

# How video cases in preparatory teaching influence students' approaches to patients in psychiatric clerkship. A qualitative study.

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## Abstract

### Background

This study explored how a preparatory teaching format using patient cases portrayed in videos influenced medical students' clinical learning and practice experiences in their psychiatric clerkship.

### Methods

The study applied a qualitative explorative design. We asked the students to draw their experience with a patient encounter in real clinical setting. Subsequently we interviewed the students unfold the students' perspectives on how they navigated learning from the preparatory teaching in their clerkship. Data was transcribed verbatim and coded by an inductive thematic analysis.

### Results

The results demonstrated that students' use of learning from the video cases varied according to their roles in patient encounter situations in their clerkship. Students having active roles in the diagnostic interview adopted a patient-centred focus demonstrated by empathic engagement with the patient and self-reflexivity related to the video cases. Students with passive roles, observing a doctor, described a self-centred focus on how to adopt an appropriate appearance and copied the surface behaviour of the simulated doctors in the video cases.

### Conclusion

Our study findings contribute to broadening the understanding of how video cases in preparatory teaching formats affect students' approach to patient encounters and their clinical learning experience. The results also reflect the importance of active engagement of students in the clinical learning context if preparatory teaching should have an effect.

## Background

In medical education, the psychiatric clerkship has unique challenges as the psychiatric diagnostic process lacks the supporting biological variables that students are familiar with in somatic specialities (1). Hence, the diagnostic interview is central to psychiatric practice (2,3). Medical students' insecurity on how to meet psychiatric patients is known to negatively influence their approaches to patients, compromising diagnostic accuracy (4-6). Medical schools therefore need to prepare medical

students for the particular skills and emotional challenges of communicating with psychiatric patients (3,7). As part of this preparation, video cases could play an important role.

Patient cases has traditionally played a role in preparing health sciences students for authentic clinical practice (8). Three central types of patient cases in contemporary health sciences education are the text based format, simulated patients and interactive components also referred to as virtual patients (video, multimedia, animation components etc.). Patient cases in the format of text has been criticized of representing the patient in an instrumental and objective language (9-11). Simulated patients are considered effective in training communication skills (McNaughton et al. 2008; Dave, 2012). However, in psychiatric teaching, there is a risk that simulated patients may bring their own prejudices to the task and may end up portraying a stereotyped view of mental illness if they are unfamiliar with the psychopathology of the case, and that may have implications for students' learning (Dave 2012). Another point of caution is that students faced with simulated patients may find the concept distracting and artificial, which will compromise the value of their learning (Gask et al. 2011). Portraying the complexity seen in psychiatric patients requires both performance abilities and detailed knowledge on psychopathology, emphasising the need for specialized training of simulated patients (McNaughton et al. 2008; Dave, 2012). However, the high costs and scarcity of trained simulated psychiatric patients has limited the use of such teaching formats in undergraduate medical education. Educational information technology has offered medical students a variety of web-based learning materials, including virtual patients, to be used for self-directed learning (Edelbring, 2012; Ruiz et al. 2006). Yet, students may have low acceptance, usage and satisfaction when e-learning resources as virtual patients are offered as isolated add-ons to other curricular component (19). Studies have shown that students prefer face-to-face and blended learning formats over purely online learning (20) (Edelbring et al. 2012). So far, there is a lack of evidence to support which of the numerous virtual patient designs may be effective and why (Cook and Triola, 2009; Bateman et al. 2013). Moreover, senior allied health professionals and tutors have been suggested as important to facilitate the a link between virtual patients and clinical practice (Edelbring et al. 2012; Bateman et al. 2013). Yet, little is known about how the patient case format affects students' learning. Using video, to

reveal clinical information interwoven with the patient's personal, emotional, social and cultural aspects has been proposed as a means to bring patient cases to life (10). It has been suggested that virtual patients in the form of simulated video cases using actors can be engaging and motivating learning tools that evoke the learner's emotional engagement (24,25) and improve medical students' performance in clinical encounters (10,14,26). Videos are considered particularly useful for enhancing the authenticity of patient cases (11,27,28). Video cases can portray clinical practice and intensify students' learning experience and reflection. The use of video cases in medical education is considered having the potential to entail insight into the complexities of meeting and engaging with patient in psychiatric clinical practice, not easily communicated in text case formats or demonstrated with the standardized patient (3,26,29). However, more research is needed to inform the instructional design of video cases (22), and we know little about how video cases influence students' learning in their clinical encounters with psychiatric patients in clerkship (7,16,26).

Our previous studies demonstrate that video cases foster patient-centred perspectives better than text-based patient cases prior to meeting psychiatric patients (30,31). In this study, we therefore sought to widen our understanding of how video cases influence medical students' meetings with patients during their psychiatric clerkship.

## Methods

As an explorative study, we aimed to identify and explain elements of students' learning experiences with video cases and how this was transferred to learning in the clinical diagnostic interview situations (32). The methodological approach in this study was inspired from an interpretivist perspective, which includes the approaches of phenomenology and hermeneutics (33). This was sought by identifying, describing, and analysing underlying interpretations of the characteristics and mechanisms of the situation from the students perspective (34). A characteristic for conducting research within the interpretative paradigm is that the researches focus on what makes sense and seek to describe the phenomena in an understandable way. This implies that there are many different approaches to data collection and analysis depending on the researches' epistemological positions, which may generate different perspectives and themes. (35). Within the research group our

backgrounds was primarily characterised by origination in clinical practice, with professions as nurse, psychiatrist, surgeon and anaesthesiologist, respectively. Our titles thus included educational anthropologist, nurse and PhD student (KP), professor and chair in clinical psychiatry (OM), clinical associate professor in medical simulation (CP) and two researches in health sciences education, associate professor (AM) and professor (CR).

## Setting

The context of the study was a 4-week clinical course in psychiatry for fourth-year medical students at Aarhus University. The course included large-group preparatory lectures and subsequent clinical placements. A 2-hour lecture prepared students for the diagnostic interview with psychiatric patients. For the purposes of the study, three video-based patient cases covering the diagnostic interview with a patient exhibiting manic symptoms; a patient exhibiting psychotic symptoms; and a patient exhibiting depressive symptoms with psychotic delusions was applied to an interactive e-learning format to be facilitated in the 2-hour lecture. The patient and a doctor were both played by actors.

## Video cases on diagnostic interviewing

The video cases portrayed the diagnostic interviewing communication between a patient and a psychiatrist. The diagnostic interview is regarded as unique in medicine for combining a humanistic and scientific approach to the observation and understanding of the patient's perspectives, in regards to psychopathological symptoms which by the patient may not be visible / apparent (36). In practice, the diagnostic interview approach in clinical psychiatry is grounded in empathic descriptive phenomenology and clinical observation (37). British as well as Danish medico-legal documents specify that all doctors must be able to perform a diagnostic interview in psychiatry and interpret the findings (38,39). Although the observation and categorization psychopathology served as a basic principle in the learning material, this was somewhat subtle, and the videos did not specifically represent a step-by-step introduction to psychopathology.

The development and design of the cases was an iterative process. The content of the video cases and the design aimed to bring forth a variety of perspectives in portraying the interaction between the clinician and patient and to form the basis for discussions and reflections on how to meet the

psychiatric patient. The portrayal of the patient and clinician in the video cases was inspired from multiple sources including; experiences of clinical teachers in psychiatry; medical simulation principles, existing literature on patient cases, medical students attitudes towards psychiatry, patient stories and representation of clinical psychiatry (3,14,15,40,41). Aesthetic considerations intended to meet the fundamentally ethical questions concerning respect in portraying the illness and suffering of patients (42) (43). Specialists in clinical psychiatry confirmed the authenticity of the psychopathological symptoms portrayed by the simulated patients.

The video case represented the course of a diagnostic interview as a whole, and aimed to reflect realism in time and content having a linear structure. To avoid cognitive overload and to keep focus on key learning goals, the video cases did not exceed 20 minutes (44). This format was inspired by a previous project. All video cases included 9–13 sequences paused with questions offering two choices encouraging students to reflect upon. The questions related to the observed psychopathology and patient information provided and choices of which symptoms would be most appropriate to explore. All cases started with a short referral note similar to the clinical information clinicians usually read in a patient record format before beginning a diagnostic interview in clinical practice.

A senior lecturer used the video cases during the 2-hour preparatory lectures and students were encouraged to vote (raising a coloured sheet) on the continuous built-in questions, which the lecturer used for initiating reflection and discussions among the students.

## Participants

Medical students who had followed the preparatory lectures were allocated by faculty administration to their clerkship rotation at one of nine psychiatric departments located in six hospitals. We invited students by e-mail to voluntarily participate in individual interviews in the last week of their clinical rotation. Student lists including e-mail and rotation information were provided by the faculty administration. We recruited participants among the sixty-one students who attended preparatory lectures. We excluded students with clerkship placement in child, adolescent and forensic psychiatry as these departments did not let students practise diagnostic interviews. We also excluded students in clerkships far from the university due to transportation challenges. This resulted in a sample of

twenty-four medical students to invite to participate in this study.

## Data collection and analysis

We used the rich picture interview technique as a visual approach to understand the medical students' experiences (45,46). Asking participants to draw their experiences in combination with interviews has demonstrated ability to unfold tacit knowledge, perceptions, and emotions of complex situations in professional practice(47).

The interviews were scheduled to last for 2 hours to enable the participant to feel comfortable to engage in a dynamic discussion (48). All interviews followed the same structure: First, the study was explained to the medical student to obtain verbal and written consent. Second, they were introduced to the visual approach (49) and instructed to draw on an A3 paper sheet in silence for 30 minutes.

The written instruction was:

“Reflect upon and draw a situation from the clerkship where the preparatory video-based teaching format helped you navigate meeting and communicating with a psychiatric patient. Try to illustrate everything you perceive to be part of the situation, including ideas, people, and connections. You can also draw representations of more subjective aspects, such as figures with human characteristics, feelings, conflicts, and prejudices. ”

Finally, the interviewer used a semi-structured interview guide to expose different points of thinking departing from the key elements of the students' rich pictures and students' reflections related to the preparatory teaching format (32). Three researchers, CP, AM and KP, made the semi-structured interview guide to explore students' drawings [29], [30]. The interview guide was pilot-tested with two fourth-year medical students, reviewed by two associate professors in health science education with qualitative interview experience, and refined accordingly. One interviewer KP and one co-interviewer AM were present to probe into relevant elements in drawings. All interviews were recorded and transcribed verbatim and the drawings scanned.

We conducted a thematic analysis approach inspired by Braun and Clarke to search for patterns of meaning in relation to the medical students' experiences described in individual interviews [28], [29].

The analysis of data initially incorporated a data-driven inductive coding to explore the described

diagnostic interview situation (contextual factors), and allowing the views of students' emotional experiences and reflection of different components of the video cases to be integral to the process of the analysis (50). This was an iterative process with constant comparison and identification of codes and patterns in the dataset (51). Co-authors discussed the identification and comparison of codes and reached consensus on the themes. Finally, the data was checked for saturation.

## Ethics

The Danish Research Ethics Committee exempts studies of this type from review. Students who volunteered to participate in the interviews were informed of the intention of the study and how the data would be anonymised. The students signed a written consent form with the option to withdraw from the study at any time. The collected data was stored and anonymised in accordance with the guidelines from the Danish Data Protection Agency.

## Results

Eight students out of the twenty-four invited students accepted the invitation and completed the interviews. A main finding from the analysis was that students' roles in the clinical interview situations influenced how they had applied the preparatory learning to diagnostic interview situations. The results differed depending on whether the students had an active or passive role. Three students emphasized having dominantly active roles, three passive role and two reported having mixed roles.

### Students having active roles

Students having an active role demonstrated a patient-centered approach in the diagnostic interview situations. They described exploring a variety of perspectives from the patient and demonstrated empathic engagement and reflection on their impressions and emotions with references to insight from the video cases. A student described how she had actively explored a patient's family relations: She [patient in clerkship] made me feel moved – as I felt when confronted with the patient in the lecture [the video case]. She [patient in clerkship] has a family who cares for her, but still she does not want to be a burden. Therefore, I asked her about her family, so we talked about this. I think that both patients had tendencies to isolate themselves because they did not want to be a burden to their families. A student told that observing, discussing, and learning about the patients' experiences from the patient's point of view, both with the video case and in the clerkship, had influenced self-reflections when relating to the psychiatric patients' concerns.

Many of the issues they [patients] are afraid of relating to are questions and concerns I also might have

myself. How do I manage my life? What do I want for the future? I think those concerns are normal. You have to differentiate between the normal and sick concerns in the patient.

Another student emphasized that the preparatory lectures in combination with the encouraging doctors in her clerkship made her consider the legitimacy to be curious about and actively explore the patient's perspectives with an open mind in the diagnostic interview.

The additional perspectives and explanations of the teacher in the lecture gave some 'aha' experiences on why the doctor in the video had asked some questions in such a direct manner which I would not have perceived on my own. Like in the lecture, the doctors in the unit said – just ask and enjoy the diagnostic interviews, experience what they say! Before that I would have it like – how legitimate is it for me to talk to someone about speaking power plugs? So instead of just saying – no it does not speak, I would now ask, what does it say? How does it sound? Now I feel ok being interested and meeting the patient with an open mind saying – I would like to hear more about that!

### Students having passive roles

In contrast, students with passive, observer roles, sitting next to a doctor in the clinical interview situations, demonstrated relatively self-centred reflections about their own appearance. They pictured how the doctor portrayed in the video cases had looked and acted and described how they copied that behaviour during the clinical diagnostic interview situation.

“You have to be able to not react in an awkward way when the patients tell you things that are very dramatic. What I thought was good about the video cases was that you did not only see the patients', but also the doctors', facial expressions. It gave me some tools to help me act above the table – appearing very open. However, I curled up my legs under the table hoping none of them [doctor and patient] saw how I trembled.”

Hence, the pedagogical influence of the video cases seemed to depend on the degree to which the students engaged in the real-world patient encounter. A student with predominantly a passive role during clerkship, highlighted reflections about how to look in future real-world psychiatric patient encounters with reflections of how to look emphatic while being prepared for potential patient aggression.

Being in the situation [the diagnostic interview] – listening to their stories – of course you have to be empathic. However, I speculated more about how to look in the situation as I am having difficulties about the role. I observed that the doctors who talk to patients and have done it many times can manage. It will come to me with experience.

A student who experienced no or insufficient guidance from resident staff described how she expected to cope with a potential stressful situations of interviewing a patient, by considering how

she should act and place one-self with reference to the video cases, in case a potentially dangerous situation should occur.

The first thing I drew - was the escape route as the door behind the patient. I have mainly been to a psychosis ward. Some have delusions - which I have tried to illustrate with a chip - or something they believe they have had implanted. So you have to always remember to be oriented in how you could exit a room if something should happen, and having the table between you and the patient, like in the video.

If the students lacked encouragement, support, and guidance from the hospital staff, the students' descriptions of their clerkship and diagnostic interview situations were described as frustrating. Under such circumstances, the video cases were perceived as less relevant.

We [students] are just like flies, looking for a doctor to cling onto for a while. Nobody is concerned about your [medical students'] thoughts, needs and feelings. The clerkship feels less authentic as you are not given the opportunity to practise. We are not encouraged or given access to patients. Why, I do not understand. In less than a year [as post-graduate doctors], we have to do it anyway with no lifelines. I think - then I could use such video cases when I am in the real world. Not in the clerkship.

## Discussion

This study demonstrates how insight from video cases in a preparatory teaching format was used by medical students' in their clerkship. The influence of the video cases seemed to depend on the students' opportunity to enact the active role of the doctor portrayed in the video cases.

Correspondingly, we found that students having active roles, adopted a patient-centred approach to explore and reflect upon patients' perspectives demonstrated with reference to reflections drawn from the video cases. Students with passive roles on the other hand characterized by demonstrating self-centred reflections which they related to learning from the video cases, when describing their experiences as observers during diagnostic interview situations.

### Active roles influencing patient centred approaches in students

Students having active roles demonstrated a variety of approaches to the patient, which relate to dimensions of patient centeredness, for example recognising patient concerns, self-reflective components (e.g. being aware of own emotional responses) and taking into account support from family (52), when describing how they used insight gained from discussing the video cases. This finding is in accordance to recent research which indicates that medical students' adoption of patient-

centeredness depends on their perception of the encouragement in clinical learning environments for applying patient-centered behaviors (53). Independency and clinical responsibility are considered important to develop students' competency during practice training (54,55). However, as we did not explore the students' individual engagement, we do not know to what extent the interviewed students were being more or less prepared for taking on active roles in the diagnostic interview. While patient-centeredness is considered important to communication and patient care, little is known about how it should be taught within psychiatry (56,57). The findings of the active students' linkage of approaches in the diagnostic interview situations to the video cases, seems to draw attention to the patient-centered capitalization of preparatory teaching with video cases being depended on clerkships culture for encouraging students independence.

#### Passive roles influencing a self-centred reflections

In contrast, we found that students' reflections differed when having passive roles as they focused on their own appearance of how to look, concern of acting awkward, and emphasized safety issues such as escape routes and use of the alarm. Students having passive roles adopted a form of mimicry of the doctor's appearance in the video cases and non-verbal behavior used to for example making eye contact and nodding as students reported. The self-oriented focus on how to look, act and a react in the students having passive roles may be linked to student anxiety and insecurity on how to approach psychiatric patients in clerkship (58). Non-verbal behaviour is recognized as a perquisite to engage in patient-centered communication yet, students must embrace multiple interrelated aspects when communicating, exploring and understanding patient's illness (52).

Participants undergoing professional training, has been found to mimic superiors' behaviours as a defence mechanism against objects of their fear, which does not include reflection (59). Accordingly, if learning experiences are not reflected upon in the learning process, students' transition will not progress (60,61). Students in our study demonstrated a variety of reflections in their use of mimicry drawn from the video cases, centred on their ability of how to handle the situation. Correspondingly, mimicry in students has previously been identified as a method to cope with stressful transitions (62-65).

With a grounded lens of learning theory, the progression from novice to professional is described as a move from “legitimate peripheral participation” involving observation and imitation to “full participation” (66). In this perspective the students having passive roles, could be regarded as being stuck in a peripheral position as “observers and imitators”. Insufficient transition can ultimately prevent students from gaining the necessary professional understanding of future patient care situations (67).

Facilitation by an experienced teacher and resident support

The senior lecturer acted a guiding role to challenge student’s beliefs and bring new insights by subjecting students to the video cases as intended. The significance of the teacher-led discussions in the preparatory teaching was highlighted in students’ recollection of their experiences of how they had used their reflections and insight from the video cases to navigate in their clerkship. Similarly, student also emphasized the ability of the clinical staff also to have a role in supporting their clinical learning, encouraging their engagement with patients. Support from clinical staff is significant in how participants undergoing transition may or may not navigate emotional disruptive learning situations to gain professional insight (68,69). Several studies have described how lack of support and encouragement from the clerkship clinical environment and access to actives role have a negative influence of medical students clinical learning (56,70,71). It is well documented that students having negative experiences related to professional socialisation processes in clerkship may experience a major gap between preclinical and clinical training, regardless of the quality of the preclinical training (72). Their professional development may thus be prolonged, as these students get ‘stuck’ in the transition from theory to practice (68,73,74).The present study is in line with these findings, demonstrating how passive roles in clerkship compromises medical students’ learning and development of a patient-centred approach (53,75). However, we did not specifically study how the psychiatric clerkships were organized or to what extent there were designated clinical supervisors with the role of guiding students’ learning experiences.

### Strengths and limitations

Following the ontology of an interpretivism stance, we acknowledge that the choice of coding

approach and interpretation of students' perspectives was influenced by the researchers' backgrounds and associated epistemological understandings (76). We thus recognize our coding approach to our data has its limitations, for example due to the possible variety of interpretations (50). While the use of individual rich picture interviews was effective in producing an in-depth picture, it might also explain the accentuated points of some students experiencing their psychiatric clerkship as negative or less optimal. Drawing attention to the students' experiences of entering their psychiatric clerkship, the individual interview format could possibly serve as a safe-room of confession for suppressed and non-verbalised frustration. The methodology of our study focuses on students' subjective emotional aspects limited to the video cases and diagnostic interview situations, whilst ignoring important contextual aspects such as organisational or cultural practices of which students may be more or less aware. As the interview questions directed the connection between video cases and students' clerkship experience, we do not know if these reflections would have emerged on their own. However, the focus of this study was deliberately limited to the exploring how video cases influence students' subsequent clinical patient encounters, as we in previous studies have established a link between the influence and effect of video cases on medical students patient-centred reflections (30,31). We acknowledge the limitations of our sampling and data collection. We used a convenience sample of students; nonetheless, those who volunteered were engaged and motivated to participate in the interviews. Although our data from eight students have sufficient depth and the rich pictures added to the richness of the students' perspective, results from a single institution may have limited transferability. Transferability of our qualitative findings is indecisive because interview questions following a semi-structured interview are not asked in a standardized way in all participants (76). Thus, we do not know to what extent the study hypothesis or results apply to other settings. The rich description of our context and data allows the reader to decide to what extent our results could be transferred.

## Conclusion

Our study findings contribute to broadening the understanding of how video cases in preparatory teaching formats affect students' approach to patient encounters and their clinical learning

experience. Patients and doctors played by actors and represented in video cases may have a potential in enabling students to self-reflect and emphasize on patient perspectives which calls for further exploration. The results also reflect the importance of active engagement of students in the clinical learning context if preparatory teaching should have an effect. Next step in a research agenda would be to explore teachers' use of video cases in preparatory teaching session to understand their role and contribution to unfolding patient-centred perspectives and how they influence on student learning and subsequent approaches to patient.

## Declarations

### **Ethics approval**

The Danish Research Ethics Committee exempts studies of this type from review. Students who volunteered to participate in the interviews were informed of the intention of the study and how the data would be anonymised.

### **Consent for publication**

The students signed a written consent form with the option to withdraw from the study at any time. The collected data was stored and anonymised in accordance with the guidelines from the Danish Data Protection Agency.

### **Competing interests**

The authors declare that they have no competing interests

### **Availability of data and materials**

The data that support the findings of this study are available on request from the corresponding author [KP]. The data are not publicly available due to them containing information that could compromise research participant privacy/consent.

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### **Authors' Contribution**

Authors KP, AM, CP, and OM all contributed to the original study design. KP and AM was active in collecting the data. KP, AM, CR and OM contributed to the process concerning the data analysis and

interpretation of finding having regular meetings. KP, AM, OM, CP and CR aided in the drafting the article regarding all aspects of the manuscript. KP, AM, OM and CR revised the article carefully and critically for important intellectual content. KP, CP, AM, CR and OM all approved the final manuscript version for submission and publication.

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## Figures



Figure 1

Hearts on the small people illustrates a caring family; the shield around the patient was an allegory conveying a tendency to isolation, and the weight was a symbol of feeling like a burden.

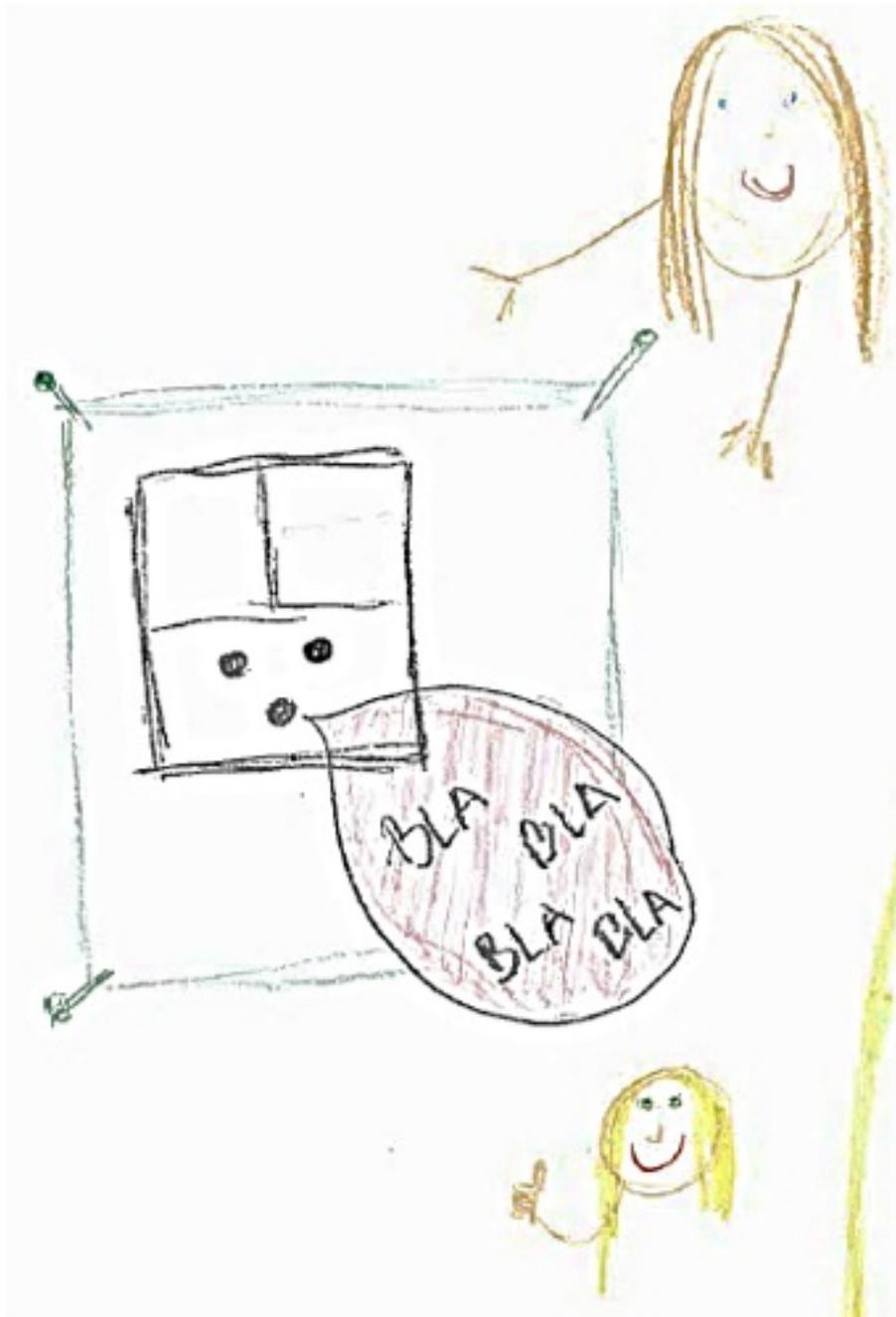


Figure 2

Talking to a patient about a speaking power plug. The students' arms are reaching towards the speaking power plug, being 'interested and open to patient's perspectives'.



Figure 3

Shadow around the patient with dark eyes as an allegory for the suffering patient having dark thoughts; the students' legs are curled up and trembling under the table; above the table, the student poses with a smiling face and eyes focused at the patient, illustrating mimicking the doctor in the video case.



Figure 4

Patient with depression (tear in eye) and alcoholism (bottle in hand). The students thinking of how to look empathic and how to reach for the alarm (triangle in belt), should the patient suddenly act aggressively.