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Conceptualizing a Situated Sense Filter

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Abstract

Drawing on Schatzki's theoretical concepts of practice, this article explores how health professionals change and form professionalism in the encounter with practices in telemedicine settings with physiotherapeutic online exercises and nursing video consultations in-home care in two municipalities in Denmark. Analyses in this paper bases on an 18-month ethnographic field study with 158 observations with ethnographic interviews and 16 interviews with six health professionals (n=6), to get insight into health professionals experiences on health professionals experiences on practices in telemedicine settings. Drawing on the analyses the paper unfolds a concept, "situated-sense-filtering" as a professional method. The concept demonstrates how individuals interpretation of ontologically altered practice changes and forms professionalism. The paper emphasizes a point that lack of collective interpretations of professionalism overrides professions' influence on their professionalism. The article suggests political and institutional supports on professional collective processes changing professionalism through the practice of telemedicine.

Keywords

Health professionals, nurses, physiotherapists, practice theory, professionalism, sense filtering, social and healthcare assistants, telemedicine

Introduction

This article adopts health professionals' perspectives aiming to explore how professionalism takes shape in health professionals encounter with practices in telemedicine settings, as a platform for professional practice, and how this implies changes in professionalism. In this article, I suggest that a "social dimension" on telemedicine may provide an approach to uncover, discuss, and understand professional aspects of telemedicine.

Scholars have found that screen-based telemedicine video calls as a platform for health care interventions imply a spatial change (Oudshoorn, 2011; Pols, 2012) and change the geography of care (Langstrup, 2014). Regarding video calls as a telemedicine setting, the change of care geography takes place through interaction with digital technologies such as an internet-connected screen, keyboard, microphone, and camera, and enables patient-professional interaction without a physical meeting. Research highlights the change of practice in terms of sensory involvement (Langstrup, 2014), role setting (Pols, 2012), relationship building, and patient-professional interaction (Emme et al., 2013; Huniche & Dinesen, 2013; Oudshoorn, 2011) in such a telemedicine setting for the interaction between patient and professionals. Professionals draw on professionalism addressed as professional skills, knowledge, skills and engagement as they do practice (Hjort, 2005). Based on this, this article addresses changes in health professional terms of professionalism in practices in telemedicine settings and highlights the practice of telemedicine as a radical change of practice. Thus, changes in practice place professionalism at the centre of the question of constituting practices in telemedicine settings as a professional practice.

The Scandinavian health sector is regulated by the welfare states policy (Fosse & Helgesen, 2018). Health professions such as health care assistants (SHA), physiotherapists and nurses have been developed with and by the modern welfare state to solve society's health tasks (Hjort, 2005). The Danish health sector has experienced a wave of digitalization in health policies over the past decade (Danish Government, 2016; Danish Health Authority, 2017; Danish Regions & Ministry of Finance, 2012; Ministry of Health, 2018), as in the other Scandinavian countries (The Norwegian Directorate of Health, 2014; Social Department and SKL, 2016), and have given birth to telemedicine as a platform to solve society's health tasks. The policy rationale is that digitalizing healthcare practices can help solve the demographic and economic challenges of an ageing population and a considerable increase in chronic illnesses (WHO, 2015; Kleinberger et al., 2007). In Danish context, policy has present telemedicine "one future solution to the health service's demographic and financial challenges in treating chronic diseases and enhancing patient self-care" (Danish Regions & Ministry of Finance, 2012). Based on this political rationale, professional healthcare will thus

become more efficient with digital equipment, and telemedicine will increase people's responsibility for self-care. This transforms telemedicine into a tool aimed to work in practice but based on political arguments for its usefulness to society by increasing health professionals' efficiency and citizens' self-care.

Moreover, various policy measures have laid the groundwork for the implementation of telemedicine, through political strategies (Danish Regions & Ministry of Finance, 2012; Ministry of Health, 2018), state financial support to regional and local government (Danish Agency for Digitalization, 2015), and changes in medium-length tertiary health programmes (Ministry of Education and Research, 2016a; Ministry of Education and Research, 2016b) and short vocational programmes (Ministry of Education, 2020). These health strategies use the term telemedicine for both the technology and for "doing practice", which produces an ontology of practice involving both the thing and its entire context. Further, the political repertoire is expanded with the concept of "welfare technology" (Danish Government, 2007), where digital technologies are presumed to "provide more welfare for the money, and a better life for healthcare service users" (Ministry of Health, 2014). Welfare technology is thus a means of achieving the policy goal of increased welfare. From an epistemological perspective, political rationales also transform welfare through the introduction of the technology, as the concept of welfare forms the basis for implementation. Health professionals' telemedicine work depends on political rationales and measures that determine the provision of healthcare to chronically ill patients. Political rationales thus construct a framework for a new field of practice, and its ontology and epistemology, where health professionals' role appears overshadowed by digital technologies, which can make practices seem intransparent in a professional perspective.

Professions have their own particular way of understanding themselves and their work, and their own special forms of professional practice (Hjort, 2005), which are manifested in occupational professionalism (Evetts, 2012). An occupational understanding reveals professionalism as constituting a practice, like telemedicine, which implies that professional knowledge and skills are based on and correspond to the ontological assumptions that patient-professional practice does not include physical presence. Apart from the possibility of framing practice of digital technologies, health professionalism has represented a practice that ontologically assumed that patient and practitioner were physically present in the same room. The ontology of telemedicine thus excludes the professionalism acquired based on this assumption.

Consequently, constituting telemedicine as a professional practice implies not only an ontologically changed practice but also epistemological changes in the knowledge and skills of the relevant professions.

Health professionals make clinical judgments, decisions and interventions (Wemmelund & Sørensen, 2019) based on national quality standards and updated professional knowledge

(Ministry of Education and Research, 2016a; Ministry of Education and Research, 2016b; Ministry of Education, 2020), while their authorizations make them legally responsible for professional practice based on policy measures and institutionalization (Ministry of Health, 2019). Health professionals are legally bound to provide high-quality treatment in an ontologically changed practice. In this light, the political agenda for telemedicine seems to be on a collision course with professionalism. It is therefore interesting that scholars have found that health professionals can perform patient interventions using telemedicine (Pols, 2012; Brewster et al., 2013), create proximity (Oudshoorn, 2011) and have close relationships with patients by sharpening their senses in telemedicine consultations (Sorknæs, 2016). As the main part of the studies of the field, these studies adopt (Mol, 2008; Pols, 2012; Hasse, 2013; Langstrup, 2014; Sorknæs, 2016; Oudshoorn, 2011; Brewster et al., 2013; Frich, 2017) a variant of the actor-network theory, which equates the non-human with the human (Latour, 1996, p. 53). Such an approach does not provide access for a complete study of social practices as it de-emphasizing human agency.

Aiming to explore health professional perspectives on practices in telemedicine settings, this article draws on an approach that highlights human agency. By illuminating human agency in the practice of telemedicine, this study aims to contribute to nuance analyses on practices of telemedicine into other methodological approaches than those that equate human and non-human agents. In this study, I ask: How does professionalism change and take shape through practices in telemedicine settings, and how do this influence the health professional and the profession?

Theoretical background

As previous research on practice with telemedicine, my focus is not on the agency of non-humans but highlights the agency of humans. To carry out my analytical work on the agency of health professionals in practices with telemedicine, I draw on Theodore Schatzki's ontological ideas of practice that human agency precedes all actions, which implies that the non-human is outside practice, and his theoretical concepts of "understandings", "rules", "teleoaffective structures", and "general understandings" (Schatzki, 2002, 2012). Drawing on this approach on practice, technology may provide a framework for the social practice of out determining practice, and the concepts on practices enable analyses on how social practices produce and re-produce changes and forms of professionalism.

According to Schatzki, a practice is organized human activity consisting of an unlimited number of "doings" and "sayings" spread over time and space. Activities create meaning, produce order and form reality, which implies that meaning, norms and identity are produced and re-produced in social practices through the following mechanisms that organize the activities (Schatzki, 2012). Practical understandings refer to knowing what the practice is about, the order of activities and the necessary "sayings" and "doings",and constitute normative guidelines for good professional practice. Rules provide a general

structure and framework for activities through linguistically explicit principles, definitions and instructions that guide the professional's actions. Teleoaffective structures are emotional orientations as to the purpose and goals of one's actions. General understandings manifest in "sayings"; they systematize health professionals' overall understanding and linking of their profession and practice. As practices interconnect causally and intentionally, they are recognizable as particular practices. Furthermore, practices are open-ended; an activity performed by different actors can be studied in its context and in how different practices merge in networks and sets of activities (Schatzki, 2012). The presented concepts of Schatzki inspire the structure of the analysis on 1) The constitution of practice framed by video calls in a telemedicine setting, 2) and how health professionals form and change professionalism.

Methods and analytical strategy

The empirical material, as this study draws on, is produced as a part of my PhD project, and this article's analysis is part of my PhD thesis. Aiming to explore how professionalism changes and take shape through practices in telemedicine settings, and the influences on health professional and the profession, I conducted an 18-month ethnographic field study in home care in two Danish municipalities. The analyses bases on observations and ethnographic interviews (n=158) on health professionals (n=6) practices in telemedicine settings, and individual semi-structured interviews (n=16) of their experiences of professionalism.

Both municipalities provided healthcare services in a telemedicine setting to patients suffering from Chronic Obstructive Pulmonary Disease (COPD) but related to different professional domains occupied by physiotherapists (n=3), social- and health assistants (SHA) (n=1) and nurses (n=3). Variations on the professions of the included professionals and contributes nuances into health professional's encounter with telemedicine as a professional practice, and how they change and form professionalism. Inclusion of health professionals exclusively providing health care to patients suffering from COPD draws an advantageous limitation in terms of focusing on professionalism, as patients suffering from the same disease may have similar needs which professional may take into account on professionalism, in the context of practices in a telemedicine setting.

Through the fieldwork, I used observation, following the health professionals during their working day using telemedicine, mainly concentrating on their actions and how professionalism manifested itself in their practice. I combined the observations with ethnographic interviews (Glesne, 2006) to expand on their doings regarding the mode of practice. To elaborate specifics and to verify my understanding of the observations, I asked the professional questions throughout their working day, about aspects of professionalism in the activities. I took frequent notes and expanded on these following each day's fieldwork. I conducted individual semi-structured interviews with the health professionals to

deepen breach, paradoxes and unanswered questions concerning professionalism in the practice of telemedicine that reading the field notes several times gave rise to. The interviews followed a semi-structured interview guide formalized around the following themes. The interviews were transcribed. In order strengthen the empirical material, I decided also to reveal nexus's of activities contributing into practices in a telemedicine setting, and conducted observations (n=5) and ethnographic interviews with technical installers (n=2), interview (n=1) with the municipal director (n=1), interviews (n=4) with consultants of Technology (n=2), observations on patients practices (n=124), and interviews with patients (n=3) on their experiences (Table 1). During the fieldwork and interviews, I obtained informed consent in accordance with the principle of ethical autonomy (NNF, 2013, p. 5). Additionally, interviewees and municipalities were anonymized. Ethical issues in the study were reviewed by the Danish Data Protection Agency, which confirmed that the study did not require registration with the Agency.

Table 1. *Overview of empirical material produced through 18 months of fieldwork*

Municipality 1	Activity	Observations and ethnographic interviews	Individual semi-structured interviews
Social- and health assistant (SHA) Woman, aged 57	Physiotherapeutic online exercising	28	3
Physiotherapist 1 (PHT) Woman, aged 56	Technical duty	18	2
Physiotherapist 2 (PHT) Woman, aged 28	Technical duty	10	2
Physiotherapist1 (PHT) Woman, aged 56	Exercising in teams at the rehabilitation centre	3	
Social- and health assistant (SHA) Woman, aged 57	Exercising in teams at the rehabilitation centre	3	
Office worker Woman, aged 32	Installation of digital technologies in patients' homes Guide patients in connecting to the digital equipment	4	1
Technology and Welfare consultant Woman, aged 38	Follow-up on the work with online exercising and tactical planning of practices in digital settings in home care	3	1
Citizens	Activities as participants in online exercising with a focus on their reactions to the health professional's agency	28 Sessions with a varying number of participants between 1 - 4 participants	1
Municipality director Male aged 58	Activities on digitization at the municipal and strategic level.		1

Municipality 2	Activity	Observations and ethnographic interviews	Individual semi-structured interviews
Nurse 1 Woman, aged 33	Consultation in telemedicine setting on video, camera, microphone	56	4
Nurse 2 Woman aged 47		18	2
Nurse Woman aged 52		13	2
Nurse 1 Woman, aged 33	Activity on online Breath exercising in teams	9	1
Citizens	Activities as participants in online exercising with a focus on their reactions to the health professional's agency	96	2
Technology and Welfare consultant Woman, aged 45	Tactical planning of digital practice in home care		1
Technology and Welfare Team of Municipality Woman and males	Meeting on the status of the establishment of telemedicine, effect and planning of future activities. Besides, planning dissemination to other citizen groups in the municipality.	1	1 with nurse 1

Analysis of the empirical material is performed as directed by Widerberg through closely intertwined stages (Widerberg, 2015). In the first stage, I formed an overall impression of the empirical material by reading in the field notes and interviews in its entirety. This stage of analysing gave the impression of a very different practice, which the health professionals had to constitute at the same time as they formed professionalism. In this part of the process, I was as open and loyal as possible to the empirical material, thereby trying to keep my gaze from within the health professionals' practice of telemedicine. In the second stage, I read the material several times to identify issues, which emerged as particularly significant in health professionals' encounter with telemedicine as a professional practice. Aiming to allow analysis to follow threads of activity performed by different actors in its context, the merge of social practices in networks and sets of activities, is based on an optic on practices as open-ended (Schatzki, 2012). I reviewed the material for each site to identify empirical parts where issues on appeared situated in professional context. I read the empirical data material. It quickly became clear that the screen was central to their work and emerged as an arena for training and guidance. I reviewed the material across the two sites to uncover whether the "screen" appeared on both sites, across the professional context, and whether there were variations thereof. As I read the material, I highlighted phrases that contained "screen" and variations on this, across the material. This created a cross-sectional analysis thread about the screen as an arena for the professional practice. Inspired by Schatzki's practice theoretical concepts, I grouped the highlighted phrases of "doings" and "sayings" as "understandings", "rules", "teleoaffective structures", and "general understandings" related to each analysis thread, as a third phase. This yielded findings on a situated level. In order to reveal pointers on professionalism in practice based on a telemedicine setting in health

professional perspectives in a general level, I focused on breaks, paradoxes or surprises in these findings, in the fourth stage. One by one, I went through; how it broke; how the break could be understood; in which the paradox consisted; what surprised and how it could be understood as professionalism; how do different health professionals' changed and shaped professionalism through practice of telemedicine over screen. Based on the analyses, the article unfolds a concept of "situated sense filtering" as a professional method variated by the individual health professional, and thus expand concept framework and vocabularies of health professionals. I let this concept serve as an example of how enlightenment of human agency in practice with digital technology, but without assigning technologies agency, makes it possible to produce knowledge in the perspective of human agents, such as professionalism. Based on this, I discuss in general terms how telemedicine implies changes in professionalism.

Findings

Forming online physiotherapy

The screen-based physiotherapy was in its third year and intended to exercise groups of up to eight patients. Although the online exercise sessions were presented as physiotherapy exercise, the SHA was responsible for the sessions, while the physiotherapists usually occupied more peripheral roles. A SHA conducted the sessions, while two physiotherapists were "on technology duty", like to help patients reconnect to the digital system if they were disconnected during the session. Physiotherapists also filled in for planned absences by the SHA and thus occasionally did conduct the online sessions. Both the physiotherapists and the SHA also provided traditional physiotherapy, being physically present at the rehabilitation centre. The centre employed around 20 physiotherapists and 2 SHA.

> The SHA hurries towards a room far from the other physiotherapy rooms, where she has just assisted a physiotherapist in a group session for people physically present at the rehabilitation centre. She enters the room, which contains just a large plant, digital equipment and floor-length curtains covering the glass wall of a corridor in the centre. There is no furniture. She stands in front of the camera, a 150-inch screen and a microphone. By clicking different remote controls, she activates various parts of the digital equipment. She, the SHA, is doing the online physiotherapy, not the physiotherapists.

There is a list of the participants scheduled for this digital group session. "The ideal is eight in each group," she says. "Or at least that's the idea of the system". All eight participants have COPD. Most people who suffer from moderate to severe COPD need to spend some time at the start of the day coughing up secretions suffer from moderate to severe, and may as well prioritize whether they should use their energy for exercising, washing, eating, or

taking medication (Dræbel et al., 2015). In this light, the patients with COPD may find it challenging to participate in the session scheduled for 08:30 in the mornings.

> The screen contains smaller screens, each of which is a digital transmission of a participant. Four images appear, thus there are four participants, and during my fieldwork, every online session had 0-4 participants, never eight.

The SHA tells me she has the wrong professional background: "I'm a professional in the wrong industry". Perhaps she does not have the professional insight to realize that the timing of the sessions alone can influence people's ability to participate.

> The SHA looks at her watch and decides to start. For the online exercises, the ½SHA stands in front of the screen that shows the participants. She says hello and nods to them as their images appear on the screen and they greet her back. She shows with her body and explains in words how the participants should move their bodies and at what pace.

"One, two, three and four" she cries, swinging her legs up and down.

> The participants' bodies move at different speeds. The participants' movements are shown in the small screens on the 150-inch screen in the SHA's room.

Forming and changing professionalism of SHA

Practice of telemedicine transforms SHA into an instructor the physiotherapist into her assistant.

> When the online session starts, the physiotherapist who the SHA assisted is sitting outside, holding some papers and a mobile, and looking into the room where the SHA is conducting the session. The SHA indicates to the physiotherapist that one participant is not connected. The physiotherapist quickly opens the door and is told which person is missing. She phones the participants and explains which buttons to press at home to become connected.

This time the physiotherapist is assisting the SHA.

Online physiotherapy transforms the living room to a gym. Participants must understand that they are in an exercise session despite being alone in their living room, while their instructor is at the rehabilitation centre. The online session thus transforms their living room into a gym.

The screen restricts the view of the body. The SHA's "general understanding" of online physiotherapy is that the instructor compiles a 30-minute programme of various exercises, where she demonstrates and explains, and assesses participants and guides them in moving

or bending in specific ways to achieve specific physiotherapeutic goals. Participants can see the SHA in full figure on their 22-inch home screen. On the SHA's 150-inch screen, the size of a participant's body depends on the distance to the screen and camera at home. Participants stand one-two metres from the screen to see how the SHA's body moves to know how to move their own bodies. With this distance, the SHA can see the upper body, but not the arms and legs included in the exercise. If participants move farther away from the screen with the camera, the SHA can see their entire body, but then they cannot see how the parts of the SHA's body are moving and thus do not know how to move their own bodies.

The SHA transforms a zoom. The SHA's "practical understanding" of online physiotherapy is that participants should be able to see what she does with her body and vice versa. The SHA form a method ("rule") to address this, consisting of a zoom that is activated when a participant steps forwards or backwards at home, following the SHA's instructions in the speaker. When the zoom is activated, it interrupts the exercise programme and to limit such interruptions, the "rules" are to repeat the programme every week; it only changes when a particular need arises for a new exercise or when there are only one-two participants.

She says:

> "I can't really see their legs if we do this or that, but still I think I've been able to see a toe that's just flipped up, when I've asked them to do it. Perhaps I've compromised on quality. Because I have to do that for the exercise. So, people may not get their arm there … but then we'll do it here. So, I have … because I'm not a physiotherapist … compromised on things."

The digital technologies thus set criteria for the virtual sessions, determining the behaviour of the human agents. The SHA does not think that this affects the professional quality but points out that it makes her mostly repeat the same programme each time.

The SHA transforms methods to regulate the body in online exercise sessions. The SHA develops a method to enable her, as the therapist, to control which body part is the object of practice by physically displaying it on the screen with her own body, and by translating terminology into everyday language. Her methodology thus involves simplifying the language and presenting her own body like a kind of demo model.

The screen excludes musical rhythm as a physiotherapy tool for body control. In regular physiotherapy, music reveals bodies that do not move as determined by the therapist. Physiotherapists criticize the lack of music in online sessions. These do not include music, as music makes the sound loop. "Exercising without music is difficult." Music should accompany exercise, as a tool that helps bodies to move in rhythm. Music helps the therapist to see which bodies follow the instructions and which do not. It is also a management tool, supporting the therapist's agency in regulating body movements.

The SHA uses her voice to transform tools for rhythm. The therapist's screen shows images of individual participants in rows, which limits her agency of regulating body movements, since the arrangement on the screen makes it difficult to see which bodies are moving and when, especially when there are many participants and therefore smaller pictures of each one. Therefore, even with better sound or equipment to enable music to be included, the screen arrangement prevents the therapist from using music to check body movements.

The SHA therefore uses her voice to create rhythm: "One, two, three and four…".

Forming and changing professionalism of Physiotherapists

Physiotherapists are prevented from leading the online exercise programme by their understanding of their professionalism. Physiotherapists' professionalism has a physical basis, where the body is a physical phenomenon that is physically accessed in practice and interpreted through physiological theory, hence the term physiotherapist. The abstract approach of imagining what the body does outside the screen, based on what is observed on the screen, the participants' verbal and non-verbal communication and scientific knowledge of the body, breaks with an objective understanding of the body as physical, concrete and measurable. However, the idea of understanding the body in parts is closely related to the physiotherapist's tradition of accessing the body in parts. Despite this, the online division of the body into parts shows little similarity with the degree of detail involved professional physiotherapy. The rapid changes in which body parts are visible on the screen break with a professional understanding of the physiotherapist as regulating the practice and the specific parts in focus.

Constituting nursing consultations with telemedicine

In the other municipality, three nurses provided telemedicine consultations to COPD patients. One started work one month before study start, had two years of training, and was a telemedicine project coordinator. The other two had a considerable nursing experience and had worked there since the start-up of the telemedicine eighteen months previously. The nurses each did video consultations for two-three days per week and performed traditional home nursing visits on the remaining days. The nurses arrange consultations with the same patients, on the same day and at the same time, in a fixed cycle. On the table near the screen is a laminated card with eight points. The nurse who has been using telemedicine for 1½ months looks back and forth at the card during the 30-minute consultations. She says it contains instructions to remind nurses what to say to patients during telemedicine consultations. The instructions were written by a welfare technology consultant with experience of nursing patients with lung diseases, who thus represent a professional opinion relevant to telemedicine. Nurses initially used the instructions actively to structure their work. However, this nurse, with 1½ months' experience of telemedicine, says that she "needs theory about what to do". She lacks "practical understandings" of how to perform her practice, "rules" to guide her practice, and "general understandings". However, this

nurse's practice changed over time; about six months later, she ignores the card. Her practice now has less of the structure indicated in the instructions. The new nurse has gained a professional understanding of the practice, seen in her expression "I found out how to…", compared with "I need a theory about what to do".

Forming and changing the professionalism of nurses

The screen and camera exclude eye contact as a professional tool for relationship building.

> The nurse sits at the screen in a room in the local care centre. The room has a glass wall through which one can see nurses answering calls from patients who need help regarding their illness at home.

The nurses assess which patients need home nursing and make appointments for a health worker to visit them to solve the problem.

> At 09:00, a patient appears on the screen for the telemedicine consultation, transmitted digitally in video and audio. The nurse can only see the person's face and upper body, not the lower body or the room where he is sitting. The nurse cannot maintain eye contact with the patient.

She says that she can choose between "looking into the camera, so the person gets eye contact, but then I cannot observe what he is doing on the screen" or "I can see what he is doing, but then he will not get any eye contact". Closer examination of the social practices involved shows that nurses using telemedicine can focus on problems that patients themselves consider essential. Being unable to see the surroundings or smell a patient's body odour helps them to deal professionally with the situation, concentrating on the specific issue to be discussed with the patient—this kind of professionalism conflicts with a holistic approach.

With this newly acquired knowledge, the nurse highlights a blind spot in professional understanding that draws on relationship building, emphasizing that relationship building as a professional basis promotes some things but inhibits others. What it can inhibit is that people who live and care for themselves by norms that differ from nurses' professional norms can receive care based on what they, rather than nurses, find problematic. Concentrating on what patients themselves find problematic agrees with patient-centred nursing principles and increases patient autonomy and self-determination. From a professional nursing perspective, this may mean departing from a holistic approach and drawing on professional knowledge.

Nurses' transform professional methods and phenomena. According to the nurses, telemedicine practice draws on general nursing knowledge, in line with the fact that nursing education is a generalist education (Ministry of Education and Research, 2016b). The data produced over 18 months reveal that nurses are transforming professional knowledge and

skills, which draw on general nursing knowledge, regarding relationship building situated in telemedicine consultations. The nurses attempt to create relationships with patients by having many consultations involving the same nurse and patient "to provide continuity for patients". Repeated social practice thus develops between the same human actors using digital equipment. They also find that the nurse-patient relationship in telemedicine consultations differs from that achieved during home visits. They stated: "The nurse-patient relationship can become more intense", because "when you face each other on the screen, you are constantly tied to each other, making a very intense relationship". By including intensity in the relationship concept, they grade ways of relating, thus giving a professional meaning to the link between relationship and intensity, as a professional method. They emphasize being able to develop the method because they are engaged in telemedicine and thus use their agency. They say: "It's impossible to recreate this way of creating intense relationships in the field", thus the method "cannot be transferred to fieldwork". Drawing on general nursing knowledge of relationship building, they have developed a professional method and phenomenon of "intense relationships" with which they constitute telemedicine consultations as professional practice. Since the development of this method and phenomenon is situated in the ontology of the practice, this is significant in the nurses' professional work with telemedicine consultations.

Discussion

This study explores changes and forming of professionalism in the healthcare professionals' encounter with telemedicine as a setting for practice. Since I performed 18 months of fieldwork and spent much time on observations and ethnographic interviews, data saturation to suggest completing the fieldwork might have been expected. However, as the health professionals were constantly forming knowledge and skills in their yet undescribed practice, I am uncertain whether I ever identified a stable or normal period for their knowledge or skills. However, I gained insight into their processes and experiences of the simultaneous forming and changing of practice and professionalism in this undescribed field.

By illuminating human agency in practices in telemedicine settings, the analysis reveals that practice in telemedicine setting in a professional perspective is far more than the implementation of digital technology since the health professionals found that they could not directly transfer their knowledge and skills to the ontologically changed practice. Concepts and phenomena can become meaningless in contexts in which they have not been developed (Wenger, 2010), regardless of the ontology in which they are situated. They had to create new professionalism, ontologically situated in practice. The health professionals can, therefore, be regarded as newcomers, whom Wenger argues may access learning through the community of practice (Wenger, 2010). Communities of practice produce and reproduce a repertoire of routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts (Wenger, 2010). Although the three nurses were a

team, they did not work simultaneously and did not produce and reproduce such a repertoire in an established a true community of practice. Neither did the SHA and Physiotherapists. Social learning is an integral part of the practice which, according to Wenger, cannot readily be planned, but it can be prepared, by promoting or preventing it (Wenger, 2010), like establishing a forum for collective professional reflection. Neither of the municipalities took steps to promote the development of professionalism but offered courses in operating the equipment. Establishing telemedicine as a professional practice was thus a matter for the individual health professional. Analysis of their practices (Schatzki, 2012) revealed that learning was nevertheless taking place, as the SHA and nurses sought to develop professionalism situated in online physiotherapy and telemedicine consultations respectively, based on their levels of understanding and reflection.

Levels of understanding and reflection

Both the nurses and SHA found that their professional knowledge, the "rules" they already knew, was not transferable to digital health practice, which influenced their "practical understanding" of how to perform the practice. According to education orders, the level of understanding and reflection on SHA's correspond to "understanding practice and important applied theory and methodology and the profession's application of theory and methodology". The analysis revealed SHA's problems in developing methods for online physiotherapy were not due to theoretical knowledge, but rather digital interruptions where the sound looped, the image froze, or the connection broke down. According to education orders, both nurses and physiotherapists level of understanding and reflection corresponds to "understanding practice, applied theory and methodology, and reflect on the profession's practices and application of theory and methodology" (Ministry of Education and Research, 2008).

The nurses experienced a lack of inadequate theoretical knowledge situated in the ontologically changed practice, and this became a challenge for their reflective processes in constituting practice and methodology. They were bothered by the digital interruptions too, but more so by the lack of "rules".

The physiotherapist's restraint regarding online exercise sessions relates to "teleoaffective structures". The term "online physiotherapy exercises" suggests that by physiotherapists perform the practice, and it may thus seem paradoxical that SHAs, not the physiotherapists, lead the sessions if one disregards the fact that their professionalism corresponds to different levels of knowledge. SHAs are authorized to perform work delegated by professional groups (Ministry of Education, 2020). Thus, the SHA's teleological structures helped her to perform institutionally assigned tasks, without needing to know "nerdy" professional explanations, unlike physiotherapists. It seems equally paradoxical that physiotherapists were willing to develop assistant-type practices separate from physical therapy since the activities drew on administrative and technical expertise.

Forming professionalism

The online trainer has a limited view of participants' bodies on the screen, but the SHA do not make this a professional problem that prevents the online exercises. She feels she can be a good instructor, because "I can easily live with the fact that I can't see if the foot's actually coming up". The SHA is willing to "sense things" and "use her imagination" to find ways to assess and guide the participants. Her "teleoaffective structures" emerged through her use of imagination and commitment when she experienced situations where the online sessions did not follow the "rules" she already knew. She thus imagined that another foot came up. However, she did not have reflective processes on knowing "rules", as Wenger suggests. The SHA's learning processes in constituting practice may be described as pragmatic, as she tried out what "worked". She thus became an agent for developing "rules" in the sessions: zooming, using her body as a demo model and her voice to keep rhythm, despite the lack of the familiar professional tool of music. Body and voice are familiar professional tools in practices that are ontologically bound to "spaces", but their ontological starting point in "places" gives them greater significance in making the online sessions professional.

Developing a concept of situated-sense-filtering

Based on the analyses and discussions on practices and professionalism situated in the ontology of places, this article suggests a concept of situated-sense-filtering as a professional method. The analyses based on six health professionals may appear to be too poor as a basis for concept development. However, I argue that the concept's importance for discussing professionalism in the field of telemedicine, combined to the extensive production of empirical work through fieldwork over 18 months with health professionals' practices of both constituting practice and shaping professionalism practices, as well as nexuses of practices that intervened in professionalism, provides a sufficiently reliable basis for unfolding the concept of 'situated-sense-filtering' in the following.

The nurses made themselves into agents for transforming abstract professional concepts and tools through experience- and reflection-based learning processes in interaction with professional knowledge and digital technologies. They drew on reflective processes and their ability to realize when their imagination could add new methods to practice and develop new "regimes of competence" (Wenger, 2010), thus creating a practice for professional development. This individual learning practice runs contrary to the understanding that learning takes place in communities of practice.

The present study confirms Pols' argument that webcam consultations provide visual and auditory insight into the patients' homes, making nurses guests in their living rooms (Pols, 2012). This study adds that the health professions can transform the webcam into a nursing sense filter, by overriding the organization of nursing practice through specific actions with an ontological basis in "spaces", but rather organizing sense filtering through practices

ontologically based in "places". Nurses transformed sense filtering situated in specific contexts by zooming in on the participant's head and upper body. Their senses outside this field are filtered out. The camera thus determines the nurse's field of view, minimizes the sense of smell, and focuses on what the person says and does. Sensory impressions from the surroundings are reduced.

Situated-sense-filtering enabled the nurses to feel that they were focusing on the actual health problems of the participants, without being distracted by "bottles and withered flowers in the background" or smells emanating from the home or the participant. They also found that they could achieve intense relationships with male participants, which would be impossible in a physical meeting. In this light, "situated sense filtering" is a key concept in both patient involvement and relationship work, and thus in enhancing democratic access to healthcare. However, the use of situated sense filtering as a professional method may empower patients to be involved in setting the agenda for professional practice in a telemedicine setting. Situated-sense-filtering in this limited field may contribute to increasing health equity, thus breaking with nursing ideals that make holistic understanding the ontological basis of practice, where sensory involvement and relationship formation are key concepts (Martinsen, 2010), which can marginalize the patient's agenda in consultations. Sense-filtering-demonstrates how the agency of health professional may transform situated knowledge and experience in a particular context, which through analysis can lead to the development of concepts of professional significance. By being agents, health professionals may produce professionalism based on their particular profession.

Changes of professionalism

The concept of situated-sense-filtering is developed based on individual learning processes and through the meta-analysis. According to Goodson, the individual's subjective experience can shed light on collective processes through the researcher's meta-analysis when individual experiences are considered in relation to their context: "the story of action within the theory of context" (Goodson, 2003). In this perspective, health professionals' subjective experiences in specific contexts can illuminate collective processes, as in the concept of sense filtering. Since individual learning processes have implications for the collective, and such learning about professional practice has not been subject to the reflective meaning negotiations of the collective, a problem of legitimation arises. Perhaps the collective would reject or revise the concept?

A further problem involves transparency, as it is unclear what knowledge and ethical reflections the learning process draws on when it is based on practice; Goodson finds this problematic, as professionals' knowledge of practice is not always "educational, beneficial or socially worthwhile", which can then imply deprofessionalization (Goodson, 2003).

There is thus a risk that individuals' learning processes in telemedicine may be based on "practical understandings", "rules", "teleoaffective structures" or "general understandings" that arise from organizational professionalism, and may appear as professionalism, but in reality represent deprofessionalization of the professions involved, because such learning processes may not have a scientific basis or draw on ethical reflection. This risk is present, as the political discourse has led to its colonization of society and practice, together with a lack of collective processes in constituting a field of practice of radically altered ontology and epistemology.

Goodson argues that commitment is a crucial element of professionalism; commitment is linked to the "personality of change", the personal, professional interests and goals that each professional brings to ongoing change processes (Goodson, 2003). The health professionals using telemedicine were very committed to establishing practices, both to enhance professionalism internally and to show others that their work was professional and that it "worked" by improving people's lives and preventing hospitalization. According to Goodson, professionalization must be based on scientific and ethical transparency in practice: "What is required is a new professionalism and body of knowledge-driven by a belief in social practice and a moral purpose", also called principled professionalism (Goodson, 2003).

The physiotherapists' refusal to offer online sessions allowed the SHA to take over, which immediately removed the threat of professional change through organizational professionalism. According to Abbott, professions must struggle to achieve or maintain their influence and position (Abbott, 1988), and this may shed light on the physiotherapists' choice to let online training slide on to the SSA. This study leaves an open question whether the physiotherapists, like the nurses, would have formed new professionalism if they had accepted to do the online exercise sessions.

Conclusion

The study on changes and constitution of professionalism through social practices reveals what practice and its rules and structures become when they are situated and performed through human agents and interpretations. These interpretations include digital technologies as part of the practice. Health professionals make different interpretations of whether they want the practice to harmonize with their professionalism because they subscribe to their guidelines and rules with ties to their particular profession. However, healthcare workers of the same profession do not automatically interpret the institutionalized demands of adopting telemedicine as a professional practice. Since it is an individual matter to constitute telemedicine, the professions involved risk losing control of their specificity, and there is also a risk that professions will reject the practice. The institutionalization of digitalization strategies into healthcare practice must therefore become a collective concern, with room for collective reflection.

An examination of the constitution of telemedicine through social practices reveals the links of the practice to both occupational and organizational professionalism. Health professionals attempt to act through their occupational professionalism, but the ontology, or organization, of practice, constrains this. It is therefore mainly the organizations, and the way work is organized that guide professionalism and to a lesser extent the professional ethos, traditions and knowledge and individual interpretations of these.

Consequently, the professionalism produced resembles organizational professionalism more than occupational professionalism, and digital practices thus imply changes in professionalism. Organizational professionalism is strengthened and expands the scope of professions, as was seen in the physiotherapists' acceptance of expanding their professionalism to include being the "SHA's assistant" and "office staff". Expansion of the scope of professions, unclear professional boundaries and deprofessionalization, through the institutionalization of multiple political strategies, have previously been discussed (Dybbroe, 2010; Dybbroe & Ahrenkiel, 2013; Hjort, 2005; Goodson, 2003; Evetts, 2012). Educational breadth with concerning organizational professionalism is institutionalized in professional colleges; here, medium-length higher education such as physiotherapy and nursing, the digitalization wave in Danish healthcare, including the national rollout of telemedicine in 2019, and the extensive research into digital healthcare in the professions, which diminishes human agency, all imply increased professional breadth.

The present article emphasizes a point that the perspectives of human actors can be unfolded, by putting materiality out of practice, as Schatzki suggests it with his practice-theoretical optics. The agency perspective makes it clear that health professionals are involved in defining the ontology of practice, where various intertwined practices are being based on different sets of rules and structures. Health professionals thus become agents, able to actively inform practices, for example, through feedback and requirements to regulate digital technologies.

Against this background, this article indicates the need for policies and organizations to create space for collective processes around the constitution of digital health practices, whereby these will become a collective rather than an individual concern.

Article history

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