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Can communication training for parents of young children with movement disorders improve the communication between children and parents? A Cochrane Review summary with commentary

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Abstract.
BACKGROUND: Communication impairments are a common challenge for children with non-progressive motor disorders and their parents.
OBJECTIVE: To assess the effects of parent-mediated communication interventions for improving the communication skills of preschool children with non-progressive motor disorders.
METHODS: To summarize a rehabilitation-relevant Cochrane Review conducted by Pennington et al.
RESULTS: Two studies were identified, involving 38 children and their mothers. These studies provided very low quality evidence that parent-mediated communication might improve parental responsiveness to their children's communication efforts, but no evidence it influence the children's communication or participation. Small samples sizes, low study numbers, and lack of reporting on some outcomes limited the conclusion that could be drawn from this review.
CONCLUSIONS: High quality adequately powered trials of parent-mediate communication interventions for children with communication impairments arising from non-progressive motor disorders should be encouraged.

Keywords: Preschool child, motor disorders, communication impairment, parents

1. Introduction

The aim of this commentary is to discuss in a rehabilitation perspective on the recently published Cochrane Review "Parent-mediated communication interventions for improving the communication skills of preschool children with non-progressive motor disorders" by Pennington, Akor, Laws, & Goldbart[1] (Pennington, Akor, Laws, & Goldbart, 2018), under the direct supervision of Cochrane Developmental,

[1]The abstract/plain language summary of this Cochrane Review is taken from a Cochrane Review previously published in the Cochrane Database of Systematic Reviews 2018, Issue 7, DOI: 10.1002/14651858.CD012507.pub2 (see www.cochranelibrary.com for information). Cochrane Reviews are regularly updated as new evidence emerges and in response to feedback, and Cochrane Database of Systematic Reviews should be consulted for the most recent version of the review.

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2. Background

Non-progressive motor disorders in childhood can occur as a result of a number of different health conditions, including, for example, cerebral palsy, acquired brain injury, global developmental delay, Down's syndrome and genetic disorders. Many children with non-progressive motor disorder have communication impairments that can impact on their relationships, schooling and social development. Parent-mediated communication interventions involve training parents to identify, interpret and respond to their children's speech and communication efforts, in order to maximize and encourage practice of these skills in everyday life.

Parent-mediated communication interventions for improving the communication skills of preschool children with non-progressive motor disorders

Pennington, Akor, Laws, & Goldbart, 2018

3. Objective

This Cochrane Review assessed the effectiveness of communication training for parents (termed "parent-mediated communication interventions") for improving the communication skills of preschool children up to five years of age who have non-progressive movement disorders.

4. What was studied and methods

The review included randomized controlled trials that compared communication training for parents of pre-school children (up to five years old) with any non-progressive movement disorder (e.g. cerebral palsy) acquired before two years of age, with no intervention, treatment as usual or clinician-mediated interventions. Training could have been delivered to parents individually or in groups, by any specialist in communication therapy. The review excluded studies that only involved children with Down's syndrome (the subject of another review) and studies of children whose communication was primarily limited by a sensory impairment. The primary outcomes of interest were the children's ability to communicate effectively in everyday life (for example, initiating conversations) and adverse events such as reduced frequency of communication or increased negative behavior. Secondary outcomes included the children's expressive and receptive language function, the children's general participation, family stress, satisfaction of the children and family with treatment, and compliance with treatment. The literature search included 20 electronic databases up to July 2017, plus hand searching of reference lists.

5. Results

The review included two studies; one from Canada and one from South Korea). A total of 38 children (20 boys and 18 girls; aged 15 to 96 months) with non-progressive movement disorders (comprising cerebral palsy, Down's syndrome, chromosomal abnormalities, developmental delay, intellectual disability and one case of unknown etiology), and their mothers took part.

One study compared an 11-week "It Takes Two to Talk" training program (Girolametto, 1988), consisting of eight group sessions and three individual home visits, to a wait-list control group. The other study compared a 12-week "Relationship Focused Intervention" (Kim & Mahoney, 2005), comprising eight, once weekly group sessions, followed by four once weekly home visits, to no intervention.

Review authors could only calculate effect sizes for one included study (Kim & Mahoney, 2005), due to missing data in the other (Girolametto, 1988) for children's frequency of communication, frequency of spoken language, speech or receptive of expressive language development. As such, only Kim & Mahoney (2005) contributed to the reported findings presented below.

5.1. Children's ability to communicate effectively in everyday life

- There was no evidence that the invention influenced children's initiations of conversation or joint attention engagement, measured post-intervention with the Child Behaviour Rating Scale (very-low quality evidence).
- Neither study reported on children's use of communication.

5.2. *Parents' responsiveness to their children's communication*

- There was some, very low-quality evidence that mothers who received communication training became more responsive to their children's communication following intervention, assessed post-intervention with the Mothers Behaviours Rating Scale).
- There was no evidence of an effect on mothers' direction of these interactions.

5.3. *Parental stress*

- There was no evidence that the intervention reduced parental stress, measured after intervention with the Parent Stress Index – Korean version.

Neither study collected data on adverse events, children's general participation, satisfaction of child and family with treatment, or compliance with treatment.

6. Conclusions

The review authors concluded that the available evidence of the effectiveness of parent-mediated communication interventions for children with non-progressive motor disorders is inconclusive. There was only limited, very low-quality evidence that parent-mediated communication interventions may improve mothers' responsiveness to the communication efforts of their preschool children with non-progressive motor disorders and communication difficulties., but no evidence that it improved the children's initiation of communication.

7. Implications for practice in neurorehabilitation

There is currently insufficient evidence to provide guidance for rehabilitation professionals working in this area. It is uncertain whether the intervention improves the outcomes studied. The very low quality of available evidence on the estimated effects of this intervention indicate the high likelihood that conclusions may change with the addition of future research.

Disclosures

The author declares no conflicts of interest.

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