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Feedback strategies in assistive technology to promote social participation in children with cerebral palsy: Systematic review

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Living with cerebral palsy has consequences such as social interaction. Feedback strategies into the assistive devices help, assist and improve the functionality of children with PC, however, the currently evidence about assistive technologies is only focuses on biological and physiological variables, and the professionals in rehabilitation are forgiven an important part of the children life, the participation component and the real environment, because, what is the sense of have the better technology in a lab if the kid cannot use in her/his school or what is the objective if the studies only focus the research in range of motion or strength gain and not in the real outcome of their studies. The main objective in this review is to synthesize the evidence on interventions with assistive technologies, including feedback systems, with the aim of discovering outcomes of social participation in children with cerebral palsy. Methodology: There were 5 databases from rehabilitation which showed 683 articles in which only 9 were included. Results: The studies assessed social participation with several instruments. The majority suggested positive effects in activities such as: walking, writing, playing, and social interaction. There were tools such as electronic pencils, switches, and exoskeletons present. Conclusion: Due to the poor quality of the methodologies of these studies, the search does not establish solid conclusions. However, the evidence suggests that assistive technologies with feedback have a positive impact on aspects of social participation.

Recent Publications

1. Huang I-C, Sugden D, Beveridge S. Assistive devices and cerebral palsy: The use of assistive devices at school by children with cerebral palsy. *Child Care Health Dev.* 2009;5:698---708.
2. Nahuelhual P, Giaconi C, Machuca MA. Measuring participation in children and adolescents with and without disabilities: A systematic review. *Rev Chil Pediatr.* 2017;88:812---9.
3. M. Levasseur, L. Richard, L. Gauvin, É. Raymond Inventory and analysis of definitions of social participation found in the aging literature: Proposed taxonomy of social activities. *Soc Sci Med.*, 71 (2010), pp. 2141-2149

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