Development of HOPE: A Family-Centered Home Video Assessment of Activity and Participation of Children with Disabilities

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Objective

This study aimed to develop the Home Observation Pediatric Evaluation (HOPE), based on the ICF model, to assess children's activity independence and participation in their natural environment using parent-provided home videos.

Research Design

Mixed-method approach according to stages of instrument development as described in Benson & Clark (1982)

Setting & Participants

Setting: ALYN Hospital, Pediatric and Adolescent Rehabilitation Center

Participants: Children and adolescents ages 6-18 with diverse disabilities, including physical and cognitive

Methods

1 Planning

- Literature review
- Review of assessments
- ICF framework integration

2 Construction

Protocol development and scoring through iterative design process:

- Focus groups with parents (N=4) and professionals (N=9)
- Parent surveys (N=51)
- Content validation with professionals (N=31)

3 Quantitative Evaluation

Pilot testing with 8 families of children with disabilities

- Parents recorded children engaging in three home activities (ADL, leisure, school)
- Therapists scored videos using HOPE
- Comparison with WeeFIM scores
- Interviews with parents and therapists











HOPE Assessment Components

Participation
Engagement and involvement in life situations

Activity Independence
Level of assistance needed to complete daily activities

Environmental Factors
Physical and social environment

Body Functions
Sensori-motor and executive functions

Personal Factors
Child's preferences, communication, and behavior

Video Format
Parent-recorded videos in natural home environment

Results

Significant positive correlation between HOPE activity scores and WeeFIM: ($r = 0.970$, $p < 0.001$)

Interviews revealed several key themes:

Family-Centered Care
"Parents need to understand the significance of why you are doing what you are doing"

Ecological Validity
"It can help see how what we do in the clinic looks like in reality"

Multidimensional Perspective
"HOPE gives a very comprehensive perspective on a number of areas without being too time consuming"

Protocol Refinement
Based on pilot feedback, modifications were made to improve scoring, usability and clarity of instructions

Conclusion

- Both families and therapists found HOPE feasible and comfortable to use
- HOPE represents a promising tool for family-centered assessment of children with disabilities
- Home videos provide ecological validity that clinical assessments often lack
- Potential for HOPE to facilitate telehealth assessment for families with limited access to services
- A larger validation study (N=35) is currently underway to further evaluate reliability and validity

References

Benson, J., & Clark, F. (1982). A guide for instrument development and validation. *The American Journal of Occupational Therapy*, 36(12), 789–800. https://doi.org/10.5014/ajot.36.12.789

Steinhart, S., Gilboa, Y., Sinvani, R.-T., & Gefen, N. (2024). Home Videos for Remote Assessment in Children with Disabilities: A Scoping Review. *Telemedicine and E-Health*. https://doi.org/10.1089/tmj.2023.0437

WHO *The International Classification of Functioning Disability and Health* (ICF). (2001).

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HOPE explanation video