

## Social Determinants of Health Virtual Reality Videos for DPT Students

**Jana Wardian, PhD, MSW**  
 Assistant Professor for Research in Hospital Medicine  
[Jana.Wardian@unmc.edu](mailto:Jana.Wardian@unmc.edu)

**Tessa Wells, PT, DPT, GCS**  
 Assistant Professor / Assistant Director of Clinical Education  
[Tessa.Wells@unmc.edu](mailto:Tessa.Wells@unmc.edu)

We have no financial relationships. 

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## Background



**Ohio University Pilot Study (N=69)**

Received funding from Medicaid/Medicare to produce videos

Pilot: Assessed 1) Cultural self-efficacy; 2) Diabetes Attitudes; and 3) Presence

- All 5 **diabetes attitude subscales** improved significantly  
 (1) *Need for special training*, (2) *Seriousness of type 2 diabetes*, (3) *Value of tight glucose control*, (4) *Psychosocial impact of diabetes*, and (5) *Attitude toward patient autonomy*
- High scores for **presence** in cine-VR, indicating **favorable perceptions of the technology** and immersion in the 360-degree virtual environment.  
 (Beverly, 2021).

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## Video Modules



**Lula Mae**

- 72-year-old grandma
- Type 2 diabetes for 22 years
- Lived her whole life in rural Ohio



**Dr. Brown**

- Lula Mae's doctor
- Experiencing signs of burnout

Social Determinants of Health affecting Lula Mae	
<ul style="list-style-type: none"> <li>Transportation barriers</li> <li>Less access to healthcare</li> <li>Limited or no insurance</li> <li>Financial barriers</li> </ul>	<ul style="list-style-type: none"> <li>Housing issues</li> <li>Food insecurity</li> <li>Less social support</li> </ul>
12 modules about 3-5 minutes in length	360 format

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## Meeting Lula Mae

Experience it for yourself!



**Phone**  
Use your phone to scan the QR code and view on YouTube.  
VIDEO WATCHED >

Watch video: <https://www.youtube.com/watch?v=...>

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## DPT Students

63 first-year DPT students

- Second semester of 8-semester program
- Clinical experience disrupted
- Opportunity for patient interaction
- Same exposure for all students
- Opportunity for purposeful reflection on application to future clinical practice

American Council of Academic Physical Therapy (2020)

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## DPT Students

We needed at least 34 students to participate

63	Baseline
60	Post-assessment
44	6-week

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### Demographics

	BL to Post	Post to 6-weeks
Women	60%	56%
White	78%	82%
Omaha Campus	82%	80%
Family/friend with diabetes	53%	56%

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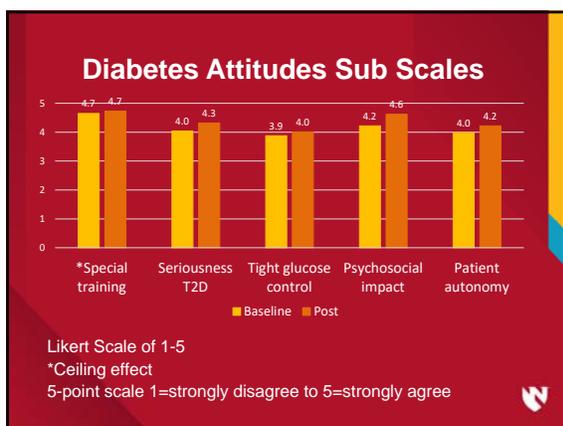
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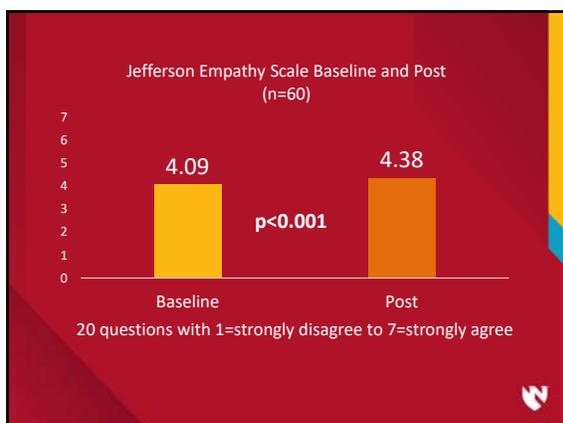
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### Presence Measure n=60

Sub Scale	Mean
Involvement (6Q)	5.41
Sensory Fidelity (4Q)	5.17
Adaptation/Immersion (5Q)	5.08
Interface Quality (2Q)	5.18

17 questions  
Response on a 7-point scale

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### One more time!?

6-week assessment

2 main scales

- Diabetes Attitude Scale
- Jefferson Empathy Scale

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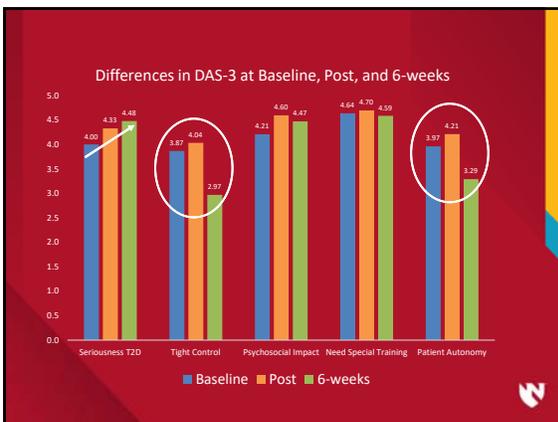
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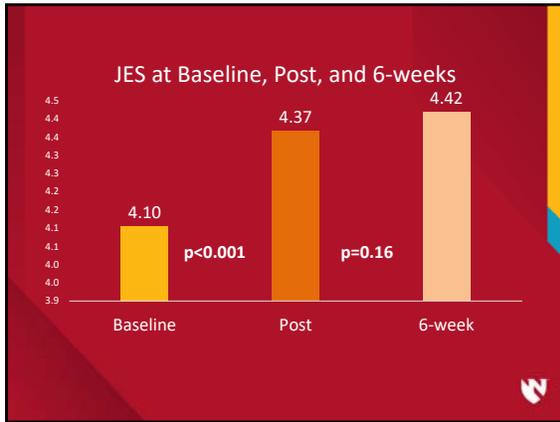
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## Classroom Discussion

- Provider Burnout
- Patient-Provider Relationship
- Student emotional response
- Student connection through stories
- Patient Barriers: Social Determinants of Health
- Patient Barriers: Lack of Family Support

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## Provider Burnout



*"he **didn't even give her a chance to speak** like just kind of took out his burn out"*

*"I don't think he rarely even let her finish her sentences"*

*"I felt like at that point he was just being **condescending**"*

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### Patient-Provider Relationship



*"Maybe she doesn't want to go to the doctor because of **how she was treated** last time. She doesn't want to be reprimanded again and **treated like a child**, you know."*

*"I could just feel my blood pressure rising. I could just I just felt like holy buckets! You know, it's like why on Earth would this woman go to her doctor's appointment?"*

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### Emotional Response

*"I was like everyone kind of **really frustrated** with all of her kids at first."*

*"I was very **emotionally invested** in this and I think I was in tears in the first 5 minutes."*

*"I mean it would it just I was **pretty angry** at that point."*

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### Student stories

Students told stories about **family members** and their poor relationship with health care providers

Students related to the **social determinants of health** through their own stories

Students discussed their **own feelings of burnout** by telling their stories

One student told a story about **learning to eat healthy food** as a teenager (orange)

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### Patient Barriers: SHD

"the distance inhibited her ability to **access proper medical care.**"

"so just being in that area usually the economic problem and then also like **education**, like the **literacy** could be a little bit lower ..."

"We have stroke survivors out here in rural Nebraska that **travel** anywhere between 100 and 300 miles. You know, and you think about that."

"if you **don't feel safe** in your neighborhood, are you going to go out for a walk or are you going to go out for a run?"

"thinking about that and someone that does have **food insecurity**, they're trying to get foods that can carry them through a week or two weeks or a month or something."



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### Patient Barriers: Lack of Family Support

"Everybody said the family will help and obviously **the family was not helping** as much as they thought they were."

"We **can't just assume that family members will take care of our patients** for us once they leave the clinic."

"I felt like her daughters especially were like **taking advantage of her**, asking her for money all the time. Assuming that she's going to watch all of the kids and. Not ask for help and she's able to do all that and I was shocked."

"I know that that was a really **surprising aspect** to me because, you know, for us **we helped our parents.**"



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### Summary

- Attitudes toward diabetes improved from BL to post; two domains decreased at 6-weeks
- Empathy increased and remained high
- Provided rich classroom discussion
- Advantages:
  - Experience is flexible
  - Students can engage in multiple aspects of a patient's life
  - Shared experience among students



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## References

Beverly, E. A., Love, C., Love, M., Williams, E., & Bowditch, J. (2021). Using Virtual Reality to Improve Health Care Providers' Cultural Self-Efficacy and Diabetes Attitudes: Pilot Questionnaire Study. *JMIR Diabetes*, 6(1), e23708.

American Council of Academic Physical Therapy (2020) Guidance on Participation in Clinical Education Experiences in Physical Therapy Education.



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