



Letter to the Editor

Organ Donation is Heavily Influenced by Humanistic Thoughts and Socioeconomic Factors



Qiqi Xie and Zhipeng Li*

School of Medicine, Taizhou University, Taizhou 318000, Zhejiang Province, China

Received: November 25, 2022 | Revised: December 20, 2022 | Accepted: December 30, 2022 | Published: January 28, 2023

We were delighted to read the high-quality research article by Martino *et al.*,¹ titled “Attitude and knowledge of medical students toward donation after circulatory death”. Martino *et al.* aimed to investigate and analyze the acceptance of organ donation in Brazil. They conducted a survey of medical students attending a public university in Brazil through a questionnaire containing 26 items consisting of Likert scale questions. The results showed that most people knew the concept of brain death, and that the acceptance of postmortem donation is much higher than the living donation. These new findings and valuable results greatly attracted our interest, but after our reading and investigation, we found that the conclusions of Martino *et al.* deserve further exploration and research. We are more than happy to contribute to the debate and look forward to hearing from the authors.

First of all, the author did not conduct a multi-center survey. The study sample only included medical students from a public university in Brazil. The sample came from a single source, but the conclusions were applied to the whole of Brazil. A single sample source can greatly reduce the reliability of conclusions.^{2,3} This is because many potential confounding factors can influence medical students’ perceptions of organ donation, whether living or post-mortem. These confounding factors may include geographic environment, household income, cultural environment, or regional policies, amongst other.^{4–6} These factors may also affect each other. In addition, there may be differences in the educational level of different universities, and the cognition of students who attend may be quite different. Students in high-level universities may be more accepting of organ donation, while students in low-level universities may be relatively low.⁷ Therefore, we recommend that the authors supplement the data with multicenter survey studies to enrich reliability.

Second, we found that the authors compared the willingness of Chinese students to donate their kidneys to relatives *in vivo* with that of Brazilian medical students. In fact, the comparability between the two is relatively low, because China is deeply influenced by Confucianism.⁸ Under the dual influence of family ethics and

humanistic thought, it is not surprising that Chinese students are more willing to donate organs to their relatives. Additionally, we note that the authors mention the proportion of liver donation. The liver only needs 30% to fully regenerate,⁹ so people with a medical education are more willing to accept liver donations, either *in vivo* or posthumously.

Finally, we note that the author mentions that “eastern countries have difficulty accepting deceased donations, while western countries have difficulty continuing with living donations”. In fact, in eastern countries, especially in countries such as China and Japan, which are heavily influenced by Confucianism, living donations are often more unacceptable than post-mortem donations, because Confucian culture emphasizes “My body, including hair and skin, which are given by parents, shouldn’t be damaged. This is the basic of filial piety.” The concept of filial piety is very important in these countries.¹⁰ Gill pointed out that socioeconomic factors, not religious beliefs, were the primary obstacle to organ donation in western countries.¹¹

Further observation and research is needed for the investigation of attitudes towards organ donation in a single center. Attitudes towards organ donation are influenced by many factors, of which sociocultural and economic factors are particularly important. We have made a sufficient analysis of the factors affecting organ donation, which provides a reliable reference for organ donation in China and the world.

Acknowledgments

None.

Funding

None.

Conflict of interest

Authors stated that they have no commercial, professional, or personal conflict of interest relevant to the study.

Author contributions

QQX: conceptualization, writing of the original draft, formal analysis. ZPL: reviewing, and editing. All authors participated in draft-

Keywords: Confucianism; Economy; Ethics; Organ donation.

***Correspondence to:** Zhipeng Li, School of Medicine, Taizhou University, No. 1139 Shifu Avenue, Jiaojiang District, Taizhou 318000, Zhejiang Province, China. ORCID: <https://orcid.org/0000-0002-0355-7889>. Tel: +86-15324975138, E-mail: lzpzhonghong@126.com

How to cite this article: Xie Q, Li Z. Organ Donation is Heavily Influenced by Humanistic Thoughts and Socioeconomic Factors. *Explor Res Hypothesis Med* 2023;000(000):000–000. doi: 10.14218/ERHM.2022.00121.

ing the manuscript and all have read, contributed to, and approved the final version of the manuscript.

Data availability

The datasets generated and analyzed in the current study are available from the corresponding author upon reasonable request.

References

- [1] Martino RB, Guidotte DV, Waisberg DR, Santos AGD, Cassenote AJF, Arantes RM, *et al*. Attitude and knowledge of medical students toward donation after circulatory death. *Rev Assoc Med Bras (1992)* 2021; 67(4):602–606. doi:10.1590/1806-9282.20210012, PMID:34495068.
- [2] Cruz DN, de Cal M, Garzotto F, Perazella MA, Lentini P, Corradi V, *et al*. Plasma neutrophil gelatinase-associated lipocalin is an early biomarker for acute kidney injury in an adult ICU population. *Intensive Care Med* 2010;36(3):444–451. doi:10.1007/s00134-009-1711-1, PMID:19956925.
- [3] Wade JA, Hurley CK, Takemoto SK, Thompson J, Davies SM, Fuller TC, *et al*. HLA mismatching within or outside of cross-reactive groups (CREGs) is associated with similar outcomes after unrelated hematopoietic stem cell transplantation. *Blood* 2007;109(9):4064–4070. doi:10.1182/blood-2006-06-032193, PMID:17202313.
- [4] Bracher M, Madi-Segwagwe BC, Winstanley E, Gillan H, Long-Sutehall T. Family refusal of eye tissue donation from potential solid organ donors: a retrospective analysis of summary and free-text data from the UK National Health Service Blood and Transplant Services (NHS-BT) National Referral Centre (1 April 2014 to 31 March 2017). *BMJ Open* 2021;11(9):e045250. doi:10.1136/bmjopen-2020-045250, PMID:34518244.
- [5] Siminoff LA, Gordon N, Hewlett J, Arnold RM. Factors influencing families' consent for donation of solid organs for transplantation. *JAMA* 2001;286(1):71–77. doi:10.1001/jama.286.1.71, PMID:11434829.
- [6] Patel SA, Dhillon PK, Kondal D, Jeemon P, Kahol K, Manimunda SP, *et al*. Chronic disease concordance within Indian households: A cross-sectional study. *PLoS Med* 2017;14(9):e1002395. doi:10.1371/journal.pmed.1002395, PMID:28961237.
- [7] Padela AI, Duivenbode R, Saunders MR, Quinn M, Koh E. The impact of religiously tailored and ethically balanced education on intention for living organ donation among Muslim Americans. *Clin Transplant* 2020;34(12):e14111. doi:10.1111/ctr.14111, PMID:33063912.
- [8] Hu B, Fan M, Huang F, Zhu T. Motivational Tendency Differences Between the Pre-qin Confucianism and Legalism by Psycholinguistic Analysis. *Front Psychol* 2021;12:724093. doi:10.3389/fpsyg.2021.724093, PMID:34858262.
- [9] Böhm F, Speicher T, Hellerbrand C, Dickson C, Partanen JM, Ornitz DM, *et al*. FGF receptors 1 and 2 control chemically induced injury and compound detoxification in regenerating livers of mice. *Gastroenterology* 2010;139(4):1385–1396. doi:10.1053/j.gastro.2010.06.069, PMID:20603121.
- [10] Jones DG, Nie JB. Does Confucianism allow for body donation? *Anat Sci Educ* 2018;11(5):525–531. doi:10.1002/ase.1771, PMID:29338121.
- [11] Gill J, Dong J, Rose C, Johnston O, Landsberg D, Gill J. The effect of race and income on living kidney donation in the United States. *J Am Soc Nephrol* 2013;24(11):1872–1879. doi:10.1681/ASN.2013010049, PMID:23990679.