



Ethics of Neurocognitive Disorders

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What is a neurocognitive disorder?

- + A neurocognitive disorder (NCD) is an acquired cognitive decline that interferes with daily living and independence (Ganguli et al., 2011).
- + Some examples of neurocognitive disorders are Alzheimer's disease, Frontotemporal dementia, or Vascular dementia (McDonald, 2017).

Neurocognitive Disorder Statistics

- + Approximately 40% of individuals over the age of 85 are diagnosed with Alzheimer's disease (McDonald, 2017).
 - 35.5 million individuals worldwide
- + In the United States alone, about 5.2 million people are diagnosed with Alzheimer's disease (Gaugler et al., 2018).

What is the issue?

- + Healthcare ethics has been an ongoing issue
- + When healthcare workers observe unethical practices it can lead to stress, burnout, and demoralization (Gabel, 2011).
- + Evidence that students who have observed an incident of unethical behavior are more likely to engage in unethical practices (Papadakis et al., 2005).

What can be done?

- + Proper training to teach ethical practices
- + More effective communication
 - how to properly and ethically speak to patients
- + Training topics:
 - Explanation of neurocognitive disorders
 - Correct and incorrect ways to care for patients
 - Coping strategies for both patient and caregiver

Literature Review

- + Not much research that assessed undergraduate students' understanding of neurocognitive disorders and whether they would want additional training.
- + Study on medical students- survey on ethics and professionalism
- + Study on nursing students- training vs no training
- + Study in nursing facility- evaluated quality and safety of care.
- + Study on primary care providers' confidence to treat NCDs.

Baykara, Z., Demir, S. G., & Yaman, S. (2014). The effect of ethics training on students recognizing ethical violations and developing moral sensitivity. *Ethics Training, 22*(6), 661-675. <https://doi.org/10.1177/0969733014542673>

Bernstein, A., Rogers, K. M., Possin, K. L., Steele, N. Z. R., Ritchie, C. S., Kramer, J. H., Geschwind, M., Higgins, J. J., Wohlgemuth, J., Pesano, R., Miller, B. L., & Rankin, K. P. (2019). Dementia assessment and management in primary care settings: A survey of current provider practices in the United States. *BMC Health Services Research, 19*. <https://doi.org/10.1186/s12913-019-4603-2>

Buljac-Samardžić, M., & van Woerkom, M. (2018). Improving quality and safety of care in nursing homes by team support for strengths use: A survey study. *PLUS ONE*. <https://doi.org/10.1371/journal.pone.0200065>

Yadav, H., Jegasothy, R., Ramakrishna, S., Mohanraj, J., & Senan, P. (2019). Unethical behavior and professionalism among medical students in a private medical university in Malaysia. *BMC Medical Education, 19*. <https://doi.org/10.1186/s12909-019-1662-3>

Purpose of Study

- + Assess students' understanding of neurocognitive disorders
- + Find correlations
- + Identify if students did want additional training

Participants

+ Sample requirements

- Age 18-50 men and women students
- Western Michigan University student
- Currently work in healthcare or aspire to

+ 65 total participants

- 43 students have worked in healthcare
- 21 students aspire to

Subject Recruitment

- + Psychology 1000 class
 - 2 points extra credit
 - screenshot of last page
- + WMU's School of Interdisciplinary Health Programs
- + Anonymous

Survey Format

- + Online survey- Qualtrics
- + 5-point Likert scale
 - Strongly agree - strongly disagree
- + Open-ended questions
- + Multiple choice questions

Survey Questions

Please select which option you most agree with.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I can explain a neurocognitive disorder to someone. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have worked with someone with a neurocognitive disorder. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am confident to work with someone with neurocognitive disorders. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have learned in class what neurocognitive disorders are and/or how to work with these individuals. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If additional training on neurocognitive disorders was provided at work, I would want to attend this. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I wish to be educated more on neurocognitive disorders before working/continuing to work in healthcare? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Who did you work with who had a neurocognitive disorder? (If not applicable, indicate so).

How many hours of training for neurocognitive disorders have you had?

- 0-1 hours
- 1-2 hours
- 2-3 hours
- 3 or more hours
- Not applicable

How long have you worked in healthcare? If you haven't worked in healthcare yet, but plan to, please indicate so.

- 0-1 years
- 1-2 years
- 2-3 years
- 3 or more years
- I have not worked in healthcare yet.

Please indicate any other information you wish to share.

Overall Results

- + Agree to be confident- **53.9%**
- + Agree to have learned in class- **52.3%**
- + Agree to wanting additional training- **89.2%**
- + Agree to want to be educated more- **84.6%**

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|-------------------|-------------------|----------------------------|----------------|----------------|
| "I can explain a neurocognitive disorder to someone." | 10.8% (7) | 12.3% (8) | 13.8% (9) | 43.1% (28) | 20% (13) |
| "I have worked with someone with a neurocognitive disorder." | 26.6% (17) | 7.8% (5) | 10.9% (7) | 18.8% (12) | 35.9% (23) |
| "I am confident to work with someone with neurocognitive disorders." | 13.8% (9) | 10.8% (7) | 21.5% (14) | 38.5% (25) | 15.4% (10) |
| "I have learned in class what neurocognitive disorders are and/or how to work with these individuals." | 12.3% (8) | 21.5% (14) | 13.8% (9) | 38.5% (25) | 13.8% (9) |
| "If additional training on neurocognitive disorders was provided at work, I would want to attend this." | 4.6% (3) | 1.5% (1) | 4.6% (3) | 33.8% (22) | 55.4% (36) |
| "I wish to be educated more on neurocognitive disorders before working/continuing to work in healthcare." | 3.1% (2) | 4.6% (3) | 7.7% (5) | 35.4% (23) | 49.2% (32) |

Short response results

- + "I find it interesting how I can be a care provider for some adults with neurocognitive disabilities but specific education about their condition was not provided."
- + "It is always good as health care providers that we be strongly educated on all disorders so that we can provide the best possible care for our patients."

What does this mean?

- + Strong statistically significant relationship between confidence and number of hours of training
- + Correlation between learning in class and confidence

Relationship Between Number of Hours of Training and Confidence Level

| Number of Hours of Training on Neurocognitive Disorders | Number of Students | Average Confidence Level (scale 1-5) |
|---|--------------------|--------------------------------------|
| 0-1 hours | 32 | 2.69 |
| 1-2 hours | 3 | 4.33 |
| 2-3 hours | 6 | 4.00 |
| 3 or more hours | 14 | 4.07 |
| Total | 55 | - |
| Average | - | 3.27 |

P-value: 0.00943

Cohen's f: 0.672

Relationship Between Learning in Class about Neurocognitive Disorders and Confidence

| <i>“I am confident to work with someone with a neurocognitive disorder.”</i> | <i>“I have learned in class what neurocognitive disorders are and/or how to work with these individuals.”</i> | | | | |
|--|---|--------------------------|-----------------------------------|-----------------------|-----------------------|
| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
| Strongly disagree | 50% (4) | 28.6% (4) | 0% (0) | 4% (1) | 0% (0) |
| Somewhat disagree | 12.5% (1) | 7.1% (1) | 11.1% (1) | 16% (4) | 0% (0) |
| Neither agree nor disagree | 0% (0) | 28.6% (4) | 66.7% (6) | 16% (4) | 0% (0) |
| Somewhat agree | 37.5% (3) | 35.7% (5) | 11.1% (1) | 60% (15) | 11.1% (1) |
| Strongly agree | 0% (0) | 0% (0) | 11.1% (1) | 4% (1) | 88.9% (8) |

Relationship Between Confidence Score and Education on Neurocognitive Disorders

| "I have learned in class what neurocognitive disorders are and/or how to work with these individuals." | Number of Students | Average Confidence Score (1-5) | Median Confidence Score (1-5) |
|--|--------------------|--------------------------------|-------------------------------|
| Strongly disagree | 8 | 2.25 | 1.5 |
| Somewhat disagree | 14 | 2.71 | 3.00 |
| Neither agree nor disagree | 9 | 3.22 | 3.00 |
| Somewhat agree | 25 | 3.44 | 4.00 |
| Strongly agree | 9 | 4.89 | 5.00 |

P-Value: <0.00001

Confidence interval of effect size: 0.357 to 0.702

Pearson's r: 0.553

Implications

- + Not much research on students' assessment
- + Assist healthcare facilities on the importance of training
- + Why investing in better training is important
- + Educate undergraduate students pursuing healthcare

Limitations

- + Responses based on lack of experience
- + May have failed to truly understand what a neurocognitive disorder is
- + Survey was only open 8 days
- + No indication of major

| | "If additional training on neurocognitive disorders was provided at work, I would want to attend this." | | | | |
|--|---|-------------------|----------------------------|----------------|----------------|
| "I have worked with someone with a neurocognitive disorder." | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
| Strongly disagree | 66.7% (2) | 0% (0) | 33.3% (1) | 23.8% (5) | 25% (9) |
| Somewhat disagree | 0% (0) | 0% (0) | 0% (0) | 4.8% (1) | 11.1% (4) |
| Neither agree nor disagree | 33.3% (1) | 0% (0) | 0% (0) | 19% (4) | 5.6% (2) |
| Somewhat agree | 0% (0) | 100% (1) | 33.3% (1) | 14.3% (3) | 19.4% (7) |
| Strongly agree | 0% (0) | 0% (0) | 33.3% (1) | 38.1% (8) | 38.9% (14) |

Conclusion

- + Additional training can lead to higher confidence
- + Training can maintain safety and ethical standards