Reciprocal dynamics between patients' choice of place and how they experience video consultations: A qualitative study

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Abstract

Objective: To analyse the reciprocal dynamics between patients' choice of place and how they experience video consultations (VCs) with the general practitioner.

Methods: Qualitative, semi-structured interviews with 27 Danish patients were conducted over a period of 9 months, from February to October 2020. Interviews were analysed using thematic analysis. The analysis was guided by Nelly Oudshoorn's concept of technogeography of care.

Results: The following three themes were identified in the data: VC-home dynamics: balancing boundaries; VC-workplace dynamics: logistical considerations; and VC-body image dynamics: on-screen exposure.

Conclusions: Taking human geography and science and technology studies as our analytical point of departure, we used the concept of technogeography of care and demonstrated how the reciprocal dynamics between patients' choice of place and how they experience VC made boundaries fluid and complex between different contexts and places, such as the home, the workplace and the clinic. These boundaries were negotiated differently by the patients depending on their need for privacy, convenience and support. Additionally, VC reconfigured patients' and general practitioners' roles, increasing patients' responsibility in securing an appropriate health care setting.

Keywords

Digital health, video consultations, place, qualitative, interviews

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Introduction

Video consultations and place

Video consultation (VC) is a remote consultation type that facilitates synchronous, audio–visual communication between a health care provider and a patient.[1] Due to the spatial independence and mobility of VC, this consultation type moves health care delivery away from a fixed place (the clinic) and into new places of the patient's choosing, for example, the patient's home or workplace. While Danish general general practitioners (GPs) offer home visits on some occasions (4.79% of visits to the GP were

home visits in 2020), as a rule, the patient shows up in the clinic.[2,3] Consequently, VCs can be said to redefine and increase the use of home visits, albeit in a new and digital

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form. According to the theoretical framework of human geography, places impact how technology is used because places involve situated human intention.[4] Following this argument, patients' experiences of VC will be influenced by the place in which they conduct the VC due to the meaning they attach to this place. At the same time, science and technology studies (STS) scholars argue that technology shapes and redefines people's experiences of place.[4] Combining these two insights, and paying equal importance to both place and technology, it is possible to investigate the reciprocal dynamics between patients' choice of place and how they experience VC. In a time of increasing VC implementation in health care settings, understanding the underlying reasons for the places chosen by patients for VC and what implications these places have for the VC experience, and vice versa is very important to ensure the future quality of telemedical health care.

Use of VC in international and Danish health care

Internationally, VC has been used across health care settings for routine delivery of health care, including specialist diabetes care,[5,6] cancer care,[7] geriatric care[8] and mental health care.[9,10] Overcoming the challenge of large geographical distances between patients and health care professionals and reducing patients' travel time has often been emphasised as a key benefit of VC.[11–18] In this regard, the inherent spatial independence of VC has improved patients' access to health care. Furthermore, following the outbreak of Covid-19, the physical separation of VC has become even more useful because it avoids contamination risk due to the absence of physical contact between patient and GP. For example, researchers in the UK have emphasised how VC can be appropriate for assessing patients with Covid-19 symptoms,[19] and during the pandemic, the use of VC also increased significantly for non-covid-related consultations.[20]

In Denmark, VC was made freely available to all GPs and all citizens with a mobile device, and patients were encouraged by the health authorities to use VC as a measure to help limit the transmission of Covid-19.[21] Between March and December 2020, VC accounted for 2.6% of the total number of consultations (email and telephone consultations not included) in general practice[22] with a peak in the second week of lockdown in March 2020 followed by a rapid decline from the third week of lockdown as society gradually reopened.[23] During the Covid-19 pandemic lockdown and a controlled re-opening of society in April 2020, the Danish Health Authority stressed that telephone consultations and VC should be the primary consultation types in general practice.[24] Even before the outbreak of Covid-19, Danish health authorities were already underway with a digital transformation of the health care sector, and they are still working on increasing the number of remote consultations with the goal of making every third visit to the GP or hospital internet-based, for example, by using VC.[25] Consequently, this study is timely and could contribute with important knowledge to support a successful ongoing implementation and use of VC.

Research about the impact of place on VC in health care delivery

Several studies have briefly explored how place impacts VC. For example, Donaghy et al.[26] investigated how patients and GPs in UK primary care raised the issue of privacy as connected to place and the potential risk of someone overhearing the consultation. Additionally, they described how patients should be responsible for choosing an appropriate place for VC but did not elaborate on what an appropriate place for VC is. Similarly, Powell et al.[27] concluded that some US primary care patients felt comfortable using VC because they could be in their own supportive environment, but that other patients expressed concerns about privacy and the risk of colleagues overhearing their conversations with the GP. The study by Powell et al.[27] did not provide an answer to what constitutes a supportive environment for the individual patient, what privacy entails or how it can be secured. However, more thorough in relation to the implications of place is a study by Islind et al.[7] about the use of VC in a cancer rehabilitation clinic in Sweden. The authors described how VC conducted in the patient's home afforded the patients privacy and comfort, which resulted in some patients sharing more information with the nurse. In this case, the patients' choice of place had a direct impact on the doctor–patient interaction and the amount of information the patients wanted to share. From the perspective of GPs, Randhawa et al.[28] presented the issue of threatened confidentiality because of GPs not being able to see who is present in the room in which the patient is located during a VC. On a more positive note, Atherton and Ziebland[29] mentioned how GPs have the possibility of getting a view of patients' home settings. However, the authors did not explain why this possibility is relevant and what implications it might have. Not least, Sturesson and Groth[30] explored how clinicians in outpatient care at a hospital in Sweden experienced disturbances and limitations when conducting VC with obese patients located in various places (e.g. at home, in a car and in school), for example, in situations where the clinicians were not sure about who was present in the patient's surroundings and consequently became cautious when asking the patients about sensitive questions. The authors concluded that both place and how the patients felt being in that place were important and that the patient needed to feel secure and comfortable. Moreover, the authors stated that the clinician could guide the patients in choosing a place, although the patients had the final responsibility. Clinicians participating in their study described discomfort

in not knowing who is present in the patient's surroundings during VC, leading to shorter consultations and asking fewer questions, but they also described the possibility of feeling closer to the patient by getting a view of the patient's environment, for example, the workplace, school or home. This study clearly showed how place can play an important role, directly influencing the content of VC. Nevertheless, the study only explored the implications of place from the perspective of clinicians in a hospital, and not within a general practice setting. The studies presented here point to interesting and important implications of place in connection with health care delivery, but knowledge about patients' experiences of place is extremely limited. Our study aims to fill this knowledge gap.

In the following, the theoretical framework, on which we draw to capture and explain the dynamics between place and technology,[4] shall be outlined.

Technogeography of care

Most research on telemedical solutions does not explicitly refer to theory, and many thematic analyses result in a list of barriers and enablers for patients' and health care professionals' uptake of the technology, including adoption and use of VC.[31] To enrich and renew the qualitative field of research on VC, we here adopt the concept of technogeography of care as defined by professor of Technology Dynamics and Healthcare, Nelly Oudshoorn.[4]

Two theoretical fields are combined by Oudshoorn in the concept of technogeography of care: STS and human geography.

First, Oudshoorn makes use of the STS argument that technology 'redefines the meaning and practices of the spaces in which they are used, and (…) introduce[s] new spaces in which people and objects interact'[4] (Oudshoorn uses the terms space and place interchangeably). Thus, technologies are not neutral tools, but actively influence the field in which they are being used together with the actors in this field. This argument is in line with the overall constructivist approach in STS (though it should be noted that there are multiple and substantially different interpretations of constructivism within STS),[32] where technologies influence but are also influenced by the social circumstances in which they are being used. One way in which technologies influence health care settings, according to Oudshoorn, is by reconfiguring responsibilities giving patients a more active role in actions of care. With the use of telecare technologies, which enable health care services at a distance,[33] patients are expected to perform tasks that would have previously been performed by the GP, or other health care professionals, in the clinic.[34] Compared to a physical encounter in the GP's clinic, the complexity of health care is increased as telecare technologies imply multiple actors, places and technologies.[34]

Second, Oudshoorn draws on human geography, which is an approach within the field of spatial science that emphasizes human agency and individuality in the social construction and experience of place (thus, this constructivist approach coincides with STS). This approach attempts to understand human meaning-making in specific places.[35] The human geography approach concentrates on the term 'place', which refers to the location of people.[35] It is this meaning of place we refer to and use in this article. From a human geography point of view, places and people are mutually constitutive,[36] and therefore the places in which health care delivery occurs need to be included as well as the users and the technology when researching and introducing telecare technologies. While the home has often been emphasized as a setting for technologically mediated health care,[4] the inherent mobility of many technologies (e.g. smartphones and tablets) enables health care to take place outside of the home as well. Consequently, it cannot be assumed that health care technologies will only be used in patients' homes, making it even more important to gain insights into patients' choices of place for health care delivery.

Combining the two fields of studies, technology and place, and giving equal importance to both, Oudshoorn rejects any deterministic views on these aspects and instead emphasizes the reciprocal influence between people, place and technologies.[4] Taking the above-defined concept of technogeography of care as our point of departure and adopting the notion of reciprocity, we aim to explore the reciprocal dynamics between patients' choice of place and their experience of VC.

Methods

This study is part of a larger qualitative research project exploring the implications of the use of VC as experienced by Danish GPs and patients. The data corpus in the project consists of semi-structured interviews with users of VC (patients and GPs) and recordings of VC. This article is based on 27 interviews with 17 female and 10 male patients (see Table 1).

Procedure

Because of the small number of patients with VC experience at the time of our data collection (February to October 2020), we did not set up any inclusion/exclusion criteria, for example, demographic variables, but used convenience sampling. However, we aimed at securing variation in age and sex. The patients were recruited in the following ways: with the help of two GPs ($n = 17$), through social media ($n = 7$) and via work-related networks ($n = 3$). All patients had used VC at least once (however, one patient failed to connect with the GP through the VC and the consultation was transferred to an email

Table 1. Participant characteristics.

ID	Age	Sex	Profession	Number of VC	Health condition (what was the VC(s) about)
P01, female, 61 years	61	F	Childminder	2	Test results
P02, female, 59 years	59	F	Technical service assistant	2–3	Test results
P03, male, 76 years	76	M	Pensioner	3–4	Test results
P04, male, 67 years	67	M	Self-employed master painter	1	Test results
P05, female, 58 years	58	F	Disability pensioner (former gardener)	2	Test results; eczema
P06, female, 32 years	32	F	Commercial coordinator	1	Pregnancy
P07, female, 37 years	37	F	Chief secretary	15–20	Anxiety
P08, male, 59 years	59	M	Boilermaker	1	Covid-19 symptoms
P09, male, 63 years	63	M	Pensioner	3	Test results
P10, female, 27 years	27	F	Engineer student	2	Conversation (subject matter not known)
P11, male, 66 years	66	M	Technical service assistant	1	Test results
P12, female, 69 years	69	F	Pensioner	1 (+1 with her husband)	Test results; physical examination of elbow
P13, female, 57 years	57	F	Childminder	1 (planned but failed)	Test results
P14, female, 46 years	46	F	Pedagogue	1	Fever (daughter)
P15, female, 37 years	37	F	Teacher	2	Rash (son) and sprained wrist (self)
P16, male, 43 years	43	M	Manager in the communications industry	3	Bone pain
P17, male, 43 years	43	M	Warehouse and logistics assistant	3	Covid-19
P18, female, 58 years	58	F	Service fitter	2	Covid-19

Table 1. Continued.

ID	Age	Sex	Profession	Number of VC	Health condition (what was the VC(s) about)
P19, female, 41 years	41	F	Pedagogue	1	Sore throat (daughter)
P20, female, 30 years	30	F	Disability pensioner	2	Psychological issues
P21, male, 42 years	42	M	Self-employed in the IT industry	3	Arthritis (son)
P22, male, 28 years	28	M	Medicotechnical job	1	Stress
P23, female, 23 years	23	F	Medical student	2	Psychological issues
P24, male, 74 years	74	M	Pensioner (former teacher)	4	Hypertension (husband)
P25, female, 50 years	50	F	Worker at the municipality	2	Infection in a finger
P26, female, 24 years	24	F	Biology student	1	Pregnancy
P27, male, 44 years	44	M	Pedagogue with IT duties	6–8	Arthritis medication

F: female; M: male; VC: video consultation; IT: information technology.

consultation). Patients were aged from 23 to 76 years old, living in the southern and the capital regions of Denmark.

The interviews were conducted by ECL and a junior researcher individually, either by phone ($n = 18$), video (Zoom, Teams) ($n = 6$), in a physical meeting with the patient in their home ($n = 2$) or in the authors' campus offices ($n = 1$). Interviews lasted between 18 and 50 min and followed a semi-structured interview guide. The purpose of using a semi-structured interview guide was to understand VC from the patient's perspective,[37] allowing room for the individual patient's opinions and experiences. Adjustments were made to the interview guide during the period of data collection, as interviewees served as inspiration for generating new interview questions. Examples of interview questions are: 'Can you explain how your last VC went and what happened?'; 'Did you feel comfortable consulting the GP through VC?'; 'Where were you located and why?'.

Interviews were audio-recorded and transcribed verbatim by ECL and a student assistant concurrent with the data collection. NVivo software (versions 12 and 13) was used for transcription and coding. For access to supplemental materials, please contact ECL by email.

Given that this study focuses on how place matters for VC and vice versa, a reflection should be made on the strengths and limitations related to our various interview methods (physical interview, video interview and telephone interview). Being synchronous in time and place, physical interviews conducted in the home provided an impression of the home environment in which the VC was conducted (in cases where the home was chosen as the place for VC). While video interviews were not synchronous in place, they still mediated visual cues, body language (to some degree) and allowed the participants to see each other's surroundings. Furthermore, the online interaction in a video interview was by some participants considered similar to a VC. Using the video interview method prompted experiences and discussions about the advantages and caveats of VC. While missing out on visual cues in telephone interviews, information about the patient could be drawn from the voice and intonation.[38] Although the use of multiple interview methods shapes the data generation process differently, we did not find that combining in one single study data generated through different interview methods compromised the quality of the data or the trustworthiness of the findings.

Data analysis

Performing the analysis, we were inspired by Braun and Clarke's reflexive thematic analysis (TA).[39,40] In accordance herewith, the analytic process was a continuum from inductive to deductive: initially, the transcripts were read by ECL, EAH and a junior researcher, taking notes along the way. In the next step, ECL performed a preliminary coding that was open and organic (with no use of a codebook) and thus grounded in the data. As an outcome of the preliminary coding process, a theoretical framework, Oudshoorn's theory of technogeography of care, was found relevant to use as an analytical and interpretative tool and a deductive coding of the data was subsequently performed, leading to the development of the following topics: (1) safe places and the home, (2) the home as waiting room, (3) family members, (4) the body, (5) patients' private spheres and (6) surroundings. These preliminary topics served as an overview of potential perspectives on reciprocal dynamics between the choice of place and VC, and they were used as a basis for discussion and intervention amongst all authors. Subsequently, ECL reviewed the entire data set, and, in the next step, began to systematically develop themes, understood as patterns of shared meaning, united by a central idea,[40] in this article, the concept of technogeography of care. Based on several discussions and an iterative restructuring of themes, ECL developed the final main themes and named them as follows: theme 1: VC-home dynamics: balancing boundaries; theme 2: VC-workplace dynamics: logistical considerations; and theme 3: VC-body image dynamics: on-screen exposure.

The authors were reflexive about their theoretical and epistemological standpoints and commitments, discussing how these impacted the way they were analysing the data, for instance how their professional backgrounds (communication, media and medical sociology) might have biased them towards a positive view of the affordances of VC. In line with reflexive TA, the authors acknowledge that their subjectivity impacted the generation of codes, topics and themes. With that said, we considered our diverse backgrounds as a strength as they served as a basis for critical discussion and challenging theoretical assumptions and ideas throughout the analytic process. Finally, the paper was read through by a GP and researcher before submission to ensure clinical practice relevance.

Ethical approval and considerations

The research aim and procedure were introduced to the interviewees before each interview. All patients gave written consent and were informed that participation in the study was voluntary. The study was approved (approval number 10.971) by the institutional board of the University of Southern Denmark, the Research and Innovation Organisation (RIO) and was conducted in accordance with the General Data Protection Regulation.

Results

Thematic analysis

The following themes were identified within the data: theme 1: VC-home dynamics: balancing boundaries; theme 2: VC-workplace dynamics: logistical considerations; and theme 3: VC-body image dynamics: on-screen exposure. Patients' age and sex accompany the quotes presented.

VC-home dynamics: balancing boundaries

Overall, patients chose their home as the location for the VC, which is consistent with the dominant focus on the home in studies of telemedicine.[34] From a technogeographical perspective, people and places are mutually constitutive and, consequently, people's location can influence social relationships and behaviour.[4] Following this argument, we examine how being at home influences the patients' experiences of interacting with the GP through a VC.

The reasons given by the patients for choosing the home as the place to have a VC were the following: (1) the home was the most convenient place since working or studying took place from home due to the Covid-19 lockdown; (2) being retired and hence most often at home; and (3) a preference for being at home during a VC rather than in the workplace, thus planning VC on days off work.

Generally, patients described the home as a safe and comfortable environment to be in during VC. Being in the home positively influenced patients' mood, making them feel secure, relaxed and comfortable when interacting with the GP. Thus, the home served a supportive function, in that the positive feelings the patients attached to their home formed their experience of the VC. One patient explained: 'That's the good thing about it, that it happens in a relaxed way. You're at home, you're in your own surroundings. Comfortable surroundings' (P11, male, 66 years). Another patient emphasized the advantage of being at home when consulting the GP on behalf of her children: 'So I would say that with regard to going with the children [consulting the GP via video], I think it was nice because sometimes they're a bit more scared or can feel more insecure [when being in the clinic]' (P15, female, 37 years). For yet another patient, the home offered more freedom and comfort in relation to physical appearance. This patient, who was dressed lightly during the online interview, said: 'Right now I'm sitting here, half-naked, on my couch, and it's so hot. I think this is more comfortable than sitting in a waiting room' (P27, male, 44 years).

While the home shaped the patients' experience of VC, the reverse was also the case: the VC technology shaped how the patients experienced the meaning of their home, thus supporting the reciprocal dynamics between place and technology. By choosing the home as the VC location, the patients in this study had to try and balance different kinds of formerly separate life spheres. This need to balance different spheres especially had to do with family members being or not being present in the room with the patient during the VC. One patient who had conducted a VC from home during Covid-19 lockdown described her reflections around privacy thus:

> Well, it has something to do with sound and light and privacy because the moment you enter a consultation room with a doctor, it's a private sphere, you can say, where some things are said and done that nobody else needs to know. Um, so I've found it challenging [to consult the GP] at home, and especially during these corona times where my daughter was also at home because, as I said, she's eleven and has big ears. Well, it's been a little more challenging in relation to not being able to have the same privacy. (P07, female, 37 years)

The above quote points to the challenges connected to the home being the place for health care delivery: the patient's 11-year-old daughter was home due to the corona lockdown, making it difficult for the patient to secure what the patient, without prompting, called a 'private sphere' in which only the GP and herself participated. Similarly, another patient explained how he would not allow his children living at home to be present, likewise referring to the private sphere: 'I think there should be a distance there about, sort of, private things, you know? The private sphere, as it's called' (P08, male, 59 years). From the perspective of technogeography, the above considerations concerning privacy in the home can be interpreted as a need for negotiating mental and ethical boundaries between home privacy and health care privacy, which has arisen due to the integration of VC in the home setting. Not only do the patients need to negotiate boundaries between the clinic and the home but also boundaries between different spheres within the home. Thus, the responsibility of securing a confidential doctor–patient interaction is to a high degree distributed to the individual patient because the GP is unable to control who is present in the patient's surroundings. When the consultation is moved away from the GP's clinic, it cannot be expected that the interaction involves only the GP and the patient. A consultation in the GP's clinic is demarcated by physical boundaries such as walls and doors, and the physical presence of a third party in a consultation is clearly apparent. However, several patients in our study mentioned that their spouse had been present in the room during their VC without the GP's knowledge. Consequently, while the

GP might be used to relatives occasionally taking part in consultations, the VC adds what could be called 'participatory uncertainty' since the GP can no longer be sure about who is taking part in the VC. In line with the technogeographical perspective, this increases the complexity of the consultation because of the possibly unknown presence of relatives. Moreover, responsibilities are reconfigured because the GP does not have control of who is part of the consultation, and the patient gains the more active role of hosting the VC, and thus increased responsibility, in securing a confidential sphere.

To summarize this theme, the home plays a significant role in shaping the use of VC, posing both new opportunities and challenges in terms of patients' feelings of comfort and convenience during the consultation. Furthermore, we have also demonstrated the opposite: that the VC technology influences patients' experience of place, challenging the boundaries between home, privacy and confidentiality in the doctor–patient encounter. Following the logic of the technogeographical perspective, there will be an ongoing renegotiation of the meaning of home when care is moved into the home.

VC-workplace dynamics: logistical considerations

In the following, we describe other places than the home chosen for conducting VC by the patients. In this respect, we are inspired by the technogeographical argument that with the introduction of new technological solutions, such as VC, previously distinct places are connected, and places are redefined and used as health care settings.

Besides the home, the workplace and places related to the workplace were of particular importance in relation to the patients' choice of place.

Some patients were located at their workplace while having a VC. Being located at work allowed the patients to save transportation time during working hours, which consequently made them feel less stressed. One patient explained a hypothetical situation of saving time:

> So, now that there's been corona – well, it's only after corona that it's been an option to get that video thing. Otherwise, I've never received the offer […] but it would suit me much better if I could just take my computer and go into a meeting room, and then I wouldn't have to spend 15 min on transport each way, just to go to the doctor because of a toe. (P07, female, 37 years)

As seen in the above quote, the acceptance of and convenience of using the workplace as a setting for receiving health care seems to be tightly connected with the availability of vacant meeting rooms that could be turned into private rooms for VC. Moreover, interruptions from colleagues were seemingly not a concern. As one patient explained:

No, well, we have almost soundproof meeting rooms. Or it's – it's fine. And if people came into the room, I would just stop talking and tell them 'this room is occupied'. (P07, female, 37 years)

However, not all patients were comfortable with having a VC at their workplace. For instance, one patient explained how he had considered the possibility of having a VC at work, but decided that he would feel too uncomfortable occupying a meeting room to have a private conversation:

No! I've thought a lot about it (long break). I can't – then I'd have to book a meeting room. I wouldn't like that. No. To be completely honest, no. Then I would rather choose a day where I have a day off. And then say that then we do it [the VC] that day. (P11, male, 66 years)

By the same token, for one patient (P06, female, 32 years) the subject which she had to discuss with the GP directly was the reason why she rejected her workplace as a place for her VC. Because the patient was in an early stage of pregnancy, her boss did not yet know about it. Hence, the patient wanted to avoid having the VC at her workplace because she felt bad about talking to the GP about something which was still a secret. Because of logistical challenges, the solution was to conduct the VC in her car on her way to work. Being outside the workplace meant that the patient did not have a bad conscience about the subject of the consultation. Corresponding to the human geography argument that places have meaning attached to them,[4] the workplace seemed to be an inappropriate place for a VC in the patient's specific situation (pregnancy). Consequently, finding an alternative place for the VC (the car) and thus keeping a physical and mental distance to the workplace impacted the patient's experience of the VC.

VC-body image dynamics: on-screen exposure

Thus far, we have accounted for the reciprocal dynamics of different places and the patients' experiences of VC, in theme 1 focusing on the reciprocal dynamics between the home and VC and in theme 2 focusing on the reciprocal dynamics between the workplace and VC. In addition to this, the present theme demonstrates how technology itself can have a special meaning attached to it in the same way as physical places can. Consequently, as we shall explain below, technology not only facilitates care but also transforms care.[4,34] Furthermore, based on our interviews, we have discovered that the combination of the VC technology and the place chosen by the patient not only shapes some patients' experience of that place but also the patients' experience of their own body.

Several of the patients experienced VC as less private due to it being technologically mediated, while a physical consultation in the GP's clinic gave a feeling of security

and of being alone with the GP. In this respect, clear boundaries of the use of VC were made when it came to showing intimate parts of the female body. For example, one patient debated with herself where her boundaries would be and ended up concluding that most body parts would be fine to expose in a VC. However, she ended her argument by stating that if she were to consult her GP because of a problem related to the intimate body parts, she would 'of course not film it in a video consultation' (P01, female, 61 years). Similarly, another patient described how she would accept showing things on her body unless she had 'to show [her] naked butt to the camera' (P06, female, 32 years), as that would make her feel awkward. Yet another patient started by explaining how she would not have any problem whatsoever by showing body parts in a VC. Nevertheless, she went on to explain:

as long as, well, I'm not the type who has ever taken a nude picture or anything like that. And I don't feel it would be comfortable in any way (…). If it's something to do with the lower body – I would never sit in front of a screen and do something. (P07, female, 37 years)

These women all expressed it as a matter of course that intimate areas of the body should not be revealed in a VC. Two women even referred directly to nude pictures. This prompts reflections about the sexualized versus the medicalized body as these women associate being naked in front of a camera with a sexual situation even though the context of VC is indeed supposed to be strictly medical and health-oriented. From being a biomedical body in a professional room at the GP's clinic, the body is turned into a personal and sexualized body in a private home in the context of VC. Hence, both the place and the VC technology change the patients' experience of the situation, which supports the argument that both places and technologies are not neutral, but have meaning attached to them.[4] Moreover, some patients referred to data security when giving reasons to not reveal intimate parts of their body in a VC:

It's probably something about, what's it called, naked pictures that are everywhere. That you need to be careful with connecting digitally and then with your own body. And I also think it's the formality of going to the doctor, and that they examine you. Then it's only in that place. (P10, female, 27 years)

With regard to privacy, this patient expressed how she perceived VC as a less safe and secure consultation form compared to one taking place in the GP's physical consultation room. Other patients expressed similar opinions about using VC. Comparing VC with physical consultations, one patient said that some people may feel: 'a greater sense of security if they are sitting there [in the GP's physical

consultation room] because in a video consultation you're not enclosed in the same way' (P23, female, 23 years).

In contrast to the patients above, other patients mentioned how they experienced VC as very similar to physical consultations. For example, one patient explained: '…it doesn't matter if you're sitting here or doing it directly. Sitting in front of the doctor. It's almost the same, in my opinion' (P08, male, 59 years). Nevertheless, despite statements like these, the consultation situation is clearly redefined when it comes to showing intimate body parts, at least for some female patients. The above quotes correspond with Oudshoorn's argument that 'technologies interact with and shape the ways in which bodies and disorders are defined, treated and experienced'.[34] The VC technology plays an active role in making the patients associate VC with nude pictures and making them aware of data security. Consequently, the feeling of having secure physical surroundings when being located at home, as described in theme 1, is not enough to secure a safe and comfortable VC for these patients, because the VC technology itself also plays a role. Thus, the VC technology represents an unpredictable element in the doctor–patient interaction, because it makes the patient feel uncertain of who is present during the VC, which results in the patients no longer wanting to share the same information as in a GP's physical consultation room.

To sum up, this theme demonstrates how the VC technology in itself changes the conditions for the consultation by influencing how the patients feel their body will be perceived and by whom. In this regard, compared to VC the GP's physical consultation room is perceived as a more secure place, where intimate body parts can be exposed and examined without the risk of security breaches or uncomfortable feelings of being transformed into a sexualized body.

Discussion

The purpose of this paper was to gain a deeper understanding of the reciprocal dynamics between patients' choice of place and how they experience VC. Our use of the technogeographical approach illuminated the complexity of implementing remote consultations. For instance, when moving the health care setting into the home, family members need to be considered as possible, but not always visible, actors in the confidential, medical encounter. The transparency of who is listening, watching or being part of a consultation is lost when the consultation is moved from a physical room to VC. In line with this argument, a Dutch study on VC has shown how patients' companions mostly serve as bystanders in the VC, staying in the background, quiet and invisible to the GP.[41] A British study has demonstrated that issues of confidentiality are not new to VC but also occur in telephone consultations, especially when patients are located at work or in public places, and to a lesser degree when patients are at home.[42] In studies on VCs, issues of privacy have also been mentioned,[26–28,30] but with a focus on workplaces and public places. Broadening these existing results, our study demonstrates how privacy is also a concern in patients' homes. This finding is consistent with studies about VC in a therapeutic context in which the therapist needs to be sure who is present in the patient's surroundings.[43,44] While the visibility of third parties in physical meetings is obvious, VC brings about uncertainty on this matter. Additionally, the existing literature has mentioned the need for an appropriate setting[26] and a supportive and comfortable environment for the patient when consulting a health care provider.[27,30] Our analysis supports the benefits of patients choosing an environment in which they feel comfortable and safe, which is in many cases the home. However, by paying attention to the dynamics between place and technology, we also found that a certain place can be appropriate for some consultations and inappropriate for others and that setting boundaries between formerly separated life spheres is part of patients' preparatory work before a VC. Consequently, the results of this study emphasise two important factors which should be considered by both GPs and patients before each VC, and which serve as recommendations for patients, GPs and other health professionals using VCs: consideration of the presence or absence of people in the patient's surroundings and consideration of the appropriateness of the patient's physical location in relation to the subject matter of the VC.

Moreover, mobility and improved accessibility are often emphasised as key benefits of remote consultation forms such as VC.[34,45] However, while VC offers a high degree of spatial mobility and is not dependent on any *fixed* place, it is still anchored in *some* place. By using the technogeographical approach, we have moved beyond the focus on mobility and accessibility and towards an understanding of the underlying reasons for the places chosen for VC and what implications these places have for the patients' experiences of the VC, and vice versa. We argued that despite the dominant focus on telemedicine and the home that we see reflected in the research literature, other places, for example, the workplace, need to be taken into account to get a full understanding of how VC is used by patients in their everyday lives. As our analysis demonstrated, despite the mobility of the VC technology making it possible, in principle, to conduct a VC anywhere, the situation is often more complex when individual contextual and situational factors are taken into consideration. In this regard, it should be noted that this study was influenced by Covid-19 and a lockdown period where many people stayed more at home. Other places than the home might gain more importance in connection with a VC beyond Covid-19 when people are no longer to the same degree homebound.

Finally, we have shown how individuals attach different meanings and intentionalities to the technology itself, and

we discovered that the VC technology not only shaped the patients' experience of place but also the experience of their body image, emphasizing the fact that the VC technology is not neutral. Other scholars have argued against technology's neutrality as well. For instance, professor of sociology, Deborah Lupton, explains how the meaning of a technology is never stable, and how it can be embraced or rejected by its users on different occasions,[46] which we have exemplified in this study. Similarly, from a post-phenomenological perspective, professor within the area of philosophy of technology, Don Ihde, emphasises technology's embeddedness in culture, explaining that technologies can have different meanings in different cultural contexts.[47] In the case of the female patients in this study, attitudes towards showing intimate body parts on video could likely be connected to personal but also culture-dependent experiences and cultural knowledge of body–technology relations. Additionally, when the same technological tool is used for multiple functions, which is the case with both smartphones and tablets being used to conduct VC, demarcations between different contexts might be more difficult to maintain. From a media studies perspective, this could be described as the phenomenon 'context collapse' where boundaries between public, private, professional and personal contexts are being increasingly blurred due to pervasive and increasing digital connectivity – a condition of the networked era.[48] Consequently, the VC user will have to rebuild and negotiate boundaries based on individual needs and preferences, considering both the meaning they attach to their physical location and to the VC technology. Working with the concept of technogeography of care implies taking not only the specific use-context into account, but also understanding this specific use-context within the broader socio-cultural and historical context of technology use.

Strength and limitations

Little research about patients' experiences of VC in a general practice setting is available, and, to our knowledge, no studies exist that focus on the relation between place and the use of VC. Our study contributed with rich data about some of the first experiences patients reported about the place and VC, providing important and novel insights into the reciprocal dynamics of place and the use of VC which, as we have demonstrated, leads to increased patient responsibility and complex boundary setting. A particular strength of the study is the use of the concept of technogeography of care which could be a useful tool for other studies of emerging technologically mediated communication practices in health care.

Regarding limitations, our results are based on interviews with 27 patients and represent a general practice setting in Denmark – a country that is known for its digitalised health care sector.[49] Consequently, the results are only transferrable to people living in countries with a moderate to high level of digitalisation in society and health care. Variables such as patients' gender, age, educational level, information technology (IT) literacy, and health conditions should be considered in future studies to help understand possible nuances in patients' choice of place and their use of VC. Likewise, all participants in this study were of Danish ethnicity. Consequently, our study does not cover potential cultural differences in how patients experience VCs, for instance in relation to intimacy and nude pictures as described in theme 3. To capture cultural nuances, ethnic minorities should be included in future studies.

Future perspectives

This study was conducted at the beginning of the implementation of VC, thus representing the initial phase of the use of VC in a general practice setting in Denmark. To gain more knowledge about the development of the use of VC, follow-up studies should be conducted. In particular, knowledge about how the use of VC in places other than the home, such as public places and the workplace, affects the quality of health care is still very limited. Furthermore, GPs' perspectives on the dynamics between VC and place should be explored as they are important to consider in future adoption processes of VC.

Conclusion

In this study, we explored the reciprocal dynamics of patients' choice of place and how they experience VC. Based on 27 interviews with patients and with a theoretical anchoring in the concept of technogeography of care, we argue that place has important implications for the use of VC because the meaning patients attach to a certain place impacts their experience of the VC. At the same time, VC has implications for patients' experiences of a physical place, such as their home, and, consequently, VC must be used with respect for individual boundaries and patients' private spheres. VC makes boundaries between different contexts more fluid, and these boundaries are negotiated differently by patients, who have an increased responsibility of securing an appropriate setting for consulting with the GP. Thus, VC poses both new challenges and new possibilities for ways of conducting primary health care. In this regard, awareness about patients' boundary setting and how they attach meaning to different places is useful for securing successful future use of VC.

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