“I'M NOT LAZY, I'M EXHAUSTED!”

Development of the Fatigue in Educational Contexts (FEC) Survey: Moving towards equity in access to learning for Deaf and Hard of Hearing (D/HH) Students

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INTRODUCTION
- Classrooms present various cognitive, visual, auditory, and attentional demands.
  - D/HH students face challenges navigating these demands amidst auditory sounds and visual distractions. Examples include teacher’s voice, chair movements, hallway conversations, movements in and outside of class.
  - Increased effort and exertion required for learning leads to greater levels of fatigue.
  - Fatigue is compounded when students lack resources known to minimize fatigue.
- Fatigue in educational settings for D/HH students is poorly understood by both students and educators.
  - Students often disregard fatigue symptoms or attribute them to other causes.
  - Coping strategies for fatigue may be limited or unavailable to students.
  - The role of educational supports in moderating cognitive, auditory, and visual exertion may be overlooked by educators.

WHAT IS FATIGUE?
- Fatigue vs. Tiredness
- Educational and developmental energy for physical and mental activity, decline at an amount of sleep

TYPES OF FATIGUE
- Cognitive
- Social-emotional
- Physical

WHAT IS INCLUSION?
- Subtitles
- Question Text
- ASL Video
- Response Audio
- Visual Icons

INCLUSIVE DESIGN
- Example of Student Survey
- Question and Response Options

OBJECTIVE
- The FEC survey is designed to assess listening and viewing fatigue in D/HH students.
  - Parallel forms of the survey are created to gather perspectives from students, parents, and teaching professionals.
  - Aims to identify, describe, and interpret fatigue levels in educational settings accurately.
  - Intends to inform approaches to alleviate fatigue.
  - Aims to help D/HH students and their educational teams understand fatigue’s impact.
  - Seeks to advocate for appropriate supports, such as strategies and programs.
  - Intends to mitigate the negative effects of fatigue on D/HH students in educational environments.

SIGNIFICANCE
- Currently, there are no inclusive measures of fatigue that are representative of the heterogeneity of students who are D/HH - spoken language users, signed language users, and dual-language users.
  - The FEC survey was designed to fill this gap.
  - The FEC survey is the first inclusive measure of fatigue that is representative of the diversity of the population of Deaf students (spoken language users, sign language users, and/or dual language users) in classroom environments and that includes accessibility considerations for test administration.
  - As an assessment instrument, the FEC will contribute to increased awareness of fatigue as a significant threat to educational, social, and vocational outcomes and provide educators with a means of connecting fatigue to educational difficulties which may result in more reflective practices.

TIMELINE
- The FEC study was developed using a multi-phase approach:
  - Phase 1: Completed
    - Designed the FEC survey to accurately identify, describe, and interpret the presence and intensity of fatigue. Inform alleviation approaches.
    - Conducted focus group interviews with D/HH experts (i.e., D/HH post-secondary students; parents of D/HH students; and D/HH professionals - teachers and clinicians).
    - Revised FEC survey based on expert feedback.
  - Phase 2: Currently Underway
    - Pilot test the revised FEC survey to allow for survey topics and item pool refinement while deepening and broadening our understanding.
    - Conduct think-aloud tests with D/HH students (Grade 7-12), parents, and educational teams, providing information on question interpretation, question bias, appropriateness of response options, and response scoring.
    - Facilitate live testing with similar participant groups followed by retrospective interviews to capture survey experiences in both English and ASL.

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