



# A Survey of Medical Students' Attitudes Toward Clinical Death After Teaching the Philosophy of Death

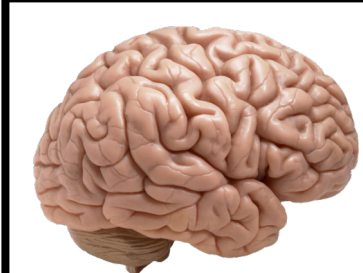
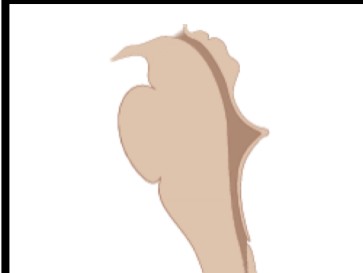
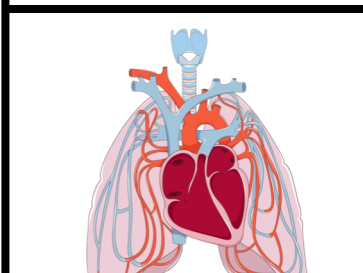
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## Introduction

The pluralism of views that surround death, both within the bioethics community and society as a whole, can be a source of frustration for medical students and physicians who encounter surrogate decision makers who deny the standard medico-legal view of death. There are large gaps in knowledge regarding brain death among medical students, likely due to the lack of educational initiatives and the reliance of media for information, which often portrays inaccurate descriptions of brain death.<sup>1</sup> Despite the growing literature on the inadequacy of medical students' knowledge of brain death, there has yet to be investigation into students' *attitudes* toward brain death and other, non-standard views of death.<sup>2</sup> Therefore, we developed a lecture with an accompanying questionnaire to determine students' knowledge and attitudes for different views of death.

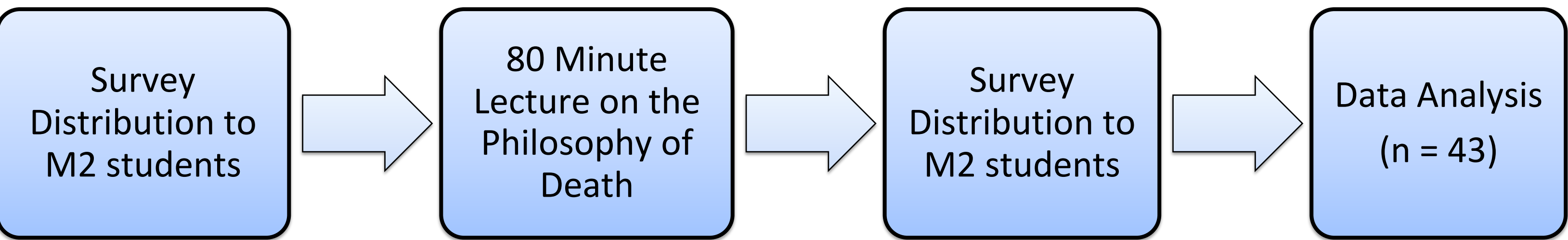
	High brain	Whole brain	Circulatory
	✗	✗	✗
	✓	✗	✗
	✓	✓	✗

\*The whole brain view of death is recognized as the current medico-legal standard of death per the Uniform Declaration of Death Act (UDDA)

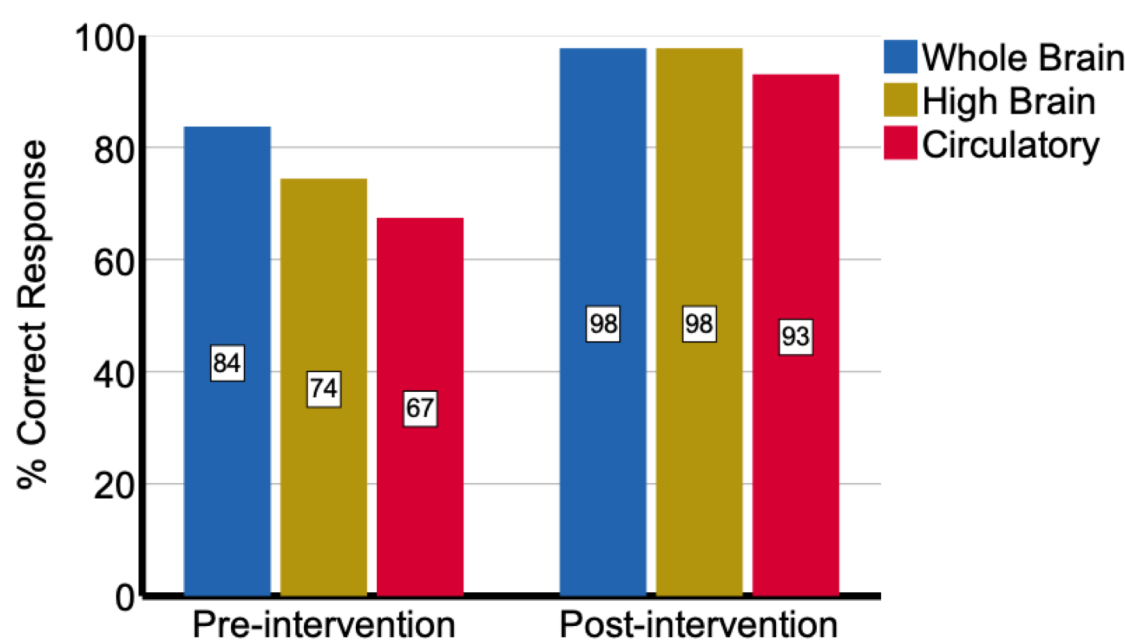
## Aims and Objectives

- Measure baseline attitudes of 2<sup>nd</sup> year medical students toward different views of death.
- Determine medical students' understanding of the current medico-legal standards of death.
- Investigate how increased awareness of the history, application, and current debate surrounding various views of death affects students' attitudes toward surrogates who hold non-standard views of death.

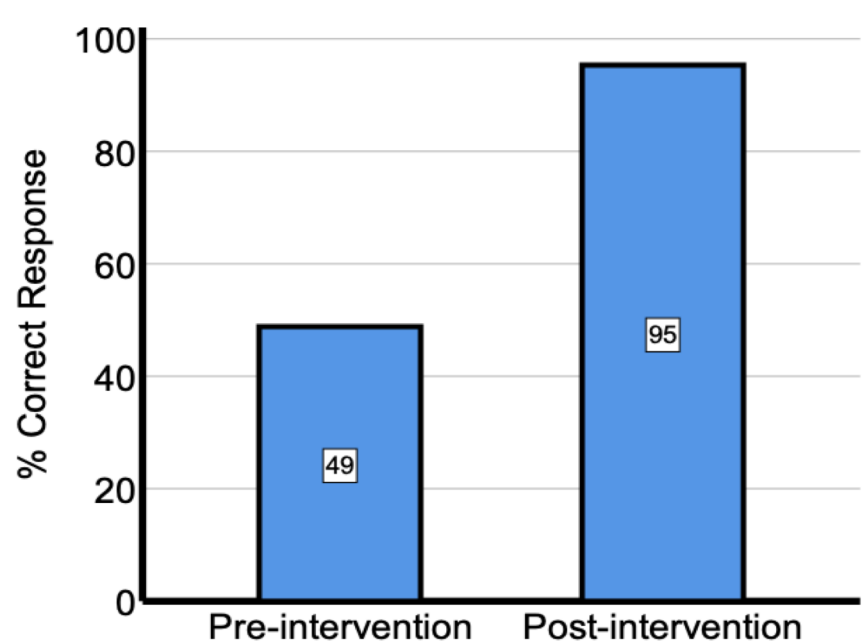
## Methods



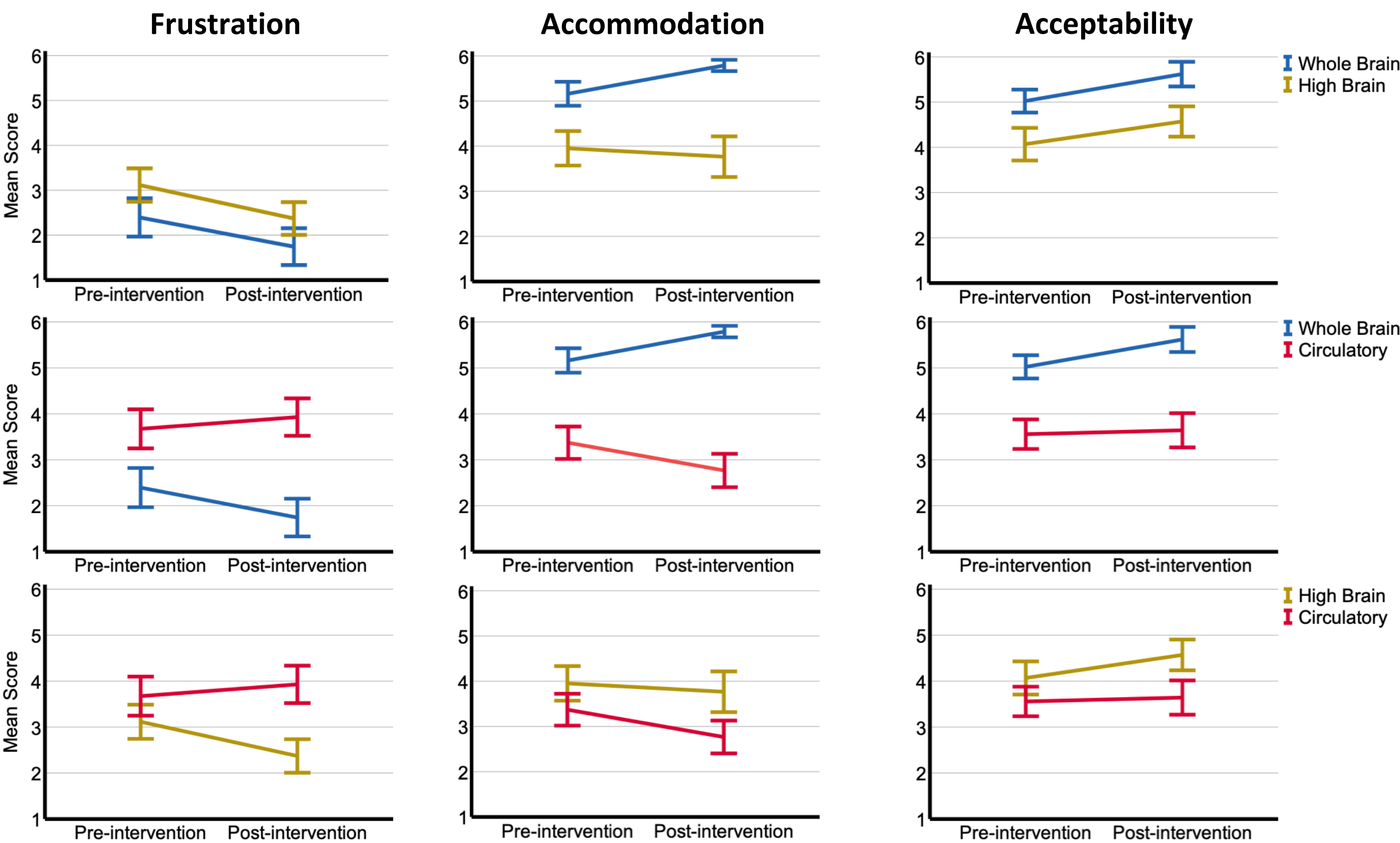
## Results



**Figure 1.** The percentage of students who correctly applied the current medico-legal standard of death to novel clinical cases significantly increased for the high brain ( $p = .006$ ) and circulatory ( $p = .003$ ) view of death.



**Figure 2.** The percentage of students who correctly identified the correct definition of death as described by the Uniform Declaration of Death Act (UDDA) significantly increased after the lecture ( $p = 0.02$ ).



**Figure 3.** A lecture on the philosophy of death had a differential impact on student attitudes toward the whole brain, high brain, and circulatory view of death. Responses were scored on a Likert scale from strongly disagree (1) to strongly agree (6). Line points represent mean score and error bars represent the standard error of means.

## Conclusions

- Less than half of students understood the language of the current medico-legal standard of death before attending the lecture.
- After attending the lecture, significantly more students were able to apply medico-legal standards of death to cases where surrogate decision makers held a whole brain, high brain, or circulatory view of death.
- Students were less frustrated, more accepting, and were more likely to remove a ventilator for a patient with whole brain death after attending the lecture.
- Although students were less frustrated and more accepting of the high brain view of death after the lecture, their attitude did not change for removing a ventilator.
- Students were less likely to accommodate a request to keep a brain dead patient on a ventilator despite not having changes in frustration or acceptability toward the circulatory view of death.

## Discussion

Our data shows that pre-clinical medical students have a lack of understanding for the current medico-legal standards of death. The shifts in students' attitudes toward the three different views of death suggests that early educational intervention on the history, application, and contemporary debate on the philosophy of death facilitates student reflection on their own understanding and opinion of the definition of death. Furthermore, students were less frustrated with the high brain view and found it more acceptable than the circulatory view, despite both being non-standard views of death. This may indicate that students have a "neuro-centric" view of death that holds higher brain function as more critical to life than cardiopulmonary function.

## References

1. Daoust A, Racine E. Depictions of 'brain death' in the media: medical and ethical implications. *J Med Ethics*. 2014;40(4):253-259. doi:10.1136/medethics-2012-101260
2. Lewis A, Howard J, Watsula-Morley A, Gillespie C. An educational initiative to improve medical student awareness about brain death. *Clin Neurol Neurosurg*. 2018;167:99-105. doi:10.1016/j.clineuro.2018.01.036