



INTERNATIONAL JOURNAL OF CLINICAL SKILLS



A Peer Reviewed International Journal for the Advancement of Clinical Skills
- *'docendo ac discendo' - 'by teaching and learning'*



In this issue:

Involving patients as educators: adding value to clinical experience

Emergency department ultrasound

Examination of the cardiovascular system

Medical student theatre etiquette course

The OSCE: a marathon, not a sprint!

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The International Journal of Clinical Skills looks forward to contributing positively towards the training of all members of the healthcare profession.

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Foreword

Chairman of the Academy of Medical Royal Colleges



The searching reappraisal of almost every element of health care that we have seen in recent years has brought challenges and stimuli to all who have a part in this enterprise. Ultimately, the quality and safety of patient care depend upon the professionalism of people of many disciplines who have a responsibility to deliver that care, and therefore upon the quality of their education and their training and the ability to exercise their clinical skills and competences at the highest possible level in practice.

The mission of the International Journal of Clinical Skills is to support and promote that professionalism and I wish it growing success.

A handwritten signature in black ink, which appears to read 'Carol Black'.

Professor Dame Carol Black DBE FRCP FMedSci
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Cultural barriers to the spread of clinical skills teaching methods

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Abstract

The transferability of clinical skills teaching methods from one culture to another are explored through a case study comparing anatomy teaching methods in Japan and the UK, since attitudes to the body are critical to clinical skills teaching, and anatomy is the most direct method of experiencing the body encountered in medical school prior to patient contact.

Current admission practices, the structure of medical school curricula and the demographic make up of medical students in each country are explored. Teaching methods are compared between each country. Cultural attitudes to death, nakedness and innovation are then contrasted.

It is concluded that, while attitudes to death between the two cultures differ significantly in philosophical principle, the practical differences are slighter. However, attitudes to nakedness and the living body are significantly different, and are likely to act as a deterrent to introduction of extensive use of methods such as peer physical examination in Japan. Attitudes to change and innovation may also differ significantly between the two cultures, suggesting that it is not sufficient to analyse merely the merits of proposed changes, but also the cultural field into which they will be introduced.

Introduction

Medical education is becoming increasingly internationalised, with a number of moves to promote collaboration in assessment [1, 2]. However, there are important cultural differences between countries and regions which may inhibit this internationalisation. We explore these issues through a case study comparing two countries with very different cultural histories, using the teaching of anatomy as the test system, since attitudes to the living and dead body, as well as attitudes to teaching, learning and innovation, are involved in clinical skills teaching.

A key question is the transferability of teaching innovations from one environment to another. This is particularly relevant in the context of the "Anglo-Japanese Conference on Medical Education in the 21st Century" [3]. We will briefly describe the nature of higher and medical education in both countries; next, we will consider the nature of anatomy teaching in each national environment; and then we will discuss attitudes towards death and the dead body, attitudes towards nakedness and the living body, and attitudes towards innovation in the two cultures.

Background

Medical Schools

In Japan, students can enter university (including medical school) after they finish high school, and therefore normally begin medical school at age 18. Since 1979, there has been a national qualification examination for admission to universities

in Japan. Since 1990, this has been administered by the National Centre for University Entrance Examinations. Nowadays, most universities use this qualification test for their admissions, in combination with their own programmes such as a written examination or an interview. Currently, each university has two or three different admission cycles, held on different dates. For example, Sapporo Medical University School of Medicine has admissions cycles three times per year for an annual intake of 100 students. Twenty are admitted by recommendation, with an interview held in January. The other eighty are admitted on a written examination with an interview: 60 of these in February, and 20 in March.

In general, special experience in health care settings is not needed for applications or admissions to medical schools in Japan, although such experience may be documented in the recommendation or evaluated at the interview. A minority of applicants are admitted on the recommendation of their high schools, associated with an interview for admission. Students who fail their entrance examinations can try again in the next year. Since the medical school entrance examination is the most difficult of the entrance examinations in Japan, many applicants make several attempts to enter medical school. It is not unusual to spend up to two years in the application process.

There are 80 medical schools in Japan. Each school has an annual intake of 90–110 students, so approximately 8000 medical students enter per year. The ratio of male medical graduates to female medical graduates in 2002 was approximately 69:31 [4].

Medical schools have a six year course in Japan. Until two or three decades ago, the six years were divided into three components in many medical schools as follows: Years 1–2 (Premedical); Years 3–4 (Basic Pre-clinical Medicine); Years 5–6 (Clinical Medicine). In the past two decades, almost all medical schools have abolished these three divisions. The demarcation between Medical and Premedical years is no longer always clear, especially since some Medical components may begin during the middle of the academic year. In most medical schools, major Pre-clinical components begin in Year 2, and by the end of Year 4, the course is entirely clinically based.

Prior to 1991, courses in university were validated by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT). In 1991, however, MEXT changed its university policy, i.e. the Deregulation (“Taikoka” in Japanese) of University Establishment Standard [5]. In general, the main teaching methods in most medical schools are lectures and practicals, and almost all schools have wet laboratory courses in their Pre-clinical component. O’Dowd [6] stated that “many students are successful under the traditional lecture/exam system because of their ability to cram for a test; however, memorizing information just for an examination doesn’t mean that they are successful learners”. During the last decade, most medical schools have introduced Problem Based Learning (PBL) tutorials to some extent. There is considerable variation: a few medical schools rely almost entirely on PBL, others use it in part. PBL is most widely used in the Pre-clinical parts of the course.

In May 2001, a Model Core Curriculum for Medical Education (Educational Content Guidelines) was proposed by a committee

of MEXT. These Guidelines were written by 28 members, including Deans of medical and dental schools, medical educationists, and an anatomist (Professor Tatsuo Sato). They were strongly influenced by international trends in medical education, including *Tomorrow’s Doctors* [7].

In the UK, students have traditionally entered medical school after school, at age 18, for a five year course followed by a pre-registration year. In recent years, a wider range of students have been admitted to 5 year courses, and a number of graduate entry 4 year courses have been developed. In 2007, 7837 candidates were admitted to medical courses, of whom 74% were aged 17–19, and 26% were older than this. In 2007, 32 universities or centres offered entry to 5 year medical courses, and of these 16 also had graduate entry programmes. School leavers are selected for admission on the basis of their academic performance at school, usually in association with one or more other methods. These vary from medical school to medical school, but include analyses of a personal statement and/or written reference, interviews structured to a greater or lesser degree, and consideration of previous voluntary or work experience. Graduates and non-school leavers are selected either on the basis of their qualifications, or their performance in an additional assessment instrument such as GAMSAT UK (the Graduate Australian Medical School Admissions Test in its UK version) or interviews. More recently, most UK medical schools now also employ the use of the UK Clinical Aptitude Test (UKCAT) as a screening tool in the admissions process. This tool assesses skills such as verbal reasoning, quantitative reasoning, abstract reasoning, decision analysis, and non-cognitive analysis rather than academic performance.

In the UK in 2007, 57% of all applicants were female, and 56% of all successful applicants were female. Women do slightly better than men during the selection process, possibly because the use of interviews selects for qualities such as empathy and communication skills more frequently shown by females.

As in Japan, the distinction between Pre-clinical years (normally years 1 and 2) and Clinical years is decreasing, with clinical material being introduced from much earlier stages or from the beginning of the course.

Medical courses are validated by the General Medical Council. Through the publication of *Tomorrow’s Doctors* in 1993, and its subsequent updates, they have exerted considerable influence on the structure of medical courses. Many medical schools have introduced PBL to a greater or lesser degree: the 5 year courses at eleven of the medical schools could be characterised as relying on PBL as the main method of delivery.

Anatomy Teaching

In Japan, anatomy is taught in the ‘Pre-clinical’ parts of the course. Most medical schools have traditional anatomy teaching, which is divided into gross anatomy and histology, and delivered by anatomists. However, about half of the medical schools nowadays have a clinical anatomy program [8, 9]. Some schools have such a program as an integral part of anatomy teaching; others have it after the conclusion of the ordinary anatomy course. In both circumstances, clinical staff, including surgeons

and radiologists may be involved in such programs, giving lectures, or participating in dissection classes. However, medical imaging is mainly taught in radiology courses.

All medical schools in Japan have dissection courses in which the students dissect the whole body. In most medical schools, there are 20–25 tables in the dissection room. Each table holds one cadaver, which is dissected by two to four students. Sessions for dissection have generally been assigned to the afternoon. About two decades ago, the dissection course of each school had 50–60 sessions on average, but now the number of sessions has been reduced to approximately 20–40.

Prosection is not widely used as the main method of anatomy learning in Japan. Many schools have prosected specimens in their dissection rooms, but they use such specimens as learning support material in their course. This may be because sufficient cadavers can be obtained to support dissection based courses. Another reason may be that there is a preference for retaining the “integrity” of the dissected whole body: i.e. it is seen as inappropriate to mix pieces of one cadaver with others, so the whole dissecting process for one cadaver is best conducted on one table.

Commercial software such as Adam™ is available in Japan, and may be used in support of PBL tutorials. Some educators [10] have developed original programmes, but such virtual or electronic means are not used extensively in teaching anatomy. Radiologists are more likely than anatomists to use such means in Japan, because they are more familiar with such virtual images through their work.

For anatomy teaching in Japan, peer examination is generally only a small part of the whole program. If a teacher wishes to teach living anatomy, especially of trunk (thorax or abdomen), they generally ask a lean male student to be a volunteer. Females would not normally be asked to participate, due to 1) lack of availability of appropriate space/room for such peer examination, 2) embarrassment at being seen and examined by their colleagues (this would also apply, for instance, to a female nurse who has to be examined by a medical colleague), and/or 3) fear of seeming to display paternalism. For instance, a female student might consider a request to volunteer to be a semi-compulsory instruction. Nowadays, such an instruction might be considered as harassment. Teachers would seek to avoid such a situation arising. If a student was perceived as likely to have a negative body image, staff would avoid asking that student to volunteer (hence the emphasis on asking lean male students to volunteer).

Physiotherapy schools have much more comprehensive living and surface anatomy courses than medical courses. Almost all nursing schools have much more comprehensive nursing skills courses taught by peer examination, although these do not include anatomy teaching. Use of life models does not occur in anatomy teaching, although simulated patients are used for communication training in clinical courses of some medical schools. Abe et al [11] state that there are few simulated patients who contribute to clinical physical examination in Japan.

In general, assessments consist of written unseen examination papers for theoretical knowledge, and practical examinations

for the dissection course. Most practical examinations are oral assessments at the table with the dissected cadaver, and take place between two and four times during the dissection course. Some schools have a more structured examination: i.e. dissected or prosected specimens are displayed in a circuit at various tables, and students answer written questions as they move from station to station.

A recent report from the Working Group of Education Committee of Japanese Association of Anatomists [8, 9] sheds light on how much time is devoted to anatomy teaching, and when such teaching occurs. It indicates that anatomy lectures and laboratory courses are delivered over several years in many medical schools (Tables 1–3). Most schools give their lectures in Year 2, and about 80% of schools complete anatomy teaching at the end of Year 2 [8, 9]. The authors stated that early delivery of anatomy motivates students to learn, although teachers may have a heavy work load due to the mental immaturity of Japanese medical students in general.

Table 1: Years during which anatomy lectures are delivered at Japanese medical schools. Cited from Kataoka et al [9].

Year(s)	Percentage (%)
1–2	28
2 only	53
2–3	8
3 only	3
Other	8

Table 2: Years during which laboratory courses relating to gross anatomy are delivered at Japanese medical schools. Cited from Kataoka et al [9].

Year(s)	Percentage (%)
1–2	16
2 only	59
2–3	13
3 only	5
Other	7

Table 3: Years during which laboratory courses in histology are delivered at Japanese medical schools. Cited from Kataoka et al [9].

The total amount of time devoted to anatomy teaching ranges from 119.5–694 hours (mean 314, SD 111). Lecture hours range from 0–347 hours (mean 100, SD 65). Dissection courses range from 9–450 hours (mean 149, SD 62). Laboratory courses in histology range from 3–103.5 hours (mean 61, SD 30). These responses plainly cover a wide range, especially for those reporting very few hours.

Kataoka et al speculate that some medical schools may have such programs but these are difficult to classify into lecture/

laboratory courses of anatomy. Sixteen schools (26%) indicated that they had small group learning for anatomy teaching, with contact hours ranging from 9–153. Eighteen schools (30%) indicated that they had tutorials for anatomy teaching, and about half of the scenarios in such tutorials are in the style of PBL and include clinical medicine.

In most medical schools, students work additional self-directed hours for laboratory courses in gross anatomy and histology. Most such work is out of the official hours, and is observed in 80% of schools for gross anatomy and more than 60% of schools for histology. Additional work also takes place during holidays (40% of schools), and at times when there are no scheduled class activities (60% of schools). Average additional working time is 32 hours (SD 46) for gross anatomy, and 21 hours (SD 24) hours for histology. There is no relationship between the length of the scheduled working day and the amount of extra time worked.

In the UK, anatomy was also traditionally delivered in the Pre-clinical years, and has therefore undergone considerable changes as the distinction between Pre-clinical and Clinical study has become less clear. A survey by Heylings [12] gathered data on teaching methods in 1999–2000 (although it is believed that this data is still relevant) and revealed that the various components of anatomy were generally taught over one or two years (average 1.9 years for gross, 2.0 years for histology, 1.6 years for embryology and 1.5 years for neuroanatomy). Table 4 shows the time devoted to anatomy and cognate subject teaching.

Table 4: Time devoted to anatomy and related subjects in UK medical schools. Cited from Heylings [12].

	Gross anatomy	Histology	Embryology	Neuro-anatomy
Total time (hours) as mean \pm SD (range)	124.5 \pm 57.3 (20–219)	39.4 \pm 21.3 (19–80)	12.9 \pm 8.8 (0–30)	27.5 \pm 19.1 (6–81)
Lectures (hours)	34.4 \pm 32.3	12.4 \pm 9.1	8.6 \pm 7.3	11.4 \pm 8

Of the responding institutions, 16/21 (76%) still included student dissection as part of the learning process. The others employed study of projected material. Since that date, one of the four new medical schools has eschewed the use of cadavers completely in favour of living anatomy and medical imaging.

Figures on the use of medical imaging and living anatomy in anatomy teaching are harder to obtain. Mitchell and Williams in a survey of 21 medical schools in the UK and Ireland [13] report that there was considerable variation in the way radiological anatomy was delivered, how much was delivered, by whom and in the range of radiological material available. An informal survey by one of the authors has suggested that while some use of living anatomy is made in almost all medical schools, there is considerable variation in the degree to which it is employed: only Peninsula Medical School [14] and Durham University (JMcL, personal communication) are known to use professional paid life models for living anatomy teaching.

Attitudes towards participation in peer examination have been explored by Rees and her co-workers where generally very co-operative views were obtained from students on their willingness to participate in peer examination [15–17].

What cultural attitudes might impact on differences in methods?

Attitudes towards death and the dead body

In Japanese culture, death is considered to be a start toward the next world (heaven or hell). A dead person might be viewed as going on a journey toward these worlds, beginning by crossing the river “Sanzu-no-Kawa”. For this journey, it is best that the deceased has an intact body. In addition, people do not consider that body and spirit are separable. A dead body is still a person. In consequence, family and relatives dislike letting the dead body be lost or damaged, and attempt to recover dead bodies which have been lost in accidents or disasters.

The body is also viewed as a gift from one's parents and its preservation is therefore an act of filial piety [18, 19]. In Japan in the Edo era (1603–1867), tattooing was a mark of having been a prisoner or a criminal and therefore it is viewed as being a mark of antisocial behaviour. In general, therefore, the Japanese prefer to keep their body as it was when they were born, avoiding unnecessary invasive procedures or alterations.

These attitudes make it difficult for families to give consent for autopsies or for organ donation for transplantation (especially where brain death has been diagnosed, but the heart is still beating and the body is warm). Miyake [19] suggests that even after death has been certified, transplant surgeons may administer an anaesthetic to the dead body before removing organs and it is seen as important that the removed organs are treated with marked respect, for instance during transport.

In Japan, there are two major laws covering anatomical dissection: (1) the Japan Anatomy Act 1949 (Shitai-kaibo-hozon-ho: “shi” means death, “tai” means body; “kaibo” means anatomical, pathological and forensic dissection or autopsy; “hozon” means preservation, i.e. possession of all or part of the body as specimen(s) after dissection or autopsy; “ho” means an act or a law); and (2) the Law of Donation of Bodies for Medical and Dental Education 1983 (Kentai-ho: “ken” means donation, “tai” means body; “ho” means an act or a law).

Until the 1960s, the major source of cadavers had been corpses who were uncollected after death. (The Japanese legal term for a person, such as a family member or a relative, who collect the corpse is “hikitori-sha”: “hiku” means to pull, “toru” means to take; “sha” means a person). Such corpses were provided for medical or dental schools by local government, pursuant to the Japan Anatomy Act (Article 12). In the 1960s and 70s, severe shortages of cadavers for dissection courses occurred in medical and dental schools, and schools were forced to have cadavers donated from volunteers after their death. However, families have often regarded such donation as shameful or dishonourable due to attitudes towards death and the dead body and the traditional sources of cadavers, as described

above. Some families might be blamed for (or even accused of) donating cadavers by their relatives or neighbours. To save face (or maintain the honour) of the families, the Kentai-ho (Law of Donation of Bodies) was established in 1983 and this Law provides that a Living Will indicating a desire to donate a body must be respected (Article 3).

Each medical and dental school in Japan has a voluntary association for the donation of bodies. Individuals wishing to donate their body after death make an application to the association for membership and would normally be admitted. The application form represents their written Living Will. However, the family and/or relatives may overrule the Will when the person dies. Therefore, most associations require applicants to gather signatures, not only of their immediate family members but also their relatives, because if just one of his/her family or relatives opposes the donation when he/she dies, it would be impossible to admit his/her body into the school, even although there had been a written Living Will.

After the establishment of the Kentai-ho in 1983, the number of members of each voluntary association for donation increased. Some associations came to have many members beyond the requirements and the admission capacity of cadavers for their medical or dental schools. Such associations have therefore restricted their membership. For example, the Association of Sapporo Medical University has an age limit of 70 and over for new admission since 1992, and it has about 1,260 members as of June 2005.

In the UK up until 2004, the use of bodies for anatomical study was covered by the Anatomy Act 1984 and was supervised by Her Majesty's Inspector of Anatomy (HMIA). The role of the HMIA was to visit centres where cadavers were being used for anatomical purposes, to inspect the facilities and procedures in place and to ensure legislation was being upheld; the HMIA had the power to close anatomy facilities if they deemed that the regulations specified in the Anatomy Act were not adhered to; the role of HMIA no longer exists.

More recently the Human Tissue Act 2004 (HT Act), under the governance of the Human Tissue Authority (HTA, established 2005), repeals and replaces several pieces of legislation in the UK, namely the Human Tissue Act (1961), the Anatomy Act (1984) and the Human Organ Transplants Act (1989). Reformation of the legislation began amidst the scandalous discovery in the UK in 1998 that body parts of deceased children (mostly hearts) had been retained at post-mortem without parental consent or knowledge; the first incidents reported were at the Bristol Royal Infirmary and later, at Alder Hey Children's Hospital in Liverpool. The remit of the HTA is now much wider than that of the former HMIA in that it regulates the removal, storage, use and disposal of human bodies, organs and tissue for research, transplantation, and education and training at around 800 licensed premises in England, Wales and Northern Ireland. The HTA also informs the public and the Secretary of State for Health about these issues. There is separate legislation in Scotland, the Human Tissue (Scotland) Act 2006.

Prior to the enforcement of the HT Act, individuals wishing to

donate their body after death were required to contact their local medical schools or the Inspector of Anatomy's office, consent was reported either in their final will and testament, or in another signed document. However, family members could overrule the donor's wishes after death, if they wished to do so. Under the HT Act, prior to death a consent form (available from medical schools) must be signed by the donor and also stored with the donor's will. The HTA also advises the donor to notify family, close friends and their GP of their planned donation, since now relatives cannot over-rule a donor's wish to donate their body. When death occurs, relatives contact the nearest medical school (or previously the Office of the Inspector of Anatomy). The donor's body is often removed to the premises of a local funeral director for refrigeration until it is transferred to the medical school for preservation. The medical school is not obliged to accept the body, and may decline it in the case of particular kinds of illness (e.g. dementia, cancers, etc), after autopsy, if the body is required by the Coroner, or after organ loss of various kinds.

Attitudes towards nakedness and the living body

Benedict [20] proposed that there was a cultural difference between 'guilt cultures' as found in the West, where the ultimate censor for actions is internal, and 'shame-cultures' such as that found in Japan, where the censor for actions is external. This argument, helpfully summarised by Atherton [21], might shed light on attitudes towards both the body and to innovation.

In general, most Japanese have a shy mentality, and they are ashamed and embarrassed about their body (rather than experiencing guilt in the sense promoted in Judeo-Christian religions). So they prefer not to expose their naked body to other people, except in specific situations such as communal pools or public baths, which were mixed in the Edo era. These were prohibited by the government in 1900, although there are a few survivals in the countryside. Indeed, public nudity (particularly of the genitals) outside the setting of hot springs would be obscene and illegal in Japan (Penal Code of Japan, Articles 174 and 175; Japan Misdemeanour Act, Article 1-20).

This contrasts with the situation in Western Europe generally, where nakedness in some public settings such as beaches would not generally be considered illegal. In the UK, public nakedness on beaches is specifically permitted in some places and is treated with more or less tolerance in others. Throughout Western Europe, and increasingly in Britain, it is considered acceptable for females to go topless in public settings such as beaches and open air swimming pools. The increased culture of toleration in the UK may reflect travel to other parts of the world where it is seen as normal. In terms of UK law, the Sexual Offences Act 2003 defines exposure of the body (particularly of the genitals) to be an offence when the intention is to cause alarm or distress to others, but not otherwise. Local by-laws may prohibit public nudity in particular environments.

There are, of course, different degrees of acceptability of nakedness in different contexts, as in Japan. For instance, for females to be naked above the waist in outdoor swimming areas would be unlikely to cause offence, but it would not be seen as appropriate in indoor swimming pools. Nudity would not be

considered appropriate in public, mixed sex, hot baths in the UK.

A study of attitudes to peer examination in Japan [4] indicated that Japanese medical students of both genders accepted the value of peer physical examination, but that there was strong reluctance on the part of female students to be examined by male students, and also very strong objections on the part of female students to take part in peer examination in the presence of male faculty members.

A comparable study of students at a UK medical school [15, 16] also showed a sex differential in preparedness to be examined by peers of the opposite sex. However, the degree of preparedness to be examined in general was markedly greater in UK females. To pick an extreme figure, just fewer than 5% of 2nd year Japanese female medical students would be prepared to consider examination of the upper chest by a male peer [4] while 56.9% of the female UK students in the survey [16] indicated that they would be prepared to consider breast examination by males.

Attitudes towards change, precedent, and innovation in teaching methods

In general, Japanese society/culture promotes collectivism and conformity, reflected in the proverb “A protruding stake will be pounded down”. Relevant attitudes might be summarised as “Do as your neighbours do. Do not do what your neighbours have not done”. However, there is a further implication which might be translated as “If your neighbours begin to change, hurry up or you’ll be late”. For instance, O’Dowd [6] stated that “Japan’s university system has had to adapt rather quickly to a growing market orientation in higher education spurred on by the University Deregulation Law of 1991 and subsequent incorporation of public universities in April 2004”. As stated previously, most medical schools have also introduced PBL to some extent, although with considerable variation. Objective Structured Clinical Examinations (OSCEs) were introduced into several medical schools in Japan in the late 1990s. The number subsequently increased rapidly to 29 in 1999, 64 in 2001, 77 in 2003, and now all 80 medical schools have OSCE programmes [22].

In the UK, change has happened much more rapidly. While in part this has been promoted by the General Medical Council, the radical nature of the proposals put forward by the GMC reflected a culture of openness to innovation present in medical education as a whole. Innovative programmes have occurred in particular medical schools without the necessity of a mass movement in that particular direction. Curiously, barriers to change have generally been stronger within the discipline of anatomy itself. Responses to innovation in anatomy teaching have frequently taken the form of a reiteration of traditional values based on assertion, rather than on positive or negative evidence on the merits of old or new systems [23].

Discussion

Anatomy teaching seems to be similar in the UK and Japan both in terms of the time spent and the teaching methods employed. For example, components of anatomy are delivered over several years

in many medical schools and time spent on teaching seems to be very similar [8, 9, 12]. There are interesting parallels and contrasts in attitudes to death and the dead body, but these have resulted in similar practical approaches to the procurement and treatment of cadavers for dissection.

There are significant differences in two major areas which are of particular importance in the spread of new methods of teaching practical clinical skills. These are in relation to body exposure and to innovation. The Japanese prefer not to expose their body to other people, but in UK such exposure is considered more acceptable. Japanese society has strong traditions of collectivism and conformity, which are likely to inhibit exchange of methods such as peer examination and use of life models, and the abandonment of traditional methods such as the use of dissection. However, such collectivism and conformity can also result in rapid innovation, once change begins to occur. At present, no medical and dental schools have abolished student dissection from anatomy courses, but this may change rapidly and completely if several schools began anatomy teaching without cadavers.

It would be desirable if changes in educational practice were introduced in response to evidence of validity. In this context, validity means whether or not an educational approach applied to undergraduate medical students results in better health care for the relevant population in the future. However, such evidence is almost entirely lacking, and would be difficult and expensive to collect. The time scale involved would also mean that by the time results were available, teaching practices might well have changed in any case. As it is, changes in education practice are driven by a number of factors, including political considerations, costs of delivery, and what might be considered as education trends or fashions which often have an international dimension. Countries may change their practice on the basis of what is happening in other countries. However, each national environment has special factors which influence the ways in which such changes are implemented.

We have provided a brief outline of some important differences and similarities between the UK and Japan with regard to practical teaching on the body, based on existing evidence. However, there is a fertile field for further studies in this area, which would helpfully be explored by qualitative and quantitative research projects.

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