ORIGINAL ARTICLE

Attitudes, knowledge, and actions with regard to organ donation among Hong Kong medical students

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Objective To study attitudes, knowledge, and actions of local medical students with regard to organ donation and self-perceived confidence and competence in approaching potential organ donors.

Design Cross-sectional questionnaire survey.

Setting Faculty of Medicine, The University of Hong Kong, Hong Kong.

Participants Medical students, years 1-5.

Main outcome measures Knowledge on various aspects of organ donation was assessed, and students' self-evaluated competence and confidence about counselling for organ donation was evaluated. Factors influencing attitudes and actions were determined.

Results The response rate was 94% (655/694). A majority (85%) had a 'positive' attitude, but only a small proportion (23%) had signed the organ donation card. Inconvenience and lack of knowledge about organ donor registration, and concerns about premature termination of medical treatment accounted for such discrepancies. Socio-cultural factors such as the traditional Chinese belief in preservation of an intact body after death, unease discussing death-related issues, and family objections to organ donation were significantly associated with a 'negative' attitude. Knowledge and action increased with medical education yet only a small proportion of medical students felt competent and confident in counselling patients on organ donation.

Conclusions The medical curriculum should increase medical students' awareness of the organ shortage problem. The donor registration system should be made more convenient and public education is recommended to correct misconceptions.

Key words
Attitude of health personnel; Living donors; Organ transplantation; Students, medical

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Introduction

As in many parts of the world, there is a shortage of cadaveric organs for transplantation in Hong Kong. Worldwide, more than 20% of patients on transplant waiting lists die every year due to shortage of donor organs.[1] The situation in Hong Kong is of particular concern, as the cadaveric organ donation rate is amongst the lowest in the developed world, being 3 per million of the population per year.[2] The majority of Hong Kong residents are Chinese; their culture and traditions have a 'negative' influence on attitudes and actions on organ donation.[3,4]

As future doctors, medical students will take up the role of promoting organ donation. However, many lack relevant basic knowledge and are influenced by personal attitudes and biases held by the general public,[5-10] which impinge on health care professionalism. Insufficient knowledge and failure to identify possible donors are considered important contributing factors responsible for the shortage of available organs.[11-13] There is also a discrepancy between attitudes and actions. While the majority of health care professionals support organ donation, only a small proportion had an actual commitment through signing an organ donation card or registering to become an organ donor.[14-16] Attitudes, knowledge, and actions are interrelated and previous studies showed that culture and religion were important external influences affecting the decision process.[17]

The undergraduate medical curriculum should provide students with basic information on procedures and ethical issues concerning organ transplantation and donation, so that future doctors can become informed advocates. However, there is a lack

of local data on attitudes, knowledge, and actions with respect to organ donation among Hong Kong medical students. This study therefore aimed to answer the following questions:

- How does clinical exposure affect corresponding knowledge, attitudes, and actions?
- How does medical knowledge affect respective attitudes and actions?
- Do medical students have the confidence and competence to counsel potential donors?
- What is the relationship between attitudes and actions?
- What factors affect attitudes and actions to account for the discrepancy, if any, between them?

We hypothesised that a majority of medical students would have a 'positive' attitude towards organ donation, but their medical knowledge might be suboptimal, and even so their actions might be less than commensurate. We expected that attitudes, knowledge, and actions with regard to organ donations would become more 'positive' with increasing medical knowledge and clinical exposure. We intended to generate recommendations to incorporate topics on organ transplantation and donation into the medical curriculum, to improve student awareness, knowledge, attitudes, and commitments, with a view to better address the problem of future organ shortages.

本地醫科學生對器官捐贈的態度、知識與行動

目的 研究本地醫科學生對器官捐贈的態度、知識和行動，以及他們對自己接觸可能成為器官捐贈者的病人的信心和能力。

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主要結果測量 評鑑學生對器官捐贈的各方面知識，評估學生對提供器官捐贈諮詢的能力和信心的自我評估，並確定影響對器官捐贈的態度和採取行動的因素。

結果 回覆率為94% (655/694)。大部分(85%)參與者對器官捐贈的態度屬「正面」，但只有少數人(23%)已簽署器官捐贈證。造成此差距的原因，包括器官捐贈登記手續不方便、對手續缺乏認識，以及擔心因此而遭提前終止治療。此外，社會文化因素與形成「負面」態度亦息息相關，包括認為死後遺體要保持完整的華人傳統觀念，忌諱談論與死亡有關的事情，家人反對等。加強醫學方面的教育後，知識和行動相應有所增加。不過，只有少數醫科學生對和病人討論器官捐贈這問題自覺有能力和信心勝任。

結論 醫科課程應提高醫科學生對可供移植器官不足這個問題的認識，而有關當局亦應簡化捐贈登記手續，並加強公眾教育以糾正市民對器官捐贈的誤解。

Methods

Settings and subjects

The University of Hong Kong is one of the two local tertiary institutions that provide undergraduate medical training. A majority of medical students are Chinese who have matriculated from local high schools. The 5-year undergraduate medical curriculum focuses on the study of basic medical science through system-based blocks in the first 2 years and on patient care and clinical clerkships in the following 3 years. The curriculum emphasises early patient contact with clinical skills sessions and clinic visits arranged for preclinical students.

Between 24 January and 24 February 2006, anonymous self-administered questionnaires were distributed to the medical students from years 1 to 5 (n=694) before morning lectures, small group tutorials, and seminars. The forms were collected immediately, during recesses, or when the respective sessions finished.

Questionnaire

Each questionnaire consisted of 38 questions on demographics (n=4), attitudes (n=2), actions (n=1), factors influencing attitudes and actions (n=12), competence (n=3), knowledge (n=15), and a potential confounder (n=1) [Appendix]. 'Positive' self-rated attitude was defined as answering 'true' to the question 'I support organ donation'; 'positive' assessed attitude was defined as answering 'true' to the question 'I agree to donate my organs when I die'; 'positive' action was defined as having signed the organ donation card/form.

Putative factors influencing attitude and action included the following: importance of preserving an intact body, unease discussing death-related issues, family objection, religion, misconception about the effects of organ donation on body disfigurement, concern about premature termination of treatment, altruism, knowing anyone who had undergone organ transplantation, convenience of donor registration, and preference for living-related donation. Willingness to donate the organs of family members was also evaluated as a correlating factor.

Students' knowledge related to cadaveric organ transplantation was assessed with 15 questions in the following five areas: (i) medical aspects of organ transplantation, (ii) medico-legal issues, (iii) donor registration, (iv) supply and demand of cadaveric organs, and (v) brain death.

A television programme, "Precious Life"《鏗

TABLE 1. Comparison of different aspects of organ donation according to year of study

Aspect of organ donation	Year of medical study					P value†
	1	2	3	4	5	
Knowledge						
Mean % of students giving correct answers	33%	39%	62%	65%	70%	<0.001
Aspects						
Medical knowledge of organ transplantation (Q1-7)*	33%	36%	68%	71%	78%	-
Medico-legal issues (Q10)*	29%	47%	62%	68%	79%	-
Donor registration (Q12, 15)*	23%	24%	28%	22%	26%	-
Supply and demand of cadaveric organs (Q11, 13, 14)*	26%	38%	60%	68%	66%	-
Brain death (Q8, 9)*	47%	54%	75%	76%	84%	-
Positive attitude						
Self-rated	99%	98%	100%	98%	100%	0.68
Assessed	84%	85%	81%	87%	87%	0.53
Positive action (signed organ donation card)	19%	20%	12%	32%	27%	0.01
Confidence in organ donation counselling	25%	34%	31%	30%	23%	0.50
Competence in organ donation counselling	12%	22%	14%	16%	27%	0.03
Belief in adequacy of the medical curriculum providing transplant-related knowledge	5.1%	7.9%	12%	21%	34%	<0.001

* Questions refer to those in the section under 'Knowledge' (Appendix)
† Comparison between preclinical (years 1, 2) and clinical (years 3, 4, and 5) students

鏘集——生命誠可貴》, about liver transplantation was broadcast 2 weeks before the distribution of the questionnaire. Subjects were asked to indicate whether they had watched the programme to account for a possible confounding effect.

Ethics approval

This study received approval from the Institutional Review Board of the University of Hong Kong/Hong Kong Hospital Authority (West Cluster).

Statistical analysis

Demographic data were analysed by descriptive statistics. Concerning knowledge about organ donation, the percentage of questions answered correctly by each student was calculated, and the mean was derived for each class (years 1-5). Comparison between students from different years was made by one-way analysis of variance (ANOVA). Scores were also compared between preclinical (years 1 and 2) and clinical students (years 3, 4, and 5) by two-sample *t* tests. Knowledge-based scores were qualitatively analysed into three categories according to sub-topics to determine relative strengths and weaknesses. Subjects were also stratified into three knowledge-level categories (high, medium, and low), according to the percentage of correct answers given. The Chi squared test was used to test the association of variables including (1) self-rated attitude, (2) assessed attitude, (3) action towards organ donation, (4) views about the adequacy of the medical curriculum in providing transplant-related knowledge, (5) self-perceived competence, and (6) confidence in organ donation counselling according to the year of study and level of knowledge. The correlation between attitude and action was also analysed by Chi squared tests. A stepwise logistic regression was used to extrapolate the odds ratio of the 12 questions, to determine factors that influence action and attitude. All statistics were carried out using the Statistical Package for the Social Sciences (Windows version 14.0, Chicago [IL], US) and Microsoft Excel (Redmond [WA], US).

Results

Demographics

The response rates for first, second, third, fourth, and fifth year classes were 95%, 95%, 100%, 91%, and 92% respectively, giving an overall rate of 94% (655/694). The mean age of the subjects was 21 years; 58% of the respondents were male. Approximately 46% of respondents did not have any religious belief, 24% were Protestant Christian, 10% were Catholic, and 2% were Buddhist.

Clinical exposure versus knowledge, attitude, and action

Table 1 reveals that the more senior medical students had better overall knowledge about organ donation, there being a positive correlation with seniority. On

average, students in clinical clerkship years (years 3, 4, and 5) answered 67% of the questions correctly, which was significantly better than the figure of 36% for years 1 and 2 preclinical students (P<0.001).

Regarding the five aspects of knowledge about transplantation, donor registration was the least well appreciated in all 5 years. Overall, only 28% of the respondents knew that organ donor registration bears no age restriction, and 20% recognised that consent of close relatives was not legally necessary for the removal of organs in a registered organ donor. Their knowledge on the supply and demand of cadaveric organ donation was also deficient. Only 39% were aware of the approximate number of cadaveric livers supplied in Hong Kong each year, and 58% realised that less than 20% of patients on the renal transplant waiting list received an organ within a year.

Almost all medical students had 'positive' self-rated attitudes (99%) and a majority of them had 'positive' assessed attitudes (85%) [Table 1]. No correlation between self-rated or assessed attitudes and the year of study was observed (P=0.68 and P=0.53, respectively). Only 23% of subjects had signed an organ donation card. Students in the clinical years were more likely to have signed the organ donation card compared with preclinical students (25% vs 12%, P=0.01).

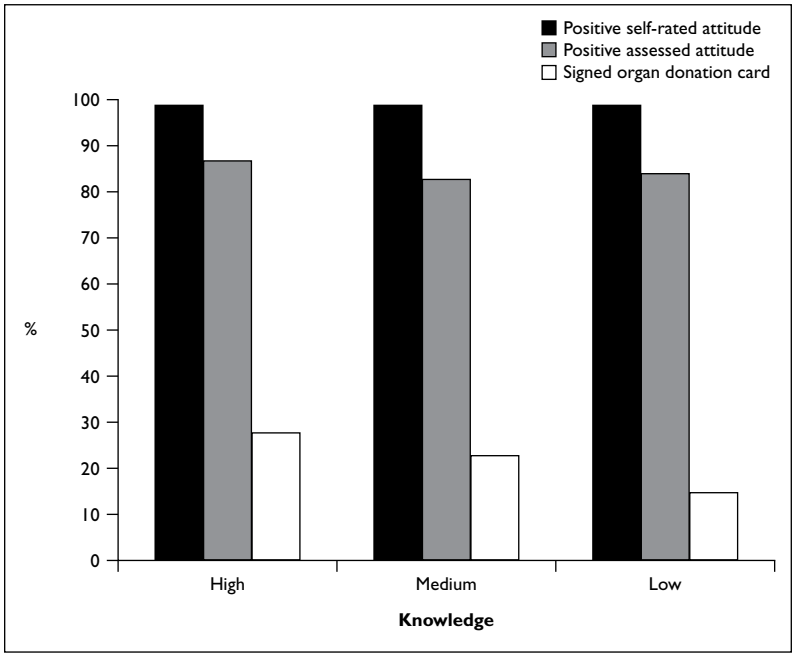

FIG 1. Comparison of self-rated attitude, assessed attitude, and action (signing of the card) at different levels of knowledge

Knowledge versus attitude and action

The level of knowledge about organ donation was divided into tertiles: high, medium, and low as shown in Fig 1. There was no significant correlation between knowledge and attitude, both self-rated and assessed (P=0.60 and P=0.66, respectively). Self-rated attitude and assessed attitude were vastly 'positive'. Action appeared to be correlated with knowledge, but the trend was not statistically significant (P=0.15).

Self-perceived confidence and competence

Self-perceived confidence and competence of medical students in counselling potential donors and their relatives are shown in Table 1. A significantly higher percentage of senior medical students thought that the medical curriculum was adequate in providing transplant-related knowledge (P<0.001), a 'positive' trend being observed. However, less than one third of all students felt confident and competent in counselling potential donors and their relatives. Students' confidence had no correlation with seniority (P=0.50), but students' competence had some correlation with seniority (P=0.03).

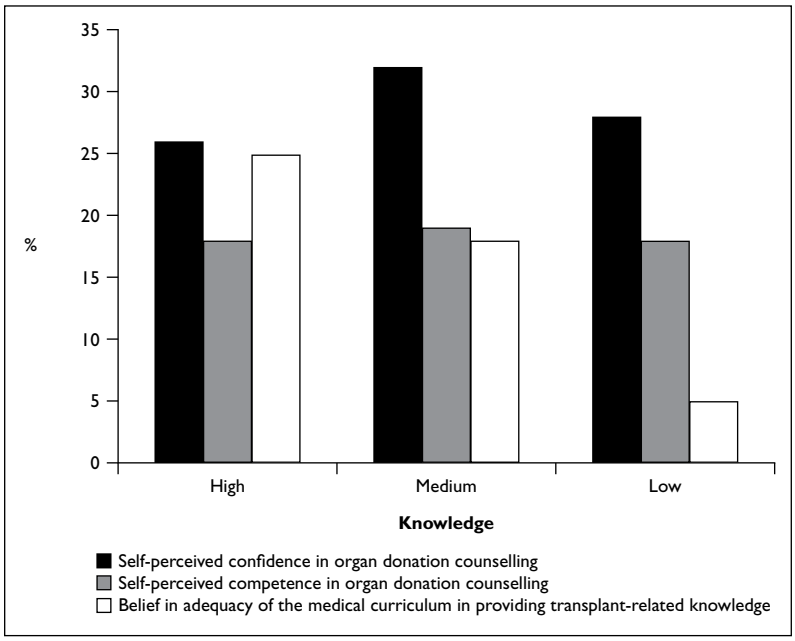

FIG 2. Comparison of confidence, competence, and self-evaluated adequacy of the medical curriculum for providing transplant-related information, according to different levels of knowledge

Belief in adequacy of the medical curriculum in providing transplant-related knowledge increased with level of knowledge (P<0.001), but confidence and competence showed no observable trend

Students had low levels of confidence in approaching potential donors and their relatives, regardless of their knowledge (Fig 2). Even fewer students thought they were competent to counsel patients on organ donation. Overall, most students believed the medical curriculum was inadequate in providing transplant-related knowledge. More students with a higher level of knowledge believed that they had benefited from the medical curriculum,

TABLE 2. Factors significantly associated with willingness to donate organs after death (assessed attitude) and signing of organ donation cards (action) among medical students

Factors associated with attitude/action	Attitude/action		Odds ratio (95% CI)	P value
	Positive attitude (n=549)	Negative attitude (n=99)		
Positive attitude				
Agree to donate family members' organs after their death	428 (78%)	34 (34%)	3.16 (1.85-5.41)	<0.001
Negative attitude				
Preservation of intact body after death is important	80 (15%)	59 (60%)	5.78 (3.41-9.80)	<0.001
Feels uncomfortable to think or talk about organ donation	24 (4%)	19 (19%)	2.35 (1.07-5.14)	0.032
Family would object to decision about organ donation	164 (30%)	65 (66%)	2.92 (1.70-5.03)	<0.001
	Positive action (n=148)	**Negative action (n=505)**		
Positive action				
Agree to donate family members' organs after their death	129 (87%)	332 (66%)	2.74 (1.51-4.95)	0.001
Knowledge on where to obtain organ donation cards	93 (63%)	134 (27%)	2.65 (1.70-4.12)	<0.001
Convenience in registering as an organ donor	118 (80%)	277 (55%)	2.21 (1.35-3.62)	0.002
Knowing family members/close friends who signed organ donation card	91 (61%)	177 (35%)	1.90 (1.24-2.92)	0.003
Negative action				
Preservation of intact body after death is important	16 (11%)	123 (24%)	2.16 (1.14-4.10)	0.018

but confidence and competence did not appear to increase with the level of knowledge (P=0.83 and 0.90, respectively).

Relationship between attitude and action

The percentage of subjects who had signed the organ donation card was rather low (23%), illustrating an apparent discrepancy between attitude and action. Among those who expressed willingness to donate their organs after death, only 26% had signed an organ donation card, while 4% with a 'negative' assessed attitude had signed a card. A positive correlation between attitude and action (P<0.05) was observed.

Factors affecting attitude and action

Among all the potential factors included in the Appendix, those identified to be significantly associated with attitudes and action are shown in Table 2. Traditional cultural beliefs, like the importance of preserving an intact body after death (odds ratio [OR]=5.78; 95% confidence interval [CI], 3.41-9.80; P<0.001), unease thinking or talking about organ donation after death (OR=2.35; 95% CI, 1.07-5.14; P=0.032), and objections from family members (OR=2.92; 95% CI, 1.70-5.03; P<0.001) were factors significantly associated with 'negative' attitudes. Those who held 'positive' attitudes were more likely to agree to donate their family members' organs after death (OR=3.16; 95% CI, 1.85-5.41; P<0.001).

Preservation of an intact body after death remained an important factor significantly associated with 'negative' action (OR=2.16; 95% CI, 1.14-4.10; P=0.018). 'Positive' action was largely related to efficacy of the current organ donor registration system, including convenience for potential donors (OR=2.21; 95% CI, 1.35-3.62; P=0.002), knowing where to obtain organ donation cards (OR=2.65; 95% CI, 1.70-4.12; P<0.001), and knowing someone who had signed an organ donation card (OR=1.90; 95% CI, 1.24-2.92; P=0.003).

As only a small proportion of students who expressed 'positive' attitudes had actually committed to signing organ donation cards, the factors which influenced action in those with 'positive' attitudes were further analysed to account for the discrepancy (Table 3). Three factors associated with 'positive' action remained significant, whereas concern about premature termination of medical treatment for registered organ donors (OR=2.79; 95% CI, 1.03-7.58; P=0.044) was associated with negative action in those with 'positive' attitudes. A total of 156 (24%) students indicated that they had watched the TV programme "Precious Life"《鏗鏘集——生命誠可貴》broadcast 2 weeks prior to the survey. The percentage of students having 'positive' attitudes or action did not differ between the group who had watched the programme versus those who had not (84.2% vs 83.8% and 24.1% vs 22.0%, respectively). A large proportion (42%) of the medical students studied believed that living-related organ donation was better than cadaveric donation, though this was not shown to significantly influence their attitudes.

TABLE 3. Factors significantly associated with signing of organ donation cards (action) among medical students expressing a 'positive' attitude

Factors	Positive action (n=144)	Negative action (n=404)	Odds ratio (95% CI)	P value
Associated with positive action				
Agree to donate family members' organs after their death	126 (88%)	301 (75%)	2.26 (1.22-4.19)	0.010
Knowledge on where to obtain organ donation cards	92 (64%)	115 (28%)	2.60 (1.65-4.11)	<0.001
Convenience in registering as an organ donor	114 (79%)	217 (54%)	2.10 (1.27-3.47)	0.004
Knowing family members/close friends who signed organ donation card	89 (62%)	153 (38%)	1.92 (1.23-2.98)	0.004
Associated with negative action				
Concern about premature termination of medication treatment for registered donors	6 (4%)	43 (11%)	2.79 (1.03-7.58)	0.044

Discussion

In this study, an increase in the level of knowledge about organ transplantation with increasing duration of clinical exposure was observed. Other studies of medical students in different countries have shown a similar trend, where the proportion demonstrating accurate knowledge about donation cards was significantly increased after education.[18] However, increased knowledge did not translate into greater self-perceived confidence and competence in counselling potential donors. Seniority had a slight correlation with competence in counselling potential donors, but since there was no correlation between confidence in counselling and seniority, we believe this result was spurious. The respondents were particularly weak in knowledge related to donor registration and were relatively unaware of the shortage in cadaveric organs in Hong Kong. Medical students from other countries had similar problems with a relative lack of knowledge in medical law,[6] brain death,[7,8] suitable candidates for organ transplantations, potential recipients and the logistics of organ donation.[9,10] Possible reasons for this included insufficient emphasis on organ donor recruitment in the curriculum, lack of exposure and understanding about the entire transplantation process, and paucity of any large-scale organ donation public awareness campaigns in the community. Therefore, issues related to donor recruitment as well as supply and demand of cadaveric organs should be more clearly emphasised in the medical curriculum. For example, a special course for medical students covering aspects of organ donation might be beneficial.[19-21]

Almost all our subjects had a 'positive' attitude regardless of their year of study, which agrees with reports from abroad.[5,11,12,22] However, only 23% of subjects had signed the organ donation card. The degree of action regarding organ donation significantly correlated with the number of years of study. We believe that increase in knowledge alone could not account for this trend, because knowledge did not correlate significantly with actions (Fig 1). Increased awareness of the issues surrounding organ donation and empathy towards patients are needed. More clinical exposure in the senior years may explain the correlation. By truly committing themselves to becoming organ donors, health care professionals can serve as role models for patients and their relatives, and a higher success rate for organ procurement might be achieved.[13] Previous studies showed that patients have more 'positive' attitudes towards organ donation if they know their doctors are ready to donate organs.[23]

Our study showed that belief in the preservation of an intact body after death, family objections to organ donation, and discomfort discussing death-related issues 'negatively' influenced attitude. Previous studies showed similar results in Chinese populations, family pressure,[24] maintaining an intact body, and filial piety[3] being the major barriers to cadaveric organ donation. The Confucian concept of 'filial piety' dictates that individuals, out of respect for their ancestors, are required to return their bodies in the same condition that they received them from their parents. Therefore, it was wrong for others to impede a person's efforts in this respect by removing organs or cremation (instead of burial). Participants who were unwilling to donate their organs were also more likely to adhere to such beliefs.[25] Furthermore, persons who chose cremation were more in favour of donating organs after death than those preferring to be buried.[26] Another study showed that people whose parents held 'positive' attitudes were more supportive of organ donation.[27] The main barriers to organ donation in the Chinese community are cultural, and regrettably such factors are very difficult to change. Thus, awareness and attitudes are not influenced by information alone, but very strongly also by social and familial factors.

A discrepancy between attitude and action was also evident. It is disappointing that despite having strongly 'positive' attitudes, only a minority of medical students had signed the organ donation card.

Other studies have shown similar discrepancies in medical students and other health care professional populations.[22,28,29] It was surprising to discover that premature termination of medical treatment for registered organ donors was a concern in a proportion of the students and associated with non-commitment to signing organ donation cards, and may reflect a commonly held misunderstanding among the public. Other studies also showed similar concerns among medical students elsewhere, in which they expressed doubts on the validity of the criteria used to diagnose 'brain death'[5] and poor understanding of the concept of brain death and organ procurement.[30-32] However, our subjects scored quite well on questions related to brain death; more than 70% of the clinical students gave correct answers on two true/false questions. Measures should be generated to improve the signing rate of organ donation cards among medical students, such as making the process more convenient, publicising where to obtain them, and education to correct misconceptions.

Our study noted the 'positive' effect of family members or close friends who had signed the organ donation card. Another study showed similar findings, namely that peer influence and action (signing the card) were positively correlated,[33] showing that mutually shared beliefs and access to organ donation cards help promote registration of organ donors.

We initially hypothesised that the attitudes and actions of those who watched the documentary 'Precious Life' might differ from those who did not, but this was not so. The programme addressed the current cadaveric organ shortage problem in Hong Kong and aimed to raise the awareness in the general public. As most students held 'positive' attitudes, this programme alone may not have been sufficient to alter their actions. As for signing of the organ donation card, because our survey was conducted 2 weeks after the TV programme, there might have been insufficient opportunity for those who decided to register as donors. The ultimate impact of this TV programme on recruitment of potential organ donors awaits further assessment, but campaigns promoting organ donation using multimedia platforms reaching different sectors of the community are desirable, considering the current long waiting list and low rate of cadaveric organ donors.

Strengths and limitations of the study

We attributed our high response rate of 94% to direct distribution, prompt collection of questionnaires, and its concise design. Our study had sufficient sampling in one of the two medical schools in Hong Kong, but generalisation of the results needs to take into account differences in curriculum content and design, as well as the background of the students.

There were limitations concerning our questionnaire. Even though the 15 questions on knowledge showed highly consistent internal validation (Cronbach's alpha, 0.806), only six of the 15 knowledge questions had significant discriminant power for classifying subjects into high-, medium-, or low-level knowledge categories. The questionnaire could have been improved by performing a pilot study for validation. As the questionnaires were distributed during classes, it was possible that some answers were shared after discussion between subjects. Social desirability could be a bias inducing students to give 'pro-donation' answers, thus our study may have overestimated the number of subjects with 'positive' attitudes towards transplantation.

Conclusions

The vast majority of our students had 'positive' attitudes towards organ donation, which were not affected by the number of years they had spent in the medical school, nor medical knowledge. Attitudes were influenced by social and cultural factors. Senior students were more likely to have acted 'positively'. However, there was a significant discrepancy between attitudes and actual commitment to organ donation, possibly influenced by the inconvenience of registering and lack of knowledge about the process, as well as concerns about premature termination of medical treatment. Our medical curriculum should include modules on organ transplantation to better equip future doctors with knowledge and confidence in counselling on organ donation issues. Well-designed publicity campaigns to address cultural beliefs and correct misconceptions, as well as more convenient donor registration systems are needed.

Appendix

Additional material related to this article can be found on the HKMJ website. Please go to <http://www.hkmj.org>, search for the appropriate article, and click on Full Article in PDF following the title.

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APPENDIX. Questionnaire*

Demographics	
Age	
Gender	M/F
Year of study	1 / 2 / 3 / 4 / 5
Religion	Christian / Catholic / Buddhist / Muslim / Non-religious / Others

34 True/False Questions

Attitude
- I support organ donation.
- I agree to donate my organs when I die.

Action
- I have signed the organ donation card/filled in the organ donation form.

Factors influencing attitude and action
- I think the preservation of an intact body after death is important.
- I feel uncomfortable to think or talk about organ donation.
- I think the body will be disfigured when the organs are removed.
- I think there will be premature termination of medical treatment for registered organ donors.
- I think donating one's organs adds meaning to one's life.
- My family would object if I were to donate my organs.
- I know family members or close friends who have signed the organ donation card.
- I know people who have benefited or are in need of an organ transplant.
- I think live organ donation is better than cadaveric organ donation in solving the problem of organ shortage.
- I think it is convenient to register as an organ donor in Hong Kong.
- I know where to obtain organ donation cards.
- I will agree to the donation of my family members' organs.

Competence
- I am confident in approaching relatives of potential organ donors diagnosed brain dead and discussing issues related to organ donation with them.
- I am competent and have adequate knowledge in counselling patients on issues related to organ donation.
- I believe I have learnt enough about organ donation from the MBBS curriculum.

Knowledge
1. Malignancy is ALWAYS a contra-indication to cadaveric organ donation.
2. The donor's human leukocyte antigen MUST be identical to that of the recipient for any transplantation.
3. The donor's and recipient's blood group MUST be identical.
4. Organ transplant recipients are more prone to development of cancer after transplantation.
5. Hepatitis B and C carriers can donate all of their solid organs except the liver.
6. It is possible to transplant an adult liver into a paediatric patient.
7. Increased risk of opportunistic infections is a complication common to all transplantations.
8. In a brain-dead patient, all brain stem reflexes are absent.
9. The heart can be beating in a brain-dead patient.
10. A certified brain-dead registered organ donor will be immediately disconnected from mechanical ventilation support.
11. More than 20% of the people on the renal transplant waiting list will receive an organ within a year in Hong Kong.
12. Registration of organ donors bears no age restriction.
13. About 20 cadaveric livers are supplied in Hong Kong each year.
14. The organ donation rate in Hong Kong is amongst the top 10 of the world.
15. Having registered as an organ donor, consent from next-of-kin is still legally necessary for the removal of organs.

Confounder
- I watched the TV programme《鏗鏘集—生命誠可貴》on liver transplantation produced by RTHK on 15 January 2006 at 7:35pm on TVB Jade.

* All of the questions were arranged in random fashion in the actual questionnaire