Cross Cultural Comparison of Quality of Life in Children with Cochlear Implants

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Disclosures

• No disclosures to report
Outline

• Mental Health and Health Related Quality of Life
• American Study Results
• Cross-Cultural Comparison
Adolescent Mental Health Statistics

• Children aged 13-18 years
  – Anxiety disorders (31.9%)
  – Behavior disorders (19.1%)
  – Mood disorders (14.3%)
  – Substance use disorders (11.4%)

• Suicide was the second leading cause of death among adolescents aged 12–17 years in 2010
Risk Factors in Mental Health

- Biological family history
- Stressful life situations
- Brain damage
- Trauma, abuse, neglect
- Alcohol and drug use
- Limited support
- Ongoing/chronic medical condition
Adult Mental Health + Medical Health

People with mental disorders: 25% of adult population

People with medical conditions: 58% of adult population

68% of adults with mental disorders have medical conditions

29% of adults with medical conditions have mental disorders
Mental Health

Medical Health

Children with cochlear implants: Parental perspectives

Archbold et al., 2002
Children with cochlear implants: Parental perspectives

Archbold et al., 2002
Children with cochlear implants: Parental perspectives

• Archbold, Sach, O'Neill, Lutman, & Gregory, 2008
  – 74 items
  – 8 domains
  – 5 point Likert scale
HRQoL

Communication

Effects of Implantation

Supporting the Child

Education

Social Relations

Self-Reliance

Well-Being

General Functioning
Countries Studied

• United Kingdom
• Netherlands
• Finland
• Brazil
• Turkey
American Study

Methods
Participants

- 33 parents
  - 17 boys, 15 girls, one unavailable
- Severe-profound SNHL
- At least one CI
- CI summer camps
  - 2007, 2008
Statistics

- Differences in HRQoL domains
  - ANOVA with one within-subjects factor
  - Post hoc (Least Significant Differences for multiple comparisons)
  - $p < 0.01$
Statistics

• Comparing US to UK, Finland, Netherlands
  – One-sample t-test
  – $p < 0.01$
## Demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronological age</td>
<td>9.85 (3.3)</td>
<td>4-18</td>
</tr>
<tr>
<td>Age at 1\textsuperscript{st} CI activation</td>
<td>2.47 (1.85)</td>
<td>&lt;1-8</td>
</tr>
<tr>
<td>Age at 2\textsuperscript{nd} CI activation*</td>
<td>4.89 (3.24)</td>
<td>&lt;1-13</td>
</tr>
<tr>
<td>Duration of CI experience</td>
<td>7.47 (2.8)</td>
<td>1-12</td>
</tr>
</tbody>
</table>

N = 32

\*N = 25
American HRQoL domains

HRQoL Domains

Communication
General Functioning
Self-Reliance
Well-being
Social Relations
Education
Effects of Implantation
Supporting the Child

HRQoL Ratings
American HRQoL domains

- Positivity in most domains
- Parent involvement
- Socioeconomic status

HRQoL Domains:

- Communication
- General Functioning
- Self-Reliance
- Well-being
- Social Relations
- Education
- Effects of Implantation
- Supporting the Child

HRQoL Ratings
Significant Differences

HRQoL Domains

HRQoL Ratings
Education

- Coping with mainstream schooling
- Keeping up with peers
- Appropriate CI services/accommodations
- School placement and progress
- Use of sign language
Effects of CI

- Communication immediately after implantation
- Expectations
- Blame
- Durability of CI
- Rejection by Deaf community
Cross-cultural comparison
US vs. Netherlands

HRQoL Ratings

Communication | General functioning | Well-being | Self-reliance | Social relations | Education | Effects of implantation | Supporting the child

US | Netherlands

HRQoL Domains

Archbold et al., 2008; Damen et al.; Huttunen et al., 2009
US vs. Netherlands

- Differences in sample demographics
- Cost analysis of CI-related expenses
- Multi-lingualism
US vs. UK

- Teacher education
- Access to CI services
  - CI centers
  - Resources
  - Counseling
  - Empowerment
US vs. Finland

HRQoL Ratings

Communication  General functioning  Well-being  Self-reliance  Social relations  Education  Effects of implantation  Supporting the child

US  Finland

HRQoL Domains

Archbold et al., 2008; Damen et al.; Huttunen et al., 2009
US vs. Finland

• Influential domains
  – Communication
  – Self Reliance

• Overall country QoL
  – Economy
  – Health and wellness
Cross-Cultural Comparison

HRQoL Ratings

Communication | General functioning | Well-being | Self-reliance | Social relations | Education | Effects of implantation | Supporting the child
---|---|---|---|---|---|---|---
US | Netherlands | UK | Finland | US | Netherlands | UK | Finland | US | Netherlands | UK | Finland

Archbold et al., 2008; Damen et al.; Huttunen et al., 2009
Cross-Cultural Factors in HRQoL

• Access to CI-specific school accommodations
• Lack of funding
• Multi-lingualism
• Prevalence of parent education
• Overall QoL
• Parent expectation
Supporting Parents

- Setting realistic expectations
- Educational accommodations
- Providing psychological education
- Treatment team approach
- Understanding cultural norms
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References