A Quantitative Exploration of Relationships Between Severity of Infant Congenital Muscular Torticollis and Caregiver Understanding of Positioning and Handling During Occupations of Infancy

Dalton J. Krenchik
Pam Kasyan-Howe
Kristin Domville
Lisa Schubert

Follow this and additional works at: https://soar.usa.edu/otdcapstonesfall2021
A Quantitative Exploration of Relationships Between Severity of Infant Congenital Muscular Torticollis and Caregiver Understanding of Positioning and Handling During Occupations of Infancy

Dalton J. Krenzlik, OTD-S; Doctoral Coordinators: Pamela A. Kasyan-Howe, OTD, OTR/L; Kristin J. Domville, Dr.OT, OTR/L; Lisa Schubert, OTD, MA, OTR/L

Methods

Quantitative Analysis

The research questions were successfully answered, and the appropriate hypotheses were accepted or rejected with the statistical analysis of the data obtained. Statistics were obtained through 1 self-rating (0-5) of understanding of positioning and handling respective one of the 3 target occupations and questions that were sorted under specific understanding of positioning and handling with one of the 3 occupations (rest/sleep, feeding, and play) 3 questions rest/sleep, 2 questions feeding respectively). Numbers were also obtained through a 1-t system assigned to answers as seen in the figure below:

<table>
<thead>
<tr>
<th>Response Pool</th>
<th>Numerical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTREMELY FAMILIAR</td>
<td>5</td>
</tr>
<tr>
<td>VERY FAMILIAR</td>
<td>4</td>
</tr>
<tr>
<td>SOMEWHAT FAMILIAR</td>
<td>3</td>
</tr>
<tr>
<td>NOT AT ALL FAMILIAR</td>
<td>0</td>
</tr>
<tr>
<td>NOT AT ALL FAMILIAR</td>
<td>0</td>
</tr>
</tbody>
</table>

The analysis of Research Question 1, 2, and 3 was analyzed first by calculating mean score and standard deviation of the 3 severities of CMT to discover significant data outside of the central tendency that would indicate a statistical significance in the difference of one group of severities mean responses.

• Using a two tailed student t-test, the researcher was also able to discover any statistically significant relationships between two severities of CMT at a time within the designated occupation by finding the p-value.

• Important findings were that there were not many statistically significant relationships between severity of CMT and positioning and handling techniques within the occupations of play, feeding, and rest/sleep. This may point towards a successful education of the population across severities regarding the techniques being implemented in home exercise programs.

• However, it should be noted another important finding in the project was the generally low scores amongst the survey respondents regarding their self-rating of positioning and handling amongst the 3 occupations addressed regardless of their infant’s severity of CMT.

• This could point towards a general need to increase education efforts to caregivers of infants with CMT regarding positioning and handling techniques during performance of occupations by Occupational Therapists. With more successful education of the population across severities regarding the techniques that can hinder occupational performance. CMT has different severities including mild CMT, moderate CMT, and severe CMT, and each individual infant’s intervention program can vary based on their client factor deficits and symptoms. This requires caregiver understanding on positioning and handling of their infant during the performance of occupations in order to achieve optimal participation of the infant in occupations that promote healthy development. Caregivers of infants with CMT experience stress, anxiety, and increased demands to incorporate a home exercise program including developmentally supportive positioning and handling into daily routines often without formal education/training.

References


Acknowledgement: A Special shout out thank you so much to Kayla Sorto, OTRL, and Eva Pachetti D’Amaro, OTRL for everything they’ve done to make this project come to fruition!