

平成 26 年度 博士前期課程学位論文要旨

学位論文題名 (注: 学位論文題名が欧文の場合は和訳をつけること)

The involuntary postural control and visual reliance in children with
Autism Spectrum Disorder

自閉性障害を持つ子供の無意識の姿勢コントロールと視覚依存度の関係

学位の種類: 修士 (作業療法科学)

人間健康科学研究科 博士前期課程 人間健康科学専攻 作業療法科学域

学修番号 12896606

氏 名: 李怡欣

(指導教員名: 伊藤 祐子)

注: 1 ページあたり 1,000 字程度 (欧文の場合 300 ワード程度) で、本様式 1~2 枚 (A4 版) 程度とする。

Objective: To determine if visual reliance exists in involuntary postural control in children with Autism Spectrum Disorder (ASD).

Methods: Standing postural stability was compared between 7 ASD and 10 Typical Development (TD) children by using a stabilometer to test the average of center of pressure (COP) and by measuring the standard deviation (SD) of angular displacement in neck, hip, ankle joints under 2 kinds of visual input circumstances (read text on a fixed reading stand, and read text by holding the material).

Result: 1) Under both conditions, ASD children showed significantly larger numerical value in COP data than TD children. This statistical result suggested that postural control of ASD children tended to be more unstable than TD children. 2) No matter whether they were an ASD or TD child, fixed target children showed significantly smaller numerical value in COP data. It suggested that fixed visual cue could make children maintain their postural stability better. 3) No statistically significant differences were obtained for the COP and SD scores between ASD and TD children under the two conditions, so there was no evidence of visual reliance in ASD children show in this study.

Conclusion: ASD children actually have poor postural stability than TD children. Postural stability would be affected under different visual input conditions in both ASD and TD children. This might suggest that manipulate the visual conditions could help for improving children's posture in daily life. The impact of a role of visual input in ASD children has showed in previous studies but not specially showed in present study because of the limitations of the experiment conditions and design. That should be improved in future studies.

Key Words: Autism; motor impairment; visual process; standing postural stability; attention