

The Effectiveness of Play Groups versus Mobilization Exercises in the Treatment of Children with Fine Motor and Handwriting Problems

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Objective

To examine the effectiveness of play groups verses mobilization exercises in the treatment for children with fine motor and handwriting problems

- To improve the fine motor skills, visual perceptual skills and handwriting of child.
- To enhance parents' knowledge about their children's development and providing strategies for parents to use at home

Methodology

Recruited from March 2012 till June 2013 in Prince of Wales Hospital

Inclusion criteria:

- Age between 7-9
- Dx: Handwriting and fine motor problem
- Study in normal primary school
- **Excluded:** Previous treatment, other disability



New Referrals from SOPD/CAC fulfilling inclusion criteria



Play



Mobilization



Control

12 subjects placed randomly into three groups
Pre test / Post test (8 sessions / 1 hour per week)

Outcome measures include:

Fine motor components of Bruininks-Oseretsky Test 2

Grip & Pinch Power

Chinese Handwriting Speed Test

English Handwriting Speed Test

Grooved Pegboard Test

Test of Visual Perceptual Skills

Parent Satisfaction Questionnaire

Result

Kruskal-Wallis One-Way Analysis among 3 groups

Critical values of Chi-square,
df =2 $\alpha < 0.05$ H value >5.99

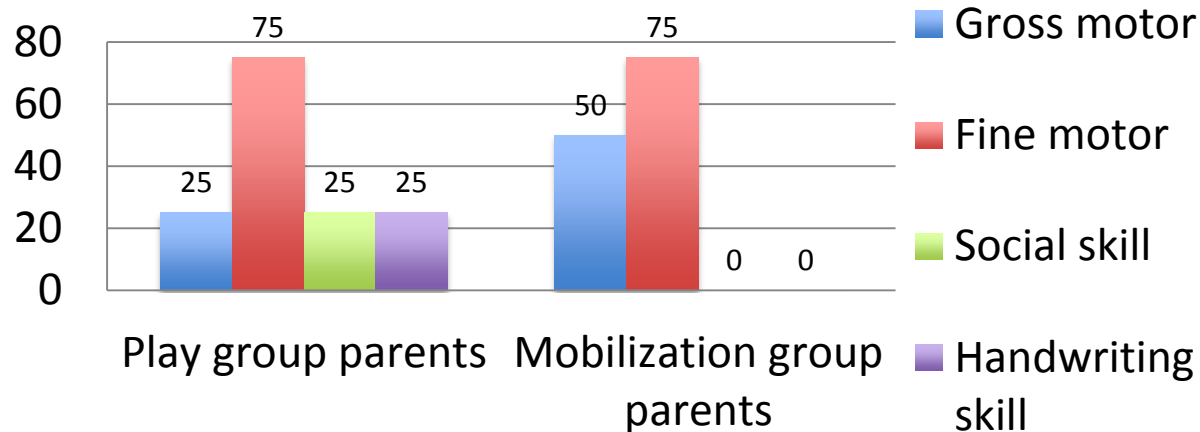
	Right Grip Power	Left Grip Power	Chinese Handwriting Speed Test	English Handwriting Speed Test	Fine Motor Integration of BO test	Total Score of TVPS
Chi-Square	10.648	6.570	6.019	6.224	6.309	6.936
df	2	2	2	2	2	2
Asymp.Sig	0.005	0.037	0.049	0.045	0.043	0.031

Critical values for the Mann-Whitney U-Test table within 2 groups

		R Grip Power	L Grip Power	Chinese Handwriting Speed Test	English Handwriting Speed Test	Fine Motor Integration of BO test	Total Score of TVPS
Play /Control	Mann-Whitney U	11.500	22.500	25.500	21.000	19.000	19.000
	Asymp.Sig. (2-tailed)	0.003	0.034	0.063	0.027	0.019	0.019
Moblization/ Control	Mann-Whitney U	24.00	54.500	49.000	38.000	37.500	30.000
	Asymp.Sig. (2-tailed)	0.025	0.971	0.671	0.224	0.208	0.129
Play/ Mobilization	Mann-Whitney U	18.00	23.000	22.500	30.500	33.500	52.000
	Asymp.Sig. (2-tailed)	0.009	0.022	0.022	0.080	0.127	0.832

Conclusion

1. Play Group is more effective than mobilization and control group in terms of power grip, handwriting, fine motor integration and visual perception skill.
2. In the responses to the parents' satisfaction questionnaires, it was noted that all the parents agreed that they have increased their knowledge in the treatment strategies, can practice these strategies at home, and that, as a result, their children's fine motor skills will be enhanced.



The table illustrates which skills parents believe are benefiting their children after participation in play versus mobilization groups