# **Trainees' Experience with a Poverty Simulation**

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# Purpose:

Health disparities disproportionately affect vulnerable populations, particularly the poor and elderly. The purpose of this longitudinal study is to assess shifts in the attitudes of University of Iowa Leadership Education in Neurodevelopmental and Related Disabilities (LEND) students, nursing students, and faculty/ staff regarding treating underserved populations based on an educational model that incorporates a poverty simulation as component of their education.

### Methods:

A total of 410 LEND and nursing students were invited to participate in a poverty simulation between the years of 2019-2023. A 20-question survey measuring participants' beliefs regarding poverty on a 5-point Likert scale was administered immediately before and after the simulation. The responses from both surveys were paired to evaluate changes in beliefs. Statistical analysis included Bowker's symmetry test and weighted Kappa statistic (alpha=0.05). Weighted kappa coefficient is defined as a measure of agreement between two sets of ordinally scaled responses obtained from both pre- and post-surveys.

### **Results:**

The study comprised 385 participants who completed both pre- and post-surveys. Shifts in responses between pre- and post-surveys were observed for sixteen questions (*P*<.05 in each instance). Notably, 201 subjects (52%) responded empathetically to 16 or more of the 20 questions prior to the simulation while 288 (75%) provided empathetic responses to 16 or more questions after the simulation. Levels of agreement ranged from kappa=0.62 to kappa=0.16 indicating that changes of opinions about poverty occurred after participating in the poverty simulation.

### Conclusions:

Engaging in a poverty simulation can educate future healthcare professionals about the challenges faced by patients living in poverty and foster the development of empathy towards these individuals

### **References:**

 U.S. Department of Health and Human Services. Oral health in America: a report of the surgeon general. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
Guay AH. Access to dental care-Solving the problem for underserved populations. J Am Dent Assoc 2004;135(11):1599-1605. 3. Casamassimo PS, Seale NS, Ruehs K. General Dentists' perceptions of Educational and treatment issues affecting access to care for children with special needs. J Dent Educ. 2004 Mar;68(3):304-5.

4. Dao LP, Zwetchkenbaum S, Inglehart MR. General dentists and special needs patients: Does dental education matter? J Dent Educ 2005; 69:1107-15.

5. Smith CS, Ester TV, Inglehart MR, Habil P. Dental Education and Care for Underserved Patinets: An analysis of Students' intentions and Alumni Behavior. J. Dent. Educ 2005; 70: 398-408.

6. Kinne RD, Stiefel DJ. Assessment of Student Attitude and Confidence in a Program of Dental Education in Care of the Disabled. J Dent Educ 1979; 43: 271-5.

7. Lampiris LN, White A, Sams LD, et al. Enhancing dental students' understanding of poverty through simulation. J Dent Educ 2017;81(9):1053–61.

8. Lattice D. Sams, Lewis NL, Tiffanie W, et al. Enhancing allied dental health students' understanding of poverty through simulation. J Dent Hyg 2019;93(6): 6-12.