

## Teachers' Experience for Improving Fine Motor Skills of Children with Down Syndrome in the Context of Special Education in Southern Province of Sri Lanka

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**Abstract :** Background: Teachers working in the context of special education have an enormous responsibility of enhancing performance skills of children in their classroom settings. Fine Motor Skills (FMS) are essential functional skills for children to gain independence in Activities of Daily Living. Children with Down Syndrome (DS) are predisposed to specific challenges due to deficits in FMS. This study is aimed to determine the teachers' experience on improving FMS of children with DS in the context of special education of Southern Province, Sri Lanka. Methodology: A cross-sectional study was conducted among all consenting eligible teachers (n=147) working in the context of special education in government schools of Southern Province of Sri Lanka. A self-administered questionnaire was developed based on literature and expert opinion to assess teachers' experience regarding deficits of FMS, limitations of classroom activity performance and barriers to improve FMS of children with DS. Results: Approximately 93% of the teachers were females with a mean age (  $\pm$  SD) of 43.1 (  $\pm$  10.1) years. Thirty percent of the teachers had training in special education and 83% had children with DS in their classrooms. Major deficits of FMS reported were deficits in grasping (n=116; 79%), in-hand manipulation (n=103; 70%) and bilateral hand use (n=99; 67.3%). Paperwork (n=70; 47.6%), painting (n=58; 39.5%), scissor work (n=50; 34.0%), pencil use for writing (n=45; 30.6%) and use of tools in the classroom (n=41; 27.9%) were identified as major classroom performance limitations of children with DS. Parental factors (n=67; 45.6%), disease specific characteristics (n=58; 39.5%) and classroom factors (n=36; 24.5%), were identified as major barriers to improve FMS in the classroom setting. Lack of resources and standard tools, social stigma and late school admission were also identified as barriers to FMS training. Eighty nine percent of the teachers informed that training fine motor activities in a special education classroom was more successful than work with normal classroom setting. Conclusion: Major areas of FMS deficits were grasping, in-hand manipulation and bilateral hand use; classroom performance limitations included paperwork, painting and scissor work of children with DS. Teachers recommended regular practice of fine motor activities according to individual need. Further research is required to design a culturally specific FMS assessment tool and intervention methods to improve FMS of children with DS in Sri Lanka.

**Keywords :** classroom activities, Down syndrome, experience, fine motor skills, special education, teachers

**Conference Title :** ICSECD 2018 : International Conference on Special Education and Child Development

**Conference Location :** Rome, Italy

**Conference Dates :** May 03-04, 2018