The Acceptability of Telemedicine Cabins by the Students

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The Acceptability of Telemedicine Cabins by the Students

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ABSTRACT
Telemedicine solutions are invading our daily lives, raising a major issue concerning the personalization of remote consultation and trust in the physician’s Competence, Integrity and Benevolence (Trusting Beliefs). The aim of this study is to extend the existing Technology-Acceptance-Model (TAM) using the concept of Trusting Beliefs and Perceived Personalization. To test the model, a quantitative approach using existing scales has been selected. A survey was administered to students from several French business schools and the sample of 158 students was analysed using a Partial Least Approach. Findings highlight the key role of Trusting Beliefs in Perceived-Personalization. While two of the three dimensions (Benevolence and Integrity) of Trusting Beliefs theory have no influence on the Intention-to-Use, Competence has a direct, positive and significant impact on Intention-to-Use a Telemedicine Cabin. The relationship between the variables of the TAM is validated, except for Perceived-Ease-of-Use, which does not impact the Intention-to-Use a Telemedicine cabin.

KEYWORDS: Telemedicine, Smart Health, Acceptance, TAM, Trusting Belief, Perceived Personalisation

JEL CODES: I190, O330
Information technology adoption and use in the healthcare sector is an important topic for both healthcare professionals (Lepore et al., 2018; Carayannis et al., 2017; Bauer, 2018; Gastaldi et al., 2018) and patients (Kohnke et al., 2014). The implementation of innovative technologies such as the Internet of Things and Artificial Intelligence in the health and medical fields (El Amrani, 2019) could bring about a positive change in the public healthcare sector (Lepore et al., 2018) or a new working systems design (De Almeida, Delgado, 2019). However, the research on the acceptance of e-health solutions by patients is incomplete. E-health refers to provided services using the Internet (Pagliari et al., 2005). Information and Communication Technology (ICT) in the health domain includes three concepts: (1) Telecare implies the use of communications technology to provide health and social care directly to the user (patient) and limits the exchange of information between professionals (Barlow et al., 2006); (2) Telehealth is used as a tool in the management of health to reduce hospital admissions. Medical equipment in patients’ homes can be used to detect problems by measuring physiological indices such as blood pressure, oxygen saturation, and pulse rate. Connected devices combined with cloud computing enables an improvement in patient-centred practice and reduces costs due to enhanced sustainability (Papa et al., 2018); (3) Telemedicine or Teleconsultation, using interactive audio-visual exchanges and data communication, could allow medical practitioners to (a) record and store individual information – administrative and/or medical (Burt, Sisk, 2005), (b) increase the efficiency of physicians (Chau, Hu, 2002), (c) improve the quality of services provided to patients, and (d) decrease health costs (Kassirer, 2001).

For the purpose of this research, we focused on the concept of Teleconsultation/Telemedicine. Teleconsultation is based on the collection and monitoring of medical information. This implies a remote diagnostic and treatment (Simon, 2016). Nevertheless, Telemedicine is a clinical act and shouldn’t be considered as e-commerce (Simon, Lucas, 2014). From September 15th, 2018, the charges for medical consultation by videoconference, including the use of Telemedicine cabins, have been reimbursed by French Health Insurance at the same rate as a face-to-face consultation. Telemedicine cabins have started to be installed in health centres, pharmacies, public places, and even in workplaces, with the approval of the Regional Health Agency (ARS), the National Union of complementary health insurance organizations (Unocam), and the National Commission for Informatics and Liberties (CNIL). For the implementation of the Telemedicine cabin to succeed, we need to understand the factors that will lead to the successful adoption of this technology by users. One of the potential early adoption populations of Telemedicine cabins could be students (18-24 years old), made up of Digital
Natives (Prensky, 2001; Kaplan, Haenlein, 2016), who are typically comfortable with technology and less reluctant to use digital solutions as they are born after 1981 (Bennett et al., 2008). Within the studied population some of them could have issues to consult on as their referring physician is far away from where they study and in big cities such as Paris it’s extremely difficult to find a physician accepting to take a new patient. Therefore, some students try to recover by themselves with the risk that they will make the situation worse or, in the case of emergency, they have no other choice than to go to the hospital. In addition, several studies demonstrate that students tend to consult a physician more rarely in case of health issues than the rest of the population (Deeks et al., 2009; Devoe et al., 2009). The implementation of Telemedicine cabins within business schools or university, reimbursed by French Health Insurance, could be the solution.

Thus, the aim of our research is to analyse the adoption process of Telemedicine cabins by students by mobilizing several existing theories, such as the Technology Acceptance Model (Davis, 1986; Davis et al., 1989), measuring the impact of Perceived Ease of Use and Perceived Usefulness on the Behavioural Intention-to-Use a new technology. Two other constructs that are relevant to the health sector have been added to the model, and their impact on Behavioural Intention-to-Use measured: (1) Trusting Beliefs (McKnight et al., 2002) and (2) Perceived Personalization (Komiak, Benbasat, 2006). The three dimensions of Trusting Beliefs (Competence, Integrity and Benevolence) and the Perceived Personalization construct are directly related to perception of the physician’s behaviour by the patient. A survey testing for these constructs was administered to students of several business schools in France.

The article is organized as follows. We begin with a literature review of the mobilized constructs. This is followed by a discussion of our hypotheses. Next, we explain our methodology and our sample is analysed. Then, we present our findings and our results are discussed, highlighting their theoretical and managerial implications. Finally, the limitations of the study and suggestions for future research are given.

**Literature Review and Hypotheses**

A central concept of our research model is Intention-to-Use the technology. Several frameworks and models have been developed to explain the Intention-to-Use technology, such as the Theory of Reasoned Action (Fishbein, Ajzen, 1975), the Theory of Planned Behaviour (Ajzen, 1985), the Technology Acceptance Model (TAM) and TAM2 (Davis, 1986; Venkatesh,
Davis, 2000; Davis et al., 1989), and the Unified Theory of Acceptance and Use of Technology (UTAUT) and UTAUT2 (Venkatesh et al., 2003; Venkatesh et al., 2012). The main factors that impact the Intention-to-Use are Perceived-Ease-of-Use and Perceived-Usefulness (Davis, 1986). Intention-to-Use can also be impacted by personal traits such as Perceived-Personalization, leading an individual to reject or to adopt technology. In addition, with the development of the Internet, users are more and more concerned about the safety of their personal data. Hence, Trust is regarded as a key influencer of technology use. This study proposes to analyse the acceptance of Telemedicine cabins by students where they are installed on their campus.

**Technology Acceptance Model (TAM)**

The TAM, developed by Davis (1986) to explain the factors influencing the acceptance of new technologies, is often used to analyse the Intention-to-Use information systems. Using behavioural intention as the dependent variable rather than actual usage is particularly useful for measuring the acceptance of technological systems at an early stage (Chau, Hu, 2002; Sheppard et al., 1988; Wu et al., 2008). In their meta-analysis, Tao et al. (2020) confirm the strength of the TAM model when examining user acceptance of Information Systems in the health domain.

In the present study, the technological context (acceptance of Telemedicine cabins) clearly indicates that the choice of TAM to analyse early stage IT implementation is prudent. Factors that influence technology acceptance for healthcare professionals and patients may differ (Gücin, Berk, 2015). Therefore, three variables of TAM were mobilized: Intention-to-Use (ITU), Perceived-Ease-of-Use (PEOU) and Perceived-Usefulness (PU).

**Perceived-Ease-of-Use (PEOU)**

PEOU is defined as the degree to which an individual perceives they can use a product or service without specific mental or physical effort (Davis, 1989; Venkatesh, Davis, 2000). Therefore, PEOU is a key indicator of Intention-to-Use, particularly in the case of new technologies using the Internet such as the Internet of Things (Chuaah et al., 2016; Baudier et al., 2019), the mobile phone (Kabbiri et al., 2017), or healthcare solutions (Pai, Huang, 2011; Sun et al., 2013). In addition, PEOU could impact PU and several researchers have analysed it in the context of the acceptance of new technologies in the healthcare domain (Wu et al., 2008; Hung et al., 2012; Lanseng, Andreassen, 2007; Liu, Yu, 2017; Baudier et al., 2019). In other words, greater PEOU of the
Telemedicine service suggests that it is more useful for users (Rho et al., 2014). So, we postulate:

\[ H1: \text{PEOU has a positive, direct and significant impact on PU (H1).} \]
\[ H3: \text{PEOU has a positive, direct and significant impact on ITU (H3).} \]

**Perceived-Usefulness (PU)**

PU, key for the acceptance of a Telemedicine service, is defined by the degree to which a patient considers that by using a product they could enhance their performance (Davis, 1989) by increasing efficiency, lowering costs, and improving the quality and safety of their care. For the purposes of this research, performance is viewed from the perspective of the user/patient, so we redefine PU as the degree to which the patient believes that using this technology (Telemedicine) will improve their health. Several studies (Venkatesh, Davis, 2000; Wamba et al., 2017) have confirmed the impact of PU on ITU, especially in the case of the acceptance of new technologies such as the Smartphone (Kabbiri et al., 2017), IoT (Mital et al., 2017) and smart-watches (Chuah et al., 2016). The definition of Usefulness is rather broad (Pai, Huang, 2011; Gücin, Berk, 2015), especially in the health context, such as e-health (Venugopala et al., 2016), Telehealth (Tsai et al., 2019; Rho et al., 2014) or Telemedicine solutions (Sun et al., 2013). So, we postulate:

\[ H2: \text{PU has a positive, direct and significant impact on ITU.} \]

**Trusting-Beliefs (TB)**

The use of digital technology in communication (e.g. Telemedicine) increases the level of uncertainty (McKnight et al., 2002; Pavlou 2003; Suh, Han, 2003) and hence of trust. The construct of Trust in the context of technology adoption theories emerged in studies of e-commerce, where the user is placed into a situation of disclosure of private information. Gefen (2000) pointed out the importance of Trust and its influence on behavioural intention, and the dependency of Trust on context (Gefen, 2000). Several authors have discussed the relevance of Trust and risk factors to explain individual acceptance of online or digital systems, including e-health applications and health information systems (Chau, Hu, 2002; Tung et al., 2008; Yuan et al., 2015; Alazzam et al., 2016; Baudier et al., 2019). Indeed, despite its advantages, Telehealth has met with resistance (Zhao et al., 2018), inertia (Ahmad, Khalid, 2017), technology anxiety (Özdemir-Güngör, Camgöz-Akda, 2018) and feelings of risk or lack of trust. In research related to
technology acceptance, Trust has been conceptualized as Trusting-Beliefs (Gefen, 2000; McKnight, Chervany, 2002; McKnight et al., 2002; Koohang et al., 2018), defined as the belief that allows users to willingly become vulnerable to technology providers after having taken the providers’ characteristics into consideration (Pavlou, 2003). Trusting-Beliefs, as the trustor’s cognitive belief resulting from the observation of a trustee’s actions (Carnevale et al., 2018), is a multidimensional concept often used in the health context (Cohn, 2019), incorporating Competence (TBC), Integrity (TBI), and Benevolence (TBB) (McKnight et al., 2002; Akter et al., 2011; Istepanian et al., 2006; Mpinganjir, 2018). Nevertheless, the three dimensions must be studied separately (McKnight et al., 2002; Schlosser et al., 2006). Competence refers to the providers’ ability to perform effectively, and Integrity refers to providers’ honesty in fulfilling their promises (McKnight et al., 2002). The Benevolence belief measures the level of care the physicians provide to their patients and whether they act in the patient’s interest. Thus, Trusting-Beliefs are key for the acceptance of new technologies impacting the Behavioural-Intention-to-Use by reducing uncertainty (Nicolaou, McKnight, 2006). Thus, we hypothesize the following:

H4: Benevolence has a direct, positive and significant impact on ITU.
H5: Integrity has a direct, positive and significant impact on ITU.
H6: Competence has a direct, positive and significant impact on ITU.

**Perceived-Personalization**

In this research, Perceived-Personalization refers to patients’ perceptions of the personalized services offered by providers of Telemedicine services. Personalization is composed of three dimensions: individualized attention, availability and feedback (Lee, 2005a). In the Telemedicine context, Personalization refers to the customization of services to address specific patients’ needs and conditions (Fricton, 2019) and to create a personal link (e.g., addressing the patient by name to personalize the relationship) (Thongpapanl, Ashraf, 2011). The goal is to ensure that users will recommend and use e-health services again (Sohail and Shaik, 2004; Rajbhandari, Intravisit, 2019). Thus, Personalization is key for the implementation of Telemedicine services. Indeed, many studies have shown that Personalization is a key factor for providers (Schafer et al., 2001; Sutanto et al., 2013). The more personalized the product or service is, the stronger the likelihood is that consumers’ needs will be satisfied and, thus, consumers will be more likely to use it (Komiak, Benbasat, 2006; Ho, Bodoff, 2014).
Patients using Telemedicine services are, of course, required to make data disclosures to enable these services. Perceived-Personalization can reduce Privacy-Concerns and impacts positively on Intention-to-Use Telemedicine services. Previous studies on Personalization have also highlighted the link between Personalization and Trust (Lee, 2005b). Nevertheless, as more of these personalized services are developed, the greater the level of trust will be required of patients in the quality of the service. We propose:

H7: Perceived-Personalization positively, directly and significantly impacts Benevolence.
H8: Perceived-Personalization positively, directly and significantly impacts Integrity.
H9: Perceived-Personalization positively, directly and significantly impacts Competence.

Our literature review raised two important research questions:

R1: What is the potential impact of Perceived-Personalization on the three dimensions of Trusting-Beliefs?

R2: What are the variables related to technology acceptance impacting Behavioural-Intention-to-Use a Telemedicine cabin?

To answer to these questions, a quantitative approach, including a non-probability sampling, was selected.
Methodology

The research model, shown in Figure 1, was built using existing scales: the TAM (Davis, 1986), the Trusting-Beliefs (McKnight et al., 2002) and Perceived-Personalization (Komiak, Benbasat, 2006) scales. The items were measured using five-point Likert scales. A survey was administered to students from several business schools using a non-probability sampling method, self-administered and based on a Computer Assisted Web Interviewing System (CAWI). The sample of 158 responses, collected via the Google platform, was analysed using a Partial Least Approach. SmartPLS3 software was mobilized to test the hypotheses. According to Hair et al. (2011), the minimum size required for a Partial Least Approach can be defined by multiplying by 10 the variable with the largest number of items. As indicated in Table 1, two constructs have four items whereas the other constructs have only 3 items. This means that a minimum of 40 respondents is required to test the model.

Table 1 – Sample’s characteristics

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Nb of Items</th>
<th>Concept</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benevolence</td>
<td>3</td>
<td>Trusting-Beliefs</td>
<td>McKnight et al. (2002)</td>
</tr>
<tr>
<td>Competence</td>
<td>4</td>
<td>Trusting-Beliefs</td>
<td>McKnight et al. (2002)</td>
</tr>
<tr>
<td>Integrity</td>
<td>3</td>
<td>Trusting-Beliefs</td>
<td>McKnight et al. (2002)</td>
</tr>
<tr>
<td>ITU</td>
<td>3</td>
<td>Technological Acceptance Model</td>
<td>Davis (1986)</td>
</tr>
<tr>
<td>PEOU</td>
<td>3</td>
<td>Technological Acceptance Model</td>
<td>Davis (1986)</td>
</tr>
<tr>
<td>PU</td>
<td>4</td>
<td>Technological Acceptance Model</td>
<td>Davis (1986)</td>
</tr>
<tr>
<td>PP</td>
<td>3</td>
<td>-</td>
<td>Komiak and Benbasat (2006)</td>
</tr>
</tbody>
</table>

Analysis of our sample confirms a high proportion of female (77%) compared to male (23%) respondents. Our gender breakdown is consistent with previous studies done on health or wellness topics (Waldron, 1988; Baudier et al., 2020). All respondents were students studying in a business school; 88% were below 23 years of age, living in Paris (34%) or in the Paris Area (66%); 47% lived in their parents’ home.
Results

Outer Model

The reliability of the model was checked by verifying that all the variables’ loadings, the Alpha’s Cronbach and the composite reliability were above the recommended threshold of 0.7 (Table A.1). The convergent validity was verified by making sure that the Average Variance Extracted (AVE) of each variable wasn’t below 0.5 (Table A.1). Finally, the discriminant validity was confirmed by analysing that the cross loading of each indicator did not load higher on other constructs and in Table A.2 that the Square root of the AVE were superior to the correlations of this construct with other constructs (Fornell, Larcker, 1981). Results confirm the validity and reliability of our outer model. Finally, the quality of the model was validated by the Goodness-of-Fit index at 0.54.

Inner Model

The R², f² and Q² of the constructs were analysed to test the inner research model.

The R² measures the correlation between a dependent construct and the independent variables explaining the variance. The closer the R² is to 1, the better is the model. According to Chin (1998), the R² is considered as substantial if above 0.67, moderate at 0.33 and poor below 0.19. The f² analyses the size effect of each independent variables on the dependent construct. Based on Cohen (1988), the f² can be qualified as low (<0.02), moderate (<0.15) and high (>0.35). Finally a Q² value above zero confirms the predictive relevance.
of the model (Henseler et al., 2009). The bootstrapping procedure was mobilized to test the stability of the relationships between variables (Hair et al., 2011) by controlling that the Path Coefficients ($\beta$) were above 0.200, the t-values >1.96 and p-values <0.05 (Figure 2). The $R^2$ at 0.476 showed that the model explains 47.6 per cent of Perceived-Usefulness determined by Perceived-Ease-of-Use, confirmed by the size effects $f^2$ at 0.910 considered as high (Cohen, 1988). This result indicates the huge impact of Perceived-Ease-of-Use on Perceived-Usefulness especially for the adoption of innovative technology. Therefore, H1 is validated. Perceived-Usefulness and Competence explained 51.5 per cent of Intention-to-Use with a biggest size effect of Perceived-Usefulness (0.229). Findings highlight the importance of the perception of Usefulness when individual decide to adopt a new technology. In addition, as the technology is about health the Competence of physician is also considered as key. Nevertheless, Perceived-Ease-of-Use, Benevolence and Integrity do not directly impact Intention-to-Use Telemedicine cabin. Indeed, the Path Coefficients, t and p values are below the recommended thresholds. Results highlight the fact that two of the three dimensions of the Trusting-Beliefs concept (Benevolence and Integrity) have no impact. In addition, the perception of Ease of Use seems not essential for the adoption of e-Health solutions. Thus, hypotheses H2 and H6 are validated and H3, H4 and H5 rejected. Perceived-Personalization directly and significantly impacts the three variables of the Trusting-Beliefs concept explaining Benevolence ($R^2=0.269$), Integrity ($R^2=0.213$) and Competence ($R^2=0.394$) confirmed by size effects of Benevolence ($f^2=0.368$), Integrity ($f^2=0.271$) and Competence ($f^2=0.651$). Again, the huge size effect of Perceived-Personalization on Competence, reinforces the importance of the fact that the physician can remotely understand and answer the patient’s needs. Therefore, H7, H8 and H9 are validated.

The blindfolding procedure was used to test the predictive relevance of the model by analysing that the Stone-Geisser’s $Q^2$ were all above zero. The quality of the model was verified by controlling that (1) Standardized Root Mean Square Residual (SRMSR) was below 0.1 (0.068), Normed Fit Index (NFI) closed to 1 (0.767) and the RMS Theta (Root Mean Square) closed to 0 (0.182). In addition, the quality of the model was also confirmed by the Goodness of Fit index (GOF) using following formula: $\sqrt{\text{Average of the AVE} \times \text{average of the R}^2}$. According to Latan and Ghozali (2012) a GOF at 0.1 is considered as poor, 0.25 as moderate and above 0.36 high. This the GOF at 0.54 also confirms the quality of the model. Finally, six hypotheses are validated, and three rejected (Table 2).
Table 2 – Outer model

<table>
<thead>
<tr>
<th>Construct</th>
<th>Predictor variable</th>
<th>R²</th>
<th>f²</th>
<th>Path Coef</th>
<th>T Value</th>
<th>P Value</th>
<th>Q²</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>PU</td>
<td></td>
<td>0.476</td>
<td></td>
<td>0.690</td>
<td>12.677</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PEOU</td>
<td>0.910</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.322</td>
<td>X</td>
</tr>
<tr>
<td>ITU</td>
<td></td>
<td>0.515</td>
<td></td>
<td>0.470</td>
<td>5.642</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PEOU</td>
<td>0.690</td>
<td></td>
<td>0.089</td>
<td>0.958</td>
<td>0.338</td>
<td></td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Benevolence</td>
<td>0.026</td>
<td></td>
<td>0.171</td>
<td>1.726</td>
<td>0.085</td>
<td></td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Integrity</td>
<td>0.007</td>
<td>(-0.089)</td>
<td>1.072</td>
<td>0.284</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Competence</td>
<td>0.049</td>
<td></td>
<td>0.219</td>
<td>2.393</td>
<td>0.017</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Benevolence</td>
<td></td>
<td>0.269</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.199</td>
<td></td>
</tr>
<tr>
<td>PP</td>
<td></td>
<td>0.368</td>
<td></td>
<td>0.519</td>
<td>7.033</td>
<td>0.000</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Integrity</td>
<td></td>
<td>0.213</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.175</td>
<td></td>
</tr>
<tr>
<td>PP</td>
<td></td>
<td>0.271</td>
<td></td>
<td>0.462</td>
<td>6.237</td>
<td>0.000</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Competence</td>
<td></td>
<td>0.394</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.235</td>
<td></td>
</tr>
<tr>
<td>PP</td>
<td></td>
<td>0.651</td>
<td></td>
<td>0.628</td>
<td>13.950</td>
<td>0.000</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Discussion

This study aimed to find the potential impact of Perceived-Personalization on Trusting-Beliefs and to identify the factors impacting Behavioural Intention-to-Use a Telemedicine cabin. First, our findings are aligned with previous studies confirming the impact of PEOU on PU (Pai, Huang, 2011; Moores, 2012; Holden, Karsh, 2010; Rho et al., 2014; Papa et al., 2018) and are consistent with the first analysis done by Davis (1986). This positive relationship is frequently verified in the case of the adoption of innovative technologies. Several researchers in the healthcare field found a direct effect of PU and PEOU on Intention-to-Use. Indeed, Pai and Huang (2011) confirmed that users’ Behavioural Intention-to-Use healthcare information systems is impacted by PU. A study published by Holden and Karsh (2010) found that the relationship was significant for health IT use, suggesting that individuals must perceive a health IT solution as useful to promote use and acceptance. Papa et al. (2018) confirmed the PU and PEOU effects on the Intention-to-Use healthcare smart wearables in India. MacVaugh and Schiavone (2010) discussed three levels of technology adoption: micro level or behaviour of single user, meso level or behaviour of community and macro level or features of industry. Individual adoption depends on the extent to which new technology meets the significant technological, social and/or learning conditions.
encouraging its adoption, i.e. it is easy to adopt, and the extent to which new technology is considered useful in the individual domain, community domain and/or industry/market domain; i.e. it is useful (MacVaugh, Schiavone, 2010). Moores (2012) discussed PU as the dominant factor in acceptance, because information systems should provide the expected features to support users. Our findings confirmed the strong impact of PU on Intention-to-Use a Telemedicine cabin and are aligned with the results derived from the original model (Davis, 1986). Nevertheless, most of the studies also highlighted the effect of PEOU on technology acceptance and our result is therefore unexpected.

Indeed, the impact of PEOU on ITU is not direct and significant, therefore the hypothesis 3 is rejected. Usually, PEOU is a strong predictor of Intention-to-Use (Pai, Huang, 2011). However, Holden and Karsh (2010) found that the relationship between PEOU and Intention-to-Use was significant in only seven of 13 performed tests. One of the explanations for the weak effect of PEOU suggests the dependence of this construct on the users' previous experience with IT (Chismar, Wiley-Patton, 2002; Barker et al., 2003), and time and familiarity of using technologies (Wu et al., 2008; Han et al., 2005). Moores (2012) also discussed the moderating effect of experience on PEOU. The profile of our respondents, highly educated students, could explain why PEOU was rejected. This result contradicts the TAM developed by Davis (1986), where PEOU has a direct, positive and significant impact on Attitude Towards Using. Our findings also highlight the strong impact of Perceived-Personalization on Trusting-Beliefs. So, the fact that patients consider that physicians, even acting remotely, could understand and answer their needs has a direct impact on Trusting-Beliefs. Indeed, this perception of personalization services (McKnight et al., 2002) will directly impact beliefs in Benevolence (Act in the interest of the patient), Integrity (Be honest and sincere) and Competence (Is an expert, good knowledge). Our results confirm the strong impact of Perceived-Personalization on the adoption of new services or products (McKnight et al., 2002). Guo et al. (2016), by analysing the Privacy-Personalization paradox in the acceptance of m-Health services, found that Trust played a role as a mediator of the relationship between Perceived-Personalization and Privacy-Concerns on Intention-to-Use behaviour.

Thus, Perceived-Personalization would influence consumer's Intention-to-Use through Trust, indicating that Trust can balance the Personalization paradox. Moreover, effects of Personalization on Trust are stronger for young people (Guo et al., 2016), a finding that is strongly in line with our study, where the respondents are students. On the other hand, the impact of
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Trusting-Beliefs dimensions on ITU was partially supported. Benevolence and Integrity as Trusting-Beliefs showed no effect on Intention-to-Use Telemedicine. Other studies reported similar results for the acceptance of Healthcare IoT’s (Baudier et al., 2019). Egea and Gonzalez (2011) argued the weak prediction effect of Trust on Intention-to-Use. The absence of significant effects of institutional Trust on Intention-to-Use is consistent with Suh and Han’s (2003) work, where Trust was more strongly related to Attitude Towards Using than on Intention-to-Use online services. Therefore, the key concern of young patients is the belief in Competence, as this dimension will be critical for the adoption of the Telemedicine cabin.

Conclusion and Limitations

The findings of our study contribute to both theory and practice. First, our research questions aimed to examine the impact of Perceived-Personalization on Trusting-Beliefs which, as far as we know, have not been previously studied, and our findings confirmed this impact. Second, our findings argued that PEOU does not impact Intention-to-Use a Telemedicine cabin: Digital Natives, who are confident with the use of remote communication tools such as WhatsApp and Skype, do not feel that this technology is too complex to use. Indeed, they only need to follow the physician’s instructions and respond to questions. Third, respondents didn’t question the Integrity and Benevolence of practitioners but highlighted the importance of Competence. Emphasizing the fact that the Trusting-Beliefs impact, considered as a multidimensional concept, depends on technology. Hence, all the dimensions of Trusting-Beliefs must be studied separately. Turning to managerial issues, the acceptance of Telemedicine in general, and Telemedicine cabins in particular, is critical for French hospital public reform as such equipment could help individuals to access a physician or a medical specialist, particularly in “medical deserts” (Simon, 2016). Teleconsultation could have a huge impact on the accident and emergency departments of hospitals by reducing the number of people waiting to consult a doctor and could reduce medical expenses such as ambulance transportation for patients (Stowe, Harding, 2010) and travel costs for clinicians (Krupinski et al., 2004). It is for these reasons that the French government has decided to reimburse the consultation fees of those using the Telemedicine cabin, removing the financial constraints highlighted in previous research (Whitten, Love, 2005; Rimner et al., 2011).

The Telemedicine services are only valuable healthcare services if physicians adopt them, as they play a key role in its implementation. Thus, it is critical to demonstrate to physicians the usefulness of such innovative technology
in improving their performance and clinical outcomes, defined as the provider's perceptions directly related to the clinical aspects of Telemedicine services (Whitten et al., 2005). In order to allow for wide diffusion of these e-Health services, considered as a disruptive technology changing users’ habits, it will be necessary to develop appropriate design features and content: (1) the services must be clearly understandable by health professionals and patients; (2) some incentive must be provided for professionals to agree to use the technology; (3) it must be relevant and trustworthy in order to reach a wide variety of users regardless of their age, ethnicity, educational attainment and socioeconomic status; (4) it must be adapted to patients’ life styles; and (5) be respectful of concerns surrounding Privacy. In order to achieve this, healthcare professionals should promote the benefits of such a cabin to a targeted population, explaining how straightforward it is to use. Finally, companies should capitalize on the growing interest in e-health by offering such services to their employees to demonstrate their interest in the health and wellbeing of their human resources. While we suggest that this study makes significant contributions to questions surrounding Telemedicine adoption and use, there are several limitations that provide further opportunities for research. There are several factors we have not discussed that may influence Intention-to-Use Telemedicine; for example, (a) Perceived-Risks and Privacy-Concerns, because both are related to Trust when using a Telemedicine cabin; (b) Self-Efficacy and Personal-Innovativeness, which are additional variables explaining the paradox of Personalization. In addition, only a small number of business schools were selected as samples to develop and test the model. We could extend the study to other types of school (e.g. universities, engineering schools). Future research should test the model on other populations, such as Digital Immigrants, and enlarge the study by interviewing other key players involved in the acceptance of Telemedicine cabins, such as physicians, medical institutions (e.g. hospitals), cities, companies, etc. In addition, this research focused on French institutions: findings may differ in other countries, depending on their culture (individualist or collectivist) or economic development. Finally, it should be noted that the reimbursement of consultation costs is not always a factor in other countries.

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Appendices

Table A.1 - Convergent validities and reliabilities

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<th>Cronbach's Alpha</th>
<th>Composite Reliability</th>
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<tr>
<td>Benevolence</td>
<td>0.87</td>
<td>0.92</td>
<td>0.79</td>
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<tr>
<td>Competence</td>
<td>0.84</td>
<td>0.89</td>
<td>0.67</td>
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<td>Integrity</td>
<td>0.94</td>
<td>0.96</td>
<td>0.89</td>
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Table A.2 - Discriminant validity

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<td>COM</td>
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<td>INT</td>
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<td>0.943</td>
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<tr>
<td>ITU</td>
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<td>0.895</td>
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<td>PEOU</td>
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