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## Original Article

# Posthumous organ donation beliefs of college students: A qualitative study



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## ABSTRACT

**Objective:** To explore the perspectives and beliefs of college students toward posthumous organ donation, and the factors influencing their beliefs.

**Methods:** This was a descriptive phenomenology study conducted with semi-structured in-depth interviews. Nine college students attending three universities in Beijing who agreed to participate in this study were interviewed. Data were analyzed following the guideline suggested by Colaizzi (1978). Briefly, statements identified as noteworthy were coded and organized. A description was then written to formalize their meaning and returned to the participants for validation of the description.

**Results:** In general, the participants exhibited positive attitudes toward posthumous organ donation. However, not all subjects indicated that they would become an organ donor. Based on the provided responses, four main themes emerged: (1) knowledge about organ donation, participants reported a general lack of education or understanding of organ transplantation and donation; (2) core beliefs on organ donation, despite believing it is valuable public service, participants were unwilling to go against the cultural beliefs held by parents and elders; (3) factors influencing beliefs on organ donation, including cultural and peer opinion, posthumous care of the body, legal registration, and publicity; (4) institutional and policy context, lack of guarantee for proper use of organs after donation was a concern.

**Conclusion:** Despite positive attitudes towards posthumous organ donation, college students are hesitant to become donors because of lack of knowledge/publicity; cultural disdain; and lack of governmental assurance.

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## 1. Introduction

Organ transplantation is an effective method for treating organ failure [1]. However, the number of organ donors is insufficient to accommodate the current need [2]. For example, in China alone, ~300,000 patients each year with end-stage liver disease require a life-saving organ transplant [3]. The limited number of available donors is exacerbated by the increased need due to medical advancements [4]. Thus, there is a need for a transparent, fair and ethical organ donation system [5].

In China, organ donation conflicts with traditional culture and ethics [6]. Therefore, it is critical to educate the Chinese population on the importance of organ donation and to relax the long-held beliefs that pose an obstacle. To gain a better understanding of the current attitudes towards organ donation, an in-depth evaluation of the beliefs of college students in China was undertaken. The actions and beliefs of this population will undoubtedly affect the future of the entire society [6–8]. To date, only a few qualitative studies have been published on college students' beliefs of organ donation, which can be expressed in a narrative format and for which the interaction of factors can be determined by narrative analysis. The aim of the current study was to explore students' beliefs regarding posthumous organ donation in order to provide a basis for improving their awareness and to increase their willingness to donate organs.

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## 2. Material and methods

### 2.1. Participant selection

This was a descriptive phenomenology study that utilized purposive sampling of fourth-year bachelor's degree students from three universities in Beijing. Participants were recruited from ads posted on publicity boards at the universities requesting they contact a researcher if interested. Students included in the study were selected from different disciplines to provide a more diverse sample. In total, nine students were interviewed, including four liberal arts students, three science students, and two medical students. Data saturation was reached after the nine interviews. All the participants who volunteered to participate were provided informed consent.

### 2.2. Data collection

Semi-structured in-depth interviews were conducted during the academic year of 2012–2013. All the interviews were conducted in the lobbies of the buildings where classes were held. Key questions in the interview guideline were: (1) Have you heard of organ donation? (2) How do you feel when someone donates his/her organs? (3) Have you thought about donating your organs after death? (4) What is the purpose of organ donation? Each interview lasted for 40–60 min and was tape-recorded with the consent of the participants. Data was recorded using pseudonyms to ensure anonymity, and the taped recordings were destroyed after the de-identified transcripts were created.

### 2.3. Data analysis

Transcriptions of the narratives obtained from the interviews were analyzed using the data analysis method described by Colaizzi [9]. First, transcripts were reviewed line by line by two researchers to gain a sense of the participants. Next, the researchers extracted statements with significance to the research question. Then, the researchers began to articulate what the statements mean and created themes from the meanings. Finally, the researchers integrated the results into a comprehensive description and returned to the participants for validation of the description. No new data were revealed from the participants. The results were compared and discussed between the two researchers throughout the analysis to reach agreement.

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## 3. Results

In total, nine participants were interviewed, including five women and four men, aged 21–22 years. All but two of the participants originated from urban areas, four of which did not have any siblings. The two rural students had siblings. Overall, the participants expressed their support for organ donation and were willing to donate organs after death, yet many were not sure whether they wanted to register as organ donors at present. Four themes emerged from the interview narratives: (1) knowledge about organ donation; (2) core beliefs on organ donation; (3) factors influencing beliefs on organ donation; and (4) institutional and policy context. In general, the participants lacked knowledge about organ donation, yet held positive attitudes and core beliefs. They were concerned about family attitudes, Chinese traditional culture and social norms, which affected their decision to be organ donors.

### 3.1. Themes 1 and 2: knowledge and core beliefs about organ donation

Most participants did not know about the organ donation and registration authority. Participants reported that they were not given comprehensive or systematic education regarding organ donation, but rather obtained their information from the media.

Participants reported beliefs that both promoted and hindered organ donation. On the one hand, organ donation was seen as a valuable way to assist others as a kind of public service that had no impact on the donor after death. However, many of the participants also perceived organ donation as complex and involved decision. Moreover, it was considered as something that did not pertain to them at present, and not an issue they needed to consider at this point in their life. Noteworthy statements are presented in [Table 1](#).

### 3.2. Theme 3: factors influencing beliefs on organ donation

Despite the apparent willingness of participants to donate organs after death, four main factors emerged that likely influenced their ultimate decisions. First, cultural and peer values tended to hinder the likelihood that the participants

**Table 1 – Themes on organ donation: knowledge and core beliefs**

Theme		Noteworthy statements
Knowledge	Registration and law	<p>“I never heard of the organ donation registration authority. I didn't understand it.”</p> <p>“I am not familiar with the organ donation law.”</p>
	Education	<p>“I rarely hear about organ transplantation. People in our hometown are cremated after death.”</p> <p>“I know about organ donation only from the web, like QQ or <a href="#">renren.com</a> (a social network); some people sold their kidneys to buy a cell phone.”</p> <p>“I saw a documentary report about heart transplantation on TV.”</p>
Core beliefs	Positive aspect	<p>“In my opinion, organ donation is public service, to give more people a chance to live and to contribute to others.”</p> <p>“The body is useless after death. It is good if the body can still provide benefits to others.”</p> <p>“I think donation leads to a continuation of life and is very noble; it will give others a better quality of life, and benefit others.”</p> <p>“It can promote communication and improve the relationship between people.”</p> <p>“There is no impact if you don't donate, but donating is a good deed.”</p> <p>“I think it is a dedication.”</p>
	Negative aspect	<p>“I have little or no understanding of organ donation, after all, it is an important matter and too complex.”</p> <p>“It is a very big decision, and I will ask my parents for their opinion and discuss it with my classmates.”</p> <p>“I feel it is too far away. The thought never occurred to me ...”</p> <p>“I am so young, it is too early ...”</p> <p>“We never thought of those things in college. If we see more people need help in society, we may have to think about it.”</p>

would donate their organs. In particular, opinions of their parents held a strong influence, as participants believed their parents would not support organ donation because of traditional Chinese views, such as the importance of body integrity, reincarnation, and superstition. However, their understanding of the disposal of the body after death was a positive influencing factor, as many of the participants were open-minded and accepted new ideas easily, in contrast to the beliefs of their elders. The third factor involved the legality of registering for organ donation. Fourth, unlike blood donations, there is a lack of publicity and a lack of awareness about organ donation. Some of the participants suggested advertising, college courses or lectures, and university activities as ways to promote awareness of organ donation. [Table 2](#) presents some noteworthy statements related to these influencing factors.

### 3.3. Theme 4: institutional and policy context

Despite being supportive of registering for organ donation after death, many participants were unsure whether or not they themselves would do so. In addition to considering the attitudes of their peers and family, the care and use of their organs following donation was an unknown factor contributing to their hesitancy. For example: “I will go to register my organs if the registered organization is legal,” and “I will consider the organization that will receive my organs.”

## 4. Discussion

The responses provided by the participants interviewed in this study indicate that knowledge and awareness of organ

donation remains low among college students in China. A previous study published in 2005 had showed that students had limited knowledge about organ donation, though medical students had better understanding than the general student population [7]. Education can be an effective solution, as evidenced by Feeley et al. [10] who found that the percentage of medical students who had organ donation in their wills increased following an educational program intervention. Furthermore, educational sessions in the health science curriculum have been shown to increase awareness of organ and tissue donation [11]. Similar to the findings presented here, previous studies also reported that beliefs, attitudes and knowledge played important roles in organ donation intentions of students [10,12].

Although some of the statements provided by subjects in our study indicated that largely negative information concerning organ donation was obtained from the media, such as news about organ trafficking and sales, this approach can also improve attitudes. For example, Bapat et al. [13] found that 97% of medical students knew about organ donation through the media, indicating that it is an effective way to disseminate information regarding organ donation. Nevertheless, organ donation education and advertisements are far from adequate in China, and strong advertising is needed to appeal to more donors [14]. A report by Armitage [15] in 2011 found that of the 400 websites containing information about organ donation, only those belonging to governmental or organizational entities had useful organ donation information. Indeed, some participants stated they would register to donate with improved awareness and government encouragement. Moreover, it is thought that the government should intervene to make the donation process transparent [16], an important issue, as many of the participants expressed concern about

**Table 2 – Factors influencing beliefs on organ donation**

Factor	Noteworthy statements
Cultural and parental values	<p>“My beliefs are not important; the main consideration is the belief of elders.”</p> <p>“Chinese values are based on the family unit.”</p> <p>“Beliefs about donation may be affected by the concept of reincarnation.”</p> <p>“I think donation is OK. They (my parents) do not support donation.”</p> <p>“I don't want my family members to know about my decision to donate until I am dead, otherwise, they will try to change my mind.”</p> <p>“The older generation wants to preserve their bodies to be buried. They will not agree with this sort of thing.”</p>
Posthumous care of the body	<p>“From a medical student's view, the human body is just a body. The soul and body will not unite after death. I think people just disappear from the earth after death. They are worthless to the one who died but may be valuable to help those who are still alive.”</p> <p>“I think the body is mostly cremated to be ashes nowadays. I would like to understand it from the perspective of science and knowledge.”</p> <p>“Originally people were buried, now cremated. I do not know why we should keep the whole body, but parents still feel that you should be a whole body even if you are cremated.”</p> <p>“You will become a carcass after cadaveric organ donation; Even your mother will not recognize you. Family members cannot accept this.”</p>
Legal registration	<p>“When writing papers on this subject, I found the laws and regulations in this field are not elaborated. There are not enough effective laws in this area.”</p> <p>“Yes, I think more people might be willing to donate if there are more legal guarantees.”</p> <p>“I think it is a good thing to give those patients a hand. But institutions and process should be transparent. Commercialization of organ donation should be forbidden. Criminals will take advantage if organ donation is commercialized.”</p>
Publicity	<p>“I think publicity about organ donation is necessary to encourage this social behavior in the whole society.”</p> <p>“Good propaganda can improve the ethical awareness of citizens. Legal guarantees will provide a bright future.”</p> <p>“I have not seen advertising about organ donation. There is no comparison between blood donation and organ donation.”</p> <p>“If advertising works, people will find organ donation does no harm, and can help others. Donations will increase.”</p> <p>“The university student union can play an important role, providing a competition or debate related to organ donation. This will get a good result.”</p> <p>“There should at least be an organ donor day, like World Blood Donor Day with some publicity and volunteer activities to help us understand better.”</p>

legal guarantees and improper oversight/use of their donation. Thus, legislation of organ transplantation process may also facilitate donations.

Participants demonstrated a willingness to donate organs after death as long as the organ would be useful, consistent with the report by Wu [6]. However, the cultural influence of their parents was a powerful factor, and the participants expressed reluctance to pursue or consider something that would conflict with traditional concepts, such as body wholeness, reincarnation, superstition, etc. This was in stark contrast to their open views and modern values, believing that the body after death has little significance, and is “just cremated to ashes”. Thus, family influence cannot be ignored [17]. Indeed, Chinese traditional culture and social norms have been shown to strongly affect organ donation wishes and registration [18,19].

The participants' youth was another factor influencing their action to register for organ donation in event of their death. Indeed, many stated that they had not considered it or that it is too far away. A similar study by Feeley and Servoss [20] also found that despite positive attitudes toward organ

donation, only 11% of students had declared their willingness to donate through the state registry or by signing an organ donor card. Participants in their study gave similar reasons, such as that they had “intentions to donate in the future”, or had never heard of other people registering.

There are several limitations in this study that should be noted. First, the data were collected using a single method (interview). Second, contributing variables, such as the type of curriculum or lectures the students had attended, or the types of organizations and activities they participate in were not investigated. The results of this study are microcosms of organ donation beliefs among a small sample of undergraduate students, and thus do not represent the views of all college students.

## 5. Conclusion

In general, the attitudes of the participants towards posthumous organ donation were positive, but many factors

influenced their decision to donate or register for donation. In particular, a lack of knowledge concerning organ transplantation and the strong influence of familial and cultural beliefs obstructed their amenability to become donors themselves. Through increased publicity, via the media and education within universities and communities, and improved legislation overseeing the donation process, the attitudes toward organ donation will become more positive, and thus increase the potential number of donations.

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### Conflicts of interest

There are no conflicts of interest.

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### Author contributions

HL designed the study, conducted data collection and analysis and drafted the manuscript. XP conducted data collection/analysis and drafted the manuscript. SZ conducted data collection/analysis and provided administrative support. XQ conducted data collection/analysis. YH provided critical revisions for important intellectual content and administrative support.

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