Looking for Blind Spots! Self-recorded Videotaped Consultations by Substitute Interns – A Powerful Method of Reflecting Upon the Complexity of Clinical Consultations

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Running head: Videotaped authentic clinical consultations

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Abstract

Background

Locum tenens, substitute interns, are at an interesting crossroads in their professional identity formation process. Despite reforms to develop communication skills programs, many studies show erosion of medical students' relational capacity and ethical self-identity. The aim of this study was to gain a deeper understanding of what medical students working as substitute interns perceive and reflect upon when watching themselves in a clinical self-recorded videotaped consultation.

Methods

In this qualitative study, medical students, working as locum tenens during their summer holiday, videotaped their own authentic consultations. Afterwards, they individually watched their video accompanied by a researcher. Students' comments/reflections from reviewing their consultations were recorded. Transcribed data were coded and analysed using qualitative content analysis.

Results

Eleven students/informants participated, two females and nine males. Eleven different conditions were presented during the consultations, and patients were young, middle-aged or elderly. Five major themes emerged: Self, Patient, Interaction, Context, and Camera.

Conclusions

The five themes could be used as guide by medical educators involved in consultation skills training to facilitate sense-making activities. The concept of power and the sociomaterial arrangements were identified as blind spots. We argue that adding the concepts of power and
sociomateriality to the theoretical framework can address blind spots in communication exercises.

Keywords: professionalism, communication skills, medical education research
Background

At the start of medical school, medical students embark on a journey from being a lay person to becoming a physician. This includes developing a professional identity, which involves a series of complex processes. Students have to establish core values, moral principles, and self-awareness so that they can professionally perform the tasks expected by society in caring for patients.[1, 2]

Professionalism is central for everyone practicing the art of medicine; when missing it is obvious to anyone. As a concept, professionalism is difficult to pin down and definitions range broadly.[3-5] In a systematic review, five themes regarding professionalism were identified: adherence to ethical practice principles, effective interactions with patients and with people who are important to those patients, effective interactions with people working within the health system, reliability, and commitment to autonomous maintenance / improvement of competence in oneself, others, and systems.[6]

Since interaction with patients, next of kin and co-workers is highlighted in the concepts of professionalism, effective use of communication skills is vital, and influences patients’ satisfaction with care, adherence to therapy, and health care utilization.[7, 8] The importance of teaching communication skills in medical schools is well-established, and most schools have developed communication skills programs.[9, 10] Despite these reforms, many studies show an erosion of students’ relational capacity and ethical self-identity during the final years of medical school.[11, 12] Professionalism training has been criticized for sometimes being idealistic and impossible to transfer into practice in real life.[13, 14]

The consultation is seen as the most essential aspect of medical practice, and everything else in the practice of medicine derives from it. [15] Medical students that work as substitute interns are at an interesting crossroads in their professional identity formation, moving from
their prior role as students to that of a physician. In the present study, the informants were medical students watching themselves as a practicing physician in reality. The aim was to gain a deeper understanding of what medical students working as substitute interns perceive and reflect upon when watching themselves in a clinical self-recorded videotaped consultation.
Methods

In this qualitative study, students at the Medical Faculty, Linköping University, Sweden, analysed their own authentic consultations that had been videotaped when they were working as substitute interns between semesters. Students' comments/reflections from reviewing their consultations were analysed.

Setting

Problem-based learning as a pedagogical philosophy and method is applied in our medical curriculum, which consists of 11 semesters, followed by 21 months of compulsory internship leading to a medical license. In Sweden, medical students that have satisfactorily completed their ninth semester, and thereby passed three semesters of clinical rotations, have the opportunity to work as substitute interns. Our curriculum is student-oriented with early patient encounters, inter-professional education, and integration between basic science and clinical medicine throughout the program. Consultation training is a crucial part, including communication and physical examination skills, and development of professionalism. Video recordings are used in the consultation training during the first five semesters. Students are trained to reflect upon their own and peers' behaviour when watching each other's videos.

Study Design

Students studying in the ninth or the tenth semesters were orally informed, by the first author, about the study after a lecture. Students that planned to work as a substitute intern during the upcoming summer vacation were invited to participate in the study. Participating students were paid 120 $.

Students who agreed to participate were instructed to videotape one consultation of their own choice during their summer job. The consultation had to be a genuine consultation, not
arranged for the purpose of the study. The consultation could be performed and recorded in any clinical setting, and had to include history-taking as well as a physical examination. Video cameras were provided by the study coordinator.

Each informant met individually with one of the researchers (ME) to review the videotape. The informant was instructed to pause the videotape whenever they observed something they wanted to comment upon, but no more detailed information was given. The researcher was not supposed to pause the videotape. When the informant paused the videotape he/she was asked to elaborate on the reason for stopping. Probe questions were asked when needed. The informant’s reviews of the videotaped consultations were audio-recorded, and afterwards transcribed verbatim.

Data Collection and Analysis

The transcripts were analysed using qualitative content analysis.[16] All transcripts were read to get a general overview of the topics commented upon. Thereafter, data were scrutinized to identify all text elements concerning the different aspects of what the informant had observed on the videotape. Each pause was coded according to topic and thereafter they were aggregated and arranged into categories. The codes were derived from the data and were not decided beforehand. Coded elements were then summarized using expressions close to the informants’ own words. The manuscript, including quotations, has been prepared with the support of an English native-speaking professional.
**Participants**

Seventeen students agreed to participate in the study. Six students were unable to videotape a consultation; the remaining 11 students, two females and nine males, will hereafter be referred to as informants. The median age of the informants was 25 years (range 24-29 years). All patients in the study were adults, with a slight male predominance (n = 7 (64%) male). Eleven different conditions were presented during the consultations and patients were young, middle-aged or elderly. (Table 1) In six consultations there was gender discordance; of these, four consultations had a male doctor with a female patient. When watching the videotapes a total of 102 pauses (median eight, range 2-31) were made by the informants.

**Ethical Considerations**

Written informed consent was obtained from all students participating in the study, as well as from each patient being videotaped. The study design was approved by the Regional Ethical Review Board in Linköping (2010/80-31).
Results

The informants’ comments on each individual pause of the videotape were analyzed. Five themes were generated: Self, Patient, Interaction, Context, and Camera. For each theme a number of sub-categories were found and all themes and sub-categories are summarized in Figure 1.

Self

The most prevalent theme that emerged concerned aspects of “self”, i.e. statements informants made about themselves: who they are, what they feel, and what they do.

Who they are

Informants commented on elements of inherent traits and thereby unchangeable during the consultation. One of these traits was lack of experience, which was believed to affect the consultation, and also influenced the student’s decision-making process. Other unchangeable factors were gender and age, which affected patient behaviour as well as the students’ own expectations going into the consultation.

‘I believe that if I had more experience I would have had shorter consultations’ [M6]

‘There were many thoughts in my head at the same time which might have been because I am a beginner ... how should I tell her what I have found and what the plan is, and that I want someone else to look at it?’ [M5]

‘I do look quite young and am a girl. I thought that I would get “Do you really know these things?” ... Some patients (reacted in this way), of course, as ever, but for the most part it went really well.’ [F1]

What they feel
During a consultation, informants’ feelings were evoked by what was said or what happened. In the study, mainly negative feelings such as being nervous, tired, and ashamed were commented on. Some students acknowledged that negative feelings impacted on their performance, whereas others were able to counteract this influence.

'I believe that I was nervous and asked the question anyway' [M3]

'Even though I was tired I managed to stay focused and continued to work quite well' [M4]

'When you say something that is not well reasoned then you are ashamed' [F1]

What they do

The third sub-category focused on the actions taken by the informants during the consultation. Several of them commented on the practice of taking notes during the consultation, the way they formulated questions, how they performed the physical exam, and their body language. Comments were often made regarding principles taught during previous communication training.

'We’ve been taught that it is not so good to take notes during the consultation ... I know that you are not supposed to but I do it anyway' [M6]

'And then there is this classic question that we’ve been taught, “What do you think about this?” ... I’ve actually tried to use it [the question] consistently with varying success during the summer since I’ve previously always thought that it was very helpful but I haven’t been as good as I hoped to be. One should not start with just one open-ended question but maybe use additional ones' [M7]
'What I think about here at the beginning is that I lean forward extremely [laughs] ... and I wonder whether this is something that disturbs [the consultation] or whether it makes me seem curious' [M9]

Patient

Similar to the previous category (Self), informants describe inherent traits of the patient (Who they are), and feelings of the patient (What they feel) observed on the videotape.

Who they are

All informants commented on the patient they met. They acknowledged that patients were different and that it was important to adapt to different personalities.

'I imagine that techniques do not work equally well with all patients' [M4]

There were certain attributes of the patient that influenced the consultation, to which the informant had to adjust. The most widely acknowledged variables of the patient that influenced informant behaviour and mind-set were age, gender, and individual personality.

'This was a young patient that talked a lot by himself; some older people just state their symptoms and that's the end of it. He blabbered quite a lot' [M7]

'I picture that she [the patient] is someone who is content when they [doctors] say that she has high blood pressure... She doesn't ask why, nor has she tried to figure out what it is caused by or what she should do' [M2]

'In this case he could have had a sweater on, for example, but it did not make a big difference to him, but if it had been a woman instead or someone who did not want to lie down and expose her bare chest' [M4]

What they feel
When observing the videotaped consultation, informants’ reactions to the emotional state of the patient did not always seem related to the examined problem. The informant could choose to respond or ignore these emotions.

‘It struck me that he was kind of nervous when he asked me about this, and I thought this was odd [a patient asking for strong pain killers when having a problem with not so strong pain]’ [F1]

‘I believe that there was some fear behind all of this, but I didn’t care about it because I felt that it was not my responsibility to start talking about their [the ear nose and throat clinic] stuff’ [M6]

Sometimes parts of the consultation were performed in a way that led to patient satisfaction.

‘Patients appreciate that you carry out a thorough examination, which makes them pleased afterwards’ [M5]

**Interaction**

Pauses were made to comment on the interaction between informant and patient, on the connection made between them, on sensitive questions, and on the control of the consultation.

**Connection**

The informants saw connecting with the patient as an important part of the consultation.

‘Generally I believe that I am doing quite well, I think it was quite hard [the consultation] but it felt as if we had a good connection’ [M2]

There are factors that promote connection with the patient such as the inherent traits of the doctor, and techniques such as shared decision-making.
'As a young doctor you must understand what position you are in. It is one thing if you have a long and successful career behind you ... I believe that it is important to involve the patient, to make a shared decision... I want the patient to feel that "me and my doctor are going to fix this"' [M6]

One informant felt the need to use a technique [taking notes] despite feeling that this interfered with establishing a strong connection with the patient.

'You do lose some connection with the patient when you write at the same time, but I think it is important to get it right, and generally I believe that the connection to the patient is good enough anyway... she seems to have confidence in me' [M5]

Control

The informants felt that one of their responsibilities was to lead the consultation and to lead in such a way that no information that the informant felt was important was left out. There were different ways to achieve the same goal; some informants actively asked probe questions whereas others acted more passively.

When interacting with the patient during the consultation, the informants wanted to direct the consultation towards areas that they felt were important.

'When she started to talk about her son and the farm... I was hoping that I in some way could lead the conversation back to... to ask what she had done previously, which would be a little more interesting' [M1]

'I've also noted that you need to be quite firm with the patients... you need to press on with [your] questions. What did you feel, how was it, describe it, and do you feel anything now. What has happened before and what is new? So that you really sort it out!' [M3]
‘It feels as if I am very “laid back”, that I don’t lead very much. But during the conversation it felt as if I were in control’ [M6]

**Context**

The consultation was conducted within a context in which several external factors were highlighted by the informants. Directly or indirectly, the consultation was influenced, by *other people, time constraints, the setting*, including the physical environment, as well as the routines of the work place, and the *camera*.

**Other people**

In the present study, the informants were just at the beginning of their career and had to rely on their supervisors, which was why they had to cope with uncertainty about the final decision-making concerning the patient.

‘I’m pretty certain that this is the case, but I don’t know whether my colleague will agree and therefore I don’t want to elaborate [to the patient] too much on what my diagnosis is’ [M5]

One informant said that patients might have relatives or close friends with special knowledge that could facilitate the subsequent care of the patient.

‘Then he told me that his wife was working in health care and could help him at home’ [F2]

**Time constraints**

As doctors the informants had to adapt to the reality that time constraints are a vital factor in consultations in most departments.

‘[During training] you really don’t have any limitations at all, you can talk about the patient’s previous medical history for 40 minutes... and there is a sharp contrast when you have, ah, 15, 20 minutes. Then you can’t let them talk about all the things that have happened
before. You need to focus on what is relevant now. You understand this pretty quickly... how you must limit the patient and yourself in questions asked' [F2]

Setting

A consultation not only involves handling patients with different personalities, co-workers and time constraints. The physical environment, the room which you are working in, its furniture and other people in the room, also had to be handled by the informants.

'The surroundings weren't optimal for this lady. She was in a room with three other beds. It did not feel appropriate to examine her in there; therefore this consultation was recorded in this office which was small and narrow' [M1]

'I thought it was awkward that he [a colleague] came in at that moment. It felt like this wasn't an optimal situation for the patient to be, in this room where people were coming and going' [M9]

'At the same time you must remember what it is like in the emergency department. If it had been a check-up at a health care centre then I might have acted differently... I believe that you can separate these different settings' [M4]

Camera

Video-recording of a consultation affected both informant and patient:

'When you know that both yourself and someone else is going to watch it, in a way, it becomes an assessment. Then you try to get your act together in certain aspects, which might make you worse in others' [M7]

'I don't know whether it shows, it doesn't show that much but I remember thinking that he was a bit bothered by the camera' [M3]
Discussion

In this study, medical students were informants watching authentic videotaped consultations from their first working experience as substitute interns. The setting of the study was unique in that the informants watched themselves being a real doctor, not pretending to be one as they did during medical training. Informants paused the video when they reacted to something which they wanted to comment upon, e.g. observed behaviour, questions, their own and/or patients' reactions, or just something they wanted to reflect upon. Transcripts of the comments were analysed and five themes were identified, as shown in Figure 1. The picture in Figure 2 visualizes the complexity of medical consultations, and could be used by educators to facilitate discussions to include more aspects of student/doctor/patient encounters.

The results of the present study show that it is doable for students to select and arrange video-recorded consultations without assistance from the faculty. The patients selected, in terms of age, gender and medical conditions, in the recordings represent a broad selection of common encounters in modern health care, strengthening the validity of the study.

There is an increasing awareness of the importance of using a sociomaterial understanding of learning as a process (including materiality - objects, technologies, nature, etc.) of ongoing participation rather than merely a process of acquiring knowledge and skills.[17] Learning cannot solely be considered in terms of individual cognitive processing but has to include particular situations, patients, tools, technologies, social relations and other environmental factors. Using simulated patients, educators have the opportunity to control the level of ethical complexity and create an undisturbed and safe environment for the consultation.[18] dynamics.[19] Therefore, it is important to alternate between simulated and authentic consultations during the curriculum.[18, 20] In this study the auscultations were authentic,
and the informants had the opportunity to discover and reflect upon contextual factors that are rarely present in simulated encounters, such as a colleague passing through the room or suboptimal chairs and room size. These material arrangements would never come into students’ awareness in a simulated exercise but could still have been blind spots for both student and tutor. In simulated consultations, complex and/or challenging ethical situations are often created and may therefore occur more frequently than in everyday clinical practice, whereas in authentic consultations complex contextual factors are common but seldom reflected upon during medical training. We argue that challenging or complex material arrangements, as well as psychological/ethical situations, should be included in learning situations.

Power influences the doctor-patient-student interaction and is always present.[21] None of the informants identified issues related to the concept of power. But, at the same time, informants perceived that being in control was one of their main objectives during the consultation, in order not to miss important information. Asking questions and using linguistics, paralinguistic and non-verbal communication are different ways to construct power in a doctor/patient encounter.[22] It seems there was a blind spot in our students’ awareness concerning power in the doctor/patient encounter, which could hinder sharing power with the patient.

By discussing authentic video recordings, the uneven power relationship between patient-doctor as well as trainer-trainee becomes apparent. One informant commented about the patient lying down with a bare chest without recognizing the uneven power relationship that this situation represented. Another student commented on her age and sex in regard to being taken seriously. Other informants articulated a will to share power through shared decision-making although they did not discuss the concept of power as such. These findings clearly show that even though the uneven power relationships are ever present in modern health and medical education they are seldom articulated as such. Our findings are in accordance with
previous studies [22, 23] and suggest that the construction and sharing of power in the doctor/patient relationship need to be further highlighted in modern medical education.

Most informants commented on inherent traits in both themselves and their patients, which influenced the flow of the consultation. Age, gender and experience, or patient history, are factors that are unchangeable and must be accepted and handled. In six consultations there was gender discordance between student and patient, and in most consultations the patient was significantly older. The informants had minimal working experience to help them handle such complex situations that require well-developed professionalism. One way to promote and foster awareness of the need for professionalism is to provide sense-making opportunities in which students discuss, explore, and reflect upon these discrepancies.[24, 25]

The study was performed during the summer vacation and all informants were working as locum tenens, making them both students and doctors, which placed them in an interesting dual position. The main strength of the present study is that all consultations were authentic and not constructed for the study.[26] Moreover, all consultations were video-recorded, giving the informants the opportunity to observe afterwards what actually happened, enhancing (their) self-awareness and thus also providing a learning experience.

We cannot rule out that the informants were influenced and their responses were hampered by the fact that the interviews were conducted by a faculty member [ME] of the medical school where they are being trained. All informants had volunteered for the study, introducing bias to the study.
Conclusion

In the present study five themes emerged that could be used as a guide for the complex situation constituted by the medical consultation, to be used by medical educators involved in consultation skills training to facilitate sense-making activities. We argue that adding a theoretical framework for these activities, such as the concept of power or sociomateriality, could address the blind spots in communication exercises.

Declarations

Ethics approval and consent to participate: Written informed consent was obtained from all students participating in the study, as well as each patient being videotaped. The study design was approved by the Regional Ethical Review Board in Linköping, Sweden (2010/80-31).

Consent for publication: Not applicable

Availability of data and material: The datasets used and analysed during the current study are available from the corresponding author on reasonable request. The videotaped consultations cannot be shared since they contain footage of individual patients.

Competing interests: None

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Authors’ contributions: All three authors contributed to the study design. ME performed the data collection. ME and KS wrote the first draft of the manuscript. All authors participated in critical revision of the paper and approved the final version for publication.

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References


Figure 1

The clinical consultation through the eyes of locum tenens

- Who they are
- What they feel
- What they do
- Connection
- Control
- Other people
- Time constraints
- Setting
Legends of figures

Figure 1

Major themes and sub-categories that appeared during the analysis

Figure 2

The clinical consultation through the eyes of locum tenens
Table 1. Code, sex, age and workplace for informants, and sex, age group and condition for patients.

<table>
<thead>
<tr>
<th>Informant</th>
<th>Code</th>
<th>Sex</th>
<th>Age</th>
<th>Workplace</th>
<th>Patient</th>
<th>Sex</th>
<th>Age group</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Male</td>
<td>24</td>
<td></td>
<td>Rehabilitation – Ward</td>
<td>Female</td>
<td>Elderly</td>
<td></td>
<td>Femur fracture</td>
</tr>
<tr>
<td>M2</td>
<td>Male</td>
<td>25</td>
<td></td>
<td>Internal medicine – ED</td>
<td>Female</td>
<td>Middle-aged</td>
<td></td>
<td>High blood pressure</td>
</tr>
<tr>
<td>M3</td>
<td>Male</td>
<td>28</td>
<td></td>
<td>Internal medicine – ED</td>
<td>Male</td>
<td>Middle-aged</td>
<td></td>
<td>Chest pain</td>
</tr>
<tr>
<td>M4</td>
<td>Male</td>
<td>26</td>
<td></td>
<td>Internal Medicine – ED</td>
<td>Male</td>
<td>Middle-aged</td>
<td></td>
<td>Atrial fibrillation</td>
</tr>
<tr>
<td>M5</td>
<td>Male</td>
<td>25</td>
<td></td>
<td>Internal Medicine – ED</td>
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<td>Middle-aged</td>
<td></td>
<td>Facial Paralysies</td>
</tr>
<tr>
<td>M6</td>
<td>Male</td>
<td>27</td>
<td></td>
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<td>Male</td>
<td>Young</td>
<td></td>
<td>Lyme disease</td>
</tr>
<tr>
<td>M7</td>
<td>Male</td>
<td>29</td>
<td></td>
<td>Internal medicine – ED</td>
<td>Male</td>
<td>Young</td>
<td></td>
<td>Chest pain</td>
</tr>
<tr>
<td>M8</td>
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<td>24</td>
<td></td>
<td>Urology – OC</td>
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<td>Middle-aged</td>
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<td>Elevated PSA</td>
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<td>24</td>
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<td>Elderly</td>
<td></td>
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<tr>
<td>F1</td>
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<td>26</td>
<td></td>
<td>Orthopaedic – OC</td>
<td>Male</td>
<td>Young</td>
<td></td>
<td>Control of fracture</td>
</tr>
<tr>
<td>F2</td>
<td>Female</td>
<td>25</td>
<td></td>
<td>Internal Medicine – Ward</td>
<td>Male</td>
<td>Elderly</td>
<td></td>
<td>Referred after PCI</td>
</tr>
</tbody>
</table>

Abbreviations: ED, emergency department; OC, outpatient clinic; PCI, percutaneous coronary intervention; PSA, prostate-specific antigen