

Examining Examinations

: on logic of practices in OSCE

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Summary

The purpose of this paper is to explicate characteristics and logic of OSCE in medical education using ethnomethodology and video-ethnography. We will first introduce the methods we use, namely ethnomethodology and video-ethnography. then present our findings from activities and logic of practices that we captured in our research. We will then move to our findings that OSCE is neither a simple medical examination nor a simple assessment of medical knowledge. OSCE is collaboratively achieved as a very distinct activity which can not be called other than OSCE in and through the interaction among all three participants, namely, Medical Student, SP (Simulated Patient), and Examiners.

1. Introduction

The purpose of this paper is to explicate characteristics of Objectively Structured Clinical Examinations (hereafter, OSCE) in medical education, using ethnomethodology and video-ethnography. We will first introduce the methods we use, namely ethnomethodology and video-ethnography, as we assume that they are unfamiliar to most readers. We will then present our findings from activities and logic of

practices that we captured in our video-based research of OSCE.

The centerpiece of our analytic agenda in the medical workplace is social interaction. E. C. Hughes, a renowned sociologist in the sociology of labor, suggests that “The subject matter of sociology is interaction. Conversation of verbal and other gestures is an almost constant activity of human beings. The main business of sociology is to gain systematic knowledge of social rhetoric” (Hughes1971 : 508). With regard to qualitative analysis, however, researchers often adhered to such concepts as “negotiation”, “career”, “trajectory”, and “the definition of situation” in their ethnographic research, rather than to the very phenomenon of social interaction itself. The theoretical concepts that a qualitative researcher uses, however, do not reveal the very phenomenon that remains to be clarified : these concepts instead hinder ethnographic research.

For this reason, we have chosen a more empirical and data-driven method in our research, that is, a combination of ethnomethodology and video-based research, which we call video-ethnography.

2. Method

In this section, we will introduce our method and the reasons behind the use of video recordings of naturally occurring settings to analyze interactional organization in OSCE. In particular, we would like to place special emphasis on ethnomethodology and video-ethnography as they provide a procedural foundation for investigating visual, as well as vocal aspects of OSCE, while providing important resource for analysis of human activities. We believe that ethnomethodology — sociological foundation of this research — and video-ethnography — more concrete procedure of this research — provide the resources with which we could develop video-based study of OSCE for sociological purposes. We will begin with a brief overview of the analytic issues, on which we based our research.

2 – 1 Ethnomethodology

Ethnomethodology emerged through the pioneering studies of Harold Garfinkel. Unlike other forms of social science studies, ethnomethodology does not provide a “method” in a sense of fixed set of procedures that, if followed, will result in valid social scientific findings. In his early writings, Garfinkel (1967) developed a radical approach to the analysis of social phenomena. His idea was to place situated production of social actions and activities at the forefront of the analysis, treating mundane activities, even on physical and biological matters, as achievements or accomplishments of the participants in the setting.

In ethnomethodology, social action and activities are intrinsically inseparable from the context at hand. Moreover, they are the part and parcel of context itself. The situated observability of a scene is accomplished in and through practical, as well as concerted actions of the participants. As Heritage (1984) suggests, “Communicative action is both context shaped and context renewing,” illustrating the very reflexive character of practical action, a central concern of ethnomethodology. Heritage (1984 : 242) further formulates this idea in detail : “A speaker’s contribution is both designed with regard to the local configuration of activity and in particular the immediately preceding actions, and itself inevitably contributes to the framework in terms of which the next action will be understood.” Put into action in actual social settings, each subsequent action displays an understanding of prior actions and is also recognized with regard to the immediately preceding actions. This step-by-step situated characteristics of practical actions provide an important analytic resource for both the lay and professional analyst. The interest in the indigenous resources used by the participants themselves drives analytic attention of researchers towards the investigation of activities in real time. For this purpose, video recordings of human activities allow detailed and repeated inspection of actual social interactions and their accomplishment by people or “the subject”.

2 — 2 Video-ethnography

As some ethnomethodologists became increasingly concerned with conversation and other types of embodied conduct, it became apparent that audio and audio-visual recordings provide useful resources for detailed analysis. At its inception, recorded data consisted primarily of telephone conversations, as video recordings were not yet popular among researchers in the 1970s. Goodwin (1981), who was interested in the visual aspects of human activity, was among the first to make use of the video camera, followed by Heath (2004) and Heath & Hindmarsh (2002). Today, it is widely acknowledged that recordings of human activities and interaction not only allow us to place complicated singular events under detailed and repeated scrutiny, but also allow us to gain access to raw materials of social action. Unlike other forms of data in qualitative and quantitative research, recordings of naturally occurring human activities provide raw materials on which the investigations will be based.

There is a growing interest in using videos to explore medical interaction, especially the ways in which participants accomplish activities verbally, or with the aid of body movement and other medical tools. Heath (1986, 1988), for instance, looked into how patients, during physical examinations, manipulate their bodies to present themselves to medical practitioners as objects available for inspection. More recently, a range of studies have explored ways in which pain and emotions are handled, exchanged, and referred to in interaction with accomplishment of a range of activities (Heath 1989, 2002).

Sociology can thus begin to develop a distinctive approach to study talk, discourse, body movement, and other aspects of physical environment. We believe that this method will help us formulate our notion of face-to-face interaction in general, as well as help those interested in data-driven study of education, simulation, and evaluation of OSCE. Video-ethnography provides the resources through which we can begin to illustrate the interactional organization of social actions and activities in complexity tasks operated on and within the medical floor.

2 – 3 Fieldwork

This paper focuses on video recordings of naturally occurring activities as its source of primary data for analysis. Nevertheless, we spent considerable time undertaking conventional fieldwork before we began video taping. We observed how people engage in medical check, the events with which they deal, and the kinds of tools and technologies they rely on. In video-ethnography, it is particularly important to undertake extensive observational research and interview prior to making video recordings, because researchers cannot otherwise select a location for the camera that gives them a vantage point from which they may obtain the most relevant glimpse of activities. For the tapings we refer to in this paper, we used two video cameras, one placed in each half of room (see the Figures below). They were positioned to allow observation of both the medical student and the simulated/standardized patient (abbreviated SP, as will be defined later in the course of this paper), and occasionally, the administrators.

In addition to non-participant observations and interviews that are often performed in fieldwork, we participated in staff meetings between lecturers and SPs before and after OSCE.

3 . What is OSCE

3 – 1 The purpose of OSCE

OSCE is an abbreviation for Objectively Structured Clinical Examination. OSCE is a medical education setting where medical students encounter with a standardized or simulated medical workplace. It consists of seven tasks : examination of 1) the chest, 2) the head and neck, 3) the abdominal, 4) the nervous system, 5) medical interviewing, 6) surgical technique, and 7) first-aid method. This set of examinations was developed to assess competency in clinical skills. Critics of medical education have often argued that textbook knowledge is over-emphasized, and that hands-on training of basic skills in preparation for real clinical situations is

insufficient. The object of OSCE is to correct this deficiency by simulating patients in standardized scenarios. The students' abilities are evaluated with men of flesh and blood, not with dolls. Our study will focus on chest examinations in OSCE.

As mentioned above, the purpose of OSCE is to evaluate students' medical knowledge and skills with simulated but actual human beings. The near future, we suppose, all medical students will be required to successfully complete OSCE to take the Japanese National Medical License. One of the main objectives of this new endeavor is to improve and evaluate communication skills of medical students — a relatively new concern for medical care in Japan, although it has always been an integral part of medical education in the U. S.

3 — 2 OSCE at Kashida Medical School

We collected our data from OSCE of sixth-year medical students at the Kashida Medical School¹⁾, administered in May 2005. Students at the Kashida Medical School participate in OSCE in their fourth and sixth years and are required to complete both OSCEs in order to graduate (There are few exceptions). The number of students in this particular OSCE program was about a hundred, and each student performed seven to eleven tasks within one day. The role of simulated patients, or SP, was executed by medical students in their early years of study. The examination room consisted of one medical student, one simulated patient, and two administrators, both of whom sat nearby, evaluating and giving retrospective advice to the medical student after each doctor-patient simulation.



Figure1. The arrangement of four participants in OSCE

3 – 3 Tasks for Physical Examination in OSCE

In the examinations we videotaped, the students were instructed to examine the entire chest region in five minutes. Three processes were involved in this task :

- 1 . Visual examination
- 2 . Percussion (the tapping of the chest wall to detect signs of unhealthy lungs)
- 3 . Auscultation

Each of these three processes was performed on both the posterior and anterior chest. Their check list consisted therefore of six processes in total :

- 1 . Visual examination of anterior chest
- 2 . Percussion of anterior chest
- 3 . Auscultation of anterior chest
- 4 . Visual examination of posterior chest
- 5 . Percussion of posterior chest
- 6 . Auscultation of posterior chest

3 – 4 Additional tasks of OSCE at the Kashida Medical School

Students at the Kashida Medical School were required to take a separate visual examination in addition to the original OSCE requirements. They were asked to identify the following six body parts, given in random order :

- 1 . Sternal angle
- 2 . Ensiform cartilage
- 3 . Seventh cervical vertebra
- 4 . Angulus inferior scapulae
- 5 . Proper location to check for check aortic stenosis
- 6 . Proper location to check for pulmonary stenosis

3 – 5 Communication (non-medical) skills

Before commencing with OSCE medical examination on a patient, the fourth-year or sixth-year medical student (the “doctor”), engaged in non-medical communi-

cation with the SP :

*Self-introduction (for example, “Hello, I’m doctor Kashida”)

*Confirmation of the patient’s name (“and you are Mr. Okada”)

And before each of the six processes :

*Informed the patient of what he or she will do next (e.g., “Let me take a look at your chest”)

Although these communication requirements were all of a non-medical nature, they were nonetheless important, since they were designed to check every student’s ability to make adequate verbal contact with the patient. Particularly before the first auscultation :

*Warming up the stethoscope

Note that during an actual medical exam at present, it is uncommon for the doctor to ask the patient for his or her name. A doctor may instead start a medical consultation or examination without this introductory process, since a patient is already introduced by one’s name when he or she enters the room where a doctor is already seated. In the case of routine outpatient treatment, these introductory remarks becomes unnecessary as the doctor and the patient know each other already. The OSCE program, on the other hand, instructs that there is a preface for each medical encounter. This preface is the prime focus of evaluating communication skills, and is an important part of the logic behind OSCE.

3 – 6 The Structure of Physical Examination in OSCE

The following nine steps form the basic procedures of a physical examination in an OSCE scenario that is taught in lectures and distributed among students. Every student is required to follow these nine steps strictly in order.

- 1 . Introduction
- 2 . Visual examination (anterior)
- 3 . Percussion (anterior)
- 4 . Auscultation (anterior)

- 5 . Visual examination (posterior)
- 6 . Percussion (posterior)
- 7 . Auscultation (posterior)
- 8 . Delivering observation
- 9 . Conclusion [“farewell” “leave-taking” “parting remarks” etc.]

Steps 1, 8 and 9 are primarily accomplished verbally and steps 3, 4, 6, and 7 are primarily either non-verbal or behavioral. In saying “primarily”, we do not mean that they are normally done in actual medical situations ; we mean rather that only minimal interaction is incorporated when they are taught in the classroom.

We found that OSCE involves not only medical procedures, but also non-medical procedures as well. For example, at the beginning of each step, the student-doctor is supposed to tell the patient what to do next. Furthermore, the student-doctor asks the patient to set up appropriate alignment. In doing auscultation, as another example, the student-doctor instructs the patient to be relaxed or to breathe slowly. Before auscultation, the student-doctor must also warm up the stethoscope. We found that some students even rub their hands against each other to warm them up. Note that student-doctors are not merely making adequate communication with the patient, either whether verbal or non-verbal, but they are also making use of procedural knowledge to contextualize basic skills. Therefore, although the kind of communication that we have stated above are of a non-medical nature, they are nevertheless requisite for building up an actual physical examination in context from de-contextualized medical basics that are taught in the classroom.

4 . Logic of “Uniqueness” in OSCE

4 – 1 The origin of “Uniqueness”

We have thus far compared two different instances of medical examination : the actual and the simulated. What now remains to be illustrated is what makes OSCE an OSCE.

OSCE is an abbreviation for Objectively Structured Clinical Examination. OSCE itself is not a medical examination ; it is rather a test of an examination, an examination of an examination. Let us compare the procedures of an actual medical examination, to those of an OSCE. We list again the nine steps of an actual medical examination (from section 3—6) :

- 1 . Introduction
- 2 . Visual examination (anterior)
- 3 . Percussion (anterior)
- 4 . Auscultation (anterior)
- 5 . Visual examination (posterior)
- 6 . Percussion (posterior)
- 7 . Auscultation (posterior)
- 8 . Delivering observation
- 9 . Conclusion [“farewell” “leave-taking” “parting remarks” etc.]

Let us now superimpose the procedures of an OSCE over the list above :

- 0 . Beginning of OSCE
- 1 . Introduction
- 2 . Visual examination (anterior)
- 3 . Percussion (anterior)
- 4 . Auscultation (anterior)
- 5 . Visual examination (posterior)
- 6 . Percussion (posterior)
- 7 . Auscultation (posterior)
- 8 . Delivering observation
- 9 . Conclusion [“farewell” “leave-taking” “parting remarks” etc.]
- 10 . Comments on the student’s performance

Note the addition of two more steps —— Step 0 and Step 10 —— in the OSCE list. We can now see that the entire procedure is no longer an actual medical examination, but an examination of a (medical) examination. What do we have to prove

this? One notable difference is that there are no administrators sitting nearby in an actual medical examination. Furthermore, there is more interaction between the patient and the doctor in an OSCE. To illustrate this point, we will describe how a medical examination in OSCE begins. At the beginning of an OSCE examination, Step 0, the SP is called, and he or she enters the room. The SP is called in, and upon entering the room, he or she gives the administrators of the OSCE (i. e., the professors) a card, which will be kept for administrative purposes. The administra-



Figure2. A medical student enters the room.

tors then instruct the SP to take a seat and wait for the student-doctor. This is very different from the ordinary practice of doctor-patient interaction, where the doctor waits and the patient comes in.

As we stated in the preceding section, an actual physical examination consists of three procedures that follow the introductory remark : a visual examination (anterior and posterior), percussion (anterior and posterior) and auscultation (anterior and posterior). In contrast to an actual physical examination, the student-doctor in an OSCE is obliged to report his observations to the patient after every procedure, even when there is no problem at all. In an ordinary, real-life medical examination, “no news is good news”. Because verbalizing is uncommon in an actual medical examination, the doctor proceeds through the examination almost silently, at most uttering one or two words, such as “OK”. Real doctors do not speak much during a physical examination, for it solicits the patient to ask or to wait for further comments (“On-line commentary”, Heritage & Stivers 1999). But in an OSCE, the student-doctor must give remarks, such as “thoracic wall balance, no abnormalities” to display that

he or she is competent of understanding and following the required procedures : i.e., I know where to look, and here are my observations.

There are at least three orientations displayed here. One is towards the patient, exemplified by politeness. Another is towards the administrators, which occurs when the student-doctor turns to the administrators to announce his or her observations. (Remember that in a OSCE, two administrators are present to assess the report made by the student-doctor). A third instance of orientation is set neither to the patient nor to the examiners, but to the ongoing situation itself. This occurs when the student-doctor talks to him or herself as he or she draws appropriate conclusions after every procedure.



Figure3. A medical student's orientation to the examiners.

4 - 2 Consequence of contingency

OSCE should be performed as a real physical examination in that the student-doctor actually sees, touches, and listens to a patient's body. However, because OSCE is an examination of basic medical knowledge and skills, the real physical condition of the patient is disregarded. In actual physical examinations, even minute problems with the patient must be reported, but in an OSCE, minor problems are ignored.

There is an interesting "deviant case" in our recorded data. A female student reported that there are "red spots" and "rashes" on a patient's body, but the none of the others student-doctors made the observation. The administrators did not comment on the issue either. The reason behind this is that because OSCE is an examination

after all, it had to be standardized : what only one student reported had to be disregarded. Her report was therefore taken simply as an irregular case of OSCE. Our intention in raising this deviation is not to criticize, but to note that there is an accountable reason not to identify minor problems during an OSCE examination. This is what we label “logic” in OSCE.

5. Conclusion

The video recording of actual interaction among medical students, SP, and examiners allowed us to find that there is a system in OSCE that is interactionally achieved. We have clarified this “seen but unnoticed” system in OSCE with our repeated scrutiny over their interaction on videotape. We have demonstrated, through our findings, that there exists no, and cannot exist any standardized form of reporting, for OSCE is neither a simple medical examination nor a simple assessment of medical knowledge ; this is what makes OSCE a very unique practice. We have also found that there is a distinct collaboratively achieved activity that cannot be called anything other than OSCE. We hope that this paper aids in explicating a complex medical workplace.

Notes

- 1 . All names have been changed to preserve anonymity.

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日本語要旨

本研究は、エスノメソドロジー研究、特にヴィデオ・エスノグラフィーという手法によって、医学教育における OSCE を分析したものである。あらかじめインタビューなどのフィールドワークを実施した上で、実際の試験場

面をビデオ録画し、繰り返し検討する形で経験的な研究を行った。論文の前半でエスノメソドロジー研究、ビデオ・エスノグラフィ、フィールドワークといった調査の手続きについて詳しく述べた後、後半では、ビデオ録画に基づき、OSCEに特徴的な論理について詳らかにした。OSCEは、特有の実践の論理を持つ。たとえば、「身体検査を行うという側面」と「医学知識の評価という側面」を不即不離に合わせ持っている。探求の結果、OSCEが、医学生、模擬患者、そして評価者がそれぞれの関心に基づいて、「身体検査をするという課題」と「試験として成り立たせるという課題」を重なり合わせながら、自分達に望まれているさまざまな役割を協調的に遂行していく形を取っていること、すなわち共同的な諸行為の特有の実践の論理を持った集積として理解できることがわかった。

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