Turning Digital in Times of Crisis: A Values-Based Theory of Telehealth Adoption During the Covid-19 Pandemic

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Abstract

This study draws on Basic Human Values theory to investigate why shifts in values occur and how they influence telehealth adoption during a crisis. A literature review of the initial adoption and post-adoption of telehealth during Covid-19 shows how tensions between the personal growth value of patient autonomy and the personal security value of interpersonal care influence continuance in adopting telehealth. Findings show the different potential of values in generating innovative telehealth solutions. Values aimed at protecting financial and reputational resources remain salient during a crisis and must be realized to enable IT adoption that benefits public security.

Keywords: Crisis, Covid-19, Healthcare, IT adoption, Telehealth, Values

1 Introduction

The Covid-19 pandemic has seen the rapid adoption of telehealth for the provision of online consultations in primary and secondary care, digital interventions for health self-management, and the home-based care of chronic patients across a range of medical specialties and countries. In stark contrast with the slow uptake of telehealth before the pandemic (Sanders et al., 2012), telehealth adoption during the pandemic occurred at a surprisingly rapid pace through a remarkable coordinated effort across several healthcare organizations and national health systems (Peek et al., 2020; Webster, 2020).

Underneath the surface of a crisis model of telehealth adoption driven by necessity (Miao & Popp, 2014) lie deep-seated shifts in users' beliefs about telehealth. For example, after Covid-19, doctors' belief that telehealth could limit their clinical judgement and communication with a patient had less value or importance in influencing telehealth adoption. Instead, the belief that telehealth could ensure the safety of patients and health workers gained importance, shifting the benefit–risk balance in favor of telehealth (Webster, 2020). Beliefs about what is important or desirable represent values shared by groups of individuals (Breuer & Lüdeke-Freund, 2016). Therefore, the example of doctors changing their beliefs toward telehealth due to a shift in their priorities (i.e., what they consider to be important or desirable) reflects the need for a stronger focus on values in the study of telehealth adoption brought about by a crisis.

There is speculation about how information technology (IT) adoption driven by the Covid-19 pandemic has traced a digital transformation path of no return (Peek et al., 2020). Yet other scholars have voiced skepticism about the extent to which the digitalization embraced by various organizations to cope with the pandemic can persist over time (Faraj et al., 2021; Gkeredakis et al., 2021; Leclercq-Vandelannoitte & Aroles, 2020). Therefore, investigating why shifts in values occur and how they affect telehealth adoption in times of crisis is important, since it can further our understanding of the extent to which telehealth adoption can perdure and sustain digital transformation in healthcare in the aftermath of a crisis. Failure to recognize shifts in values and their implications for telehealth may undermine healthcare managers' efforts to sustain and scale up telehealth services after Covid-19.

Consistent with most research on IT adoption (e.g., Alalwan et al., 2016; Venkatesh et al., 2012), several studies have found a positive relationship between telehealth adoption and psycho-social factors such as users' expectations of technology performance (e.g., perceptions of usefulness or ease of use) (Chau & Hu, 2002; Rahi et al., 2021), the level of confidence and effort in using a technology (e.g., self-efficacy) (Chong et al., 2022; Zobair et al., 2019), and

social influence (e.g., social norms) (Rahi et al., 2021; Wu et al., 2021). This research provides a useful but limited understanding of telehealth adoption, since technology adoption in healthcare is often influenced by the intersection of competing interests, beliefs, and values held by different stakeholders (Pouloudi et al., 2016). Values, in particular, are an important component of healthcare work. As suggested in other research (Turja et al., 2020), compatibility between telehealth and moral values in healthcare may influence healthcare workers' willingness to adopt telehealth. These considerations, compounded by the fact that, in times of crisis, individuals change priorities and that in changing priorities they deem some values to be more (or less) salient than others (Lee & Fujita, 2011; Sortheix et al., 2019), demonstrate the importance of investigating how values may affect telehealth adoption during a crisis.

Against this backdrop, this paper presents findings of a literature review of research on telehealth adoption during the Covid-19 pandemic and asks the following research questions: (1) why do some values become more salient than others during a crisis? (2) how does a shift in the salience of values affect telehealth adoption during a crisis? Specifically, this paper focuses on shifts in values affecting the initial adoption and post-adoption of telehealth during the Covid-19 crisis. Initial adoption concerns users' intention to adopt an IT for the first time. Post-adoption refers to users' intention to continue to use an IT (Karahanna et al., 1999). Accordingly, this paper investigates shifts in the values that motivated the initial adoption of telehealth in response to the Covid-19 crisis and shifts in the values that reflected users' perception of telehealth after its adoption. Arguably, salient values in the post-adoption phase may influence users' intention to continue to use telehealth once the Covid-19 crisis is over, that is, when the number of severe cases and deaths from the disease declines to such an extent that it is deemed safe to lift public health restrictions and resume in-person visits (Charters & Heitman, 2021). Since research has shown that values not only influence users' willingness to adopt an IT, but also determine the innovation potential of IT adoption (Tams et al., 2020), this

paper also focuses on values that have the potential to drive innovation in telehealth technologies in the post-adoption phase.

The analysis of values and their influence on telehealth adoption is based on Schwartz's theory of Basic Human Values (Schwartz, 2012). This theory has been widely used to understand IT adoption (Dalvi-Esfahani et al., 2017; Puohiniemi & Verkasalo, 2020; Tams et al., 2020) as well as changes in users' perceptions of values during crises (Li et al., 2022; Sortheix et al., 2019). It defines values as beliefs linked to desirable goals that motivate action and assumes that values vary in importance across individuals. Therefore, it suits the purpose of linking users' beliefs about desirable goals to the values underlying perceptions of telehealth. In addition, the values identified in this theory are considered to be "universal"; that is, they transcend specific cultures, actions, or situations (Schwartz, 2012; Schwartz & Bilsky, 1987) and are therefore relevant for studying IT adoption in any context, including healthcare.

Following a theory-building approach to the analysis of the literature review findings (Paré et al., 2015), the main contribution of this paper consists of a set of propositions that *explain* why values shift in salience, and with what implications for telehealth adoption during a crisis. These propositions set the foundation for a values-based theory of telehealth adoption in times of crisis, which can be readapted to investigate the adoption of other types of IT during a crisis. Future directions for research and implications for practice are also discussed.

2 Values and Telehealth Adoption in Times of Crisis

The rapid adoption of telehealth during the Covid-19 pandemic (Touson et al., 2021) contradicts past research highlighting local processes of negotiation affecting telehealth implementations (Nicolini, 2010) due to tensions between conflicting values, norms, and views (Boonstra & Van Offenbeek, 2010) held by different stakeholders (Bernardi & Exworthy, 2020; Bunduchi et al., 2015; Mathar, 2011; Rogers et al., 2011; Sanders et al., 2012). Emblematic is the relaxation of regulations in several countries, particularly on telehealth reimbursements (Bokolo, 2020,

2021a), which, for years since before the pandemic, had been a major barrier to telehealth adoption (Heyer et al., 2021; James et al., 2021; Serper et al., 2020). Research highlights shifts in priorities that facilitated telehealth adoption during the pandemic. For example, even though privacy was still a concern shared by healthcare professionals (Bokolo, 2020), relaxation of privacy regulations to access patient information without consent was an acceptable trade-off to accelerate telehealth adoption and protect public safety from Covid-19 (Bokolo, 2021b). While not explicitly, this research shows how the value of public safety took precedence over the values of patient privacy and confidentiality, suggesting that shifts in the salience of values played an important role in influencing telehealth adoption during the pandemic.

Other research has shown the role of institutional logics, that is, cultural resources and norms that individuals and organizations draw upon to decide on courses of action (Friedland & Alford, 1991), in influencing how different stakeholder groups made sense of telemedicine during Covid-19 (Oborn et al., 2021). Since values, such as societal or professional values, also fall within the domain of institutional logics (Friedland & Alford, 1991), this research reinforces the argument of the importance of values in influencing telehealth adoption in times of crisis. Furthermore, as shown in other studies, IT adoption in healthcare is driven by users selectively drawing on values across competing logics (Bernardi & Exworthy, 2020; Boonstra et al., 2017), suggesting that the plurality of values that groups of users or stakeholders (Pouloudi et al., 2016; Rivard et al., 2011) draw upon to make sense of an IT may not necessarily belong to the same logic. Hence, a values perspective constitutes a fine-grained theoretical lens that can provide a comprehensive understanding of how users make sense of telehealth, and why they may wish to adopt it.

3 Theory of Basic Human Values

The theory of Basic Human Values (BHV) originates from Schwartz's work in cross-cultural psychology and defines values as beliefs linked to desirable goals that motivate action

(Schwartz, 2012; Schwartz & Bilsky, 1987). It classifies and orders values according to the goals and outcomes they serve (Schwartz, 2012). For example, *personal values* are focused on outcomes for the self while *social values* are focused on outcomes for others or established institutions (Schwartz et al., 2012). These values are further subdivided into values of protection and growth. *Values of protection* are motivated by a sense of anxiety that accompanies the goal to protect personal or social security. In contrast, *values of growth* are anxiety-free and motivated by the goal of achieving personal or social growth and improvement (Schwartz, 2012). A summary and classification of values along the dimensions social/personal growth values and social/personal protection values are provided in Figure 1.

Figure 1. A readaptation of the Basic Human Values framework (Schwartz et al., 2012)

Social growth values include values of self-transcendence, which are oriented toward "transcending one's own interests for the sake of others" (Schwartz et al., 2012, p. 669), such

as “benevolence” (e.g., caring for other people’s welfare) or “universalism” (e.g., being committed to equality or justice).

Personal growth values include openness-to-change values emphasizing “readiness for new ideas, actions, and experiences” (Schwartz et al., 2012, p. 669) (e.g., “self-direction” or autonomy to achieve one’s goals and nurture one’s own ideas and abilities) as well as the self-enhancement value “achievement,” when this indicates a desire to affirm one’s personal capabilities.

Personal protection values include values of self-enhancement when these emphasize achieving one’s own interest, such as “power” to control people and resources or “face or reputation” to preserve one’s public image. “Achievement” can also be a self-enhancement value of personal protection when it is oriented toward increasing one’s social status by gaining personal success. Values of conservation can be both values of personal protection (e.g., “personal security”) and values of social protection, such as “societal security” to maintain social stability and public safety, or “conformity” to comply with rules, laws, and formal obligations (Schwartz et al., 2012).

According to Schwartz et al. (2012), a single decision or action may manifest conflict or compatibility between values. For example, if people defy authority, they indicate a conflict between personal growth values of self-direction—representing autonomy of thought, ideas, and action—and social protection values of conformity—representing compliance with rules, laws, and formal obligations—as well as compatibility between personal growth values of self-direction and stimulation—representing excitement, novelty, and change.

3.1 Basic Human Values and Information Technology Adoption

Several studies have drawn inspiration from the theory of BHV to investigate the role of values in influencing intention to adopt an IT (Dalvi-Esfahani et al., 2017; Puohiniemi & Verkasalo, 2020) and in encouraging the use of knowledge-intensive technologies to innovate (Tams et al.,

2020). This research shows that growth values are more likely to support technology adoption than social and personal protection values (Dalvi-Esfahani et al., 2017; Puohiniemi & Verkasalo, 2020). According to Puohiniemi and Verkasalo (2020), this is due to the fact that growth values, both at social and personal levels, are anxiety-free, whereas social and personal protection values are geared toward anxiety avoidance. In particular, social growth values, that is, values that transcend the individual and are projected toward the "welfare of others" (Puohiniemi & Verkasalo, 2020), are more likely to generate innovation than personal growth values geared toward the self-enhancement of individuals (Tams et al., 2020).

BHV also share similarities with other categories of values used to investigate technology adoption (Turja et al., 2020). For example, instrumental values, that is, values related to self-interest (e.g., financial gains or loss) (Chen & Granitz, 2012; Turja et al., 2020), are similar to personal protection values of achievement. Likewise, moral values, that is, values attached to an "ideal" or what is desirable or believed to be the "right thing to do" for society and for oneself, reflect social growth or social protection values as well as moral values that may affect us personally, such as conservation values of personal security (e.g., work–life balance) (Carlisle & Baden-Fuller, 2004). Research has found that users' perceptions of the impact of an IT in relation to their instrumental values (e.g., whether the IT may push them out of employment) influence the extent to which they perceive the IT to be compatible with their moral values (Turja et al., 2020). These findings are in line with other research that shows how beliefs associated with instrumental values determine how individuals apply beliefs associated with moral values in the evaluation of organizational change (Carlisle & Baden-Fuller, 2004). Therefore, types of values and their relationships are important factors that influence people's acceptance of an IT and the change that results from its adoption.

3.2 Basic Human Values and the Temporality of Values

The theory of BHV has also been used to investigate how external conditions or events such as crises may influence the extent to which individuals prioritize one value over another (Li et al., 2022; Sortheix et al., 2019). For example, recent work has found that exposure to information about Covid-19 is associated with workers' orientation toward pro-social values of conservation, which influences their willingness to accept authoritarian leadership (Li et al., 2022). This resonates with other research showing how, during the pandemic, leaders resorted to pro-social values as a moral compass to prioritize resources over employees' welfare (Liu et al., 2021). Similarly, previous research has found that, during financial and economic crises, individuals place higher importance on values of social security and conformity than on libertarian and individualistic values of personal growth (Sortheix et al., 2019). This echoes more recent work about the role of the COVID-19 pandemic in changing people's perceptions of security and preservation, resulting in individuals placing more importance on social protection values of safety, resilience (Spicer, 2020), and a collective sense of security than on personal protection values of privacy (Steinert, 2020). In contrast, values of personal growth regain momentum after periods of crisis, leading to greater social change (Lee & Fujita, 2011). Research on shifts in values in times of crisis contradicts recent arguments according to which values are stable and difficult to change (Chatterjee et al., 2021; Reeskens et al., 2021), confronting us with a paradox between *values* stability and change.

A solution to this paradox can be found by looking into how the *salience* of values changes over time. Past research suggests that while values remain the same, their salience and how they are applied to make sense of certain circumstances change (Carlisle & Baden-Fuller, 2004; Långstedt & Manninen, 2021). People manifest certain values only when they consider them relevant to achieving a goal at a specific point in time (Carlisle & Baden-Fuller, 2004). Previous research highlights the importance of the temporality of values. In particular, it supports the argument that some values may be pushed to the background and become less salient in the

framing of a course of action, or the adoption of an IT, whereas other values are foregrounded. This argument finds confirmation in research on IT adoption (Selander et al., 2010). For example, Mukta et al. (2019) take a longitudinal perspective to investigate changes in values across time and how these affect the behavior of users of social networks. Interestingly, they find that when one value is regarded highly at a certain point in time, another value may lose importance.

To summarize, past research on IT adoption and values shows the importance of looking at the influence of values not only individually but also in relation to other values. In addition, the literature shows how some values may become more or less salient during a crisis. The BHV theory incorporates both a relational and a temporal perspective on values due to its focus on compatibility and conflict between values and its emphasis on which values stakeholders consider more important at a certain point in time. It is therefore a suitable perspective from which to investigate why some values become more salient than others and how shifts in the salience of values may affect telehealth adoption in times of crisis.

4 Research Methods

The literature review method chosen for this study shares similarities with explanatory or theoretical reviews, since its objective is to synthesize a body of literature and, by doing so, develop a new theory that explains a phenomenon (Paré et al., 2016; Paré et al., 2015). Explanatory reviews encompass *interpretivist approaches* and methods that synthesize data through induction and interpretation to develop "concepts" and "theories" (Dixon-Woods et al., 2006). While systematic reviews seek to "aggregate" evidence to establish "what" influences a phenomenon, an interpretive synthesis of the literature suits best the objective of this paper, since, instead of quantifying the magnitude of evidence about the factors influencing telehealth adoption (e.g., how many studies talk about financial barriers to telehealth), it seeks to capture the richness and variety of evidence about telehealth adoption during the Covid-19 pandemic.

4.1 Data Collection

The literature search strategy followed a multidisciplinary approach. For this reason, three bibliographical databases—Scopus, Business Source Complete, and PubMed—were selected. Business Source Complete was chosen since it focuses mostly on business and information systems management journals. Since IT adoption is a business and information systems management research topic, it was expected that research on telehealth adoption during Covid-19 would feature in this database. Scopus, a much larger database than Business Source Complete, was chosen for its wide coverage of journals across the fields of science, technology, medicine, social sciences, arts and humanities, business and information systems management, and behavioral and social sciences (Singh et al., 2021). It was therefore expected to find literature on telehealth adoption during Covid-19 across multiple disciplines. Finally, since telehealth is a health-related topic, PubMed, a large database of citations from the medical and health fields, was also selected. In line with the principles of "systematicity" and "transparency" (Paré et al., 2016), the literature review followed a rigorous and clearly articulated search strategy documented in Figure 2.

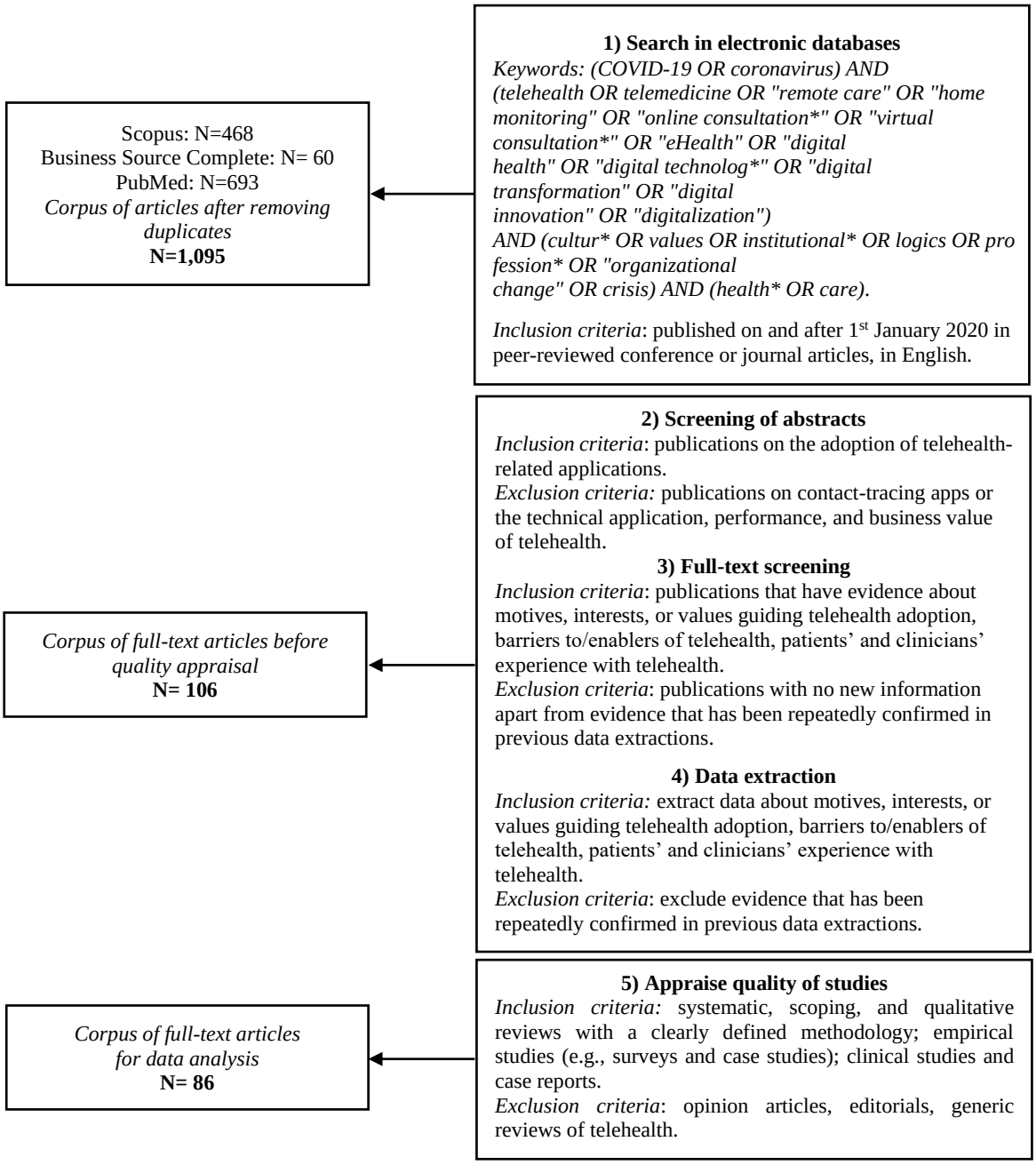


Figure 2. Literature search strategy

A truncation symbol (*) was used to search various words endings simultaneously (e.g., cultur retrieves "culture" or "cultures" or "cultural")*

The *inclusion criteria* were academic peer-reviewed journal articles and conference papers with full text available, published in English from the beginning of January 2020 to the end of May 2021, when the literature search was carried out. Most studies about COVID-19 would have been published during this period, since cases of COVID-19 in China were first reported to the

World Health Organization on 31 December 2019, and in May 2021, the global pandemic was still at its peak. To retrieve publications about values and telehealth during this period, a search of titles, abstracts, and keywords was conducted using four sets of search keywords. A first set of keywords included the terms Covid-19 and coronavirus followed by terms related to telehealth (e.g., telehealth, telemedicine, eHealth, virtual/online consultations, digital health). A second set of keywords included terms related to digital transformation (e.g., digital transformation, digital technologies, digital innovation, digitalization, organizational change, and crisis) to include studies focusing on wider digital transformations involving telehealth-related applications, since these initiatives may affect or be affected by values, particularly during a crisis. Therefore, studies on this topic may also include evidence about values, even though indirectly. A third set of keywords included values and other related terms (e.g., culture, cultural, institutional, profession, professionalism, logics). Finally, terms related to healthcare were also included to limit search results to studies in the healthcare sector.

After duplicate sources were removed, a purposive sampling strategy was adopted. First, the titles and abstracts of a total of 1,095 articles were screened. Publications on contact-tracing apps were *excluded*, given the focus of the review on the adoption of telehealth-related applications. Papers on the technical application or performance of technologies and other types of values (e.g., business value) were also *excluded*. Second, full-text screening *included* publications with evidence about motives, interests, or values guiding telehealth adoption, barriers to or enablers of telehealth, and patients' and clinicians' experience with telehealth. These were all themes from which values could be inferred. For example, the value "convenience" could be inferred from evidence about patients who were satisfied with telehealth because it saved them time and money from not having to travel to a clinic. In line with a "systematic and transparent (but iterative) approach to searching the literature" (Paré et al., 2016, p. 500), full-text screening was conducted iteratively with data extraction. A pro

forma for data extraction including such themes as reasons for adoption, barriers, and enablers was built but used loosely to be open to new themes. Given that the focus of interpretive theoretical reviews is not on "an exhaustive summary of all data" but on "the development of concepts and theory" (Dixon-Woods et al., 2006, p. 3), a data saturation approach was adopted to determine at what point collection of data about recurrent themes (e.g., "reimbursements for telehealth") should stop (Faulkner & Trotter, 2017). Following this approach, subsequent iterations of full-text screening *excluded* publications with no new information apart from evidence that had been confirmed repeatedly in previous data extractions. This resulted in a sample of 106 articles. After a quality check, opinion articles, editorials, and generic reviews of telehealth were *excluded*, resulting into a final sample of 86 articles (see Table A1 in the Appendix).

4.2 Data Analysis

Key information extracted from the sampled articles was imported into Atlas.ti 8.4.5. Following the example of other review papers (Bach-Mortensen & Barlow, 2021; Kordzadeh & Ghasemaghaei, 2022), this information was then analyzed through thematic synthesis. Thematic synthesis synthesizes concepts and ideas across studies through induction and interpretation. The aim of thematic synthesis is to go beyond the content of the studies reviewed to develop novel insights or theories (Thomas & Harden, 2008).

First, similarly to open coding in grounded theory, extracted text of the sampled articles was coded into concepts derived inductively from the data (Sarker et al., 2000; Urquhart et al., 2010) (see Tables A3 and A5 in the Appendix). Codes were then grouped into two categories: drivers and enablers of initial telehealth adoption in response to Covid-19; concerns and benefits that patients and healthcare practitioners perceived from their use of telehealth, that is, in the post-adoption of telehealth, during Covid-19. Second, the theory of BHV was adopted as a sensitizing lens to infer what values the initial set of codes represented, following the theory's

definition of values as "beliefs linked to desirable goals that motivate action." For example, the enabler "change in funding/reimbursement mechanisms" indicates that healthcare professionals and providers were willing to adopt telehealth as far as it did not compromise the goal of protecting their financial stability and resources. Therefore, the value "financial viability" was associated with the barrier "change in funding/reimbursement mechanisms." Finally, types of values were grouped into BHV values categories by asking the question "what goals and outcomes do values serve?" For example, "financial viability" is oriented to protecting healthcare providers' and practitioners' financial stability and resources. Therefore, it is a personal (or organizational) protection value of self-enhancement belonging to the category "power-resources" (see Tables A2 and A4 in the Appendix for a summary of the analysis).

Reliability was ensured through a quality check of results of a number of queries with different combinations of keywords before the final results were collected. Clear inclusion and exclusion criteria were set (see Figure 2) to ensure that the articles retrieved and sampled were relevant to answering the research question. The inclusion of peer-reviewed studies and the exclusion of studies that did not meet quality criteria concerning the scientific value or research method of the study also ensured that the sources sampled were reliable. In addition, consistent with principles of systematicity and transparency (Paré et al., 2016), an "audit trail" (Carcary, 2009) of various steps in the data collection and analysis was produced, as shown in Figure 2 and Tables A2 and A4. This ensures that if repeated, the study design may yield similar results. The *validity* of the interpretation of the researcher can also be assessed through an audit trail of how findings from the literature review were synthesized to infer and classify values (see Tables A2 and A4 in the Appendix). Confirmation of findings across different sources collected and past research on telehealth and the role of values in IT adoption, innovation, and crisis also increased confidence in the *validity* of findings and the researcher's interpretation.

The synthesized evidence was used to build a narrative of findings, illustrating why shifts in the salience of values occurred, and their implications for telehealth adoption. The next step in the analysis was *theory building*. This phase of the analysis aimed to infer high-level theoretical constructs, processes, and relationships (Urquhart et al., 2010). In this process, values inferred from the data and their relationships were mapped into the BHV framework (see Figures 4a and 4b). Using the framework as a guide, an interpretation of the narrative of findings has led to the development of a set of propositions. A summary of the research methodology stages is provided in Figure 3.

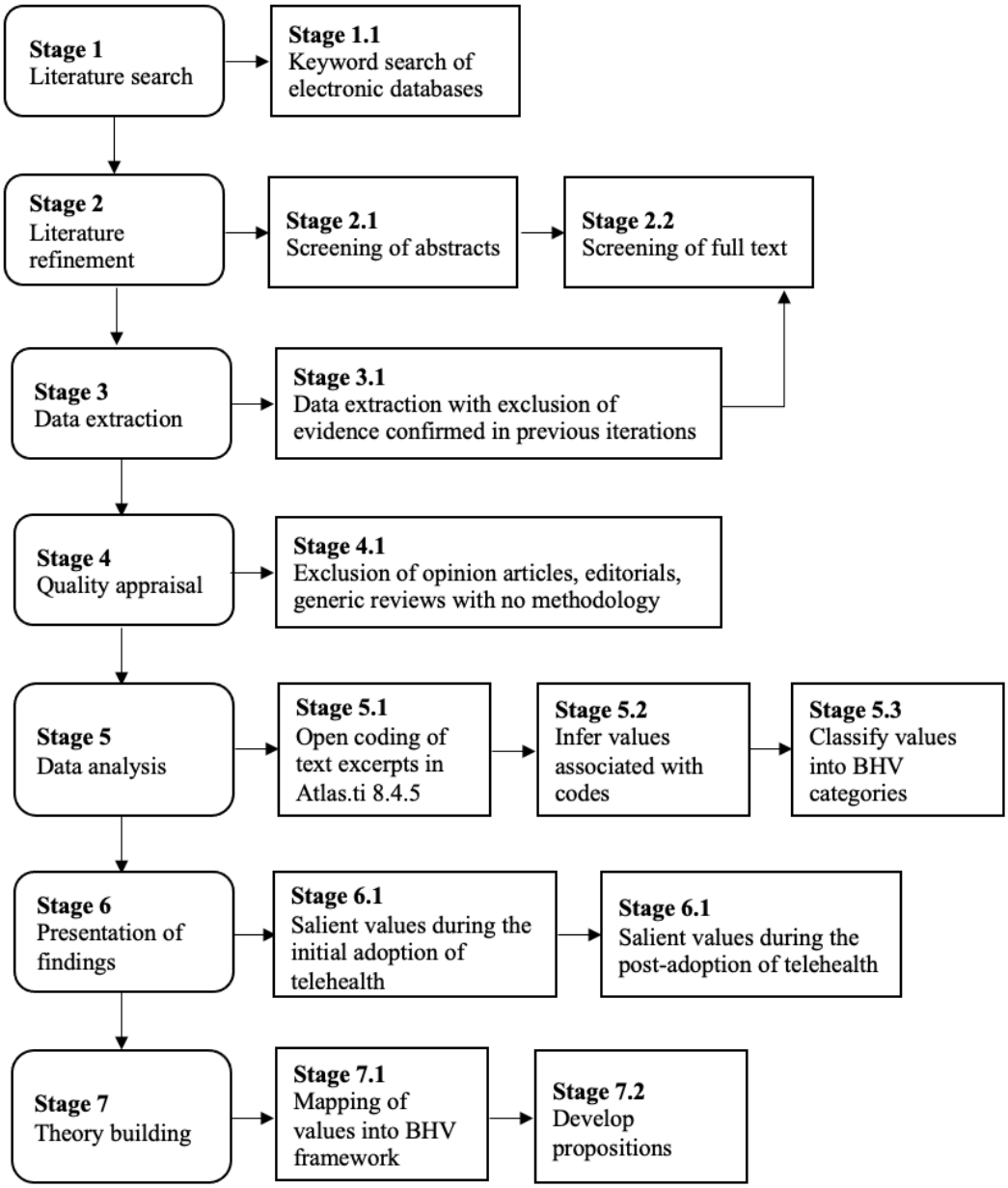


Figure 3. Summary of research methodology stages

5 Results

The analysis that follows unpacks the key values that became salient in evaluating a situation of crisis brought about by the Covid-19 pandemic, which then motivated the adoption of telehealth. This is followed by an analysis of the values that became salient in the evaluation of telehealth in the post-adoption phase and may therefore influence continuance in adopting telehealth.

As summarized in Tables A2 and A4 in the Appendix, the BHV theory was used to infer values from users' beliefs associated with desirable goals and the desire to have certain needs satisfied.

5.1 Salient Values in the Initial Adoption of Telehealth During Covid-19

5.1.1 Continuity of care and safety

The Covid-19 pandemic was a wake-up call. Years of inertia in bringing care out of hospitals into the community and closer to home through telehealth had left the health systems of several countries unprepared to cope with the dramatic rise in hospital admissions, turning hospitals into hotbeds of Covid-19 transmission (Keesara et al., 2020). This put the life of patients and healthcare practitioners at risk and contributed to the staggering infection and mortality rates witnessed in many countries. In this scenario, rapid adoption of telehealth was mostly motivated by the goal of guaranteeing continuity of care for all while keeping healthcare staff and patients safe (Abuzeineh et al., 2020; Oborn et al., 2021; Taylor et al., 2021). The belief that telehealth could achieve this goal reflects the salience of the values of *continuity of care and safety* in motivating telehealth adoption during the pandemic. From the perspective of healthcare providers and policy makers, these are *social protection values of security* since, according to the BHV theory, their defining goal is to provide care while protecting patients' and healthcare practitioners' safety (Schwartz, 2012). Yet from a healthcare practitioner's and patient's perspective these values were *personal protection values of security*, since their defining goal was also to protect them from the virus (Steinberg et al., 2021; Oborn et al., 2021). Therefore, anxiety related to the risks of infection from the virus, both from a public health and from an individual health perspective, made the values of continuity of care and safety salient.

Whereas before the pandemic the safety of patients was often used as a cautionary argument against the adoption of telehealth (Bernardi & Exworthy, 2020), with Covid-19 now being one of the greatest threats to humanity, the benefit–risk balance shifted in favor of telehealth,

making it suitable not only for low-risk but also for high-risk patients (Wherton et al., 2020). This is acknowledged by Taylor et al. (2021), who state

The external huge risk of COVID made inroads into the status quo - where change was necessary/mandated in order to offer continued care to clients […] the nature of normal risk aversion and standard fear of change got beaten to death by the much larger imposed risk profile.

While during the pandemic the values of continuity of care and safety gained salience, other values, such as *interpersonal care*, lost salience as shown in this quotation from Oborn et al.'s (2021) case study:

Prior to the pandemic, doctors had argued against the use of telemedicine […] because their communication could be compromised, and establishing therapeutic relationships hampered. However, in response to COVID-19, the hitherto resistance to using audio-visual technologies in accessing meaningful knowledge about patient care needs, was overruled by the fear of contamination.

As suggested in this quotation, the defining goal of interpersonal care is to establish and preserve the doctor–patient relationship. Before the pandemic, the belief that this goal could only be achieved with in-person care was a major obstacle to the adoption of telehealth. Yet as the pandemic augmented the risk of infection through in-person care, the value of interpersonal care lost salience, lowering barriers to telehealth adoption.

5.1.2 Financial viability, privacy, and confidentiality

Change in legislation was crucial in enabling rapid adoption of telehealth. First, while before the pandemic the lack of payments for telehealth services had been a major barrier to telehealth adoption (Rangachari et al., 2021), governments in several countries agreed to extend reimbursement mechanisms to telehealth services (Berlin et al., 2021). According to Hall

Dykgraaf et al. (2021), "additional […] incentive payments were temporarily introduced to support the *financial viability* of private general practice clinics" (Hall Dykgraaf et al., 2021). The salience of financial viability was linked to healthcare practitioners' and providers' fear that telehealth visits might not be reimbursed. Therefore, government policies included telehealth in healthcare reimbursement schemes to incentivize the adoption of telehealth by healthcare providers. The defining goal of financial viability is to protect healthcare providers' and practitioners' financial stability and resources. Therefore, it is a personal (or organizational) protection value of self-enhancement belonging to the power dimension (Schwartz, 2012).

Second, as stated in Camden and Silva (2021), the "privacy and protection of health information" were "*legal* aspects" that impact how "agile and responsive health systems are" in adopting such technologies as telehealth. Hence, the "temporary relaxing" of data protection legislation "accelerated the up-take of telehealth by practitioners" during the pandemic. Therefore, following this change in legislation, healthcare practitioners' and providers' belief that the use of telehealth would not be in breach of their legal obligation to protect patients' privacy and confidentiality motivated their adoption of telehealth. This shows how *privacy and confidentiality* values became less salient under the pressure to ensure continuity of care and safety through telehealth. Meeting one's legal obligations falls under the BHV category of "conformity to rules" (Schwartz et al., 2012). Hence, from a healthcare practitioner's perspective, the values of privacy and confidentiality are social protection values of conservation.

5.2 Salient Values in the Post-adoption of Telehealth During Covid-19

5.2.1 Cost effectiveness, efficiency, and convenience

Healthcare practitioners believed that telehealth was cost effective and efficient, since it improved flexibility and access to timely care (Leite & Hodgkinson, 2021; Murphy et al., 2020; Steinberg et al., 2021). According to Chou et al. (2020), telehealth was "cost-effective and

[saved] physician's time […] thereby […] prioritizing critically ill patients more efficiently." On the other hand, convenience from reduced travelling time and costs was one of the major benefits of telehealth perceived by patients (Gilbert et al., 2020; Leite & Hodgkinson, 2021) and the primary reason patients preferred telehealth over face-to-face consultations (Kerr et al., 2020).

Therefore, in the post-adoption phase, both healthcare practitioners and patients realized that telehealth could be used to achieve desirable goals such as cost effectiveness, efficiency, and flexibility in healthcare provision (Leite & Hodgkinson, 2021; Murphy et al., 2020; Steinberg et al., 2021); shorter queues and waiting times (Opinc et al., 2020); and less travel time and cost (Quinn et al., 2020). While the values associated with these goals, such as *cost effectiveness, efficiency, and convenience*, were gaining salience, safety, on the other hand, was losing salience. For example, Sclafani et al. (2021) found that, while physicians believed safety was the main benefit of telehealth during Covid-19, "*over time* patient *convenience* and satisfaction became significant drivers" for telehealth adoption. In the same study, Sclafani et al. (2021) report that "savings and convenience" as well as "faster service" were the two most common benefits of telehealth perceived by patients, while "safety" was only third, "even during the height of the COVID-19 pandemic" (Sclafani et al. 2021).

According to Cheng et al. (2021), convenience reflects patients' belief that telehealth allows them to access care at a convenient time and location, explaining its positive association with patients' perceived competence. Likewise, cost effectiveness and efficiency amount to improved performance in providing care. According to Schwartz (2012), "competent performance" in achieving one's objectives (p. 5) is a defining goal of values of achievement. Thus, the values of cost effectiveness, efficiency, and convenience can be considered self-enhancement values of achievement, which are anxiety-free and therefore oriented toward personal growth.

While for some specialties, the use of telehealth was gradually replaced with in-person visits during the progressive recovery from the pandemic, the use of telehealth for routine follow-ups and visits stabilized (Sclafani et al., 2021). Likewise, prescription renewal, discussions of test results, and simple follow-ups were among the most popular reasons that patients used telehealth (Javanparast et al., 2021). Other studies found that acceptance of telehealth among patients was high mostly for external lab controls and online visit management, but lower for remote treatment planning and secondary care referral (Rodler et al., 2020). In a study of general practice by Javanparast et al. (2021), patients appreciated "convenience and timely access" to care for services that did not require "physical contact, including repeat prescriptions, reporting of test results, and monitoring of less complex health conditions." A similar point of view was shared by a patient in Leite & Hodgkinson's study (2021): "I am not going back to seeing Dr face to face unless a physical examination is required. This is super convenient." These and other studies suggest that convenience may be particularly salient for patients who need to access routine health services that require limited physical assessments, or who need to travel long distances or miss work to see their doctors (Quinn et al., 2020; Xie et al., 2021). Conversely, other studies found that for some patients the perceived benefits of in-person care outweigh the inconvenience of having to miss work (Greven et al., 2021), suggesting that for these patients convenience is not a salient value and would have limited influence on their intention to continue to adopt telehealth.

5.2.2 Patient autonomy

Telehealth required patients to participate actively in consultations, thus facilitating greater patient autonomy and engagement in their own care (Assenza et al., 2021). Some patients also reported a sense of empowerment, greater control, and autonomy thanks to telehealth (Hoel et al., 2021). According to Quinn et al. (2020), "remote physical examinations were conducted, allowing the patient and/or carer to take an active role in the consultation," which then

facilitated “collaborative decisions with patients.” In another study, Malliaras et al. (2021) argued that some clinicians “felt that telehealth facilitated acting as coaches enabling encouragement of self-management, rather than their traditional role as ‘fixers,’ providing hands on care,” resulting in a “s*hift* away from passive to more active care.”

Therefore, new possibilities of care afforded by telehealth led to a shift in healthcare practitioners’ beliefs about how they could deliver good care, a shift from passive physical examination to active engagement of patients in their own care both during consultations and in their own self-management. Care goals of collaborative/active care and patients’ self-management are associated with the value of patient autonomy. In healthcare, this value is linked to “individual choice, independence, empowerment, control, and self-direction” (Keenan et al., 2021) and resonates with the BHV of self-direction, oriented toward “independence of thought and action” and personal growth (Schwartz, 2012, p. 5).

Several studies suggested that equipping patients with telehealth peripherals (e.g., blood pressure cuffs) for the self-monitoring of their vital signs (King et al., 2020; Peahl et al., 2021; Quinn et al., 2020) and video or photographic technology to capture quality images for a virtual physical examination (Pearlman et al., 2021) can facilitate patients’ engagement in their own care and in providing useful clinical information for telehealth visits. For example, Wali et al. (2021) highlight how the metrics provided by remote monitoring devices supported clinical decision-making and enabled clinicians to “effectively titrate medication” despite the “absence of in-person visits” due to Covid-19 restrictions. Likewise, Sclafani et al. (2021) show how augmented outpatient otolaryngology teleconsultation addresses “the inability to make an adequate diagnosis from a limited [physical] examination,” while, in a survey by Jaclyn et al. (2021), patients expressed interest in “technology that would allow for at-home assessment of pulmonary function.” These studies suggest that the reduced possibility for a physical examination matched with new possibilities of care afforded by telehealth made the value of

patient autonomy salient, and that telehealth adoption under the influence of this value may drive further innovation in telehealth technologies.

5.2.3 Interpersonal care from a patient's perspective

The defining goal of the value of interpersonal care is to build patient–doctor relationships and trust (Orrange et al., 2021; Wali et al., 2021). Patients felt that online consultation made it more difficult to establish personal relationships with their healthcare professionals (Wali et al., 2021) and missed personal interactions with their clinicians (Kerr et al., 2020; Watson et al., 2021) and physical examinations (Kerr et al., 2020; Opinc et al., 2020). Patients lacked confidence in the effectiveness of electronic clinical evaluations, which they perceived to be of less quality than in-person care (Pearlman et al., 2021; Rismiller et al., 2020).

Interpersonal care was salient when patients did not feel they had the competence or confidence to achieve their care goals in a telehealth consultation, or when they felt lonely and isolated and, therefore, required personal contact with their healthcare practitioners and carers. Patients who were competent with the technology (Assenza et al., 2021; Orrange et al., 2021) and felt more confident talking about their problems online than in person were satisfied with the care received through telehealth (Lynch et al., 2021). In contrast, patients who experienced difficulties in expressing their care needs and in describing their symptoms or side effects during telehealth consultations (Javanparast et al., 2021; Watson et al., 2021) were more likely to feel the need of being physically examined and seen by a doctor in person (Dalby et al., 2021). When telehealth cannot satisfy this need, it can cause patients and carers anxiety (Murphy et al., 2020). For example, in a study by Assenza et al. (2021), parents of children with complex needs felt anxiety and a "sense of inadequacy" in playing the role of therapists, which added to their other responsibilities, particularly during lockdown. This contributed to parents' poor perception of the effectiveness of telerehabilitation in achieving therapeutic goals.

These studies show how patients' perceived competence is important to satisfy their "needs for control and mastery," which, according to Schwartz (2012), are linked to self-direction (p. 5). Hence, when patients perceive they lack the competence to satisfy these needs through telehealth, values of self-direction such as autonomy may lose salience, while the salience of interpersonal care associated with their need to be supported through in-person care augments. Other studies suggest that the need for in-person care was not only a matter of competence and control but was also linked to patients' perceived reassurance from "direct contact and physical examination" (Kerr et al., 2020). This suggests that, for some patients, interpersonal care is linked to patients' needs for personal security and is therefore a personal protection value of conservation (Schwartz, 2012). Social distancing rules during the pandemic augmented patients' desire for personal contact with their doctor, thus making the value of interpersonal care even more salient, as expressed by this cancer patient in Rodler et al. (2020):

Telehealth is helpful and may save me from COVID-19, but it aggravates the suppressing isolation I feel without the personal contact to my cancer doctors.

Telehealth may exacerbate this sense of loneliness by focusing on patients' biomedical needs while ignoring their psychosocial needs. For example, in a study by Wali et al. (2021), patients whose clinical parameters were under control and were therefore not triggering any monitoring alerts were dissatisfied with telehealth because they could not establish a connection with their clinicians. These patients felt that telehealth could not cater to other factors affecting their health, such as pain management, sleep, and living conditions. Therefore, a telehealth care model that is not designed around patients' psychosocial needs may augment their need for in-person care, contributing to the salience of interpersonal care.

5.2.4 Interpersonal care from a healthcare practitioner's perspective

Medical specialists who valued in-person consultations had low adoption rates of telehealth (Rangachari et al., 2021) and perceived the care provided without physical examination to be of lesser quality (Bradley et al., 2021; Murphy et al., 2020; Sclafani et al., 2021). Some healthcare practitioners had concerns about the safety and quality of care delivered through telehealth (BrintzenhofeSzoc et al., 2021; Peahl et al., 2021) and believed that telehealth would be suitable for low-risk patients and less complex cases (Galle et al., 2021; Malliaras et al., 2021; Watson et al., 2021). Concerns about quality of care and patient safety are not the only reasons that some healthcare practitioners may prefer in-person care to telehealth. As highlighted in various studies, in some medical specialties, physical examination is considered a core component of in-person care, which helps develop patient trust and strengthen the doctor–patient relationship (Heyer et al., 2021; Malliaras et al., 2021; Murphy et al., 2020). This is described in this quote by a midwife in Galle et al. (2021):

Technology is a good tool, but does not replace face-to-face conversations, palpating a mom's abdomen, and listening to the baby's heart rate in order to form warm, trusting bonds between a patient and the midwife.

Therefore, it is the belief that in-person care is essential to protect the patient–doctor relationship that makes interpersonal care a salient value among healthcare practitioners. The theory of BHV defines the protection of personal relationships as a value of personal security (Schwartz, 2012). Hence, from the perspective of healthcare practitioners, interpersonal care can be considered a personal protection value of conservation.

Healthcare practitioners' perception of telehealth also varied depending on how long they had known their patients beforehand (Gilbert et al., 2020), since they found it easier to establish rapport with patients they already knew (Camden & Silva, 2021; Javanparast et al., 2021; Quinn et al., 2020; Wali et al., 2021). As shown in a study by Dhamija et al. (2021), patients preferred

to maintain the relationship with their clinician through telehealth rather than being visited physically by another doctor. Hence, pre-existing trusting relationships between healthcare practitioners and patients may diminish concerns about missing physical contact and interpersonal interactions. In this situation, the value of interpersonal care may be less salient in influencing users' perceptions of telehealth since telehealth is not seen as either an obstacle to or an enabler of patient–doctor relationships.

Other studies show how the negative perception of telehealth in comparison with in-person care improved over time (Berlin et al., 2021; Doran & Lawson, 2021; Rettinger et al., 2021), signaling that experience with telehealth and appreciation of how it could compensate for in-person care led to a shift in beliefs about whether in-person care was always necessary or desirable:

[for telehealth to be sustainable post-covid], both payers and healthcare professionals will need to re-examine their historical insistence on face-to-face patient-provider interactions where laying of hands is considered a sacrosanct component of care. (Wosik et al., 2020)

In Lynch et al. (2021), therapists were initially skeptical about the effectiveness of telehealth due to the potential loss of "non-verbal cues and interpersonal connection." However, one therapist said that with time, as they got used to it, it did not hinder them as much as they would have thought. Several other studies show how, after the adoption of telehealth, healthcare practitioners had to re-think the patient–clinician communication and physical examination (Camden & Silva, 2020; Rismiller et al., 2020; Quinn et al., 2020; Wherton et al., 2020). In a study about the use of telehealth for medical abortion, a clinician said that they would "be delighted to do No-Touch abortion" and "mail [patients] their medication directly" since "this would be the safest and most effective way to deliver abortion care" (Upadhyay et al., 2020). In this example, conducting an abortion procedure during Covid-19 would have posed safety risks. Instead, patients were given full control to perform abortions on their own. This shows

how a new model of patient-centered care afforded by telehealth has reduced the salience of interpersonal care, while patient autonomy has become more salient. This new model focuses more on patients' medical and psychosocial needs and allows designing and reviewing care plans by taking into consideration the social and physical environments in which the patient lives, and how this may affect their self-care and the effectiveness of clinical interventions (Brunton et al., 2021; Buchheit et al., 2021; Peterson et al., 2021; Sasangohar et al., 2020). This example shows that telehealth can improve quality of care, a defining goal of social growth values of benevolence (Schwartz, 2012).

Another important value that governs patient–doctor relationships is empathy. By showing empathy during virtual consultations, healthcare professionals can put patients at ease, reducing patients' anxiety, and contributing to patients' perceived competence and control (Cheng et al., 2021; Dalby et al., 2021). The salience of empathy during the pandemic is linked to patients' social support needs (Assenza et al., 2021; Galle et al., 2021; Wosik et al., 2020). By affording new possibilities of communication and connectedness in the midst of the pandemic (Galle et al., 2021; Quinn et al., 2020; Kurotschka et al., 2021), during which social isolation was heightened, telehealth contributed to the salience of this value. Empathy is linked to the ethical principle of "beneficence" (Sasangohar et al., 2020), which shares similarities with benevolence as a BHV of self-transcendence.

5.2.5 Health equality

Telehealth was valued for providing equitable access to care for people with mobility issues, living in isolated rural areas (Brunton et al., 2021; Leite & Hodgkinson, 2021), or having to shield during the pandemic (Chan et al., 2021). Patients who were often not attending appointments in order not to miss work were now attending virtual clinic appointments (Quinn et al., 2020). Telehealth gave the incentive to extend telehealth services to a wider pool of patients (Peterson et al 2021), and its benefit for equitable access to care were perceived by

both patients and healthcare practitioners (Quinn et al., 2020). Keenan et al. (2021) link the idea of fairness and equal access to telehealth to the ethical or moral value of justice. This same value motivated telehealth adoption to increase access to abortion services during the pandemic and was associated with the idea of person-centered care (Godfrey et al., 2021). In Schwartz's (2012) BHV framework, social justice and equality are social growth values of universalism and self-transcendence.

Health equality became salient because of the new opportunities of access offered by telehealth as well as barriers to equitable access to care, such as the absence of suitable telecommunications devices and connectivity (BrintzenhofeSzoc et al., 2021; Buchheit et al., 2021; Hoel et al., 2021; Krok-Schoen et al., 2021; Leite & Hodgkinson, 2021), patients' poor digital skills (Hall Dykgraaf et al., 2021; Javanparast et al., 2021; Kuvac Kraljevic et al., 2020), and language barriers often requiring the use of an interpreter (Galle et al., 2021). Digital and health inequalities were mostly affecting vulnerable groups (Peahl et al., 2021; Vindrola-Padros et al., 2021), such as the elderly and migrants (Galle et al., 2021). Prioritizing less complex cases for telehealth and referring more vulnerable patients or patients with complex health issues to in-person care could exacerbate inequalities (Baines et al., 2020), pointing to a tension between values of interpersonal care and health equality.

With health equality in mind, healthcare professionals were advocating hybrid and more flexible models of care that blend telephone and video consultations with in-person care (Galle et al., 2021; Leite & Hodgkinson, 2021; Pearlman et al., 2021). Hybrid and flexible models of care are designed around patients' needs and preferences and are therefore guided by the principle of person-centered care (Camden & Silva, 2021; Godfrey et al., 2021; Quinn et al., 2020; Watson et al., 2021). Rangachari et al. (2021) argue that, before the pandemic, the adoption of telehealth marked a shift from a "provider-centric" to a "patient-centric" culture in some medical specialties. The emphasis on patient-centered care during the pandemic seems to

have accelerated this cultural change or at least planted the seeds for a wider cultural change in healthcare.

5.2.6 Privacy and confidentiality

Privacy concerns were shared by both healthcare professionals and patients and have been found to be negatively associated with intention to adopt telehealth (An et al., 2021), while having fewer privacy concerns has been found to be linked to patient satisfaction with telehealth (Orrange et al., 2021).

From the point of view of patients, having their privacy and confidentiality concerns addressed affected their level of trust in telehealth (McDonald et al., 2021). Little trust due to concerns about confidentiality and privacy was linked to patients' personal circumstances (e.g., undocumented migrants were more reluctant to use telehealth (Galle et al., 2021)) or certain clinical conditions (e.g., patients with psychotic disorders had paranoia associated with being recorded (Lynch et al., 2021)). Therefore, from a patient perspective, privacy concerns can be a source of *anxiety* and have a negative impact on their sense of security and wellbeing. Privacy and confidentiality are thus associated with patients' goal of protecting their own personal security and are therefore personal protection values of conservation (Schwartz, 2012). As shown in research pre-Covid, perception of trust linked to confidentiality and privacy may lead to reluctance to communicate with healthcare practitioners via telehealth (Keenan et al., 2021). Therefore, the salience of privacy and confidentiality depends on patients' personal circumstances (e.g., their status of vulnerability) and the negative impact of privacy concerns on patients' sense of security associated with telehealth visits.

Healthcare practitioners not only were receptive of patients' concerns, but also had concerns with not being able to see or control who else was in the patient's room (Chan et al., 2021), resulting in inappropriate interference by family members during telehealth visits (Gilbert et al., 2021) and potential breaches of confidentiality. The blurring of boundaries between

family/home and therapeutic encounters, while seen as beneficial for better quality of care by some, made it more challenging to protect patient privacy and confidentiality. Patients and family members were reminded that telehealth sessions were for patients only, and no one else should be in the room with patients (Baweja et al., 2020; King et al., 2020). Therefore, from a healthcare practitioner's perspective, the salience of privacy and confidentiality was linked to the challenges of maintaining telehealth consultations private and confidential.

Healthcare practitioners adjusted their protocols and adopted rules to address these issues (Chan et al., 2021; Lynch et al., 2021), ensuring that the telecommunications solutions adopted were compliant with privacy laws (Hall Dykgraaf et al., 2021; Quinn et al., 2020; Wosik et al., 2020). Therefore, protecting patient privacy and confidentiality falls under the legal and moral obligations of healthcare professionals (Leite & Hodgkinson, 2021). While from a patient's perspective, privacy and confidentiality are associated with personal security, from a healthcare practitioner's perspective, they are a matter of *conformity* to legal and moral expectations in society and are therefore social protection values of conservation (Schwartz, 2012).

5.2.7 Financial viability

Despite the relaxation of reimbursement policies to allow for medical consultations online, uncertainty and ambiguity about the future of these policies started to emerge (Brunton et al., 2021; Heyer et al., 2021; Rettinger et al., 2021), not only in the United States (Rismiller et al., 2020) but also in other countries (Rettinger et al., 2021). For example, in a survey of teletherapists conducted in Austria, the majority of respondents "was not committing to or against" teletherapy in the future due to uncertainty about reimbursement policies (Rettinger et al., 2021). According to Fisk et al. (2020), funding provided in "this extraordinary time" may not "prove adequate to support the running of *viable* telehealth businesses in the Covid-19 context." Likewise, Esper et al. (2020) state that to sustain "financial sustainability," "continued deregulation" that lowers barriers to payment of telehealth services is needed. Therefore,

following the adoption of telehealth, financial viability resurfaced as a salient value due to healthcare practitioners' and providers' fear that reimbursements of telehealth services would be discontinued and explained healthcare practitioners' and providers' reluctance to adopt telehealth after the pandemic. Because it relates to healthcare practitioners' and providers' financial stability and resources, financial viability is a personal (or organizational) protection value of self-enhancement and a source of power and survival (Schwartz, 2012).

5.2.8 Professionalism

Professionalism underpinned healthcare professionals' concerns about blurring personal and professional life boundaries (Sasangohar et al., 2020). It became salient following healthcare professionals' challenges in maintaining the formality of therapeutic encounters, often seen as a source of professional authority through which healthcare professionals gained patient trust and respect (King et al., 2020). According to the BHV theory, authority is a power value (Schwartz, 2012). Hence, professionalism is a personal protection value of power and self-enhancement.

Linked to professionalism is professional competence, concerning healthcare professionals' poor digital skills and limited confidence in the use of the technology (Gilbert et al., 2020; Hall Dykgraaf et al., 2021). Healthcare practitioners who felt competent were generally more satisfied with telehealth than those who did not feel competent (Assenza et al., 2021; Kuvac Kraljevic et al., 2020; Tohme et al., 2021) and were more likely to continue to use telehealth after the Covid-19 crisis (Machluf et al., 2021). A sense of competence was often linked to previous experience with telehealth (Machluf et al., 2021; Assenza et al., 2021; Tohme et al., 2021).

From a healthcare practitioner's perspective, being unable to conduct a clinical consultation properly due to poor digital skills or lack of confidence with the technology was seen as being unprofessional (Taylor et al., 2021). In particular, healthcare professionals feared that this

would have a negative impact on patient trust and satisfaction (Chan et al., 2021). Therefore, competence is oriented toward looking professional and maintaining one's professional credibility and reputation in front of a patient. If doctors perceive telehealth as an obstacle to their professional credibility and reputation, some doctors may perceive it as a threat to their professional and personal security and therefore may not want to continue to use telehealth. Hence, professional competence is a personal protection value of achievement and self-enhancement, since its defining goal is to demonstrate "competence according to social standards," which, in turn, is a source of resources and survival (Schwartz, 2012).

Technical difficulties and challenges in using the technology made the value of professional competence salient. Some healthcare practitioners saw in telehealth an opportunity to enhance their skills, which is why training was one of the main recommendations across several studies (Baines et al., 2020; Hoel et al., 2021; Malliaras et al., 2021). While still a value of achievement and self-enhancement, in this case, professional competence is oriented toward personal growth rather than personal protection, since its defining goal is to achieve personal success to confirm one's capabilities rather than admiration and approval (Schwartz et al, 2012).

Linked to professionalism are also values of accountability and liability. These values were reflected in healthcare practitioners' concerns that telehealth would not be compliant with legislation or regulations and, therefore, would become a liability (BrintzenhofeSzoc et al., 2021; Rettinger et al., 2021). Baines et al. (2020) state that "concerns about the negotiation of clinical risk and diagnosis uncertainty were repeatedly expressed within the context of an increasingly litigious culture." Some doctors were unsure whether their indemnity would cover them (Gilbert et al., 2021) or had concerns about safeguarding (Chan et al., 2021). While not all healthcare practitioners shared the same concerns over safeguarding—some were confident in being able to perform safeguarding during telehealth visits—safeguarding risks were one of the reasons mentioned for refusing to use telehealth (Gilbert et al., 2021).

Issues of accountability, liability, and safeguarding are linked to the ethical or moral principle of non-maleficence, which refers to the risk of neglect and medical error resulting from telehealth consultations (Rismiller et al., 2020) and is guided by the goal of "preventing harm" (Keenan et al., 2021). Hence, they are social protection values. In addition, because they are oriented to a goal of fulfilling a moral and legal obligation, they are values of conformity and conservation (Schwartz, 2012). However, because breaching the moral and legal obligation to keep patients safe can cause professional, reputational, and economic damage (see the case of litigation), they are linked to personal protection values of self-enhancement.

5.2.9 Work–life balance

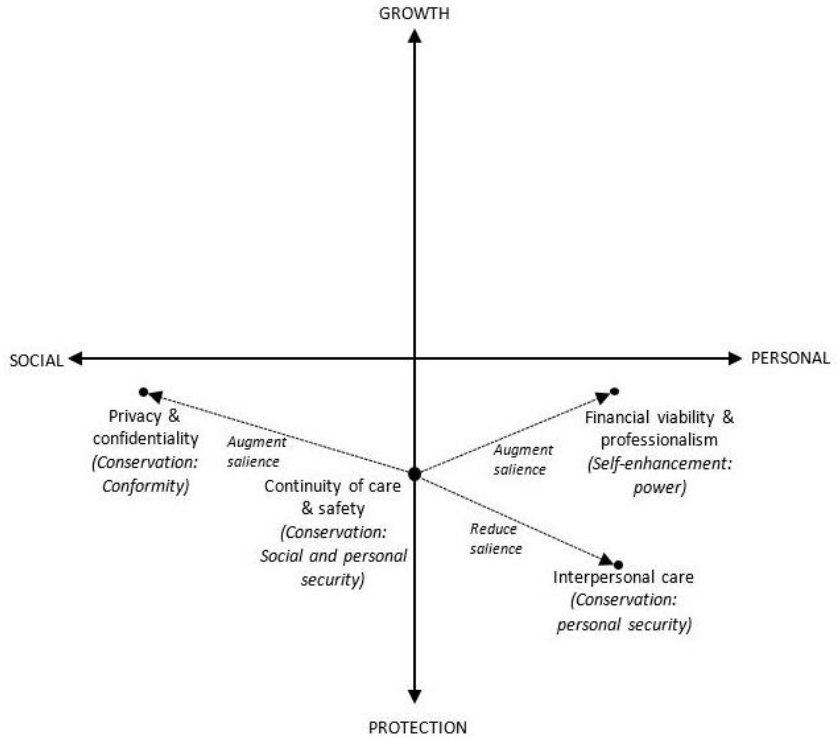
Working from home raised concerns about workload and staff burnout (Baines et al., 2020; Lynch et al., 2021; Sasangohar et al., 2020). Staff burnout and exhaustion were linked to Zoom fatigue, reconciling working from home full-time with childcare during the pandemic (Steinberg et al., 2021), and the challenges of separating personal and professional life to preserve work–life balance (Lynch et al., 2021; Sasangohar et al., 2020). Sasangohar et al. (2020) speak of the importance of "in-person consultations between staff, which have social and not purely logistical benefits" and the "therapeutic and rejuvenating" benefit of "a well-established period of reflective time" and how "the fragmentation of that time into asynchronous processes such as emails is felt." Work–life-balance is a conservation value of personal security, since it is oriented to the protection of personal wellbeing and safety (Schwartz, 2012). It became salient due to higher workload and burnout following the adoption of telehealth during the pandemic. Talking about the challenge of spending long time on the screen, a healthcare practitioner in Leite and Hodgkinson (2021) said

It is harder on my voice and logistics of requisitions and prescriptions; but I have and will always value saving patients' time, travel, and work productivity.

This and other studies (Hall Dykgraaf et al., 2021) highlight the conflict between personal growth values of convenience, cost effectiveness, and efficiency and the personal protection value of work–life balance. Research has shown how this conflict may influence clinicians' negative attitudes toward telehealth (Bernardi & Exworthy, 2020). Therefore, when health workers perceive higher workload and burnout following the adoption of telehealth, the personal protection value of work–life balance becomes salient and may negatively influence their intention to continue to adopt telehealth.

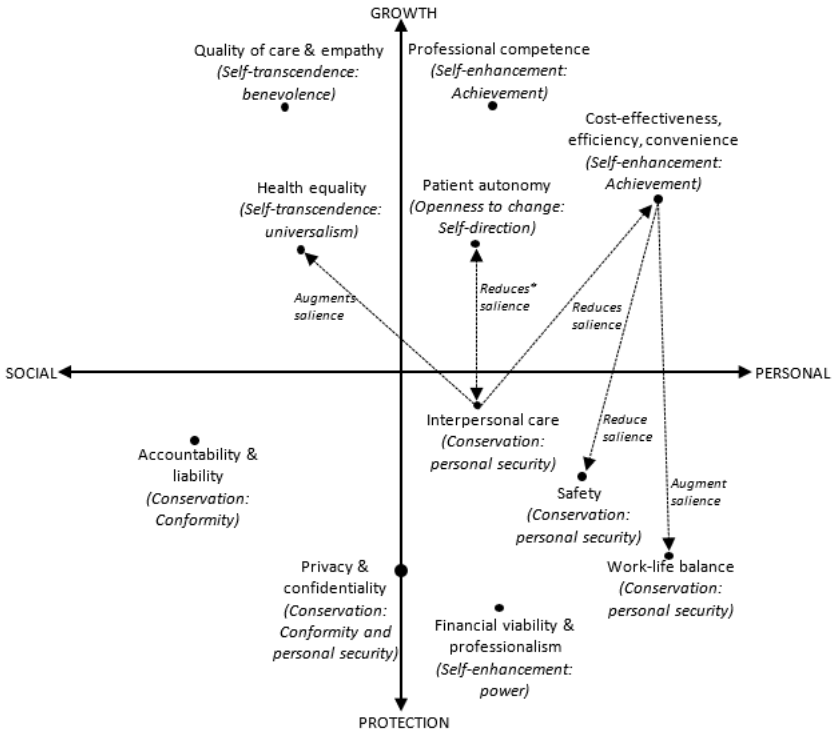
6 Discussion

Figures 4a and 4b illustrate values and their classification according to the BHV framework.



The dotted line (--------) indicates incongruence between values. A value may lose salience when its incongruent value gains salience, or vice-versa. A salient value may also augment tensions with and increase the salience of other incongruent values.

Figure 4a. Salient values and shifts in salience between incongruent values influencing initial telehealth adoption during Covid-19



The dotted line (--------) indicates incongruence between values. A value may lose salience when its incongruent value gains salience, or vice-versa. A salient value may also augment tensions with and increase the salience of other incongruent values.

**Patient autonomy and interpersonal care stand in a reciprocal relationship, whereby increased salience of one value is accompanied by reduced salience of the other.*

Figure 4b. Salient values and shifts in salience between incongruent values after the adoption of telehealth during Covid-19

Next, the propositions developed from the findings and the representation of values and their relationships in Figures 4a and 4b are discussed. These propositions constitute a "mid-range theory" (Gregor, 2006, p. 616), since they provide an abstract explanation of why values become salient and their influence on telehealth adoption in times of crisis and can be further developed into testable hypotheses. A summary of findings and their relationship with propositions is provided in Tables 1a and 1b.

Table 1a. Shifts in the salience of values and their implications for the initial adoption of telehealth during Covid-19

Initial adoption of telehealth during Covid-19				
Value	**Value classification**	**Why values shifted in salience[1]**	**Implications for the initial adoption of telehealth**	**Propositions**
Continuity of care and safety	Societal security (from policy makers' and healthcare providers' perspective)—social protection values of conservation Personal security (from healthcare practitioners' and patients' perspective) – personal protection values of conservation	Anxiety related to the risks of infection from the virus, both from a public health and from an individual health perspective, made values of continuity of care and safety salient	Drive initial telehealth adoption during a crisis	P1a
Interpersonal care	Personal security—personal protection value of conservation	Augmented risk of infection through in-person care reduced salience of interpersonal care	Lower barriers to initial telehealth adoption during a crisis	P1a
Financial viability	Power (resources)—personal (or organizational) protection value of self-enhancement	Healthcare practitioners' and providers' fear that telehealth visits may not be reimbursed augmented salience of financial viability	Hinder initial telehealth adoption during a crisis	P1b
Privacy and confidentiality	Conformity (from a healthcare practitioner's perspective)—social protection values of conservation	Relaxation of data protection legislation reduced salience of privacy and confidentiality values	Lower barriers to initial telehealth adoption during a crisis	P1c

[1] This column explains the main factors that contributed to a shift in the salience of values during the initial adoption (Table 1a) and post-adoption (Table 1b) of telehealth. This explanation is based on the interpretation of the literature review findings in Section 5.

Table 1b. Shifts in the salience of values and their implications for the post-adoption of telehealth during Covid-19

Post-adoption of telehealth during Covid-19				
Value	**Value classification**	**Why values shifted in salience**	**Implications for the post-adoption of telehealth**	**Propositions**
Cost effectiveness, efficiency, and convenience	Achievement (anxiety free)—personal growth values of self-enhancement	Higher care accessibility and flexibility afforded by telehealth made cost effectiveness, efficiency, and convenience salient Salience of convenience was mostly associated with routine services	Motivate continuance to adopt telehealth for routine health services and does not drive further innovation in telehealth technologies	P2a/b, P2c/d
Safety	Personal security (from healthcare practitioners' and patients' perspective)—personal protection values of conservation	Realization that telehealth can address needs/or meet desirable goals that are not contextual to the pandemic (e.g., greater access to care) reduced salience of safety	Motivate continuance to adopt telehealth	P2a/b
Patient autonomy	Self-direction—personal growth value related to openness to change	Reduced possibilities for a physical examination matched with new possibilities of patient engagement afforded by telehealth made the value of patient autonomy salient	Drive further innovation in telehealth technologies to support self-management and patient engagement in collaborative care	P2a/b, P2e
Professional competence	Achievement (anxiety avoidance or anxiety free if telehealth is seen as an opportunity for personal growth)—personal protection/growth value of self-enhancement	Initial technical difficulties and challenges with using the technology made the value of professional competence salient	Motivate continuance to adopt telehealth by driving upskilling	P2a/b
Interpersonal care (from a patient's perspective)	Personal security—personal protection value of conservation	Factors contributing to salience of interpersonal care: —Patients' perceived lack of competence or	Hinder continuance to adopt telehealth	P3a/b

		confidence in achieving their care goals during telehealth consultations reduced the salience of self-direction values (e.g., patient autonomy) and augmented their need for in-person care —Patients' sense of loneliness augmented their need for in-person care. This need increases if telehealth does not cater for patients' psychosocial needs, further contributing to the salience of interpersonal care Salience of interpersonal care augments while salience of convenience diminishes if perceived benefits of in-person care outweigh inconvenience of travel		
Interpersonal care (from a healthcare practitioner's perspective)	Personal security—personal protection value of conservation	Belief that in-person care is essential to protect the patient-doctor relationship made interpersonal care a salient value among healthcare practitioners Salience of interpersonal care was reduced when pre-existing trustworthy patient-doctor relationships diminished concerns about the lack of in-person care A new model of patient-centered care afforded by telehealth reduced the salience of interpersonal care while patient autonomy became more salient. This new model was linked to quality of care, a social growth value of benevolence	Salience of interpersonal care can hinder continuance to adopt telehealth Reduced salience of interpersonal care vs salience of patient autonomy motivates continuance to adopt telehealth	P3a/b P2a/b
Work–life balance	Personal security—personal protection	Work–life balance became salient due to	Hinder continuance to adopt telehealth	P3a/b

	values of conservation	higher workload and burnout following the adoption of telehealth during the pandemic Conflict with personal growth values of convenience, cost effectiveness, and efficiency may further augment the salience of work–life balance		
Financial viability	Power (resources) - personal (or organizational) protection value of self-enhancement	Salience of financial viability was linked to healthcare practitioners' and providers' fear that reimbursements of telehealth services would be discontinued	Hinder continuance to adopt telehealth	P4a/b
Professionalism	Power (dominance)—personal protection value of self-enhancement	Salience of professionalism was linked to healthcare professionals' challenges in maintaining the formality of therapeutic encounters raising concerns about losing professional authority and patient trust	Hinder continuance to adopt telehealth	P4a/b
Privacy and confidentiality	Personal security (from a patient's perspective)—personal protection values of conservation	Salience of privacy and confidentiality depended on patients' personal circumstances (e.g., their status of vulnerability) and the negative impact of privacy concerns on patients' sense of security associated with telehealth visits	Hinder continuance to adopt telehealth particularly by patients, augmenting their desire for in-person care and the salience of interpersonal care	P3a/b
	Conformity (from a healthcare practitioner's perspective)—social protection values of conservation	From a healthcare practitioner's point of view, the salience of privacy and confidentiality was linked to the challenges of maintaining telehealth consultations private and confidential	Motivate continuance to adopt telehealth by adjusting telehealth visits protocols and ensuring telecommunications equipment is compliant with privacy laws	P5a/b
Accountability and liability	Conformity—social protection values of conservation	Salience of accountability and liability was linked to fear that professional indemnity would not cover medical error	Hinder continuance to adopt telehealth	P5a/b

		arising from telehealth consultations		
Empathy	Benevolence—social growth value of self-transcendence	Salience of empathy was linked to patients' social support needs during the pandemic matched with new possibilities of connectedness afforded by telehealth	Motivate continuance to adopt telehealth during a crisis	P6a/b
Health equality	Universalism—social growth value of self-transcendence	Salience of health equality was linked to new opportunities of access offered by telehealth as well as digital and health inequalities that hindered equitable access to care Salience of interpersonal care driving referral of vulnerable patients to in-person care can augment health inequalities, thus creating tensions with the value of health equality	Drive adoption of hybrid and more flexible models of care that blend telephone and video consultations with in-person care	P7a/b

6.1 Shifts in the Salience of Values Influencing Telehealth Adoption in Times of Crisis

6.1.1 Conservation values of security and personal protection values of self-enhancement

The anxiety related to the risks of infection from the virus made the values of *continuity of care* and *safety* salient. These were values of societal and personal security, since their defining goal was to protect public health as well as patients' and healthcare practitioners' own safety. Interestingly, while continuity of care and safety gained salience, the augmented risk of infection through in-person care reduced the salience of other values of personal security such as interpersonal care. Interpersonal care was associated with the sense of security that healthcare practitioners perceived from maintaining their relationships with patients.

Before the pandemic, the need to protect relationships with patients through in-person care was often used by healthcare practitioners as an argument against the adoption of telehealth. However, after the pandemic changed the profile risk of in-person care, both patients and healthcare practitioners believed that telehealth could better meet their need for personal security than in-person care (Oborn et al., 2021), motivating the adoption of telehealth in response to the Covid-19 crisis.

Proposition 1a. In times of crisis, new personal protection values become salient following changes in healthcare practitioners' and patients' needs for personal security and motivate telehealth adoption.

While healthcare practitioners and providers were willing to switch from in-person care to telehealth to protect their own safety and the safety of their patients, they also feared that telehealth visits might not be reimbursed, augmenting the salience of *financial viability*. Fears that telehealth visits would not be reimbursed had been a major hindrance to telehealth adoption even before the pandemic (Rangachari et al., 2021). Thus, the conflict between social and personal security values motivating telehealth adoption and the self-enhancement value of *financial viability* oriented toward protecting healthcare practitioners' and providers' financial resources could have hindered telehealth adoption. Hence, legislators had to intervene in solving this conflict by extending payments of telehealth services (Hall Dykgraaf et al., 2021).

Proposition 1b. In times of crisis, the conflict between values of social and personal security and values of self-enhancement oriented toward the protection of healthcare practitioners' and providers' financial stability and resources hinders telehealth adoption.

By driving the adoption of telehealth, social and personal security values (i.e., continuity of care and safety) also created a conflict with values of *privacy and confidentiality.* From a healthcare practitioner's perspective, values of privacy and confidentiality are social protection

values of conformity to rules that protect patient privacy and confidentiality. Breaching these rules may come at a financial and reputational cost. As evidenced in the literature (Camden & Silva, 2021), the relaxation of data protection legislation was thus necessary to reduce the salience of *privacy and confidentiality* values and lower potential barriers to telehealth adoption.

Proposition 1c. In times of crisis, the conflict of social and personal security values with social protection values of conformity associated with healthcare practitioners' and providers' legal and moral obligations hinders telehealth adoption.

6.2 Shifts in the Salience of Values Influencing the Post-adoption of Telehealth in Times of Crisis

6.2.1 Personal growth values of self-enhancement and self-direction and personal protection values of conservation

Higher care accessibility and flexibility afforded by telehealth contributed to the salience of cost effectiveness, efficiency, and convenience. These are personal growth values of self-enhancement, which are anxiety-free and oriented toward improved personal or organizational performance. As shown in the literature review (e.g., Sclafani et al., 2021), healthcare practitioners' and patients' realization that telehealth could meet desirable goals beyond the protection of personal safety from the virus, for example, by affording greater convenience, reduced the salience of personal security values such as safety and became a significant driver for telehealth adoption.

Another value of self-enhancement that became salient after the adoption of telehealth was professional competence. Professional competence became salient due to the initial technical difficulties and challenges that healthcare practitioners were experiencing with telehealth. Professional competence is a value of achievement, which can be both of personal protection and of growth. It is a value of personal protection when healthcare practitioners believe that not showing competence during consultations may negatively affect their professional reputation,

patient trust, and satisfaction (Taylor et al, 2021; Chan et al., 2021). Hence, showing competence during telehealth consultations is an anxiety-avoidance goal. Yet it is also an anxiety-free value of personal growth when healthcare practitioners see in telehealth opportunities for upskilling (Baines et al., 2020; Hoel et al., 2021). Research has shown that healthcare practitioners who perceived themselves to be competent to use telehealth were satisfied with telehealth (Assenza et al., 2021) and more likely to continue to use telehealth after the pandemic (Machluf et al., 2021).

In addition to values of self-enhancement, reduced possibilities for a physical examination matched with new possibilities for patient engagement afforded by telehealth contributed to the salience of the self-direction value of patient autonomy, a value of personal growth directed toward satisfying patients' needs for autonomy in achieving their own care goals. The literature review revealed how the salience of patient autonomy was accompanied by a reduction in salience of the personal security value of interpersonal care induced by opportunities for better quality of care (a social growth value of benevolence) that some healthcare practitioners saw in a new model of patient-centered care afforded by telehealth (Malliaras et al., 2021). These findings suggest that healthcare practitioners who perceive patient autonomy and patient-centered care afforded by telehealth as an opportunity for better quality of care may be willing to continue to adopt telehealth.

Proposition 2a. In times of crisis, increased care accessibility and flexibility, upskilling opportunities, and patient-centered care afforded by telehealth make personal growth values salient, while values of personal security become less salient.

Proposition 2b. The salience of personal growth values motivates continuance in adopting telehealth.

Several studies suggested that the value of convenience was particularly salient for patients who required a limited physical examination or needed to travel long distances or miss work to see a doctor (Quinn et al., 2020; Xie et al., 2021). These needs could easily be met with routine health services (e.g., online visit management or prescription renewal) (Sclafani et al., 2021) that required minimal patient–doctor interaction (Javanparast et al., 2021). Patient acceptance of telehealth was higher for routine health services but lower for remote treatment planning and secondary care referral (Rodler et al., 2020). Compared with routine health services, these services require more advanced telehealth technologies to compensate for the lack of a physical examination (Wali et al., 2021; Sclafani et al., 2021). Therefore, for patients who simply value the convenience of accessing routine health services online, there may not be a need for more innovative telehealth technologies that can compensate for the lack of a physical examination through advanced diagnostic and monitoring tools. Hence, the realization of personal growth values of self-enhancement such as convenience may be an incentive to maintain online access to healthcare services but may not drive further innovation in telehealth technologies.

Proposition 2c. Telehealth can satisfy personal growth values of self-enhancement with the simple provision of routine healthcare services.

Proposition 2d. Continuance in adopting telehealth under the pressure of personal growth values of self-enhancement does not drive further innovation in telehealth technologies.

In contrast, several studies suggested that both healthcare practitioners and patients recognized that patient self-management and active engagement during telehealth visits were necessary to compensate for the lack of a physical examination. Therefore, they both valued the use of peripheral devices (e.g., blood pressure monitors) and advanced technologies for remote diagnosis and monitoring to support patient empowerment (King et al., 2020; Peahl et al., 2021). Supporting patient empowerment is a defining goal of the self-direction value of patient

autonomy and one of the pillars of patient-centered care (Malliaras et al., 2021). Hence, it is argued that continuance in adopting telehealth under the drive of self-direction values may further drive innovation in telehealth technologies to support patient-centered care.

Proposition 2e. Personal growth values of self-direction drive further innovation in telehealth technologies to support patient-centered care.

While personal growth values of self-enhancement and self-direction can potentially sustain continuance in adopting telehealth, the opposite is true when personal protection values of conservation become salient. For example, tensions between interpersonal care, a conservation value of personal security for both healthcare practitioners and patients, and the self-direction value of patient autonomy were evident. The salience of patient autonomy was reflected in a reduction in the salience of interpersonal care, and vice versa.

The salience of interpersonal care among healthcare practitioners was linked to their belief that in-person care was essential to protect the patient–doctor relationship (Heyer et al., 2021; Galle et al., 2021). In fact, for both patients (Dhamija et al., 2021) and healthcare practitioners (Camden & Silva, 2021), interpersonal care was less salient when pre-existing trustworthy patient–doctor relationships diminished concerns about the lack of in-person care during telehealth visits. As shown in various studies, medical specialties who valued in-person consultations had a low rate of telehealth adoption (Rangachari et al., 2021) and perceived the care provided without physical examination to be of lower quality (Bradley et al., 2021; Murphy et al., 2020; Sclafani et al., 2021). Presumably, for these healthcare practitioners, the value of patient autonomy associated with person-centered care had less salience, and perceived constraints of telehealth on in-person care may dissuade them from continuing to adopt telehealth.

Several other factors were contributing to the salience of interpersonal care among patients, including patients' perceived competence and confidence and a sense of isolation. For example, patients' perceived lack of competence and confidence in using telehealth to achieve their care goals (Javanparast et al., 2021; Watson et al., 2021) diminished their desire for autonomy and augmented their need for in-person care (Dalby et al., 2021), thus increasing the salience of interpersonal care and reducing the salience of patient autonomy. Likewise, patients' sense of loneliness exacerbated by reduced social contact during the pandemic augmented their need for in-person care (Rodler et al., 2020). This need increased when telehealth did not cater to patients' psychosocial needs (Wali et al., 2021), further contributing to the salience of interpersonal care. A similar pattern emerged in relation to personal growth values of self-enhancement such as convenience, whereby interpersonal care gained salience when patients' perceived benefits from in-person care outweighed the inconvenience of travel (Greven et al., 2021).

The salience of other personal security values of conservation, such as privacy and confidentiality, was linked to patients' sense of vulnerability and the negative impact of privacy concerns on patients' sense of security associated with telehealth visits (Lynch et al., 2021). As shown in the literature, privacy concerns were negatively associated with healthcare professionals' and patients' intention to adopt telehealth (An et al., 2021). Overall, a greater sense of insecurity experienced with telehealth than with in-person care may explain why some patients wanted to go back to in-person care after the pandemic (Rodler et al., 2020; BrintzenhofeSzoc et al., 2021).

At the same time, higher workload and burnout experienced by healthcare practitioners following the adoption of telehealth during the pandemic contributed to the salience of work–life balance, also a conservation value of personal security. As evidenced in the literature, service users' higher expectations for accessibility and flexibility of health services following

the introduction of telehealth added pressure on healthcare practitioners' workload (Leite & Hodgkinson, 2021; Hall Dykgraaf et al., 2021), highlighting a conflict between personal growth values of self-enhancement such as convenience, cost effectiveness, and efficiency, which serve the goal of improving performance in providing care, and the personal protection value of work–life balance. As suggested in previous research (Bernardi & Exworthy, 2020), such a conflict may further augment the salience of work–life balance itself and dissuade healthcare practitioners from continuing to adopt telehealth.

Proposition 3a. When telehealth contributes to patients' and healthcare practitioners' senses of insecurity, conservation values of personal security gain salience, while personal growth values of self-direction and self-enhancement lose salience.

Proposition 3b. The salience of conservation values of personal security hinders continuance in adopting telehealth.

6.2.2 Personal protection values of self-enhancement and social protection values of conformity

Healthcare practitioners' and providers' fears that reimbursements of telehealth visits might be discontinued after the pandemic led to the re-emergence of financial viability as a salient value. The defining goal of this value of self-enhancement is to protect healthcare practitioners' and providers' financial resources and security. Research has shown that some healthcare practitioners were reluctant to continue to use telehealth after the pandemic due to uncertainty about reimbursement policies (Rettinger et al., 2021). Therefore, if the adoption of telehealth is incompatible with the goal of protecting healthcare practitioners' and providers' financial security, then the salience of financial viability may hinder continuance in adopting telehealth. Another personal protection value of self-enhancement, professionalism, also became salient due to healthcare practitioners' concerns about blurring personal and professional life boundaries (Sasangohar et al., 2020). Like professionalism, professional competence is a

personal protection value of self-enhancement linked to healthcare practitioners' desire to project an image of professional authority during telehealth visits in order to preserve patient trust in their professional advice and thereby protect their relationships with patients (King et al., 2020; Machluf et al., 2021). Research has shown that healthcare practitioners who felt competent to use telehealth were more satisfied with telehealth than those who did not feel competent (Assenza et al., 2021) and more likely to continue to use telehealth after the pandemic (Machluf et al., 2021). These findings suggest that difficulties in preserving an image of professional authority through telehealth may lead to a sense of insecurity and dissuade healthcare practitioners from continuing to adopt telehealth.

Proposition 4a. When telehealth jeopardizes healthcare practitioners' financial stability, professional reputation, and authority, personal protection values of self-enhancement become salient.

Proposition 4b. The salience of personal protection values of self-enhancement hinders continuance in adopting telehealth.

Also linked to values of self-enhancement were social protection values of conformity, such as privacy, confidentiality, accountability, and liability. From a healthcare practitioner's perspective, these values were aimed at fulfilling their legal and moral obligations of protecting patient privacy and confidentiality and safeguarding patient safety. As shown in the literature review, healthcare practitioners were concerned that telehealth would not be compliant with existing privacy legislation and professional codes of conduct, and therefore would become a liability (BritzenhofeSzoc et al., 2021). Some healthcare practitioners were unsure whether their insurance would cover them and mentioned a lack of confidence in performing safeguarding through telehealth as one of the reasons for not intending to continue to use telehealth (Gilbert et al., 2021). These findings show that healthcare practitioners were concerned about the

reputational and economic damage from breaching social protection values of conformity, highlighting the link between these values and personal protection values of self-enhancement (e.g., professionalism and financial viability). Hence, if healthcare practitioners perceive the use of telehealth to be incompatible with their moral and legal obligations, social protection values of conservation may become salient, hindering continuance in adopting telehealth. However, findings from the literature review also showed how continuance in adopting telehealth can be maintained by readapting practices and protocols to fulfill safeguarding responsibilities and compliance of telehealth visits and equipment with privacy laws (Chan et al., 2021; Quinn et al., 2020).

Proposition 5a. When telehealth challenges healthcare practitioners' ability to fulfil their moral and legal obligations, social protection values of conformity become salient.

Proposition 5b. The salience of social protection values of conformity hinders continuance in adopting telehealth.

6.2.3 Social growth values of self-transcendence

Empathy and health equality were among the few social growth values of self-transcendence that became salient following the adoption of telehealth during the pandemic. The salience of empathy, a self-transcendence value of benevolence, was linked to patients' social support needs during the pandemic (Assenza et al., 2021; Galle et al., 2021) matched with the new possibilities of connectedness afforded by telehealth (Galle et al., 2021; Quinn et al., 2020). Hence, healthcare practitioners saw value in telehealth satisfying patients' social support needs, particularly during a time when social isolation was aggravated by the pandemic. Arguably, in a post-pandemic scenario, the need for social support diminishes, reducing the salience of empathy.

Proposition 6a. The salience of social growth values of self-transcendence such as benevolence is linked to telehealth affordances satisfying care needs that are contextual to a crisis.

Proposition 6b. The salience of social growth values of self-transcendence that satisfy care needs contextual to a crisis motivates continuance in adopting telehealth only until the crisis is over.

The salience of health equality was linked to new opportunities of access offered by telehealth as well as digital and health inequalities that hindered equitable access to care (Buchheit et al., 2021; Hoel et al, 2021). The salience of interpersonal care driving referrals of vulnerable patients to in-person care can augment health inequalities (Baines et al. 2020), thus creating a conflict with the value of health equality. In line with the value of health equality, rather than excluding vulnerable patients from telehealth, some healthcare scholars advocated flexible telehealth strategies (e.g., telephone-based consultations for elderly care vs. video-based consultations for physical examinations) and blended care, which mixes telehealth with in-person care, as solutions for more equitable access to care (Galle et al, 2021; Pearlman et al., 2021). Knowing that, through blended and more flexible models of care, telehealth can be re-adapted to patients' specific needs (Camden & Silva, 2021; Godfrey et al., 2021), healthcare practitioners and providers may be more willing to continue to adopt telehealth.

Proposition 7a. The conflict between values of personal security and social growth values of self-transcendence and universalism such as health equality can drive the readaptation of telehealth to meet specific patient needs.

Proposition 7b. The readaptation of telehealth to meet specific patient needs motivates continuance in adopting telehealth.

7 Theoretical Implications

7.1 A Values-Based Theory of Telehealth Adoption

This paper drew on a BHV perspective to investigate shifts in values salience during the Covid-19 pandemic and their influence on telehealth adoption in times of crisis. A literature review of telehealth adoption during Covid-19 was conducted. This identified a set of values which were salient in the initial adoption and post-adoption of telehealth during Covid-19. Following a critical analysis of these findings, a set of propositions explaining telehealth adoption during a crisis were developed.

The findings and propositions from this study lay the foundations for a values-based theory of telehealth adoption. The main contribution of this theory is to provide a wider understanding of telehealth adoption than current theories, which are mostly narrowly focused on psycho-social factors such as users' perception of technology performance (Chau & Hu, 2002; Rahi et al., 2021), user confidence (Chong et al., 2022; Zobair et al., 2019), and social influence (Rahi et al., 2021; Wu et al., 2021). A major contribution of the values-based theory developed in this paper is to unveil the dynamics and tensions through which shifts in values during a crisis occur, highlighting not only their implications for telehealth adoption but also their innovation potential. This casts further light on the motivation and barriers affecting continuous adoption of telehealth, thus adding significantly to the understanding of telehealth adoption achieved with current technology adoption theories (e.g., Chau & Hu, 2002; Rahi et al., 2021; Wu et al., 2021; Zobair et al., 2019).

First, contrary to what is implied in the current literature (Bokolo, 2021b), the salience of social security values (e.g., public safety) was not necessarily linked to the loss in salience of other values (e.g., privacy and confidentiality). Therefore, it was not a sufficient driver of telehealth adoption in response to the Covid-19 crisis. Through the theory of BHV, this study has illuminated how, by becoming salient, social and personal security values brought about

tensions with other values (e.g., privacy, confidentiality, and financial viability) aimed at the protection of financial and reputational resources, potentially hindering telehealth adoption (Propositions 1b-c). The examples of privacy, confidentiality, and financial viability show how personal protection values that are either directly or indirectly oriented to protecting healthcare practitioners' and providers' reputations, social/professional status, resources, and therefore a position of power may have more salience than conservation values of social and personal security and may potentially hinder telehealth adoption even during a crisis. Likewise, this paper has revealed that healthcare practitioners' goals of preserving financial stability, professional reputation, and authority regain salience in the post-adoption of telehealth (Propositions 4a and 5a). The conflict between values associated with these goals (e.g., values of self-enhancement) and values of social and personal security may hinder continuance in adopting telehealth. Hence, policy measures to reduce the salience of these values are necessary to lower barriers to telehealth adoption.

Second, this paper demonstrates how the affordances of telehealth can drive shifts in values between the initial adoption and post-adoption of telehealth during a crisis, thus sustaining continuance in adopting telehealth. Following the rapid and widespread adoption of telehealth in response to the pandemic, telehealth affordances contributed to the salience of personal growth values such as convenience and patient autonomy (Proposition 2a), potentially starting a cultural shift from in-person to patient-centered care, which years of national healthcare policies have failed to achieve (Klecun, 2015). Values of patient autonomy guiding patient-centered policies in support of telehealth have often been viewed as encroaching on the authority of medical professionals (Kitson et al., 2013; Shaw et al., 2017) and as a potential barrier to telehealth adoption (Bernardi & Exworthy, 2020). In contrast, this paper has shown how patient-centered care afforded by telehealth can augment the salience of growth values

oriented to the empowerment of patients, which, in turn, can sustain continuous adoption of telehealth by medical professionals.

Third, this paper has shown the complexity of personal security values in healthcare, and how conflict and shifts in salience between these values characterized changes in healthcare practitioners' and patients' perceptions of risk and safety associated with telehealth visits in the initial adoption and post-adoption of telehealth during the pandemic (Propositions 1a and 3a). The importance of values of personal security is understandable, given the context of healthcare, particularly during a pandemic. Yet the implications of these values for the adoption of telehealth, particularly concerning their conflict with values of personal growth such as patient autonomy, have been overlooked in the literature. An important finding from this study is that healthcare practitioners' preference for in-person care over telehealth is not purely driven by social growth and social protection values and their respective goals of quality of care and patient safety, as is suggested in other research (Bernardi & Exworthy, 2020; Rangachari et al., 2021; Keenan et al., 2021; Heyer et al., 2021; Murphy et al., 2020). Instead, it reflects a sense of personal security that healthcare practitioners derive from in-person care. This explains why some healthcare practitioners may be less inclined than others to value the achievement of goals of patient autonomy through telehealth, and why arguments of clinical effectiveness are often insufficient to motivate telehealth adoption (Bernardi & Exworthy, 2020).

Furthermore, the literature has often considered personal growth values of autonomy as a source of empowerment that is desirable for patients and may therefore motivate patients' adoption of telehealth (Bradford et al., 2015; Suter et al., 2011). Other studies have questioned this view, showing how greater autonomy in self-care through telehealth can burden patients (Brunton et al., 2015). Findings from this paper add to this debate by showing the importance of values of interpersonal care as fulfilling patients' needs for personal security, which outweigh their desire for autonomy, thus leading to a loss in salience of values of personal growth. Ultimately, the

loss in salience of values of personal growth, due to their tension with conservation values of personal security, may hinder patients' continuous adoption of telehealth. As shown in this study, this risk increases when telehealth reproduces a biomedical model of care instead of catering to the psychosocial needs of patients.

Finally, while previous research has merely focused on what factors influence telehealth adoption (e.g., Chau & Hu, 2002; Rahi et al., 2021; Wu et al., 2021; Zobair et al., 2019), this study unveils the different innovation potential of values. As shown in this study, personal growth values of self-direction (e.g., patient autonomy) can drive the adoption of more technologically advanced telehealth solutions (Proposition 2e). In contrast, personal growth values of self-enhancement (e.g., convenience) may motivate continuance in adopting telehealth without innovation (Proposition 2c). In addition, the conflict between values of personal security and values of self-transcendence such as health equality can lead to creative re-adaptation of telehealth through hybrid telehealth strategies (Proposition 7b).

7.2 Advancing Values Perspectives on Information Technology Adoption and Crisis

In addition to contributing to the literature on telehealth adoption, this paper adds to existing values perspectives on IT adoption and crisis. First, while previous research has highlighted the role of values of social protection (Sortheix et al., 2019) in crafting "preserving responses" (Carugati et al., 2020) during a crisis, this study has shown the importance of values of personal security in motivating telehealth adoption during a crisis. These findings suggest that the goal of benefitting public security may not be sufficient to motivate IT adoption in response to a crisis. Second, in complementing previous research on the shift from social security values during a crisis to personal protection and personal growth values post-crisis (Lee & Fujita, 2011; Steinert, 2020), this paper provides a more nuanced understanding of the differences between types of personal protection values and their implications for IT adoption during a crisis. In particular, it shows how personal protection values that respond to the self-interest of

protecting one's material resources and authority do not lose salience during a crisis. On the contrary, they need to be realized to enable IT adoption that benefits public security. Finally, with regard to previous research attributing more innovative potential to social growth values projected toward public good (Puohiniemi & Verkasalo, 2020) than to personal growth values oriented to the betterment of an individual (Tams et al., 2020), findings from this study highlight the different potential of personal growth values in generating innovation from IT adoption. The extent to which some personal growth values can generate innovation may depend on their link with other social growth values (e.g., the importance of patient autonomy for quality of care).

8 Study Limitations and Future Work

The significance of the values-based theory developed in this paper is not limited to telehealth adoption in times of crisis but can be extended to other events such as external jolts and radical IT-enabled transformations, which may cause shifts in values salience. The theory can be employed as an analytical tool to investigate what drives and sustains IT adoption following shifts in values salience not only in healthcare but also in other contexts. For example, personal protection values linked to professional autonomy and work–life balance may affect digitalization efforts in other working contexts such as education.

However, values shifts identified in this study are bound to the context of telehealth adoption in healthcare. While some of these values may be significant in other contexts (such as professional autonomy or competence in other professional organizations), it is also true that some of the values identified and their relationships may be relevant to healthcare only (such as personal security values). This study also did not consider differences in values across different pathologies or medical specialties, an issue that requires further investigation. Further research should also investigate the extent to which shifts in values and their influence on telehealth adoption are culturally or politically motivated. For example, healthcare providers'

willingness to use telehealth for medical abortion may be influenced by political, religious, or cultural views.

Finally, this study also highlighted how values oriented to the protection of self-interest remain salient even during a crisis. Future research could investigate the implications of these values in driving IT adoption and crisis responses that may reinforce power structures, while also widening existing inequalities in society. The research contributions of this paper, together with further recommendations for future work, are summarized in Table 2.

Table 2. Summary of research contributions and recommendations for future work

Topics	State of the art	Research contributions	Research questions for future work
Telehealth/IT adoption during a crisis	Social and personal security values drive telehealth adoption during a crisis (Bokolo, 2021b; Webster, 2020).	Social and personal security values are not sufficient to drive telehealth adoption during a crisis. These values augment tensions with values for the protection of financial and reputational resources underlying a position of power. The resolution of this tension with policy intervention is necessary to enable telehealth adoption.	How does the tension between the need for public security and the status quo of powerful actors influence telehealth/IT adoption during a crisis or radical change?
	Values of social protection (Sortheix et al., 2019) drive IT adoption in response to a crisis (Carugati et al., 2020). Social security values gain salience during a crisis, while personal protection and personal growth values become salient post-crisis (Lee & Fujita, 2011; Steinert, 2020).	Personal values for the protection of one's material resources and authority do not lose salience during a crisis. On the contrary, they need to be realized to enable IT adoption that benefits public security.	
Telehealth as an enabler of values shifts and patient-centered care	The lack of a systematic understanding of shifts in users' perceptions of telehealth between initial adoption and post-adoption of telehealth, and how this may affect continuance to adopt telehealth.	After its initial adoption, telehealth can afford shifts from personal security (e.g., safety) to personal growth values (e.g., convenience), sustaining its continuous adoption.	How do shifts between personal growth values of patient autonomy and personal security values of in-person care vary across

	Personal growth values of patient autonomy guiding patient-centered policies in support of telehealth may encroach on the authority of medical professionals (Kitson et al., 2013; Shaw et al., 2017) and become a barrier to telehealth adoption (Bernardi & Exworthy, 2020).	Patient-centered care afforded by telehealth can augment the salience of growth values for the empowerment of patients, sustaining continuous adoption of telehealth by medical professionals.	medical specialties or conditions? How do differences in values across medical specialties influence telehealth adoption? To what extent are shifts between personal growth values of patient autonomy and personal security values of in-person care and their influence on telehealth adoption politically or culturally motivated? How do patients' characteristics (e.g., age, sex, ethnicity social and economic conditions, education) influence their sense of autonomy or insecurity following adoption of telehealth? What telehealth affordances can sustain a biosocial model of care that reduces tensions between personal growth values of patient autonomy and personal security values of in-person care?
Values of personal security as barriers to telehealth adoption	The lack of research on the implications of values of personal security for telehealth adoption.	Tensions between values of personal security (e.g., interpersonal care and safety) and between values of personal security and personal growth affect healthcare practitioners' and patients' perceptions of risk and safety associated with telehealth visits in the initial adoption and post-adoption of telehealth, respectively.	
	Healthcare practitioners' preference for in-person care over telehealth is driven by social growth and social protection values and their respective goals of quality of care and patient safety (e.g., Bernardi & Exworthy, 2020).	Healthcare practitioners value in-person care more than patient autonomy through telehealth due to a sense of personal security from in-person care. This may constitute a barrier to healthcare practitioners' continuing adoption of telehealth.	
	Personal growth values of autonomy are a source of empowerment that is desirable for patients and may therefore motivate patients' adoption of telehealth (Suter et al., 2011; Bradford et al., 2015). Yet greater autonomy in self-care through telehealth may also burden patients (Brunton et al., 2015).	Values of interpersonal care that fulfil patients' needs for personal security may outweigh their desire for autonomy, thus representing a barrier to patients' continuing adoption of telehealth. Telehealth services that reproduce a biomedical model of care may augment the salience of personal security values driving patients' sense of insecurity. This in turn undermines patients' intention to continue to adopt telehealth.	

The potential of values to generate innovative telehealth solutions	Research has merely focused on what factors influence telehealth adoption (e.g., Chau & Hu, 2002; Rahi et al., 2021; Wu et al., 2021; Zobair et al., 2019), regardless of their potential for generating innovative telehealth solutions.	The innovation potential of values varies. For example, personal growth values of self-direction (e.g., patient autonomy) can drive more innovative telehealth solutions than personal growth values of self-enhancement (e.g., convenience). Conflict between values of personal security and social growth values (e.g., health equality) can lead to innovative hybrid telehealth strategies.	What are the enablers of or barriers to the development and adoption of innovative telehealth solutions? What telehealth solutions can afford greater health equality?
	Social growth values projected toward public good (Puohiniemi & Verkasalo, 2020) have more innovation potential than personal growth values (Tams et al., 2020).	Personal growth values have a different potential in generating innovation from IT adoption. This potential may depend on their link with other social growth values (e.g., the importance of patient autonomy for quality of care).	

9 Implications for Practice

Findings from this study can guide the efforts of health practitioners, healthcare managers, and policy makers in making telehealth more viable in future post-crisis scenarios. In particular, they can help healthcare managers identify critical values that, if unrealized, may hamper telehealth adoption. For example, to sustain the use of telehealth post-Covid-19, healthcare professionals need to invent new ways of communicating and conducting virtual physical examinations (Quinn et al., 2020). Yet this can be challenging for healthcare professionals, since it may require a lot of interactions with patients, adding to their workload. The risk is that the realization of values of convenience and patient autonomy encroaches on the value of work–life balance. Healthcare managers need to be mindful about these challenges and find ways to smooth the transition of their staff to telehealth in order to minimize resistance to change. Ways

of achieving this include giving healthcare practitioners more control over their workload and the time that they need to dedicate to online consultations, managing patient expectations about healthcare staff availability online, alternating online with in-person surgery at set times, and having an online booking system for both online and in-person visits.

To increase acceptance by healthcare practitioners and patient satisfaction, healthcare managers should also ensure that the appropriate technology facilities and devices are available to healthcare practitioners, particularly in medical specialties that require more advanced diagnostic tools, such as teledermatology. In addition, procedures to identify which patients are more in need of in-person care should be in place.

Another potential conflict may arise when a narrow focus on patients' medical outcomes is taken to assess quality of care. Findings from the literature review revealed the risk of a medicalized approach in the provision of care that takes a narrow view of values of personal growth (e.g., patient autonomy), thus neglecting patients' wider psychosocial needs. In addition to patient autonomy, other values, such as health equality, should drive the design of telehealth solutions that are more inclusive of the needs of the wider patient population.

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