sustainability

MDPI

Article

Digital Virtual Consultations and Improved Stakeholders' Health and Wellbeing amongst Hospital Doctors

Dorothy Zammit [1], Gianpaolo Tomaselli [1], Sandra C. Buttigieg [1], Lalit Garg [2] and Gloria Macassa [3,*]

[1] Department of Health Systems Management & Leadership, Faculty of Health Sciences, University of Malta, MSD 2080 Msida, Malta
[2] Department of Computer Information Systems, Faculty of Information & Communication Technology, University of Malta, MSD 2080 Msida, Malta
[3] Department of Public Health and Sports Science, Faculty of Health and Occupational Studies, University of Gävle, 801 76 Gävle, Sweden
* Correspondence: gloria.macassa@hig.se

Abstract: The past several decades have seen a shift in patient care towards digitalisation, which has ushered in a new era of health care delivery and improved sustainability and resilience of health systems, with positive impacts on both internal and external stakeholders. This study's aim was to understand the role of digital virtual consultations in improving internal and external stakeholders' health, as well as wellbeing among hospital doctors. A qualitative research approach was used with semi-structured online interviews administered to hospital doctors. The interviews showed that the doctors viewed digital virtual consultations as supplementary to in-person consultations, and as tools to reduce obstacles related to distance and time. If the necessary infrastructure and technology were in place, doctors would be willing to use these options. Implementing these technologies would improve the medical profession's flexibility on the one hand; but it might affect doctors' work–life balance if consultations extended beyond standard working hours.

Keywords: video consultations; digitalisation; stakeholders' health and wellbeing; corporate social responsibility; hospital doctors; patient care

Citation: Zammit, D.; Tomaselli, G.; Buttigieg, S.C.; Garg, L.; Macassa, G. Digital Virtual Consultations and Improved Stakeholders' Health and Wellbeing amongst Hospital Doctors. *Sustainability* **2023**, *15*, 4428. https://doi.org/10.3390/su15054428

Academic Editor: Francesco Caputo

Received: 23 December 2022
Revised: 23 February 2023
Accepted: 28 February 2023
Published: 1 March 2023

1. Background

Countries and their health care systems are struggling because of geographic barriers, changing demographics as populations age, and rising health care costs [1]. Today's health care systems have long waiting times linked to the increased demand and a limited workforce. This causes patients to worry about access to care, which weakens the doctor–patient bond and results in increased dissatisfaction with the standard of care received, ultimately affecting patient outcomes [2]. However, with an increase in incidence of burnout, job discontent, and high turnover rates, the increased burden on health care systems has also affected the health and wellbeing of health care professionals [3,4].

Advances in the technological environment are encouraging the adoption of digital tools as health care systems improve equity in access to care, maintain quality in the delivery of care, control the skyrocketing costs, and, last but not least, improve the wellbeing and job satisfaction of health care workers [1]. Digital tools allow increased access to care, better patient autonomy, and a smoother organisation of workloads, and encourage digital alternatives to traditional health care delivery methods [5]. For these reasons, policy makers are urging the adoption of digital consultations in health care settings.

Telemedicine is defined by the World Health Organization (WHO) as the use of information and communication technology (ICT) by medical professionals to deliver health care when a physical barrier exists [6]. "Telehealth" and "telemedicine" are frequently used interchangeably. However, the word "telemedicine" tends to limit the use of digital health

technology to those in the medical field, whereas "telehealth" refers to its use by a variety of other health care professionals [6].

Several countries worldwide are adopting digital health care [7]. For example, Poland began implementing telemedicine in the early 20th century, and in 2013, Korea sought to legalise the use of digital consultations between patients and medical personnel [7,8]. The rapid advancement of ICT, quick access to the Internet, and the adoption of electronic patient records (EPRs) have encouraged member countries of the Organisation for Economic Co-operation and Development (OECD) to invest in telemedicine [9]. Furthermore, digital health has been acknowledged as a vehicle for increasing the sustainability of the healthcare sector [10] in line with the United Nations (UN) Sustainable Development Goals (SDGs). In particular, achieving universal health coverage (SDG 3) can be facilitated by the implementation of ICT and digital technologies within healthcare organisations [11–13].

Use of intricate technology and infrastructure, the duration of use, and patients' ease of access are all issues in telemedicine [14]. Video consultations are an example of telemedicine that is "synchronous" or takes place in real time. However, telemedicine can also be "asynchronous", where the data are stored and then handled later, a process applicable to electronic consultations [2,11].

Further advantages of using telemedicine for health systems are improved patient outcomes by empowering individuals to participate actively in their medical care [7]. Furthermore, telemedicine allows a reduction in waiting times through assisted triaging and offers some flexibility to the medical profession by reducing the number of patients in waiting rooms, allowing clinicians to concentrate on challenging situations improving patient management, impacting work–life balance [15,16]. Through the exchange of evidence-based information, digital consultations supplement traditional medical care and facilitate the follow-up of institutionalised and chronically ill patients. They also serve as a source of education for both patients and medical professionals [11,17,18].

The literature has also shown advantages of telemedicine and teleconsultations in comparison to more traditional telephone consultations, In the study by [19], technology was perceived as an innovative way to manage consultations and reduce the associated complexity. In all, 81% of respondents in the study conducted by [20] found that teleconsultations were better than telephone consultations and the providers felt supported leading to a reduced level of anxiety when dealing with acute or complex cases. Compared to telephone consultations, teleconsultations reduced the volume and length of the medical consultation [21].

Despite these difficulties, [22] found that virtual consultations scored better than telephone consultations when it came to establish rapport with the patient, while [23] noted that digital consultations enhanced patient contact, allowing for assessment through the patient's appearance and allowing for both verbal and nonverbal communication.

On the other hand, the literature has also shown a number of disadvantages and challenges brought by the implementation of telemedicine in health care. These include (i) the need for technical training on the part of the health care professionals and, to some extent, the patient; (ii) the availability—or unavailability—of the equipment required to conduct the (tele)visit; (iii) the potential for a reduction in continuity of care similar to the retail healthcare movement; and (iv) the inability by the health care professionals to conduct a physical examination [24,25]. As a result, ICT and telemedicine have been incorporated into the sustainability and corporate social responsibility (CSR) strategy of health systems [26]. The concept of CSR was originally understood as a social duty for corporations to make decisions and act responsibly in accordance with societal objectives and values [27]. Today's definition of "CSR" includes businesses' ongoing commitment to act morally, promote economic growth, and enhance the lives of their employees and their families, the local community, and society as a whole [28]. The term "CSR" has been defined in various ways throughout the last century; however, the European Union (EU)'s definition concisely and effectively summarises the meaning of the term as corporations' responsibilities for their impact on society [29]. Through improving the health and wellbeing of stakeholders (both

internal, such as health care workers, and external, such as patients), the use of digital tools in health care contributes to the success of the CSR strategy as a whole as well as to the sustainability of the health care sector.

Against this background, this study explored doctors' experiences of, attitudes towards, and thoughts on digital virtual consultations and the extent to which these can improve their patients', as well as their own, health and wellbeing. This research was conducted in a tertiary hospital in Malta. The need for research addressing the planning and implementation of digital technologies within the Maltese health system was identified in a number of national policy documents and literature [30]. As such, this work is an early step in understanding the willingness of the Maltese medical workforce in adopting new technologies that will invariably lead to new ways of practicing medicine as well as introducing new ways of interacting with patients. This research could also potentially pave the way to further discussions between administration and workforce in regard to the implementation and utilisation of digital consultations in the Maltese health care system.

2. Methodology

2.1. Research Setting and Selection of Participants

Using an explanatory sequential approach nested within the philosophical worldview of pragmatism, this research study adopted a qualitative research design [31,32]. Sound qualitative research employs methodical and rigorous ways to investigate people's perceptions and emotions around events and circumstances [33,34].

From March to May 2021, thirteen (n = 13) online interviews were conducted. There is an ongoing debate about how many interviews/participants a qualitative study should have; however, a large part of the literature agrees that a sample of between five and fifty participants is considered adequate [35,36]. The interviews took place at the interviewees' convenience and lasted, on average, 28 min. The interviewees practised various specialties at varying levels of seniority. An equal number of men and women participated in the interviews, and the average age of the participants was 45 years. Participants were selected using a snowball sampling technique where they were asked to provide access to other respondents within the same population to increase the breath of data collection and sample size [37,38]. A limited number of participants were recruited with the COVID-19 pandemic impacting the availability of persons to interviews.

2.2. Data Collection

From all the potential participants contacted, thirteen (n = 13) doctors working at the hospital under study accepted to participate in online semi-structured interviews using Microsoft Teams (Microsoft, Seattle, WA, USA). The questions asked in the semi-structured interviews were open-ended, allowing for in-depth discussion of the study issues and elaboration of ideas in order to obtain richer data [39–41]. Questions asked included experience with video consultations, the perceived role of video consultations in medical practice, perceived ease of use of the technology, whether doctors feel ready to the uptake of this mode of consultations, their ideas on whether the organisation is ready for such a change, and what are the perceived factors impacting uptake of video consultations.

For easier data processing, interviews were recorded verbatim and transcribed.

2.3. Data Analysis

Thematic analysis was used to organise data into codes and categories in order to formulate themes. The themes that emerged from this approach will be discussed in this section. Four main themes were identified through thematic analysis of the data gathered, and each theme was divided into categories, as shown in Figure 1. The four themes included the following: Usefulness; Ease of Use; Provider and User Interactions; and Barriers and Facilitators.

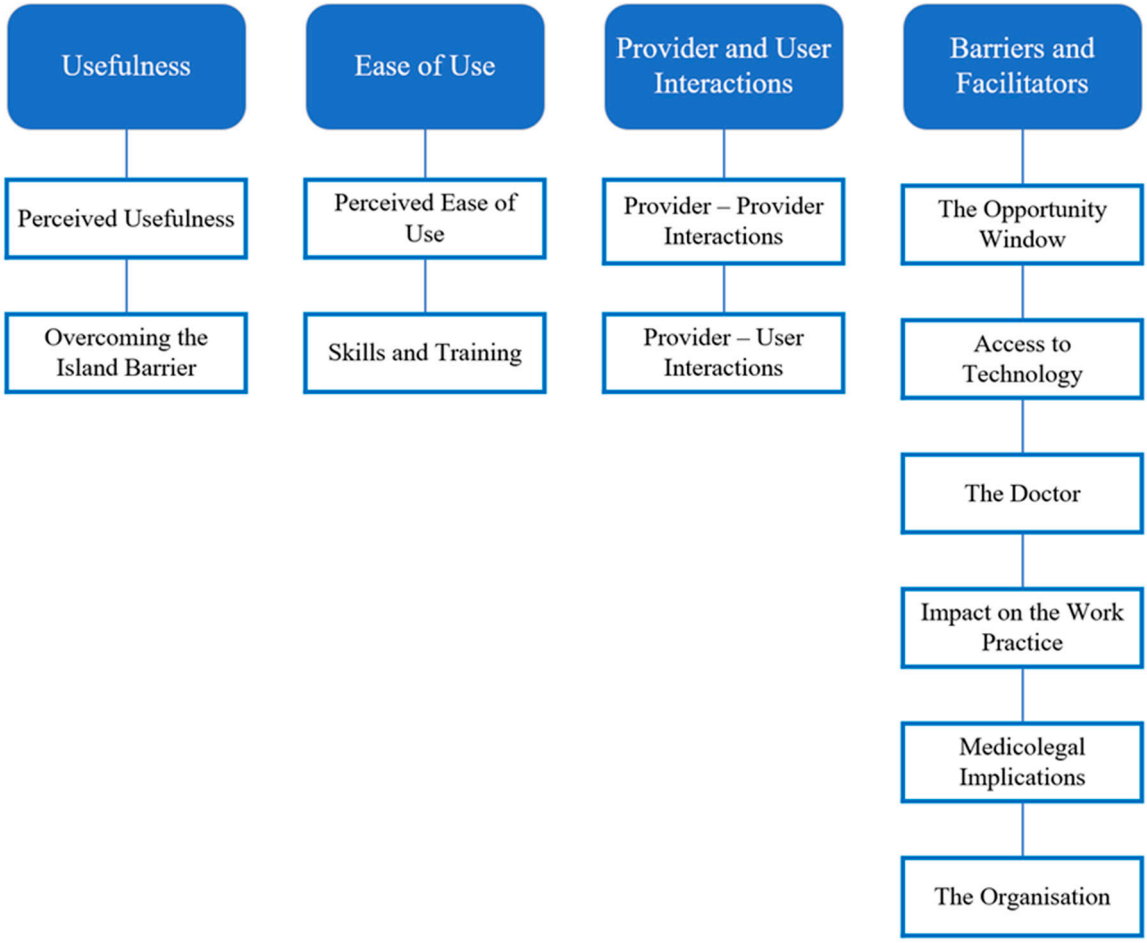

Figure 1. Themes and associated categories identified through thematic analysis.

While developing and analysing the above-mentioned themes, the steps proposed by [42] were followed. In their article, they suggest a four-stage process of analysis comprised of an initialisation, construction, rectification, and finalisation. Through initialisation, the researcher becomes familiar with the data and develops a general understanding by reading repeatedly the dataset. In the construction phase, the researcher commences the process of organisation of the codes and allocates these codes in clusters based on their congruencies and disparities in relation to the study. In the rectification phase, the themes are nearly set; however, the researcher will reassess the process of analysis and, if need be, move away from the data so as to avoid hasty closure of the analysis. In the final phase, the researcher brings the themes together in a narrative with the scope of answering the research question.

Through the process of thematic analysis, the views of the participants can be linked with data that have been collected at different times and situations, enhancing greatly the potential for interpretation [43].

2.4. Ethical Considerations

While this study was conducted, the ethical values of freedom from harm, and the right to autonomy, anonymity, secrecy, and privacy were upheld. All subjects gave their informed consent for inclusion before participating in the study. The study was conducted in accordance with the Declaration of Helsinki. Approval was obtained from the Research Ethics Committee of the Faculty of Health Sciences at the University of Malta (University Research Ethics Committee (UREC) Form V_150620205465). Additionally, approval was received from the data protection office, chief executive officer, and chief clinical chairperson

at the hospital under study. The chiefs of the departments at the hospital divisions that were included in the study granted the required approvals.

So that the individuals could not be identified, data were pseudo-anonymised. Only the researchers gathered, handled, and stored the data, which were then secured with a password.

3. Results

Thematic analysis of the transcriptions yielded four themes: Usefulness; Ease of Use; Provider and User Interactions; and Barriers and Facilitators (Figure 1).

3.1. Usefulness

The theme of Usefulness summarises the interviewees' thoughts and perceptions on the perceived benefits of utilisation of video consultations, as well as the role of video consultations in the context of a small island nation (Malta).

Most interviewees recognised the importance of video consultations for follow-up of cases, rather than as the first point of contact with patients. The traditional face-to-face consultation was still the golden standard for a first-time encounter. Video consultations were perceived as having potential in cases where the patient had been seen at least once, management plans had been drawn up, follow-up could be left to other specialists such as general practitioners (GPs), and the individual patient was perceived as able to utilise the technology. As Doc2 said:

> Ideally, you have physically examined [the patient] once at least, and you know what [the patient] has and has not, and then maybe you can continue his care online. I think I would be much more comfortable like that, right?

These digital alternatives were a potential solution to patient commuting, reducing the number of patients on the hospital premises, allowing for better patient flow management, and diminishing waiting times. As Doc3 argued, "You don't have that pressure of people complaining outside in the waiting room either . . . I guess the other advantage is that, at the moment, we have a significant shortage of outpatient rooms.".

Despite the lack of face-to-face interaction, video consultations would still allow for an individualised approach to care since the doctor would still be able to assess the "elements of the non-verbal". According to the interviewees, these digital platforms also allowed for easier information exchange between colleagues locally and abroad, bridging the local health care system with health systems abroad. As Doc4 continued to elaborate:

> I mean, previously, I would have written a report, sent the [electrocardiograms] ECGs, and sent everything over for review by this foreign consultant. Since we know we can do Zoom, why not do a Zoom, and talk about it in a Zoom and see the person? We can involve the patient as well.

This exchange of information was seen as integral to professional development, enhancing the local level of medical knowledge. Doc4 noted that digitalisation has "opened up new possibilities" and has "facilitated the transfer of information".

Finally, the role of video consultations extends beyond the doctor and the patient, involving the exchange of information between different professionals, impacting the patient care plan. As Doc8 stated " . . . multidisciplinary meetings and sharing information with peers can easily be done through teleconferencing with more or less the same outcome as meeting in person.". However, the medicolegal implications in terms of safety to the doctor and patient when it came to the exchange of medical information over a digital platform were a concern. According to some of the respondents, not all patients are amenable to a video consultation and thus there might be the need for vetting of individual cases. "Given the relatively higher age of our average patient and the lack of infrastructural backup, apart from difficulties in interacting with aforementioned clients, make certain consultations not only useless at times but also dangerous." (Doc13).

3.2. Ease of Use

The theme of Ease of Use revolves around the interviewees' thoughts and perceptions on how easy it would be to utilise these technologies in medical practice, and on the skills and training needed to facilitate the adoption of the said technologies.

Despite the concept of video consultations still being relatively new, doctors were already utilising various technologies to assist in patient care. To this effect, Doc1 said, "We were already talking to each other on Skype on an informal basis and using MSN and that kind of thing, and WhatsApp.".

Younger doctors were perceived as more open and finding it easier to apply these technologies in their medical practice. According to Doc1, "It depends on the age of the doctor, if [the doctor]'s accustomed to using these technologies.". This also applies to younger patients as "the younger generation should be quite comfortable" with attending a virtual consultation compared with their older counterparts.

Having the technology does not imply that all intended users will be able to utilise it correctly without proper training. Hence, there was agreement among the majority of interviewees that education and training should be a requirement for both doctors and patients. "Like everything else, it's just the beginning, which is daunting." (Doc1). The interviewees expressed that doctors needed to acquire new skills to conduct consultations effectively and efficiently via video, assisted with technical support and the appropriate infrastructure. These consultation methods, it was said, needed to be introduced "as part of the training programme" to become "part of the mentality" (Doc1). Doc7 affirmed that all doctors "should have some form of 'courses' or hands on experience in this technological age. The future is digital.". However, doc5 stated that it was not only doctors who needed to adapt to the new changes; the patients also needed to be educated in order to understand the benefits of the new modalities: "You need to educate the patients and like everything . . . yeah . . . because . . . they have to appreciate that it's not an inferior service: it's a more efficient service.".

3.3. Provider and User Interactions

The theme of Provider and User Interactions includes the perceptions of the impact that video consultations might have on the interactions between doctors as providers and patients as users.

Video consultations connect professionals together, not only doctors but also allied health professionals, facilitating multidisciplinary care. They diminish the distance barrier but still allow access to expert opinions from different specialists, reducing the waiting time for patient management. As Doc1 pointed out, "It is less disruptive for the doctor, and for the patients themselves as well, because they're at their desk at home.".

The reduced need to physically attend a consultation associated with telehealth may be advantageous for patients as the level of health care is maintained through the empowerment of patients to self-care. This turns into improved sustainability of the hospital and better health access and coverage (UN SDG 3). As elucidated by Doc1, "The patient will feel more confident because [the patient] is monitoring him/herself and also knowing that the doctor is seeing or receiving or there could be a fast track when something goes wrong.". There was, according to the interviewees, a need for proper identification of those patients who would benefit from such interventions. Once completed, " . . . the patient can be . . . more confident that they might have the opportunity to talk to their professional.".

However, despite the above-mentioned points, some of the participants were concerned about the inability to perform a physical examination when performing a video consultation. As Doc11 stated " . . . the most important parts of a consultation are the history and examination.". In some instances, different specialities were more dependent on a physical examination than others and thus video consultations were not as practical. In this regard, Doc12 affirmed that "in O&G, examination is essential, and it would be difficult to do via video.".

3.4. Barriers and Facilitators

The theme of Barriers and Facilitators encompasses those factors that the interviewees perceived as enhancing or inhibiting the adoption, implementation, and utilisation of virtual consultations.

There was a general agreement among the interviewees that the ongoing COVID-19 pandemic was pressing for change in how doctors practised medicine. It highlighted the benefits that technology might have in reducing exposure to both doctors and patients while at the same time maintaining access to care. Doc1 stated that the technology was "inconceivable until 3 years ago and then . . . in 2020 . . . COVID happened; it has really cemented the need and the importance of it". Furthermore, respondents saw the current COVID-19 pandemic as a window of opportunity for the adoption of digital alternatives allowing for the medical practice to go on with minimal interruption while maintaining social distancing (Doc10: "in COVID situation it is especially important").

Among the interviewees, there was a perception that, despite the push towards digitalisation, the technical infrastructure was not yet up to standard. Doc4 noted that, in terms of hardware, "we're still backwards". This was echoed by Doc5, who stated, " . . . right now, it's not; it's very basic". The interviewees expressed that new technologies needed to be integrated into the systems already in place and doctors needed to be reassured that data transfer was safe and that there was a sound medicolegal framework backing up these initiatives. The medicolegal framework should address the safety of patient-related data transfer and handling following video consultations.

The specialty of a doctor could impact the uptake of virtual consultations. The interviewees felt that some specialties were more suitable for digital consultations than others depending on whether a physical examination was required and whether this could be delegated to another professional who was with the patient. As Doc4 said, "It varies by specialty as well . . . If you're checking . . . you want to check whether it's surgery, for example, if you want to check whether the patient has a hernia or not, you have to examine.". Doc2 gave another example: "Dermatology, it's quite comfortable to use the video, but you know how you can perform a good surgical or neurological examination?".

Several of the doctors, such as Doc3 in the following, voiced concern about the inability to physically examine a patient when performing a video consultation.

"I take my specialty as an example . . . one of the ways of knowing whether they're getting worse is by examining them and taking certain parameters . . . so I can't see how a video consultation can replace a face-to-face visit with an examination directly".

The same interviewee continued to elaborate that, in cases "where you might be about [to] breach bad news", the patient should be "sitting in front of you, not part of their laptop".

Since video consultations altered how health care was provided, the effect on health professionals' workload was debatable. The interviewees felt that practices needed to be reorganised and patients identified; also, it was important that the consultations should be easy to set up. These alternative forms of consultations needed to "be acknowledged and recognised [by the organisation] as equal to the traditional face-to-face consultations"; they needed to be included in agreements and contracts, and the professionals providing them needed to be given appropriate remuneration and protected time.

Despite the flexibility these modes of consultation offered, there was concern that video consultations would intrude outside of work, further jeopardising doctors' already limited work–life balance.

However, the interviewees were open to discussions centred on adopting the technologies and argued that the identification of health care champions would further enhance the uptake of this initiative. Doc1 noted that, despite general resistance, "there are some people who are hyper enthusiastic . . . some people are . . . particularly amazing"; these champions could initiate the adoption of virtual consultations.

Furthermore, some of the interviewees suggested that access to telemedicine can be impacted by social inequalities. In this respect, not all patients might be amenable to a

video consultation, as Doc5 pointed out, "either they don't have access to technology, or they don't have the knowhow or training on how to use it". Therefore, individual case vetting might need to be carried out so as to identify the population of patients who would benefit from these alternative forms of consultations.

There was also a general perception amongst the interviewees that not all patients would be able to utilise this technology either because of age or because of the lack of infrastructure. As Doc1 said, "I think it's a little more difficult for the older people", while Doc1 identified the younger generation as being more "media friendly", thus "the younger generation, they should find it quite comfortable". Finally, without a sound and robust technological infrastructure, digital consultations cannot be held, especially if the software is not supported, resulting in an inability to initiate and continue a video consultation. The organisation plays a role in investing in such infrastructures. These issues have been emphasised by some of the interviewees, such as Doc9 who stated the following: "our hardware is past its prime, in spite of recurrent complaints to administration.".

3.5. Summary of Key Findings

A summary of key features under each theme is presented in Table 1 below.

Table 1. Summary of key features under each theme.

Theme	Key Features
Usefulness	• More efficient follow-up of medical cases • Less patient commuting • Reduced number of patients in the hospital • Better patient flow management • Reduced waiting times • Easier information exchange
Easy to use	• Ease of applying the technology in the medical practice • Ease of use will depend on health professionals' (and patients') age and technology skills • The need for further education and training (for both doctors and patients) • The need to develop new skills • The need for technical support and adequate infrastructure
Provider and user interactions	• Bring professionals together • Facilitate multidisciplinary approaches to care • Diminish distance barriers • Give access to expert opinion exchange • Provide patient empowerment and self-care
Barriers and facilitators	• Current technical infrastructures are still inadequate • New technologies need to be integrated into the systems already in place • There are data transfer issues • Certain specialties are more challenging to "move online" • Practices need to be reorganised • Doctors' work–life balance is impacted • Social inequalities impact on access to telemedicine

In conclusion, regarding the differences between teleconsultations and telephone consultations, some of the interviewees in our study did have experience in consultations through telephone; however the focus of the interviews was to discuss video consultations, their role and factors affecting their uptake and implementation. With the onset of the pandemic, telephone consultations had already been implemented.

Despite the inability to be physically present, the webcam allows the providers and users to see each other, and as Doc4 said, "you have gotten other elements of the non-verbal, you have got facial expression, you can look into the eyes of the other person you know", so the medical professional can have a clearer picture of how the patient is feeling compared to a telephone consultation.

4. Discussion and Conclusions

4.1. Discussion of Results

This study aimed to explore doctors' experiences of attitudes towards and thoughts on digital virtual consultations and the extent to which these can improve their patients', as well their own, health and wellbeing. The study found that doctors perceived video consultations as having a relevant role in providing care by facilitating access to health care while maintaining the quality of care. They also perceived the health care organisation as instrumental in providing the necessary resources with the appropriate infrastructure and technical support, impacting the ease of utilisation. Doctors expressed their intention to utilise these new technologies given the proper setup.

Video consultations were perceived as adjuncts to face-to-face consultations, especially in patients requiring follow-up. As suggested by the interviewees, a hybrid approach could be adopted for patients who did "not require actual physical examination". The uptake of digital alternatives depended on the perceived need and perceived benefits relative to their utilisation [44,45]. Digital consultations might potentially have a role in the follow-up of institutionalised patients where on-site health care providers could facilitate the consultation.

Video consultations were also perceived as having a role in reducing the costs related to travelling and taking time off work, allowing for flexibility in conducting consultations in terms of time and space. With fewer patients physically attending hospital visits, the patient flow would be easier to manage simultaneously, allowing doctors to deal with more complex cases face-to-face while minimising exposure within the context of an ongoing pandemic.

Desai et al. [20] reported that participants in their study perceived digital consultations as improving communication between professionals separated by distance, facilitating access to specialist care and serving as channels for both formal and informal learning. These findings were reproduced in our study, where the doctors felt that while previously the caring specialist would need to write reports manually and send them overseas to foreign specialists, the technology facilitated the instant sharing of medical information. They also said that patients can now be involved in consultations with local doctors who act as advocates for their patients during consultations with foreign specialists. As Desai et al. [20] and Johansson et al. [46] argued, video consultations allow more than one actor to participate in the consultation, facilitating communication and leading to improved coordination in patient care and timely management. This could limit the need for repeat face-to-face consultations, predominantly in chronic cases, which could reduce waiting lists and time intervals for visit scheduling and thus augment patient satisfaction.

Virtual consultations assume an essential role in connecting specialists internationally, improving the local level of knowledge and assisting local practitioners in maintaining skills that might otherwise be lost because of the lack of exposure to complex patient cases.

The participants were concerned about medicolegal implications and emphasised that doctor and patient safety are vital. They said doctors felt the need to feel safe while conducting interventions where sensitive personal information was exchanged, especially in complex cases where the lack of a physical examination was perceived as a disadvantage. There was concern that crucial medical information would be missed. Simple technology of robust quality and safety in terms of data storage was therefore needed [46].

Besides recognising the benefits of the new technologies, doctors would need to understand what was required of them when they initiated and completed a digital consultation and what the implementation of such technologies would translate to in terms of adaptations in work practices [47]. Supposing a health care organisation understood the benefits of video consultations and came to implement these technologies, it would have to invest in the proper infrastructure that supports using the technology. The interviewees said that there was a need for investment in appropriate technological infrastructure that ensured simplicity of use, easy accessibility, and the ability to support virtual consultations. The new technologies should fit with the local doctor's practice and be able to be easily integrated

into existing digital systems, with the appropriate level of technical support made available. Besides having to make the initial investment, the health care organisation would be responsible for the sustainability of the initiative, according to our interviewees. Furthermore, another limitation that emerged from the results is the impact of social inequalities on access to telemedicine and the fact that not all patients might have access to technology and/or the knowhow to use it.

The health care organisation was, moreover, perceived as central to initiating virtual consultations by identifying champions. This research has identified young doctors as potential champions whom a health care organisation could recruit to push the initiative forward. This research has also identified young patients, those requiring follow-up without the need for a physical examination, as well as institutionalised patients as individuals who would benefit the most from virtual consultations. Ahmed et al. [48] discussed the successful implementation of telemedicine in specialties such as dermatology, mental health, and neurology. The interviewees argued that particular specialties were better suited for virtual consultations as either they were not heavily reliant on a physical examination or the examination could be digitalised, or the examination could be delegated to a health care provider attending with the patient.

The role and potential of video consultations needed to be recognised and acknowledged, according to our interviewees. Their utilisation should be "in the collective agreement", meaning that both the time dedicated to video consultations and the remuneration needed to be specified.

The workload improvement, in terms of increased productivity and effectiveness, reported by Aghdam et al. [49], was not apparent in this study. Further research should address the impact of introducing new technologies on local work practices.

A window of opportunity for implementation has presented itself in the form of the COVID-19 pandemic. With restricted mobility and the need to limit exposure, innovative ways have been sought to maintain patient contact and health care delivery. This has led to local doctors utilising alternative communication methods, thus providing a level of familiarisation with these new technologies and diminishing the resistance to new practices.

From an internal stakeholder perspective, the literature has shown the role of technology in improving employees' wellbeing (including improved work–life balance, and flexibility). However, the results of this study suggest that digital consultation in a hospital setting may have both a positive impact in terms of a better work–life balance, and a negative impact, as utilisation of the new technology could pressure health care professionals to be available outside of work hours.

From a sustainability perspective, literature has shown the impact of digital technology in improving the sustainability of the health care sector and—in particular—in achieving universal health access and coverage. Results of this study suggest that the implementation of digital video consultations can help in efficiently deal with high patient flows, reducing waiting times and extend health coverage.

4.2. Strengths and Limitations

The aim of this study was to present preliminary results grounding further research that will adopt a mixed methodology to enhance the generalizability of the results. The study was conducted within the context of an ongoing pandemic, which might have reduced the availability of doctors towards participation, coupled with the digital nature of the study, which might have excluded participants who were not familiar or had limited access to the technology. The researchers, however, made every effort to be rigorous in all the stages of data collection and analysis and followed the set ethical procedures to protect the participants' identity. To the authors' knowledge, this is the first study of its kind to explore perceptions of doctors working in a secondary and tertiary care hospital within an island context.

4.3. Recommendations for Future Research

In view of the limited number of interviewees, it would be recommended to increase the breath of this study through the recruitment of more doctors working in different specialities. Feasibility and cost-effectiveness studies should be performed to have a better understanding of the need, demand, and expectations of such technologies within the local medical context. Evaluation of the fit of such technologies to current practice would shed light as to where their introduction would lead to better resource utilisation, improved patient access, improved workloads, and ultimately a better work–life balance.

4.4. Conclusions

This study aimed to explore doctors' experiences of, attitudes towards, and thoughts on digital virtual consultations and the extent to which these can improve their patients', as well their own, health and wellbeing. Findings indicated that doctors perceived digital virtual consultations as a supplement to in-person consultations and as a means of removing barriers brought on by time and location. Doctors would be willing to employ these solutions if the required infrastructure and technology were in place. From a sustainability and CSR perspective, implementing these technologies would increase the flexibility of the medical profession; but, if consultations continued after regular business hours, it would have an impact on doctors' work–life balance. Both the literature and the results of this study stressed the contribution of digital technologies to improve the sustainability of the health care sector by expanding health access and coverage (as per UN SDG 3).

This study presented preliminary results of ongoing research the progress of which will be directed towards expanding the sample of doctors interviewed, implementing a mixed qualitative-quantitative methodology approach and expanding the themes included in this initial phase.

Author Contributions: Conceptualisation, D.Z.; methodology, D.Z.; investigation, D.Z.; research supervision, G.T. and S.C.B.; writing—original draft preparation, D.Z. and G.T.; writing—review and editing, D.Z., G.T., S.C.B., L.G. and G.M. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: The participants have provided informed consent.

Data Availability Statement: Primary data were collected through semi-structured interviews, which were recorded and transcribed verbatim. Data can be accessed by contacting the authors.

Acknowledgments: The authors would like to acknowledge the support received from the Department of Public Health and Sport Sciences at the University of Gävle, Gävle, Sweden.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Zildzic, M.; Salihefendic, N.; Krupic, F.; Beganovic, E.; Zunic, L.; Masic, I. Telemedicine in Gastroenterohepatology. *Acta Inf. Med.* **2014**, *22*, 276–282. [CrossRef] [PubMed]
2. Liddy, C.; Afkham, A.; Drosinis, P.; Joschko, J.; Keely, E. Impact of and Satisfaction with a New EConsult Service: A Mixed Methods Study of Primary Care Providers. *J. Am. Board Fam. Med.* **2015**, *28*, 394–403. [CrossRef] [PubMed]
3. Dyrbye, L.N.; Shanafelt, T.D.; Sinsky, C.A.; Cipriano, P.F.; Bhatt, J.; Ommaya, A.; West, C.P.; Meyers, D. *Burnout Among Health Care Professionals: A Call to Explore and Address This Underrecognized Threat to Safe, High-Quality Care*; NAM Perspectives; National Academy of Medicine: Washington, DC, USA, 2017; Volume 7. [CrossRef]
4. Dyrbye, L.N.; Meyers, D.; Ripp, J.; Dalal, N.; Bird, S.B.; Sen, S. *A Pragmatic Approach for Organizations to Measure Health Care Professional Well-Being*; NAM Perspectives; National Academy of Medicine: Washington, DC, USA, 2018; Volume 8. [CrossRef]
5. Ateriya, N.; Saraf, A.; Meshram, V.P.; Setia, P. Telemedicine and Virtual Consultation: The Indian Perspective. *Natl. Med. J. India* **2018**, *31*, 215–218. [CrossRef] [PubMed]
6. World Health Organisation. *Report on the Second Global Survey on EHealth*; WHO: Geneva, Switzerland, 2010.

7. Karwowski, R.; Gasiorowska, J. Telemedicine Consultations in Obstetrics and Gynecology-A Population Based Study in Polishs-peaking Women. *Ginekol. Pol.* **2018**, *89*, 677–681. [CrossRef] [PubMed]
8. Kwon, I.H. High Time to Discuss Future-Oriented Telemedicine. *Health Inf. Res.* **2015**, *21*, 211–212. [CrossRef] [PubMed]
9. Eze, N.D.; Mateus, C.; Hashiguchi, T.C.O. Telemedicine in the OECD: An Umbrella Review of Clinical and Cost-Effectiveness, Patient Experience and Implementation. *PLoS ONE* **2020**, *15*, e0237585. [CrossRef]
10. Faggini, M.; Cosimato, S.; Nota, F.D.; Nota, G. Pursuing sustainability for healthcare through digital platforms. *Sustainability* **2018**, *11*, 165. [CrossRef]
11. Voran, D. Telemedicine and Beyond. *Mo. Med.* **2015**, *112*, 129–135.
12. Kickbusch, I.; Piselli, D.; Agrawal, A.; Balicer, R.; Banner, O.; Adelhardt, M.; Xue, L. The Lancet and Financial Times Commission on governing health futures 2030: Growing up in a digital world. *Lancet Comm.* **2021**, *398*, 1727–1776. [CrossRef]
13. WHO. *Global Strategy on Digital Health 2020–2025*; World Health Organization: Geneva, Switzerland, 2021.
14. WHO. *Universal Health Coverage (UHC)*; WHO: Geneva, Switzerland, 2021.
15. Bhowmik, D.; Duraivel, S.; Singh, R.K.; Sampath Kumar, K.P. Telemedicine—An Innovating Healthcare System in India. *Pharma. Innov.* **2013**, *2*, 1–20.
16. Cascardo, D. Telemedicine: Advancing from Idea to Implementation. *J. Med. Pract. Manag.* **2015**, *31*, 82–84.
17. Klingler, A.M. Is Telemedicine Your Cup of Tea? *JAAPA* **2018**, *31*, 11–12. [CrossRef] [PubMed]
18. Brockes, C.; Schenkel, J.S.; Buehler, R.N.; Grätz, K.; Schmidt-Weitmann, S. Medical Online Consultation Service Regarding Maxillofacial Surgery. *J. Craniomaxillofac. Surg.* **2012**, *40*, 626–630. [CrossRef] [PubMed]
19. Casey, M.; Shaw, S.; Swinglehurst, D. Experiences with online consultation systems in primary care: Case study of one early adopter site. *Br. J. Gen. Pract.* **2017**, *67*, e736–e743. [CrossRef]
20. Desai, S.; Williams, M.L.; Smith, A.C. Teleconsultation from a secondary hospital for paediatric emergencies occurring at rural hospitals in Queensland. *J. Telemed. Telecare* **2013**, *19*, 405–410. [CrossRef]
21. Cowie, J.; Calveley, E.; Bowers, G.; Bowers, J. Evaluation of a Digital Consultation and Self-Care Advice Tool in Primary Care: A Multi-Methods Study. *Int. J. Environ. Res. Public Health* **2018**, *15*, 896. [CrossRef]
22. Randhawa, R.S.; Chandan, J.S.; Thomas, T.; Singh, S. An exploration of the attitudes and views of general practitioners on the use of video consultations in a primary healthcare setting: A qualitative pilot study. *Prim. Health Care Res. Dev.* **2019**, *20*, e5. [CrossRef]
23. Jiménez-Rodríguez, D.; García, A.S.; Robles, J.M.; Salvador, M.D.M.R.; Ronda, F.J.M.; Arrogante, O. Increase in video consultations during the COVID19 pandemic: Healthcare professionals' perceptions about their implementation and adequate management. *Int. J. Environ. Res. Public Health* **2020**, *17*, 5112. [CrossRef]
24. Almathami, H.K.Y.; Win, K.T.; Vlahu-Gjorgievska, E. Barriers and facilitators that influence telemedicine-based, real-time, online consultation at patients' homes: Systematic literature review. *J. Med. Internet Res.* **2020**, *22*, e16407. [CrossRef]
25. Valentino, L.A.; Skinner, M.W.; Pipe, S.W. The role of telemedicine in the delivery of health care in the COVID-19 pandemic. *Haemophilia* **2020**, *26*, e230–e231. [CrossRef]
26. Tomaselli, G.; Garg, L.; Gupta, V.; Xuereb, P.A.; Buttigieg, S.C.; Vassallo, P. Healthcare Systems and Corporate Social Responsibility Communication: A Comparative Analysis Between Malta and India. In *Research Anthology on Developing Socially Responsible Businesses*; Information Resources Management Association, Ed.; IGI Global: Hershey, PA, USA, 2022; pp. 945–961. [CrossRef]
27. Bowen, H.R. *Social Responsibilities of the Businessman*; University of Iowa Press: Des Moines, IA, USA, 1953.
28. World Business Council for Sustainable Development WBCSD. *Corporate Social Responsibility: Meeting Changing Expectations*; WBCSD: New York, NY, USA, 1999.
29. European Commission. *A Renewed EU Strategy 2011–14 for Corporate Social Responsibility*; European Commission: Brussels, Belgium, 2011.
30. Tomaselli, G.; Azzopardi-Muscat, N.; Buttigieg, S.; Calleja, N.; Grech, K. Developing an Agenda for Future Health Services Research in Malta. *Synapse* **2018**, *17*, 7–10.
31. Creswell, J.W.; Creswell, J.D. *Research and Design Qualitative, Quantitative and Mixed Methods Approaches*; SAGE: Thousand Oaks, CA, USA, 2018; ISBN 9781506386768.
32. Bowling, A.; Ebrahim, S. (Eds.) *Handbook of Health Research Methods: Investigation, Measurement and Analysis*; Open University Press: Maidenhead, UK, 2005.
33. Seers, K. Qualitative Data Analysis. *Evid. Based Nurs.* **2012**, *15*, 2. [CrossRef] [PubMed]
34. Thorne, S. Data Analysis in Qualitative Research. *Evid. Based Nurs.* **2000**, *3*, 68–70. [CrossRef]
35. Morse, J.M. Determining Sample Size. *Qual. Health Res.* **2000**, *10*, 3–5. [CrossRef]
36. Dworkin, S.L. Sample Size Policy for Qualitative Studies Using In-Depth Interviews. *Arch. Sex. Behav.* **2012**, *41*, 1319–1320. [CrossRef]
37. Acharya, A.S.; Prakash, A.; Saxena, P.; Nigam, A. Sampling: Why and How of It? *Indian J. Med. Spec.* **2013**, *4*, 330–333. [CrossRef]
38. Elfil, M.; Negida, A. Sampling Methods in Clinical Research; an Educational Review. *Arch. Acad. Emerg. Med.* **2019**, *7*, 52. [CrossRef]
39. Taherdoost, H. Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. *SSRN Electron. J.* **2018**, *5*, 18–27. [CrossRef]

40. Gill, P.; Stewart, K.; Treasure, E.; Chadwick, B. Methods of Data Collection in Qualitative Research: Interviews and Focus Groups. *Br. Dent. J.* **2008**, *204*, 291–295. [CrossRef]
41. Clarke, V.; Braun, V. Thematic Analysis. *J. Posit. Psychol.* **2017**, *12*, 297–298. [CrossRef]
42. Vaismoradi, M.; Jones, J.; Turunen, H.; Snelgrove, S. Theme development in qualitative content analysis and thematic analysis. *J. Nurs. Educ. Pract.* **2016**, *6*, 100–110. [CrossRef]
43. Alhojailan, M.I.; Ibrahim, M. Thematic Analysis: A Critical Review of Its Process and Evaluation. In Proceedings of the WEI International European Academic Conference Proceedings, Zagreb, Croatia, 14–17 October 2012; Volume 1, pp. 8–21.
44. Jury, S.C.; Walker, A.M.; Kornberg, A.J. The Introduction of Web-Based Video-Consultation in a Paediatric Acute Care Setting. *J. Telemed. Telecare* **2013**, *19*, 383–387. [CrossRef] [PubMed]
45. Maarop, N.; Win, K.T. Understanding the Need of Health Care Providers for Teleconsultation and Technological Attributes in Relation to The Acceptance of Teleconsultation in Malaysia: A Mixed Methods Study. *J. Med. Syst.* **2012**, *36*, 2881–2892. [CrossRef] [PubMed]
46. Johansson, A.M.; Lindberg, I.; Söderberg, S. Healthcare Personnel's Experiences Using Video Consultation in Primary Healthcare in Rural Areas. *Prim. Health Care Res. Dev.* **2017**, *18*, 73–83. [CrossRef]
47. Bagot, K.L.; Cadilhac, D.A.; Bladin, C.F.; Watkins, C.L.; Vu, M.; Donnan, G.A.; Dewey, H.M.; Emsley, H.C.A.; Davies, D.P.; Day, E.; et al. Integrating Acute Stroke Telemedicine Consultations into Specialists' Usual Practice: A Qualitative Analysis Comparing the Experience of Australia and the United Kingdom. *BMC Health Serv. Res.* **2017**, *17*, 751. [CrossRef]
48. Ahmed, S.N.; Wiebe, S.; Mann, C.; Ohinmaa, A. Telemedicine and Epilepsy Care-a Canada Wide Survey. *Can. J. Neurol. Sci.* **2010**, *37*, 814–818. [CrossRef]
49. Aghdam, M.R.F.; Vodovnik, A.; Hameed, R.A. Role of Telemedicine in Multidisciplinary Team Meetings. *J. Pathol. Inf.* **2019**, *10*, 35. [CrossRef]