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The formation and performance of medical humanities by interns in a clinical setting†

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ABSTRACT

Objectives: There were two aims of this study: first, we attempted to identify the medical humanities performed by interns in the clinical ward; second, we wanted to explore the ways that interns learn medical humanities.

Materials and Methods: This research was carried out in a general internal medicine model unit of a medical center in southern Taiwan. Researchers conducted field work by participant observation in the ward for 9 months from December 2008 to May 2009, and from November 2009 to January 2010. Eight interns were enrolled in this study. Humanistic behaviors performed by the interns who were investigated during the course of their medical activities were recorded in field records. After participant observation, five interns were interviewed to collect information on their learning processes related to medical humanities. The field records and interview transcriptions were coded according to categories of medical professionalism defined in this study.

Results: Four major characteristics of medical humanities were observed from the field work: primacy of patient welfare, patient autonomy, social justice, and sincerity. The most common humanistic practices performed by the interns included converting medical knowledge into lay language when communicating with the patient's family, closing the bedside curtain for privacy and arranging social worker consultations to help patients. Three learning models were also identified that were associated with the performance of humanistic practices observed in the field. Interns may learn medical humanities through learning by doing, a teaching-learning model, informal peer learning, or a combination of these.

Conclusion: This study confirmed that sincerity is a characteristic of medical professionalism and medical humanities. Participant observation can be used as an ideal tool for identifying humanistic medical practices in daily clinical settings, and an interview can become a supplemental method to validate what has been observed.

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1. Introduction

Traditional Chinese and Western medical training both emphasize professionalism, the connotation of which is based on the following three principles: the primacy of patient welfare, patient autonomy and social justice. This basis supports 10 professional responsibilities in modern medicine, as outlined below. There is, however, a lack of understanding of the extent to which medical students in clinical settings learn humanities in terms of medical professionalism, and in what ways they learn them.

Through a literature review of medical professionalism and medical humanities, participant observation and interviews, this study aimed to determine the performance and learning models of medical students during the course of clinical education in the formation of medical humanities in clinical practice.

Conflict of interest: none.

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1.1. Medical professionalism and medical humanities

In traditional Western society, medical education is defined as professional education. The history of self-examination and improvement in the quality of medical education can be traced back to 1942, when the Liaison Committee on Medical Education (jointly established by the American Medical Association and Association of American Medical Colleges) formed a mechanism to improve the quality of medical education via a feedback effect. In 1999, the Taiwan Medical Accreditation Council was set up to enhance the quality of local medical education [1]. Its aim was to assist medical colleges in improving and achieving medical professionalism. The medical humanities were defined as one of the major items to evaluate medical education [2], and thus became important in achieving medical professionalism.

In the development of medical education around the world, medical professionalism has been considered a key foundation in protecting patients' benefits as well as constituting the "contract basis of medical circles and society" [3–10]. This basic contract contains three principles: the primacy of patient welfare, patient autonomy and social justice. These principles support the 10 responsibilities of modern medical professionalism, with commitments to the following [4]:

- professional competence;
- honesty with patients;
- patient confidentiality;
- maintaining appropriate relations with patients;
- improving the quality of care;
- improving access to care;
- a just distribution of finite resources;
- scientific knowledge;
- maintaining trust by managing conflicts of interest; and professional responsibilities.

There were other definitions of professionalism in medicine before and after the 2002 definition given by the American Board of Internal Medicine (ABIM), American College of Physicians–American Society of Internal Medicine (ACP-ASIM) Foundation, and European Federation of Internal Medicine. No definition dealing with professionalism was drawn up until the 1990s, when physicians faced criticisms from lay people and sociologists, who accused them of not assuring "competence and protecting patients from poor practice" [7].

In response to societal criticisms in a changing world, Irvine identified professionalism as expertise based on consistently utilizing the results of research, ethics originating from a distinctive amalgamation of values and standards, and service with the idea of commitment to put patients first [7]. Cruess and Cruess advanced Irvine's idea. They regarded professionalism as processes of knowledge making, learning, and practice under the control of professional associations, apart from reward. This means that professionalism is altruistic and serves the public interest rather than the interests of physicians [9].

Rothman deliberated the idea of professionalism more precisely by focusing on the issue of public interest. He not only argued that professionalism should prioritize patients' interests over physicians' financial self-interest, but also treated it as a service required by unprotected people and involving social participation [5]. In terms of sociological understanding, professionalism is a stabilizing force practiced by physicians whom we entrust to carry out medical services for us [11]. They protect vulnerable people and social values through the distribution and fair allocation of healthcare products and services in relation to moral relationships [11,12]. Another pillar of professionalism identified by Wynia et al is the public profession of values [11], which means that the relationships between physicians and patients are public and standards of conduct and their enforcement are required [13]. Negotiation is the third element of professionalism recognized by Wynia et al. It requires medical professionals to engage with the public in negotiating social values that balance medical values [11].

After publication of *Medical Professionalism in The New Millennium: A Physician Charter* by the ABIM Foundation, ACP-ASIM Foundation and the European Federation of Internal Medicine, the elements of professionalism were widely expanded to include respect for other people; additional humanistic qualities; honor, integrity, ethical and moral standards; accountability; excellence; and duty/advocacy [14].

In improving the welfare of patients, however, some researchers point out that this charter does not include the necessary characteristics of engaging new healthcare authorities, such as "insurers, managed care organizations, and health systems run by governments", to realize the charter's aspirations [15]. Such engagement has been recognized as a social contact between physicians, patients and society as whole [16].

Professionalism can be therefore defined in two ways. First, in relation to the clinical– or physician–patient aspect, professionalism encompasses behaviors or attitudes of respect, regard, integrity, responsiveness, altruism, accountability, excellence, duty, service, honor, caring compassion and communication performed by physicians, or their intent towards their patients. Second, in terms of public engagement, professionalism can be defined as behaviors or attitudes of advocating health policy to protect national populations who are vulnerable [17].

In contrast to defining medical professionalism, there are many difficulties in defining medical humanities and there is a lack of clarity on its definition [18–21]. Shapiro et al ([20] and Kidd and Connor [22] have offered valuable explanations. Derived from Aristotelianism, Shapiro et al termed the humanities attitudes and behaviors that physicians use to refine and complexify their judgments in clinical situations, based on a nuanced and integrated understanding of the fundamental aspects of illness, suffering, healing, personhood and related issues [20]. What should nuanced and integrated understanding be? According to Kidd and Connor, such understanding includes many aspects of polite scholarship, such as philosophy, ethics, history, anthropology, sociology, literature, and the visual and performing arts [22]. Therefore, physicians can understand patients' needs and the meaning of their stories, respect their languages, and care for them with compassion and empathy that encourage reflection and critical thinking about the human body and mind with altruistic, knowledgeable, skillful and dutiful perspectives [22].

Despite difficulties with the definition of medical humanities, we can recognize that there are core ideas shared explicitly by the concepts of medical professionalism, such as altruism, skill and duty. Each is matched with the three principles of medical professionalism: primacy of patient welfare, patient autonomy and social justice.

1.2. Learning models of medical humanities

After generalizing the meanings of medical professionalism and medical humanism, we can say that humanistic professionalism education in clinical medicine refers to "teaching medical students that patient welfare, patient autonomy and social justice take primacy in the service environment, so that they can offer charitable and dignified treatment". Based on this understanding, we examined interns' performance and their learning model of humanistic professionalism based on materials collected through

participant observation and in-depth interviews with interns who were in service during the research project.

Two learning approaches, learning in a practice model and a teaching-learning model, are often applied to teaching either medical professionalism or humanities [23,24]. Learning in practice means that the processes of learning in apprenticeship are based on apprentice learners' observations of the characteristic activities of the work that surrounds them. Learners have opportunities to access a full round of activities and make their own curriculum, which is an individualized and realistic learning setting [23]. There are two forms of the teaching–learning model, traditional and human becoming. The latter is in accordance with the human becoming theory developed by Parse [25], which was advocated in the field of medical education, and nursing in particular. The traditional model is defined "teaching as telling (face-to-face or electronic) and learning as a destination" [25]. This is a teacher-centered approach in which all learning objectives and outcomes are planned by teachers with pre-determined absolute truths [25]. The human becoming model is a journey in which teachers and students try to co-structure, co-create, and co-transcend knowledge. This is a process of giving–receiving in coming-to-know and has been welcomed by medical education through application of these ideas to a problem-based learning environment [26]. In other words, the teaching–learning model has been transformed from teacher-centered learning to a form of interactive learning in medical education in which the students interact with teachers in the learning created by the teacher using clinical dialogue [25]. The teacher needs to organize the students, curriculum, other variables, and him/her-self in a systematic way to achieve predetermined goals [24–26]. Both learning in practice and teaching–learning approaches have demonstrated success in advancing students' humanistic practices [27].

Generally, both approaches of the learning model prescribed above involve context learning since practitioners, either physicians or interns, are situated in a place where problems need to be resolved [28,29]. As such, medical learning "takes place in the context of practitioners confronting and attempting to resolve problems in day-to-day practice" [30]. Under an apprenticeship, both models (learning in practice and teaching–learning) share the major characteristics of role modeling, such as legitimate participants, learning the profession from participating in communities of practice, and participating as learners in the clinical setting where the knowledge, skills and values are situated.

Prescribed approaches are based on instructors' perspectives. There is a lack of context that shows the learning process is based on students' perspectives. This paper addresses this focus. We will try to explore the behaviors of medical humanities that medical students perform in their internship, and their perceptions of the type of learning model related to their performance.

2. Materials and methods

This study was conducted at a medical center in southern Taiwan during clinical rotation during internship, and eight interns participated. Qualitative exploration, including participant observation and interviews, was adopted that was comprehensive and effective in addressing perspectives, meanings, and the dynamics of performance and learning models of medical humanities that underlie complex social processes. A serious of codes were identified through evaluating the definition of medical humanities and learning models to form a coding scheme for delving the process of professionalization and deeper contextual understanding of the perceived learning process in medical humanities.

2.1. Sites and participants

Quantitative researchers usually emphasize that permitted confident or valid generalization of a research project needs to be based on "selecting a truly random and statistically representative sample" [31–33]. Hence, representativeness does matter in any quantitative research since the generalization is the essential requirement. In terms of qualitative research, however, findings based on a single case or a few cases are acceptable "when the objective is to understand social processes" that create and maintain forms of relationships, culture, life and society [34,35]. This is because this research method does not seek to quantify data [36] but to obtain information-rich cases [31]. The following methods regarding subject selection, data collection, data analysis and research findings are therefore based on clinical context in learning rather than statistics.

We selected a general internal medicine model unit as the site for our field studies. There were two ward investigations, one carried out between December 2008 and May 2009 and the other between November 2009 and January 2010. During the investigation periods, our observers attended many explicit teaching programs and observed inexplicit learning. The explicit programs concerned ward orientation, teaching clinics, case presentations, bedside teaching, evidence-based medicine, medical ethics, quality of care, patient safety, drug education, and medical skill practice. They were all carried out in the ward chosen for the study. The inexplicit programs were ward rounds, office hours (when physicians wrote progress notes, charts and reports, performed physical investigations, prescribed medicine and prepared for explicit courses). Eight interns were observed and five of them were interviewed between April and May 2010.

2.2. Data collection

Before the investigation started, we invited 10 experienced attending physicians to attend a focus group to synthesize definitions and identify applicable index behaviors in medical service involved with characteristics of medical professionalism and medical humanities. These physicians from several departments were acting as clinical teachers, organizers, coordinators or conveners-in-chief in internship training programs, including internal medicine, surgery, radiology and nursing,. Twenty-eight identified index behaviors, such as trust-building while delivering a service, listening to the patient, making efforts to maintain the doctor–patient relationship, and respect for patient privacy, were used as guidance. These index behaviors did not constrain the interns, for our participant observation was carried out afterward in the clinical setting of this research. During the investigation, field notes including the performance contexts, which contained the teaching–learning context of medical professionalism, were taken according to the guidance of the index behaviors while the interns worked in the ward. Two observers completed the first period of field work between December 2008 and May 2009, and three observers completed the second observation period from November 2009 to January 2010. Behaviors and conversations performed by the observed interns such as working states, advice from residents or attending physicians, and treatment services–were noted as soon as the observations were completed. In total, 35 sets of field notes paged from 2 to 67 were recorded. Every one to two weeks, we met to discuss the humanistic implications embodied in the observed behaviors, identify behaviors in which the method of learning was difficult to determine, and propose questions for interviews accordingly.

After completion of participant observation, we contacted the interns who had been observed for further interviews. The

purpose of the interviews was to confirm their intentions and which learning models of medical humanities they had used. To understand how the interns learned the medical professionalism observed in this study, we developed 12 open-ended interview questions based on our field notes to ask them about medical professionalism related to teaching–learning, such as learning differences between the preclinical years and internship, the most impressive learning in the ward, and the person(s) who influenced them most. Five of the eight interns accepted our interview requests. Interviews lasted about one and a half hours on average.

2.3. Data analysis

In the context in qualitative research, observing and coding based on context in learning are the essential processes for qualitative analysis [37,38]. All field notes and interviews were transcribed into electronic files. With the definition of medical humanities and learning models identified, the data collected were read repeatedly and coded accordingly. The major codes of medical humanities include behaviors related to primacy of patient welfare, patient autonomy and social justice. The sub-codes of medical humanities contained respect, regard, integrity, responsiveness, altruism, accountability, excellence, duty, service, honor, integrity, caring compassion and communication. The coding schemes of qualitative analysis were designed to separate the data into groups of like items [39] related to medical humanities. We evaluated each file to identify behaviors related to the major codes and sub-codes where common attributes appeared.

We used the definition of learning-by-doing and teaching–learning as the main codes for the learning models. The sub-codes included explicit learning, inexplicit learning, attending physician-driven learning, patient-driven learning, reflection, and instruction. Each coding was recognized in accordance with the context in which humanistic performance was observed in the field notes or where the learning process was addressed in transcriptions of the interview.

3. Results

We discovered some common or recognizable behaviors with humanistic characteristics performed by interns during the course of the investigation. The main humanistic behaviors related to the three principles discussed in the literature review. These were identified as follows.

3.1. Primacy of patient welfare

This conversation took place on ward rounds with a medical team led by doctor VIO1, one of the attending physicians in our investigation. The patient had been in the hospital for a few days and had a urinary catheter. IO1, one of the interns in this study, had a humanistic interaction with a patient's family, who had requested a prescription from VIO1.

> Patient's family: No more antipyretic.
> IO1: There is no fever today. He will be discharged tomorrow.
> VIO1: Urinary catheterization can cause inflammation of the urinary tract. He should have medicine if the bladder is not comfortable. [Field note: 2009/03/29]

Instead of a direct response to the request from the patient's family, intern IO1 was trying to tell them that the patient did not need an antipyretic by reporting the biological condition of the patient and the expected discharge date. The positive response from the intern showed that he had converted medical knowledge into lay language ("no fever" and "discharged"). This response implies that the medical decision was in line with the primacy of patient welfare, which was tacitly expressed as "no more antipyretic" by the patient's family.

3.2. Patient autonomy

On another occasion, IO2 made a sickness inquiry and gave a woman with stomach problems, who was in a three-bed patient room, a physical examination. IO2 spent about 15 minutes with the patient, updating her on her condition.

> IO2: Open your eyes, mouth (IO2 put the stethoscope on the patient's back), sit up and let me check (she did what IO2 asked). Let me press here (while pressing her abdomen with his hands, IO2 pulled the bedside curtain around her bed). Does this hurt?
> [Field note: 2009/05/08]

Evidently, IO2 not only practiced his medical knowledge by using the stethoscope and his hands to investigate the condition of the patient's stomach, but also demonstrated his humanistic concern by pulling the curtain around the bed for privacy from her roommates. Privacy has been characterized as part of or equal to autonomy in medical practice [40, 41], and the action of IO2 shows respect for the patient's autonomy.

3.3. Social justice/social contract

One typical event relating to social justice occurred during field work concerning the allocation of medical resources. The daughter (AFA) of the patient, a man with gout and a history of alcoholism, requested that the attending physician VIOC stop her father's drinking behavior before discharge, since the family had a great deal of difficulty caring for him. IOB, the intern caring for the patient, helped arrange medical resources.

> VIOC: Ointment must be spread over the wound.
> AFA: May I have a word with you?
> VIOC: Let's talk outside.
> AFA: He lives alone, and definitely gets drunk.
> VIOC: We can plan to do our best rather than keep him here forever.
> AFA: I know. I am sorry for always bothering you.
> VIOC: Or you may consider taking him somewhere such as …
> AFA: A nursing home?
> VIOC: Hum.
> AFA: This (option) is expensive. My mother had a stroke. My younger brother is responsible for my father and mother's living expenses and I pay for their medication. However, I don't earn much money. Can you intimidate him to give up drinking?
> VIOC: That method won't work. What we can do is to try to talk to him.
> [Field note: 2010/01/06]

The next day outside the patient's room, VIOC had a conversation with IOB:

> VIOC: The family would have to pay if he went to a rehab center. We can't do that. What we can do is to try to talk to him.
> IOB: I attempted to contact the Department of Social Work for a consultation. However, I did not know how to address the case (clearly), therefore, the referral form has not been sent yet.
> [Field note: 2010/01/07]

3.4. Sincerity in a patient-centered medical service

Some major journals related to medical professionalism or the medical humanities have reported on sincerity, which is a simple but important characteristic by which medical professionals can “serve the individual, the profession, and the patient well” [42,43]. The idea of sincerity is not as simple as probity or honesty [44]. It is related to “achieving uniform quality and safety of health care” with “empathy and compassion” [45,46]. Padel says that it means “a sincere concern for and interest in humanity” [47]. Sincerity was also considered as one of the index behaviors of medical professionalism by the members of the focus group in this study.

According to our observations in the field, sincerity does matter when providing uniform quality and safety of healthcare with empathy and compassion. The following case presents the issue of sincerity. The attending physician, VIOA, explained future healthcare issues to Inn, a 79 year-old man cared by intern IOA and his wife. IOA saw a need for continued hospital care for Inn and witnessed a demonstration of sincerity by his clinical teacher, VIOA.

(In the corridor) VIOA: Is there any message from the department of neurology about Inn? (VIOA asked RIOA*)

RIOA: They will not consider permission for hospitalization until he has a brain MRI, since his symptoms are not clear.
VIOA: How can they respond it in this way? We have checked almost everything what we can. Further treatment must be done in either the department of neurology or department of orthopedics, the department of neurology in particular. If the department of neurology cannot deal with it, we don’t know what we can do any more.

(Entering the patient room)
VIOA: Is he better? (Talking to Inn’s wife.)
Inn’s wife: He is better, and had a bowel movement today.
VIOA: The department of neurology told us that there is no reason to hospitalize him. Uncle’s (polite form of address in Taiwan) foot tremor seems to be caused by muscle relaxants. We, in the internal medicine department, have investigated his condition thoroughly. The opinion from the department of neurology is that his condition does not meet their criteria for hospitalization. You may consider transferring him to another hospital.
Inn’s wife: It is very difficult to transfer him to another hospital because it is not easy for him to move.
VIOA: Aunty (polite form of address in Taiwan), caring for him is difficult for you. You should consider hiring someone to assist you. Our suggestion is to transfer him to the neurological specialty or orthopedics. Neurological care is particularly urgent for him.
Inn’s wife: But in his condition, it is even difficult to get him into a taxi.
VIOA: The problem of discharge is that in the evaluation of the neurological department he does not fit the criteria for hospitalization). We cannot force them (to change their minds). Let us consider the possibility of transferring him to another hospital, Kaohsiung Veterans General Hospital, for example.
Inn’s wife: Of course, Veterans General Hospital is more convenient for us. However, the problem is he simply cannot move, even if my son comes to help.
VIOA: But we, the internal medicine department, cannot help him with his condition any further.
Inn’s wife: So, you cannot treat his illness?
VIOA: Yes.
Inn’s wife: So, leave him to fend for himself!
VIOA: No, we do not mean that. His problem is neurological. However, the department of neurology thinks that he can be treated at the outpatient clinic.
Inn’s wife: We cannot go to the outpatient clinic since he cannot move easily. Otherwise, we would not stay here any longer.
VIOA: We have tried our best to help you, and that is all we can do.
RIOA: Grandma (polite form of address in Taiwan), you need to think about his long-term care. We are not driving you away. We will contact the neurological department again.

(All medical members came out of the room)
VIOA: Let’s consult the neurological department again.
IOA: I have spent a lot of time on him (to build up physician–patient relationship).

The patient’s wife expected that he could be treated continuously in this hospital because of foot tremors, which was a neurological rather than an internal medicine problem. According to the department of neurology, hospitalization was not necessary for Inn’s tremor, although the attending physician, VIOA, knew Inn’s needs. At the beginning of the dialog, we can see that VIOA carefully dealt with the boundary between the internal medicine and neurological medicine departments by emphasizing the opinions of the neurological department and saying “We cannot force them (to change their minds)”. At this stage, VIOA paid attention to professional expertise rather than the reality of Inn’s movement difficulties. After Inn’s wife expressed the strong feeling of being driven away, VIOA decided to turn to the department of neurology once more about Inn’s situation. This suggests that VIOA sincerely took the needs of the patient and patient’s family into account. It seems that this is an attempt to repair the relationship between Inn’s family and his medical team.

However, what did VIO learn and how did he learn it? We will answer this in the discussion below.

4. Discussion

We define humanistic professionalism as teaching medical students that patient welfare, patient autonomy and social justice take primacy in a service environment, so that they can offer charitable and dignified treatment.

It is has been recognized that the exact effects of the learning process, in terms of the development of medical professionalism, are largely unknown [48]. This study tried to bridge the gap by explaining how interns learn medical humanities. Three kinds of learning models that contributing to humanistic performances observed in the ward were identified from interns’ perspectives in our interviews.

4.1. The learning-by-doing model

During the course of our field work, there was no explicit instruction in some humanistic behaviors, such as pulling the bedside curtain or helping the patient sit up, in the ward orientations held each month for new physicians and interns. From the interns’ perspectives, humanistic behaviors were learned from the attending physicians who performed the behaviors:

“I learned a lot from my teacher at the clinical site in general, the clinical teachers do not always instruct us directly. However, you can learn from their actions, for example when they help the patient sit up.” [IOE, interview on 5/18/10]

Evidently, some medical humanities were learned by the interns because of opportunities to access and observe a full round of medical activities with humanism performed by clinical teachers.

Role-modeling was not the only method we observed in the field. Self-reflection was another kind of learning-by-doing model. Interns can learn from patients through self-reflection as a major mediator that helps them build up medical humanities during clinical practice. This learning process was also reported by Bleakley and Bligh when discussing patient-centered medical education [49]. The following is a good example of communication with the patient:

"After reflection, what I will do in the future is to understand the patient and patient's family's situation and needs and discuss further treatment decisions with the attending physician. In fact, the patient also encountered problems with another specialty (neurology, during discharge procedure). We should have had a neurological consultation and let the patient and his family listen to professional recommendations. However, we only communicated his problem with a doctor serving in the specialty, and then we, acting as a proxy, explained what the doctor said to the patient and his family. My attending physician's standpoint was that he had recovered enough to go home. We were going to make an outpatient neurology appointment for his follow-up." [IOA, interviewed on 28/4/10]

4.2. The teaching–learning model

Park et al have argued that "the process of professionalization in medicine may delve further to provide a deeper contextual understanding of how participants respond" [48]. We did find that some interns learned medical humanities in this way. Clinical teachers guided interns to decide on adequate treatments in many contexts, including medical, social and economic contexts.

The clinical teachers being observed in the field may explain the reasons for their decisions containing humanistic characteristics, and some of the interns interviewed recognized such contextualized learning:

"The gout patient for example, it was difficult for him to give up drinking. Therefore, he had repeated attacks of gout. According to the textbook, there are only certain drugs for treatment. We began to understand his family, and why he could not stop drinking. We had meetings with social workers about this. This was not taught in our textbook." [IOB interviewed on 10/5/10]

Combining what we observed and what IOB perceived, we can confirm that VIOB paved the way for the perspectives, meanings and dynamics underlying the complex social processes for IOB to learn what had not been written in the medical textbook. As Reid points out, "the context of learning is one of the most important factors that determine the outcome of learning" [50].

4.3. Informal peer learning model

The peer learning model has been given little attention in the field of medical professionalism or humanities, according to our search results. Peer learning has been defined as "students learning from and with each other in both formal and informal ways" [51]. This means that students interact, learn and share perceptions and experience as others in the same class or cohort in order to increase their knowledge and understanding, formally or informally [52,53].

According to our observations, peer learning often occurred in two settings: when practicing treatments and exchanging information. In general, the former occurred at the bedside and the latter in the doctor's conference room. The following dialog shows an intern demonstrating medical humanities soon after peer learning from a resident at the bedside:

RIO6 (resident physician): Uncle (UPA) is hard of hearing, very severe. You have to speak loudly, otherwise he cannot hear you.
RIO6: Or you can give him this stethoscope.
IO6: Let me try it.
IO6: Uncle, I am going to insert a catheter, all right?
UPA: Ah? (Cannot hear IO6.)
IO6 (places the stethoscope earpieces in UPA's ears): Uncle, I am going to insert a catheter. Is that all right?
(UPA nods his head)
IO6: Uncle, you may feel uncomfortable during insertion. Hold on a moment, please.
[Field note: 11/2/09]

The case below indicates how an intern learned prescription a safe dosage from his attending physician through a resident's double checking something that might concern his patient.

IO3: Please check this for me. I am going to discharge the patient, and then come back and inject Rocephine (ceftriaxone).
RIO3: Is one tablet/QID enough?
IO3: She has taken two tablets already, and no fever.
RIO3: How about the other (drug)? Coumadin (warfarin)?
IO3: The Teacher (i.e. attending physician VIO3) said either (ceftriaxone or warfarin) can be used.
RIO3: Yes, you are right. I have asked him. You need to tell the nurse and the patient about this change. It's better.
IO3: OK I will do it.
[Field note: 4/30/09]

It seems that influential peer learning is the interaction of experience, knowledge and facts between interns and residents in a clinical setting, at the bedside and in the doctor's conference room, according to the cases shown above. Three of the five interns interviewed, however, told us that the level of influence the residence had on their learning depended on the relationship between themselves and the residents:

IOC: Interaction between the residents and myself depends on familiarity. Generally speaking, the first time we interns rotate into any ward, and meet the residents, we do not know each other very well. We may chat with each other more only when the rotation is coming to the end.
[IOC interviewed on: 11/5/10]

IOB: Of course, we may learn from the senior doctors, when we accompany them on ward rounds. (However) the most useful learning is from the experience of our own classmates. By and large, our level (of knowledge or ability) is similar, and what my classmate sees in his ward is the same as I see in my ward.
[IOB interviewed on: 10/5/10]

What did the interns interviewed learn from their classmates? The answer is shared emotion more than shared knowledge.

IOD: What we do more is complain to each other about what we encounter in the ward. Negative expressions are common, such as complaining bad luck that someone's condition was worse yesterday while another case was assigned to me. I myself do not know how to deal with such situation.
[IOD interviewed on: 12/5/10]

IOB: When (my classmates) complain about the cases they care for, I can learn more about cases than that I care in my ward.
[IOB interviewed on: 10/5/10]

IOE: We often discuss clinical skills and knowledge. As to caring (one of the characteristics of medical humanities), we usually tell our feelings. In effect, it seems to me that there is difficulty

learning from each other in terms of skills and knowledge about patient care.
[IOE interviewed on: 18/5/10]

4.4. The prospects of learning models in medical humanities

This study provides insight into learning models in medical humanities with more convening data, derived from eight subjects, in comparison with existing studies. Reports on the medical humanities in the field of medical education usually explicitly or inexplicitly discuss the learning-by-doing model [45,50,54]. Clearly, there is a knowledge gap in the relationship between the performance of medical humanities and the teaching–learning model. One of the studies cited theorized without empirical data [50], and another was based on secondary data analysis [45]. One report demonstrated an argument of learning-by-doing with empirical data from only one patient [54]. More empirical studies based on clinical students' points of view are needed.

The observational method has been applied to situational assessments, and in objective structured clinical examinations in particular, for medical professionalism in clinical settings [55]. Our findings and discussion not only confirmed that participant observation is an adequate means of identifying medical humanities, but also shows that interviews, which are methodologies commonly used by social scientists, can become a supplemental method to validate what has been observed in daily clinical settings. The importance of this methodological combination was also confirmed by one of the attending physicians we observed in this study. When pulling the bedside curtain, for example, the physician said "I never thought this action was humanity. Since I was a medical student, nobody has ever said this action meant humanity." (VIOD, personal contact on 2011/05/31). Participant observation with interviews may help clinical teachers identify what medical humanities have been performed and whether these actions have been learned through teaching–learning, learning-by-doing, or both.

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