Educating Dental Health Professionals about People with Intellectual and Developmental Disabilities

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Evaluating Dental Health Professionals about People with Intellectual and Developmental Disabilities^1
Christine J. Clifford^2, MHP; Alexandra Bonardi^2, MHA, OTR/L; Matthew Holder^3, MD, MBA

Background
Dental schools and dental hygiene programs are required to incorporate specialized training in their programs to serve people with special needs, however people with intellectual and developmental disability (I/DD) continue to experience poor oral health outcomes. Access to clinicians with the desire and skill to care for people with I/DD remains a challenge. There is a need to understand the best approaches to improve access, and to reduce disparity in oral health, for this vulnerable population representing approximately 1-3% of the general population. Researchers are systematically investigating the literature to uncover evidence of effective approaches to improve access and to support good oral health behaviors. These approaches should be integrated into educational curricula.

The key question: “Do professional educational experiences impact providers (dentists, hygienists and others) attitudes toward (willingness), or ability to treat individuals with I/DD?”

Methods

The systematic review included databases such as PubMed, as well as gray literature. Broad search terms were used to uncover interventions to improve both access to oral health and support good oral health behaviors in individuals with I/DD. Initial results yielded 4,854 articles. Title and abstract screening for articles that specifically address the I/DD population, and that were published after 1990 ranged from a 45 minute lecture to an 8 hour practicum. Fifteen articles were identified to have a clear I/DD population definition, intervention, and outcome. Articles were reviewed in detail with structured abstraction of results entered into the AHRQ Systematic Review Data Repository.

Interventions measured:
1. Assess educational experience/knowledge acquisition: curriculum for orthodontists, dentists, & hygienists
2. Assess attitudes toward treating persons with I/DD
3. Assess an educational model: virtual patient, service learning, interprofessional model
4. Assess comfort/satisfaction with technique or materials: behavior management, available information, experience

Interventions were delivered by lecture (3), virtual patient models (2), case base learning (1), service learning (1) and combination video/text based (1). Length of interventions ranged from 45 minute lecture to an 8 hour practicum. Sample size ranged from 23 to 568 and studies surveyed a variety of student and professionals.

Study Subjects # of Studies
Students (dental, hygiene) 6
Dentists 3
Students (dental, hygiene, individuals with I/DD) 2
Orthodontists, Hygienists, Nurse Practitioners, Other health providers 1 each

Ten of the 15 studies were surveys, measuring 38 total outcomes.

Conclusions
Exposure to individuals with I/DD, whether that be through curriculum, practical experience, or other means has a positive impact on a providers attitudes toward treating individuals and including individuals with I/DD in their practice. There are limited studies to describe the impact of educational interventions toward teaching individuals and including individuals with I/DD in their practice. Further research and evaluation is needed.

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Quality of Evidence

Using questions adapted from The Community Guide Data Abstraction Form, clinical experts provided an interpretation of external validity, while a research methodologist accomplished a separate review of internal validity. Few studies rated “good” for both internal and external validity.

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<th>Study Author</th>
<th>External Validity</th>
<th>Internal Validity</th>
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<td>Subbar P, ChAVEZ EM, Miles J, Wong A, Glassman P, Labare E</td>
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Outcomes # of articles containing the outcome
Curriculum related (i.e., content, satisfaction) 9
Education/Knowledge (i.e., gained, experience) 6
Attitudes/Beliefs (i.e., perception) 5
Behavior Management (i.e., knowledge, experience, comfort) 4
Comfort level (i.e., comfort treating) 3
Expectation (i.e., of individuals with I/DD capabilities) 2
Other: communication skills, complete training, cooperation, awareness, etc. 1 each