Engaging Medical Students and Families of Children with Disabilities in Patient-Centered Education
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BACKGROUND
- Nearly 20% of Americans experience disability.¹
- Many have had difficulty finding a physician that understood them, leading to worse health status than those without disabilities.²
- This engagement program assessed medical students’ perceptions and attitudes towards this population and provided them with opportunities to learn how to effectively interact with these children and act as a liaison for the families to formulate the best plan of care.

METHODS

Participants
- Families recruited from Southeast Michigan and Wayne County by the Developmental Disabilities Institute (DDI)
- Children under the age of 21 who have a developmental disability
- Year 1 and Year 2 medical students

Measures
- Medical Students’ Perceptions of Disability (MSPD)
  - 25 statements assessed on a Likert-type scale
  - Components
    - Clinical skills confidence
    - Comfort interacting with patients with disabilities
    - Negative impressions of people with disabilities
  - Beach Family Quality of Life Assessment
  - 25 statements assessed on a Likert-type scale
  - Components
    - Family interaction
    - Parenting
    - Emotional Well-Being
    - Physical/Material Well-Being
    - Disability-Related Support
- Statistical significance determined by paired t-test

Program Logistics
- Medical Student Training and Pre-Assessment
- Medical Students’ Perceptions of Disability (MSPD) Pre-Assessment
  - "Disability Overview and Evidence-Based Practices" orientation
- First Month: 1 hour Family Visit
  - Completed the Beach Family Quality of Life Assessment – 25 Items
  - Provided the family a list of resources
    - Transportation, child care services, support groups, and information about unique nutritional needs
    - Gave the family a $25 gift card and gave the children age-appropriate gifts: Younger than 11: coloring books and crayons; 11-21: $10 Google Play gift card
- Second Month: 30 minute Follow-up Phone Call
  - Students asked if the resources had been helpful or if the families required additional resources for specific needs or disabilities.
- Third Month: 1 hour Family Visit
  - Identical to the 1st Family Visit
- Medical Student Post-Assessment
- Medical Students’ Perceptions of Disability (MSPD) Post-Assessment

RESULTS

Changes in Student Attitudes and Perceptions about Disability
- I feel confident working with patients who have a disability.
- I feel confident communicating with a patient’s family.
- I would be comfortable interacting with a person with an intellectual disability who was in the community on his or her own (i.e. without staff members or caretakers).
- I am comfortable being around a person who has an intellectual disability.
- Most people with disabilities feel sorry for themselves.
- Most people with disabilities resent people without disabilities.

Figure 1 Average changes in student attitudes and perceptions about disability reported by students using a Likert-type scale (5= Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree) obtained from the Medical Students’ Perceptions of Disability Assessment. Significant differences (P < 0.05) in all categories were reported, including clinical skills confidence, comfort interacting with children with disabilities, and positive impressions of people with disability. Significant differences (P < 0.05) are marked by * and error bars represent values within one standard deviation of uncertainty.

Changes in Overall Family Quality of Life
- Family Interaction
- Parenting
- Emotional Well-Being
- Physical Well-Being
- Disability-Related Support

Figure 2 Overall changes in each category of family quality of life between the first and second visit reported by the family using a Likert-type scale (5= Very Satisfied, 4 = Satisfied, 3 = Neither, 2 = Dissatisfied, 1 = Very Dissatisfied) obtained from the Beach Family Quality of Life Assessment. Significant differences (P < 0.05) in 2 of the 5 categories were reported: family interaction and parenting.

REFERENCES

CONCLUSIONS
- Families were less satisfied with their quality of life after program completion, with the Family Interaction and Parenting categories yielding significant results, 0.00178 and 0.00673, respectively (p<0.05).
- This was probably due to the family's expectations that medical students would provide medical and clinical interventions.
- Our program was designed to address the psychosocial and economical aspects of caring for a child with a developmental disability.
- Students were more comfortable and confident interacting with children with disabilities and had less negative impressions of people with disabilities after completing the program, with each category yielding significant results.
- Medical students were provided the opportunity to interact with individuals with disabilities and developed a positive perception change towards this patient population.

NEXT STEPS
- Follow-up with the family to assess whether there is any improvement in family quality of life and whether these changes are maintained months after participation in this program.
- Incorporate additional assessment tools so that the capabilities of the child with a developmental disability will be evaluated while providing the students with opportunities to practice their clinical skills.
- Additional and more personalized resources will be provided to the families so that their quality of life can improve, particularly in regards to support and respite services.

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