

Hearing Voices

The Effect of Simulated Auditory Hallucinations on Medical Students' Empathy, Attitude, and Knowledge Regarding Patients With Hallucinations

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INTRODUCTION

- Experiential learning has been known to have positive effects on the care of patients with auditory hallucinations.¹
- In the realm of mental health, prior auditory hallucination simulations completed with nursing students have been shown to increase empathy towards and knowledge base about patients with hallucinatory symptoms as it relates to patient care.
- To better gauge how the use of simulated hallucinations impact medical students, we studied groups of third- and fourth- year medical students participating in a psychiatric didactic during their required psychiatric clerkship.

OBJECTIVE

The aim of this study was to determine medical student levels of empathy and understanding towards patients who experience auditory hallucinations after a simulated experience where medical students performed tasks while listening to a recording of voices and command hallucinations.

METHODS

1. A survey was provided prior to the experience to determine the baseline demographics, attitudes and empathy towards people who live with auditory hallucinations.
2. The medical students then underwent a 30-minute simulation, where they performed everyday tasks while listening to auditory hallucinations with headphones.
 1. The stations were designed to exemplify the difficulty of performing daily tasks while burdened with auditory hallucinations, including challenges associated with critical thinking, spatial reasoning, communication, memory, and concentration.
3. Once the experience was complete, the students answered the same survey questions to determine any change in their perspective.

RESULTS

- 171 students completed the pre-simulation survey, and 167 students completed the post survey. The responses were not linked to preserve anonymity
- There was a strong indication of student empathy on the pre-test scores (Mean = 48.45, SD = 0.69)
- Our data showed a statistically significant increase in self-perceived empathy determined by comparison of pre-simulation to post-simulation scores (Mean = 52.43, SD = 0.61) by both genders ($p < 0.001$)
- Each question in our survey showed a statistically significant increase in empathy when comparing the means between the pre-simulation and post-simulation data
 - Question 1: $p < 0.014$
 - Questions 2-11: $p < 0.001$

- Three of the most significant questions we asked regarding empathy on our pre- and post-simulation surveys:

9. I have empathy (the ability to identify and understand another person's feelings and perspective) towards people who experience hallucinations.	Strong Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree
10. I believe that having empathy towards people who experience hallucinations improves my ability to care for patients.	Strong Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree
11. Experiencing simulated hallucinations will improve my empathy towards my patients	Strong Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

Student Comments on the Post-Simulation Survey:

- "I had sympathy from working with this patient population, but underestimated how hard it was to hear others and communicate"
- "The experience was more difficult and more exhausting as time went on"
- "Even in the short time, I can see how impactful auditory hallucinations are in performing normal daily tasks"
- "This was a great experience and really helped me understand and empathize much more"
- "This was very frustrating. I couldn't imagine living with that permanently"

DISCUSSION

- **What are the results really showing?**
 - All questions in our post-survey improved significantly when compared to the pre-survey.
 - Prior to the experience, female medical students had overall higher scores than their male peers.
 - After the experience, female medical students continued to have higher scores than their male peers.
- **How is this interpreted?**
 - There was an overall increase in empathy that medical students show towards patients with auditory hallucinations.
 - Our female student population has higher levels of empathy. Their response to the experience brought about more empathy towards patients with hallucinations that it did for the males.
 - Making students actively aware of their patients' conditions, can help make our future providers better able to provide more empathetic care.

CONCLUSION

- Through this didactic we were hoping to identify a better way to educate students on what psychiatric patients with auditory hallucinations experience daily.
- While healthcare workers may be generally more empathetic than other professions, given the "helping" nature of the occupation, there remains a need for healthcare providers to acquire more education.
- These results show that this style of education could produce more caring providers.
- Our hope is that experiences similar to this one can be implemented in more medical schools nationwide to spread awareness and bolster medical student education regarding auditory hallucinations.

REFERENCES

1. Magliano L, et. Al. "Social dangerousness and incurability in schizophrenia": results of an educational intervention for medical and psychology students. *Psychiatry Res.* 2014 Nov 30;219(3):457-63.