



Picture of Health: A Sentiment Analysis of Individuals with Disabilities in Medical Textbooks



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Objectives

Examine the perception of images of people with disabilities (PWD) through:

1. Developing an inventory of images of people living with disabilities that are commonly taught in health professions education
2. Evaluating the emotional impact of these images on the receiver (e.g., positive, neutral, or negative) via crowd-coding.



Figure 1

Introduction

- 2/5ths of physicians feel 'very confident' in their ability to provide the same quality of care to people with disabilities that they provide to people without disabilities (Iezzoni et al., 2021)
- Osteopathic medicine is "a holistic and person-centered profession" (Thomson et al., 2013)
- Implicit perceptions towards disabled individuals could undermine their care
- Do images used in osteopathic medical education affect perception of people with disabilities?

Methods

- **Goal:** Evaluate the sentiment conveyed by images used in osteopathic medical education.
- **Analysis:**
 - 372 participants completed an anonymous 120 question survey
 - Participants ranked images in medical textbooks/scientific publications (medical), disability advocacy websites (advocacy), scientific publications, and stock images (control)
 - Images included PWD and people without disabilities
 - Images were paired based on shared characteristics
 - Sentiment analysis was performed
 - Unpaired T-test was performed to determine sentiment difference from neutral (3)

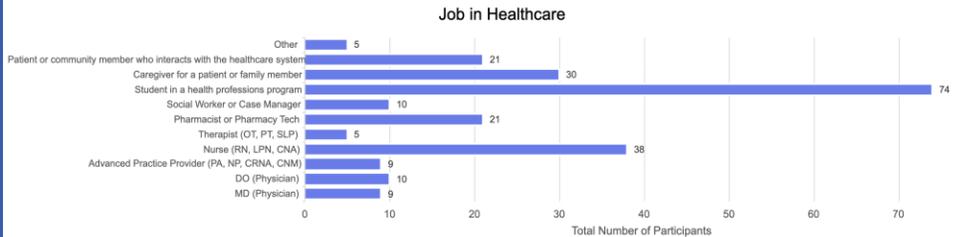


Figure 2



Figure 3

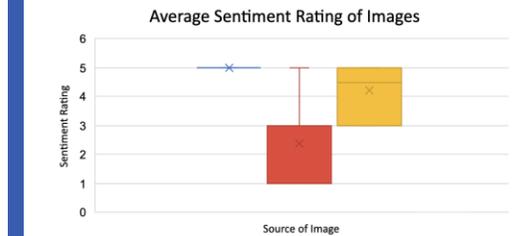


Figure 4

Figure Legend

Figure 1: Images used in survey

- AD= advocacy
- MT = medical
- CT=control
- From left to right: AD321, MT313, MT437, CT395, AD259, CT312

Figure 2: Role in healthcare for participants with caregiving/job experience

Figure 3: Participant reported level of contact with PWD
Figure 4: Average sentiment rating of images categorized from image origin. Median sentiment score overall was 5, all disability 3.31, medical 2.4, advocacy 4.23, and control 5. An unpaired T test comparing sentiment score to neutral (3) showed control (P <0.0001), disabled (P <0.022), and medical images had no significance.

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References

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Discussion/Conclusions

- 1,237 images were collected
 - Sentiment polarity of 120 images was assessed
 - The sentiment polarity of medical images deviates from neutral
- Need for further studying:
 - Effect of image sentiment on student empathy and attitudes
 - Understanding the downstream effects of images on care received by PWD