

IT self-efficacy (also known as computer self-efficacy) refers to “an individual’s beliefs about their ability to competently use information technologies (or computers)” (Compeau & Higgins, 1995, p. 186). 12 individuals identified demographics as being relevant for individuals’ IT-change readiness (Table 7). When individuals were asked about what contributes to their IT-Change Readiness, many of the interviewees made a clear connection between two types of personal demographics (sub-themes) and their IT self-efficacy, which in turn, influenced their IT-Change Readiness according to them. These sub-themes are presented next.

TABLE 7
THE DISTRIBUTION ACROSS ORGANIZATIONS AND INDIVIDUALS’ ROLES OF INTERVIEW QUOTES SUGGESTING THAT IT SELF-EFFICACY MODERATES DEMOGRAPHICS AND INDIVIDUALS’ IT-CHANGE READINESS

DEMOGRAPHICS-quotes	IT Professionals	Medical Professionals	Managers
Total	3	5	4
Organization A	2	1	2
Organization B	1	4	2

Sub-Theme 3.1: Age. We found that self-efficacy is a moderator of individuals’ age and their IT-change readiness. Half of the interviewees alluded to older employees not feeling comfortable using IT and therefore having difficulties adapting to IT-related change (See Table 8).

TABLE 8
THE DISTRIBUTION OF INTERVIEW QUOTES ACROSS ORGANIZATIONS AND INDIVIDUALS’ ROLES INDICATING INDIVIDUALS’ IT SELF-EFFICACY MODERATING THEIR AGE AND INDIVIDUALS’ IT-CHANGE READINESS

AGE-quotes	IT Professionals	Medical Professionals	Managers
Total	3	4	2
Organization A	2	1	1
Organization B	1	3	1

The specific terms individuals highlighted when they were comparing older people (people 50 years old and up) to younger people (employees in their 20s and 30s) included “preferring pen and pencil to IT”, “being afraid to use IT”, “hating IT”. Comparatively, the interviewees mentioned that the younger employees “grew up with IT”, “used IT socially” and therefore found it much easier to adapt to IT. While the employees connected age of the employees to their readiness to change, their age-related comments tied directly to their capability of learning new IT. These explanations highlight that older employees have lower self-efficacy with IT, and the younger employees have higher self-efficacy with IT, which consecutively effects their readiness to change.

A Medical professional from Organization B put it this way:

“I am one of the older generations, but we have a lot of young colleagues here, and when I see how spontaneously and easily they pick up IT, I feel that it is much more difficult for me. That’s why I still use pen and paper next to my computer” [Respondent #13].

Sub-Theme 3.2: Educational Level. IT Self-Efficacy is a moderator of individuals’ education level and their IT-change readiness. The second type of personal characteristics that influence IT-related change indirectly was education level. One third of the interviewees mentioned education level as impacting IT self-efficacy of the employees, which, according to them caused the employees’ lack of readiness for IT related change. Medical professionals and managers brought up this concern, and it was never brought up by the IT professionals.

TABLE 9
THE DISTRIBUTION OF INTERVIEWEE QUOTES ACROSS ORGANIZATIONS AND INDIVIDUALS’ ROLES ON THE IT SELF-EFFICACY MODERATING INDIVIDUALS’ EDUCATION LEVEL AND INDIVIDUALS’ IT-CHANGE READINESS

EDUCATION LEVEL	IT Professionals	Medical Professionals	Managers
Total	0	1	2
Organization A	0	0	1
Organization B	0	1	1

Specifically, the comments highlighted that as the employee’s education level increased so did their knowledge of IT, which enabled them to learn IT more quickly, use IT faster, and therefore be open for new IT solutions and even proactively identify new IT solutions to ease their job. One Medical professional stated that

“... I am completely inexperienced, and I lack knowledge ...in IT The fact that we lack knowledge influences our readiness to change. That is a large influence” [Respondent #14].

When asked about what makes individuals ready for IT change, a manager sums up the connection between employee education and their IT self-efficacy as follows:

“The average level of education in this organization is relatively low. If you see how they [uneducated employees] type, one finger at a time. So that’s extremely slow and they dislike using it. We also have higher educated people who use IT in a much wider spectrum because they are actively searching for applications for their clients” [Respondent #18.]

The findings presented in 3.3.1 and 3.3.2 correspond to extant literature on IT culture, which recommended that researchers further examine influential personal demographics and characteristics including academic training and participant age (Walsh & Kefi, 2008). Further, some researchers that investigate behavioral intention to use new IT in medical fields found the demographic variable of age to be important (Escobar-Rodríguez et al., 2012; Holden et al., 2012; Song et al., 2015; Yu et al., 2009). While certain other demographic factors such as work experience (Yu et al., 2009) were also included, education level was often ignored by many researchers, other than by Song et al. (2015). This general omission may have resulted from the homogeneity in education level of the individuals that were sampled for the studies.

Our findings contribute to this literature stream by suggesting that age and education level of an individual may impact their IT-Change Readiness, mediated by their IT self-efficacy. From this, we may be able to extrapolate the practical recommendations that organizations whose make-up include younger and well-educated individuals may be more agile in dynamic IT environments that requires individuals to adopt new information technologies.

Therefore, we posit that:

Proposition 3: *IT self-efficacy moderates individuals' demographics and their IT-Change Readiness.*

Proposition 3A: *IT self-efficacy moderates an individual's age and their IT-Change Readiness.*

Proposition 3B: *IT self-efficacy moderates an individual's education level and their IT-Change Readiness.*

Theme as an important antecedent of individuals' IT-change readiness are presented in Table 10.

TABLE 10
THE DISTRIBUTION OF INTERVIEW QUOTES ON IT-USE ENJOYMENT'S
RELATIONSHIP WITH INDIVIDUALS' IT-CHANGE READINESS ACROSS
ORGANIZATIONS AND INDIVIDUALS' ROLES

IT USE ENJOYMENT-> IT-Change Readiness	IT Professionals	Medical professionals	Managers
Total	2	2	2
Organization A	2	1	1
Organization B	0	1	1

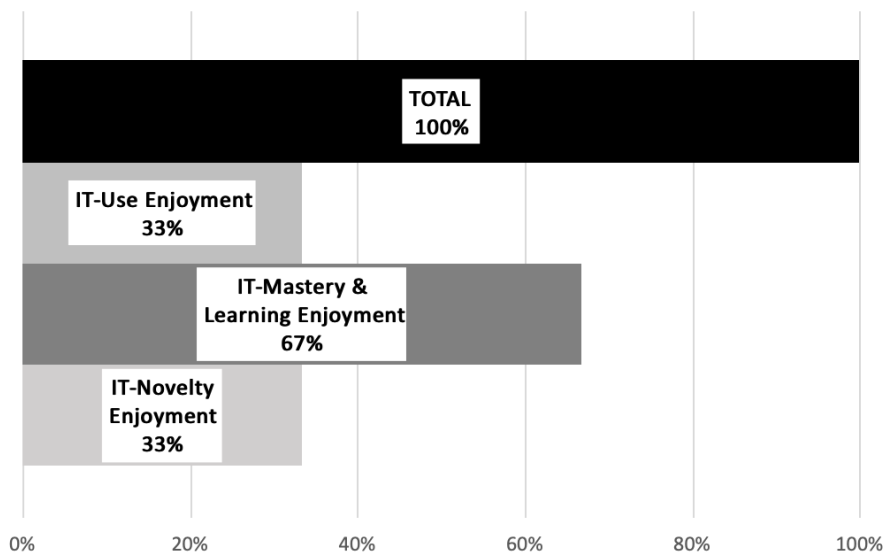
Theme 4: IT Enjoyment

Influence of IT Enjoyment on Individuals' IT-Change Readiness

6 out of 18 respondents identified their own (or other people's) enjoyment of IT as a reason for their IT-change readiness. The distribution of the individuals from different departments who identified this theme as an important antecedent of individuals' IT-change readiness are presented in Table 10.

The theme of IT enjoyment had three major sub-themes, which are discussed next. The emergent sub-themes related to IT enjoyment are presented in Figure 3. Please note that the sub-themes may not add up to 100% because an individual who discussed IT use influencing their IT-Change Readiness may have discuss more than one theme.

FIGURE 3
THE EMERGENT SUB-THEMES WITHIN THE THEME: IT ENJOYMENT



The IT enjoyment theme falls into intrinsic motivations for using IT that is identified in previous literature (Eseryel et al., 2021). Intrinsic IT motivation is defined as users enjoying using most IT and find it interesting (Eseryel et al., 2021; Walsh et al., 2010).

Sub-Theme 4.1: IT-Use Enjoyment. One third of the respondents identified a connection between their enjoyment of using IT and their IT-change readiness in describing why they believe they are ready for the upcoming IT changes; four of the six respondents described their relationship with IT using statements such as ‘fun’, ‘like IT’, ‘love IT’, ‘enjoy IT’, ‘interest in IT’, ‘enthusiastic about IT’. One IT professional put it succinctly as “I really use IT for fun. I work with technology and enjoy doing so... If it is within my capacity to change, I will, partly out of love for IT” [Respondent #1]. One manager provided a counterexample of how not enjoying IT is related to resisting IT-related changes, i.e., low individual IT-change readiness: “Not everyone likes IT as much... Those people are happy when they finally understand a system. When they hear that new changes are coming up, they resist.” Table 10 shows the distribution of this theme across three groups of individuals across two organizations. The IT use enjoyment theme provides two more sub-themes described next.

Enjoyment within the IT research can be defined as “the extent to which the activity of using an innovation is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated” (Song & Han, 2009, p. 512). The significance of enjoyment as human motivation was identified in early consumer research, which determined that part of individuals’ basic wants include joyful experiences (Rokeach, 1973). Davis et al. (1992) applied this concept to the IT research by conducting two studies that investigated the relationship between enjoyment and intention to use IT. They found that enjoyment significantly influenced intention to use word processing software (study 1) and the intention to use business graphics programs (study 2). The authors suggested that enjoyment influenced IT use behavior indirectly by impacting intention to use.

Sub-Theme 4.2: IT-Mastery & Learning Enjoyment. Among the individuals who mentioned IT enjoyment as contributing to their IT-change readiness, four of them highlighted the satisfaction they get from learning and mastery of information technologies. A medical professional said, “I like learning about IT, and I am sure that if we were to choose for another direction, I would be able to cope with that.” [Respondent #5]. An IT professional described their interest in learning as follows: “The learning process in IT gives me fulfillment. That is why I like to seek for new opportunities in IT. Most changes that are proposed in this organization are fine with me because of it.” [Respondent #1] A manager observed this clearly in their group and summarized this theme as follows: “Big IT users, enthusiastic IT users are different types of people than those that resist IT... I think interest in IT plays an important role in readiness to change. People get satisfaction out of working with IT and mastering it. I feel that people with a personal interest in IT are more positive about their ability to cope with upcoming IT changes.”

In searching for relevant literature to the sub-theme of IT-mastery enjoyment and learning enjoyment, we found training as determining individuals’ intention to use new IT (Abdekhoda et al., 2015; Aggelidis & Chatzoglou, 2009; Escobar-Rodríguez et al., 2012; Escobar-Rodríguez & Romero-Alonso, 2013; Holden et al., 2012; Wu et al., 2007). While training refers to the existence of an external support mechanism for learning, enjoyment of IT-mastery and learning describes the intrinsic motivation of individuals and how people enjoy learning and mastering a new information technology. We recommend the addition of the sub-theme of IT-mastery and learning enjoyment as sub-variable for TAM researchers.

Sub-Theme 4.3: IT-Novelty Enjoyment. The last sub-theme of IT enjoyment is that IT provides novelty. A couple of respondents mentioned this aspect of information technologies and described enjoying the challenge and novelty that IT provides. An IT professional said “*If you work with IT tools a lot, you will face changes often, and there is always something new and interesting. So, you are capable of changing IT is going to be an even bigger part of my job, and I like the challenges that come with IT.*” [Respondent #2] From the perspective of a medical provider: “*People who know they are able to successfully adapt to those changes in IT are more ready for change. And their curiosity helps them.*” [Respondent #16]

The third sub-theme of IT novelty enjoyment may be relevant to the individual trait of personal innovativeness from the IT literature, which was determined to constitute an important determinant of behavioral intention to use new information technology (Kummer et al., 2013; Liang et al., 2003; Saigi-

Rubió et al., 2014). While personal innovativeness is a trait of individuals expressed as their inclination to try out any new IT (Flynn & Goldsmith, 1993). The IT-novelty enjoyment sub-theme refers to those motivated to adopt new IT because they like newness and change and are curious about how the future IT would contribute to their work. We recommend the addition of the sub-theme IT-novelty enjoyment as sub-variable for TAM researchers.

Therefore, we posit that:

Proposition 4: *Individuals who enjoy information technology have high individual IT-Change Readiness at work.*

Proposition 4A: *Individuals who enjoy using information technology have high individual IT-Change Readiness at work.*

Proposition 4B: *Individuals who like to learn and/or master new information technologies have high individual IT-Change Readiness.*

Proposition 4C: *Individuals who enjoy the novelty provided by IT have high individual IT-Change Readiness at work.*

Theme 5: Anticipated IT Usefulness

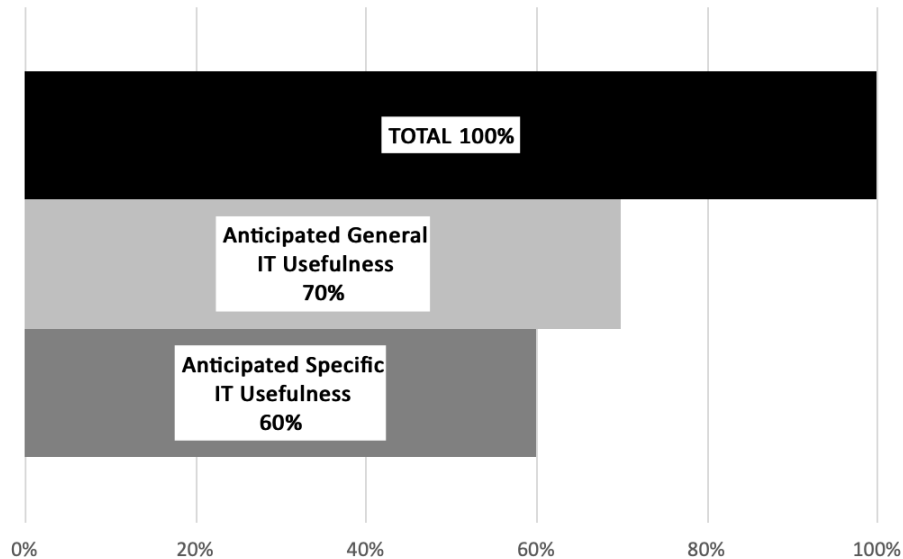
10 out of 18 respondents mentioned anticipation of future IT to be useful as a reason for their IT-change readiness. The distribution of the individuals from different departments who identified this theme as an important antecedent of individuals’ IT-change readiness are presented in Table 11.

**TABLE 11
THE DISTRIBUTION OF INTERVIEW QUOTES ON ANTICIPATED IT USEFULNESS’
RELATIONSHIP ON INDIVIDUALS’ IT SELF-EFFICACY ACROSS ORGANIZATIONS AND
INDIVIDUALS’ ROLES**

ANTICIPATED IT USEFULNESS -> IT-Change Readiness	IT Professionals	Medical professionals	Managers
Total	2	4	4
Organization A	1	2	2
Organization B	1	2	2

The theme of anticipated IT usefulness had two major sub-themes, which are discussed next. The emergent sub-themes related to anticipated IT usefulness are presented below in Figure 4. Please note that the sub-themes may not add up to 100% because an individual mentioning the influence of anticipated IT usefulness on their IT-Change Readiness may have discussed more than one theme.

FIGURE 4
THE EMERGENT SUB-THEMES WITHIN THE THEME: ANTICIPATED IT USEFULNESS



Sub-Theme 5.1: Anticipated General IT Usefulness

Anticipated IT usefulness is the expectation that the IT that will be adopted will contribute to the execution of task performance. 10 out of 18 respondents suggested they are more open to using new IT because they expect it to add value in general and to them as individuals. Seven of these respondents had generally positive expectations of the new IT, and they shared this expectation in discussing their readiness for IT-change. A manager stated how they expect that the new changes in IT will improve their organization’s general IT infrastructure would help their individual IT-change readiness. One manager stated:

“I believe that the technology we have now, and what changes can do for people and how they can benefit, the speed, the clarity it can provide, that has an influence on my readiness to change. Time is money so if IT changes can make things more efficient, I think it is a positive thing. I cannot imagine anything but improvement if we continue to develop our IT infrastructure. I really trust that this will be helpful for all of us. What we have now can be improved greatly. Due to the merger, we are able to look at the best of both organizations and combine it into one powerful IT infrastructure. I look forward to learning more about their IT structure in order to pick out the best solution.” [Respondent #17]

Other two managers also highlighted general expected benefits: “I believe that the more you see the added value of IT, the easier you can use it. It helps you to gain knowledge and experience, which in turn impacts readiness to change” [Respondent #7]. “I am very positive about the changes in the IT field. It can make life so much easier. I am very positive about the potential of the changes” [Respondent #9].

Sub-Theme 5.2: Anticipated Specific IT Usefulness

Six of the 10 respondents referred to specific benefits that the future IT will bring. In these two organizations, there was a general need for the organization to become more efficient.

The interviewees used the terms “speed”, “efficiency”, and “productivity in describing their specific expectations from the IT to be more useful for them”. The interviewees suggested that knowing that new IT would increase efficiency would increase their and others’ individual IT-change readiness. An IT professional suggested “*It definitely helps if you can introduce a system that allows people to work faster and more efficiently. When they [individuals] resist, it is mostly because it [this benefit] hasn’t been explained to them properly. The moment you explain them how IT will help them in the future, they will feel more confident about their ability to change.*” [Respondent #10]

There was a general need for the organization to become more efficient in these two organizations. There was a general feeling that their existing information technologies did not help the staff do their work quickly. Therefore, those individuals who described their anticipated specific future benefits from IT identified as increased work efficiency. We expect that other organization that have different burning requirements from IT may determine other anticipated specific IT usefulness areas, such as ‘compliance with regulations’, ‘increased information sharing’, ‘cost reduction’ and so on.

These findings correspond to extant research findings that perceived IT usefulness influences individuals’ intention to use new information technologies (Davis, 1989). In fact, perceived usefulness is at the core of the TAM model. Our findings suggest that this variable also contributes to individuals’ IT-Change Readiness. Lastly, our research provides a deeper understanding of how individuals perceive IT usefulness: Namely, individuals in medical settings may expect general benefits that they may not be able to identify, or they may specifically expect the new information technology to increase their work speed, efficiency, and productivity.

Therefore, we posit that:

Proposition 5: *Individuals who anticipate high IT usefulness have high individual IT-change readiness at work.*

Proposition 5A: *Individuals who anticipate high general IT usefulness have high individual IT-change readiness.*

Proposition 5B: *Individuals who anticipate high specific IT usefulness have high individual IT-Change Readiness.*

Theme 6: Commitment

Influence of Commitment on Individuals’ IT-Change Readiness

Three out of 18 interviewees mentioned commitment as contributing to their individual IT-change readiness (Table 12).

TABLE 12
THE DISTRIBUTION OF INTERVIEW QUOTES ON COMMITMENT’S RELATIONSHIP ON INDIVIDUALS’ IT SELF-EFFICACY ACROSS ORGANIZATIONS AND INDIVIDUALS’ ROLES

COMMITMENT -> IT-Change Readiness	IT Professionals	Medical professionals	Managers
Total	1	2	0
Organization A	1	1	0
Organization B	0	1	0

Two respondents felt that being ready for IT-change is just part of their job and that they must be ready to change and adapt. The first respondent, an employee in the IT department, describes their IT-change readiness as, “*I do what is asked of me and if I need to change, I will... partly out of love for IT, but also out of sense of duty*” [Respondent #1].

The other respondent, a medical professional, also related their change closely to their current position, “*It is important for my job, so I will welcome any change with dedication*” [Respondent #5]. Both respondents clearly connect their IT-change readiness with their current positions and commitment regardless of their own aptitude in IT. Respondent #1 went on to say that they love IT over. This makes sense because they work in the IT department. The other respondent, respondent #5, a medical professional said, “*My affinity with IT isn’t that high, but it is important for my job so I will welcome any change with*

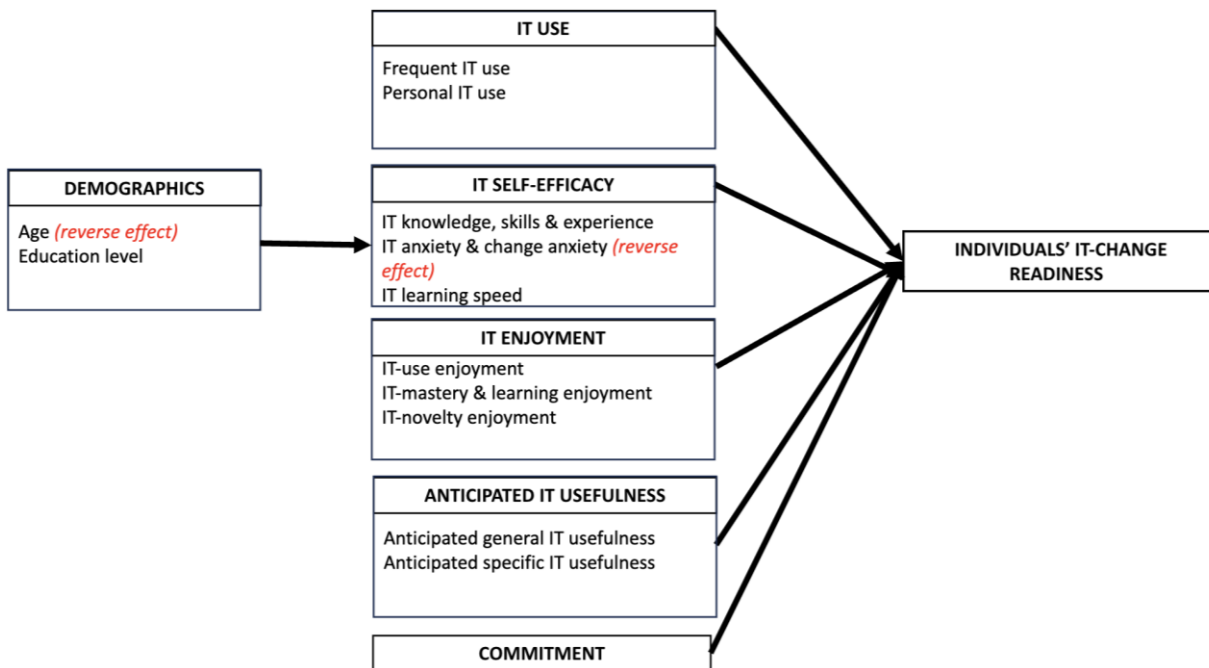
dedication.” The last respondent said they wanted to adopt IT because management asks for these changes. The statements did not provide any emphasis on the individuals’ dedication to their organization. Rather, the brief statements highlighted their sense of duty to their job requirements.

The extant research in marketing initially introduced the influence of commitment on various outcomes. The commitment-trust theory of Morgan suggested relationship commitment was a mediator that contributed to important relationship marketing outcomes. Applying this theory to the information systems field, Yang et al. (2019) found that commitment contributed to individuals’ intention to continue using internet banking technologies. Therefore, we posit that:

Proposition 6: *Individuals who have higher commitment have higher individual IT-Change Readiness compared to others with low commitment.*

Figure 5 depicts the proposed research model based on the developed propositions. This figure includes the themes and sub-themes identified in our descriptive, quantitative research. To keep the figure simple, we did not provide arrows for each sub-theme, but the existence of these arrows that match the propositions related to sub-themes are assumed.

**FIGURE 5
PRESENTATION OF THE PROPOSITIONS DEVELOPED FROM THE THEMES AND
SUB-THEMES AS PROPOSED RESEARCH MODEL**



LIMITATIONS, STRENGTHS, AND IMPLICATIONS FOR FUTURE RESEARCH

Use of replication logic design with two case studies is the limitation of our research design. While it is common to use replication logic with two case studies, addition of more cases would strengthen the replication logic. This study is conducted in the healthcare industry, specifically within mental healthcare. The medical field is significantly different from other sectors (Natarajan, 2006) therefore the findings could not be generalized outside the healthcare industry without further testing in other settings. Further, since this study is conducted with mental healthcare organizations, generalization of findings to medical settings that significantly differ from mental healthcare settings requires caution. This limitation is a common

shortcoming of case study research (Eisenhardt, 1989). However, this study does allow for better external validity to other medical institutions in mental healthcare.

The strength of this study includes the qualitative approach that allowed themes unique to the settings to emerge due to rich data availability. This helps contribute finer details to existing theory. Further, the descriptive study enabled us to present individuals' perspectives. Lastly, the study accounted for the perspectives of all three different groups of individuals that are often found in healthcare settings (Boonstra et al., 2018).

Based on our findings, we have the following recommendations. Five key components contribute positively to individuals' IT-change readiness: individuals' (1) IT use, (2) IT self-efficacy, (3) IT enjoyment, (4) anticipated IT usefulness, and (5) commitment. These components can be evaluated during the hiring process to ensure the recruitment of individuals who are ready for the change that is unavoidable in the medical fields. Further, organizational development initiatives can be taken to improve these five factors for existing employees. The impact of demographics on IT self-efficacy can be taken into consideration when designing organizational development initiatives to address the responses of employees that are in the opposite ends of age and education level continua.

Researchers may use our study to inform their research that quantitatively tests our proposed research model, and the propositions developed through this qualitative study. In this study, we focused more on the internal aspects of individuals that influence their IT-change readiness. Future studies should investigate the influence of external factors, including the leadership (Eseryel et al., 2012) that influence the individuals' IT-change readiness. A recent leadership theory called transformational IT leadership (Eseryel et al., 2024) is one of the key areas to investigate. Studies found that transformational IT leadership of managers and leaders increase follower's IT self-leadership (Eseryel, 2020; Eseryel & Biernath, 2024). When individuals' IT self-leadership (Eseryel, 2013) increases, this may potentially significantly influence their IT self-efficacy (Rieder et al., 2021) and IT usefulness, thereby potentially increasing individuals' IT-change readiness and team level innovation (Eseryel et al., 2014).

CONCLUSIONS

IT is commonly used in medical fields and change in IT is unavoidable. IT-change success in medical organizations requires the participation of different individuals with different roles, such as medical professionals, managers and IT specialists (Boonstra et al., 2018). Thus, investigating factors contributing to individuals' IT readiness to change that considers individuals from all three groups is imperative for IT change success in healthcare. Yet very little attention was given to the *individuals'* IT-change readiness (Paré et al., 2011), especially in the healthcare sector. Our findings suggest that individuals' IT use, IT self-efficacy, IT enjoyment, anticipated IT usefulness, and commitment all contribute to their IT-change readiness, while their demographics (age and education) impact their IT-Change Readiness mediated by their IT self-efficacy. Further quantitative testing of the model and the propositions that are developed in this study are needed. This study also provided a more granular understanding of the elements used in the model on technology acceptance (TAM). Certain sub-themes that emerged in our study, such as personal IT use, change anxiety, IT learning skill, IT mastery & learning enjoyment, and IT novelty enjoyment may be used by TAM researchers to provide more granular understanding of elements such as IT use, IT self-efficacy, and IT enjoyment.

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APPENDIX 1: COREQ (CONSOLIDATED CRITERIA FOR REPORTING QUALITATIVE RESEARCH) CHECKLIST

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interviews?	Page 276
Credentials	2	What were the interviewer’s credentials? E.g. PhD, MD	Page 275
Occupation	3	What was their occupation at the time of the study?	Page 275
Gender	4	Was the interviewer male or female?	Page 275
Experience and training	5	What experience or training did the interviewer have?	Page 275
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	Page 275
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	Page 235
Interviewer characteristics	8	What characteristics were reported about the interviewer? e.g. Bias, assumptions, reasons, and interests in the research topic	Page 275
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	Pages 276-277
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Page 276
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	Page 276
Sample size	12	How many participants were in the study?	Page 276
Non-participation	13	How many people refused to participate or dropped out? Reasons?	Page 276
Setting			

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	Page 276
Presence of nonparticipants	15	Was anyone else present besides the participants and researchers?	Page 276
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	Page 277
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Pages 275-276
Repeat interviews	18	Were repeat interviews carried out? If yes, how many?	Page 275
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	Page 276
Field notes	20	Were field notes made during and/or after the interview?	N/A
Duration	21	What was the duration of the interviews or focus group?	Page 276
Data saturation	22	Was data saturation discussed?	N/A
Transcripts returned	23	Were transcripts returned to participants for comment and/or correction?	N/A
Domain 3: Analysis and Findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	Page 277
Description of the coding tree	25	Did authors provide a description of the coding tree?	Appendix 2.
Derivation of themes	26	Were themes identified in advance or derived from the data?	Page 278
Software	27	What software, if applicable, was used to manage the data?	N/A
Participant checking	28	Did participants provide feedback on the findings?	N/A
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	Pages 279-290
Data and findings consistent	30	Was there consistency between the data presented and the findings?	Pages 279-290
Clarity of major themes	31	Were major themes clearly presented in the findings?	Pages 279-290
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	Pages 279-290

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

APPENDIX 2: CONTENT ANALYSIS SCHEMA

Themes	Description
IT Use	When the individuals mention the reason for individuals' readiness to change as their frequent IT use, or IT use at home or other IT use at the office, we use this code as an antecedent.
IT Self-Efficacy	The influence of how capable and knowledgeable the individuals see themselves in IT on the individuals' readiness to change.
Individual Demographics	Demographic information such as age, gender, race that influence individuals' readiness to change as well as individuals' backgrounds such as education, managerial level, etc. that influence individuals' readiness to change
<ul style="list-style-type: none"> • Age 	When the interviewers mention an individual's youth or old age or mention the influence of age when it comes to a person's readiness to change, we use this code.
<ul style="list-style-type: none"> • Education Level 	When the interviewers mention specific education type or level as it relates to a person's readiness to change, we use this code.
IT Enjoyment	When the individuals mentioned how much individuals' enjoyment of IT use as an explanation of their IT-change readiness, these statements were coded with enjoyment.
Anticipated IT Usefulness	When the interviewee mentions the understanding of the need for change or understanding of the usefulness of IT as a reason for individuals' readiness for change, we use this code as an antecedent.
Commitment	When individuals highlighted their commitment as a reason that explains their IT-Change Readiness, these statements were coded using commitment.