

# Participation in Home and Community Activities among Preschool Children with and without Physical Disabilities

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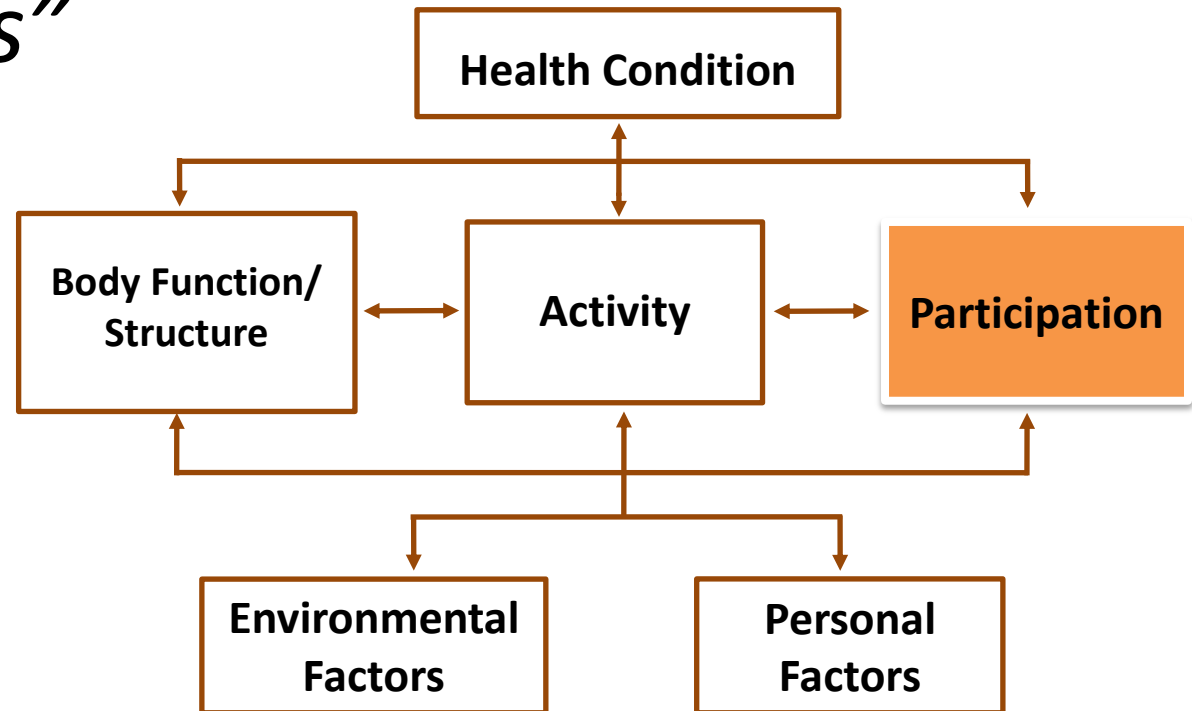
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**Participation**, is defined as *“involvement in life situations”*

## The ICF Model



Adapted from *International Classification of Functioning, Disability and Health (ICF; WHO, 2001)*

Children have the **right** and should be given **opportunities** to actively participate

(the United Nations' Convention on the Rights of the Child, UNCRC)



# Preschool children (2-6 years of age)

- Participation is essential for **early development** and for **inclusion** of children with disabilities in the communities
- **Age** may be an important factor affecting participation in this early and sensitive period (Bult, et al., 2013; Law, et al., 2012; Wu, et al., 2015)

# Children with physical disabilities

- They often face challenges in participation that are associated with multiple factors  
(Chiarello, et al., 2016; Chiarello, et al., 2012; Carlson, Bitterman, & Daley, 2010)
- Research is limited in describing participation in everyday activities of preschool children with physical disabilities *in comparison to children with typical development*

# Aim

- To examine the differences in the intensity of participation as a function of **age** and **disability status**
  - **age** (2 to <4 years vs. 4 to <6 years)
  - **disability status** (with vs. without physical disabilities)

# Participants

- **120** children with **physical disabilities (PD)** and **160** children with **typical development (TD)** in Taiwan
- aged 2 years to 5 year 11 months old

## Conditions associated with phy

Cerebral Palsy

Developmental (motor) delay

Chromosomal disorder

Acquired brain injury <sup>a</sup>

Spina bifida

Congenital anomalies


<sup>a</sup> Acquired brain injury (TBI, brain tum infection, anoxia)



# Child & Family Demographic Characteristics

	PD	TD	<i>p</i>
<b>Child's age</b>			.087
2 to < 4 years	62 (52%)	99 (62%)	
4 years	58 (48%)	61 (38%)	
<b>Child's sex</b>			.051
Boys	81 (68%)	89 (56%)	
Girls	39 (32%)	70 (44%)	
<b>Parent respondents</b>			.212
Mother	101 (84%)	139 (87%)	
Father	17 (14%)	19 (12%)	
Other relatives	2 (2%)	2 (1%)	
<b>Household income, NTD</b>			<.001
<\$300k	40 (35%)	24 (15%)	
\$550k-\$1,000k	51 (45%)	61 (39%)	
\$1,000k-\$2,500k	22 (20%)	65 (41%)	
> \$2,500k	0 (0%)	8 (5%)	
<b>Number of children in the household</b>	1.9 (0.9)	1.9 (0.8)	.966

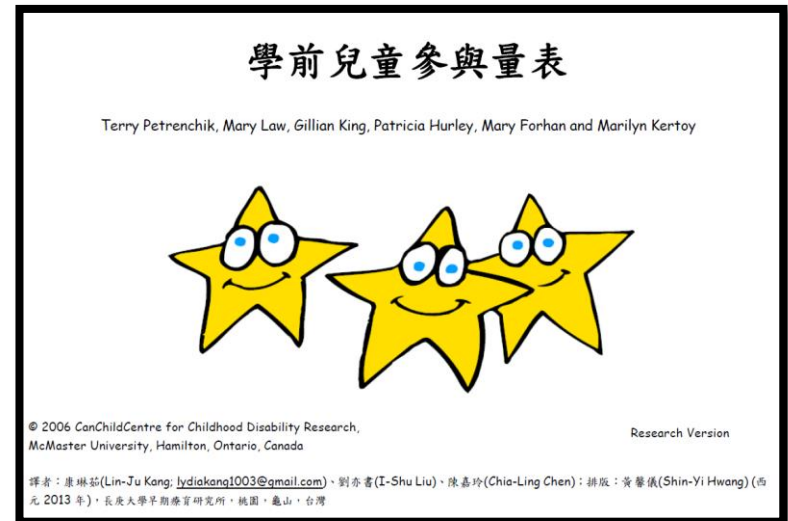
Not a significant covariate, was not included in later analysis





# The Chinese version of the Assessment of Preschool Children's Participation (APCP-C)

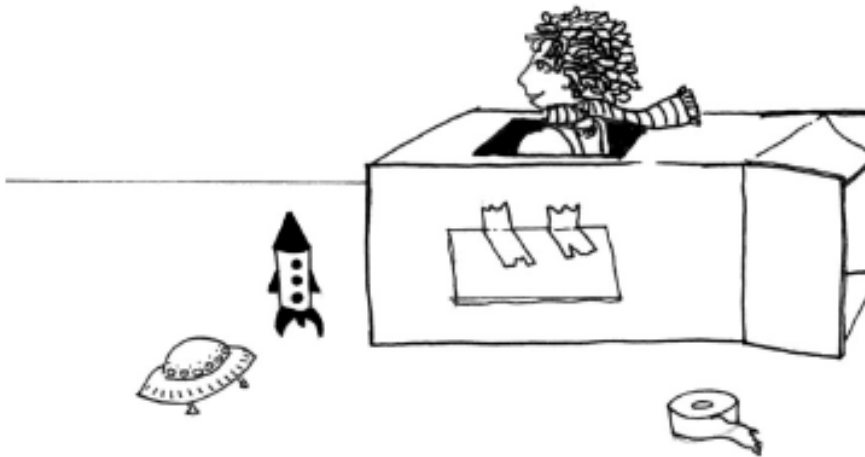
- Translated from the APCP (King et al., 2011; Law et al., 2012)
- Psychometrics of the APCP-C (Kang et al., 2016)
- 45-item parent-report measure for preschool children's participation
  - Play
  - Skill development
  - Active physical recreation
  - Social



# Play Activities: examples

## 1. Doing pretend or imaginary play

Includes creating plays, acting out stories or role-playing.



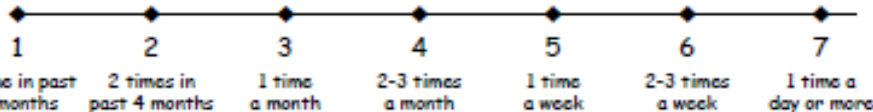
Has your child done this activity in the past 4 months?

Yes

No →

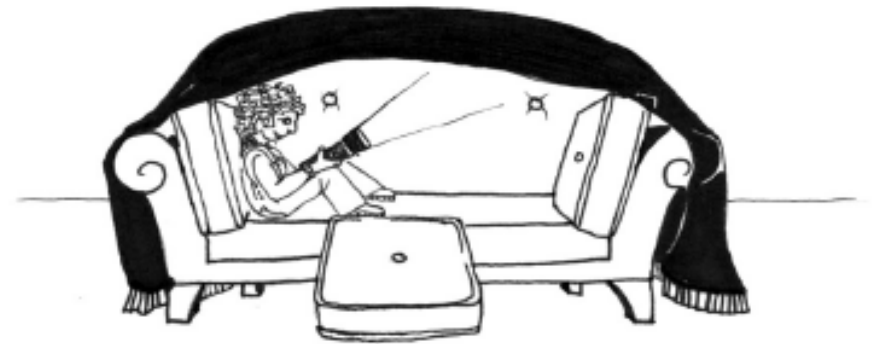
If yes, how often? (circle your answer)

Frequency



## 2. Building forts or tents

Includes building forts, tents, castles, cars, or homes out of boxes, blankets or other household items.



Has your child done this activity in the past 4 months?

Yes

No →

If yes, how often? (circle your answer)



# kitchen & toy vender built out of boxes





# Skill Development Activities: examples

## 14. Cutting and pasting

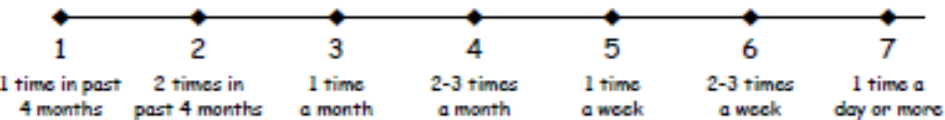
Includes the use of preschool scissors, glue, tape, or stickers.



Has  months?

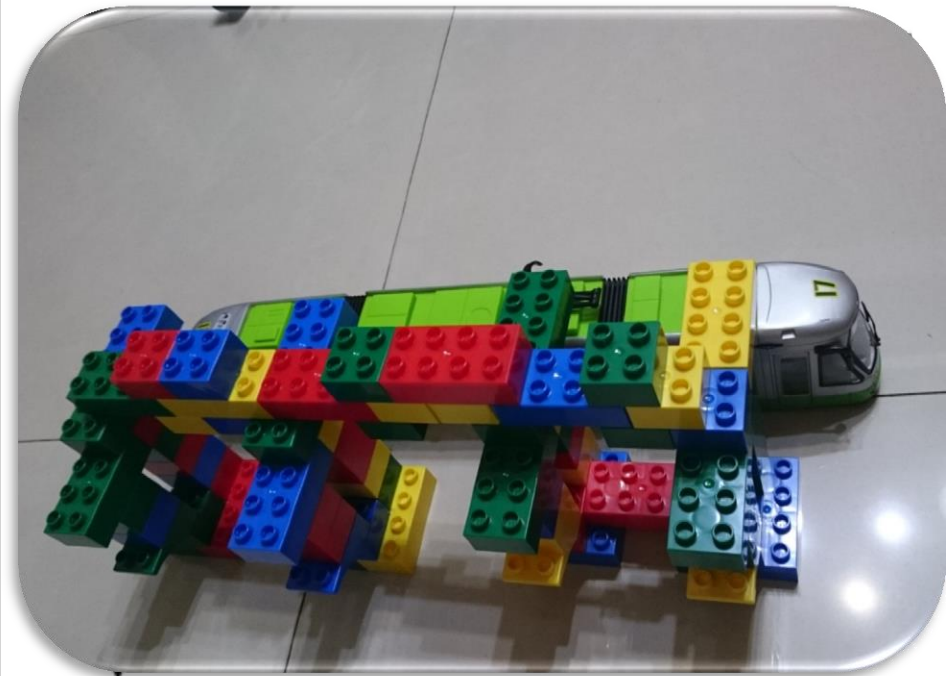


If yes, how often? (circle your answer)



## 11. Building things

Includes building things out of blocks, clay, playdough, or other materials.



If yes, how often? (circle your answer)



# Active Physical Recreation: examples

## 27. Going for walks

Includes walking or mobilizing on a trail, sidewalk, or roadway. The walk is the main activity, not a means of transportation.

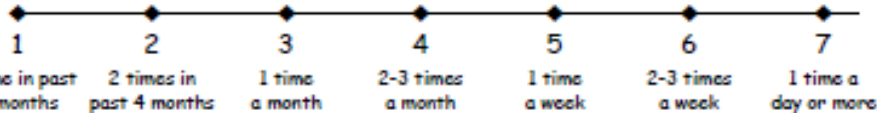


Has your child done this activity in the past 4 months?

Yes

No →

If yes, how often? (circle your answer)

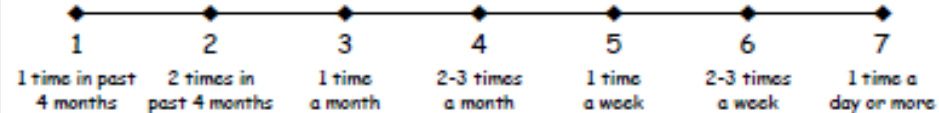


## 28. Riding a bicycle, tricycle, or scooter

Includes all types of bikes and scooters, in-line skating, roller skating, and peddling toy cars and trucks.



If yes, how often? (circle your answer)



# Social Activities: examples

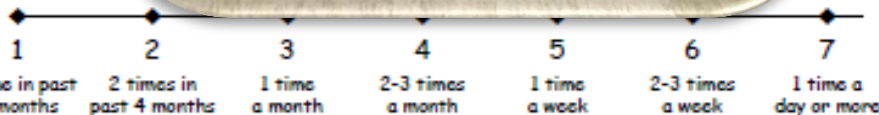
## 41. Going to a party

Includes birthday parties, family reunions, weddings, graduations, and other



Has your child done this activity in the past 4 months?

If yes



## 42. Attending a play group

Includes attending an organized playgroup with adult directed or supervised activities.



Has your child done this activity in the past 4 months?

 Yes

 No →

If yes, how often? (circle your answer)





# APCP-C Scoring

- **Diversity:** total number of activities done in the past 4 months

- **Intensity:**

*the sum of frequency across all items*

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*the number of possible items in each activity area*

Total (45 items)

Play (9 items)

Skill improvement (15 items)

Active physical (10 items)

Social (11 items)

# Data Analysis

- **Two-way ANOVAs** were used to examine the effect of **age** and **disability status** on **intensity** scores for total participation and each activity type.
- Significance level:  $p < .01$



The interaction of Age x Disability were not significant ( $p = .399$ )



# Results: Total activities

**Age:**

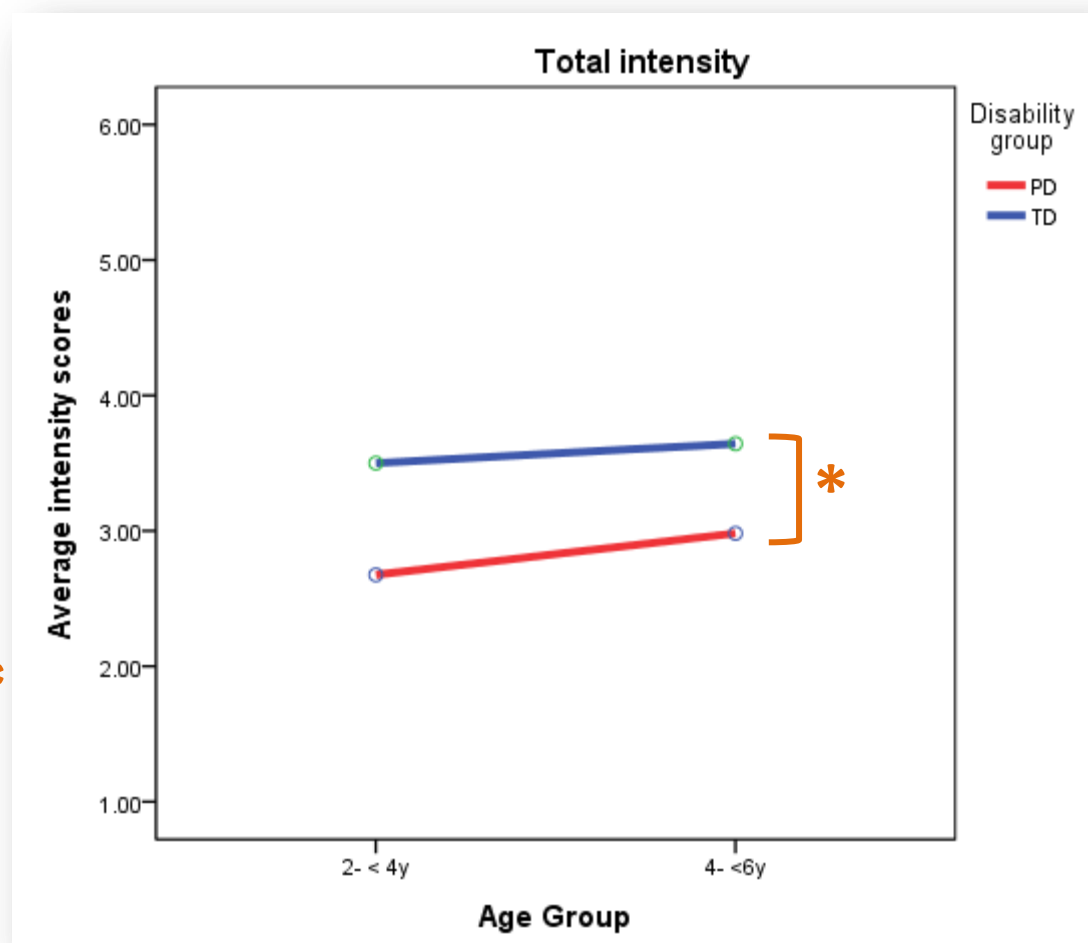
2- 4y = 4- 6y

$F_{(1, 276)} = 4.744; p = .03$

**Disability:**

**TD > PD**

$F_{(1, 276)} = 64.245; p < .001^*$



# Results: Play activities

**Age:**

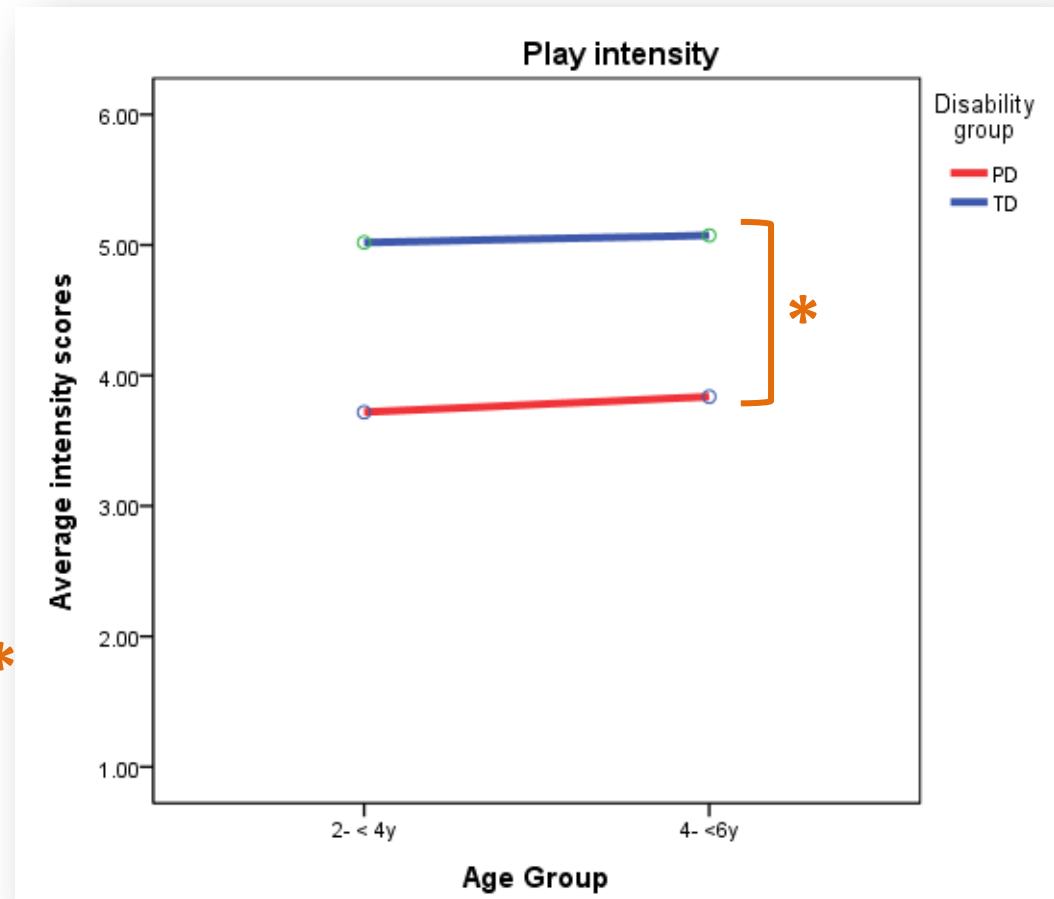
2-4y = 4-6y

$F_{(1, 276)} = 0.569; p = .45$

**Disability:**

**TD > PD**

$F_{(1, 276)} = 122.890; p < .001^*$



# Results: Skill development activities

**Age:**

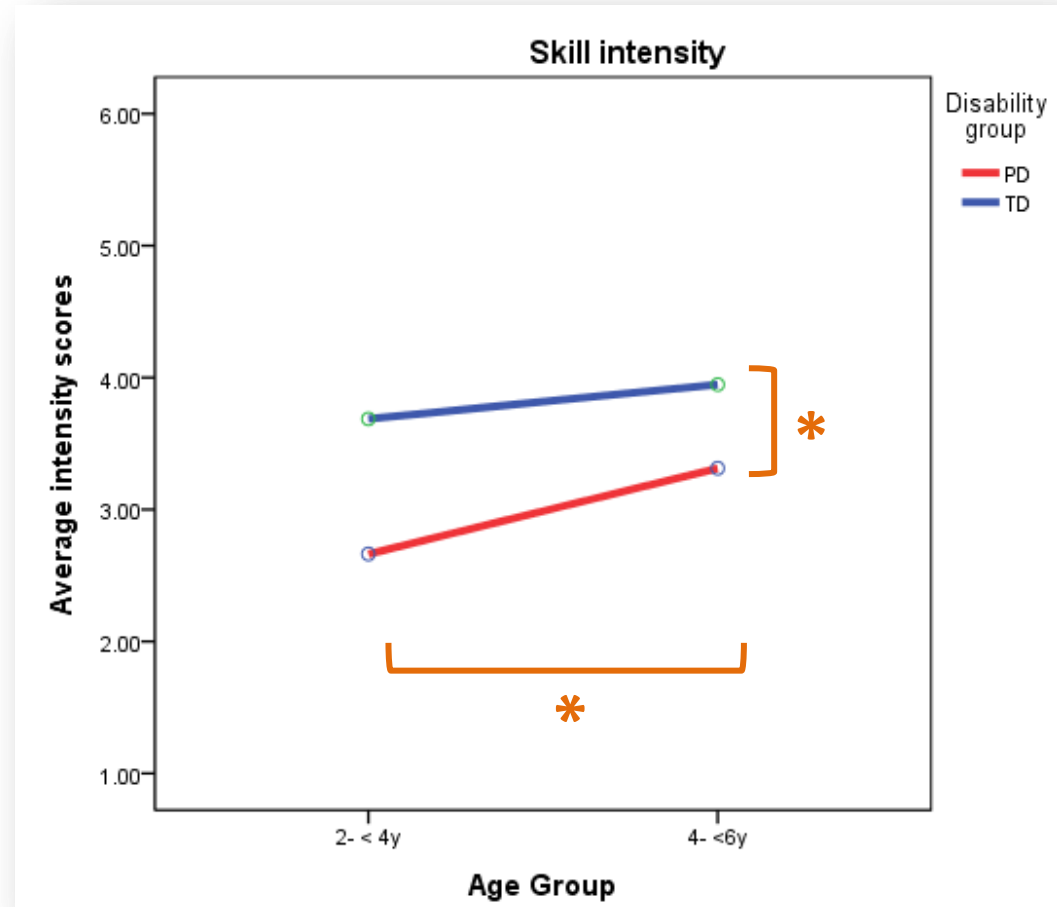
**2-4y < 4-6y**

$F_{(1, 276)} = 10.587; p = .001^*$

**Disability:**

**TD > PD**

$F_{(1, 276)} = 47.765; p < .001^*$



# Results: Active physical recreation

**Age:**

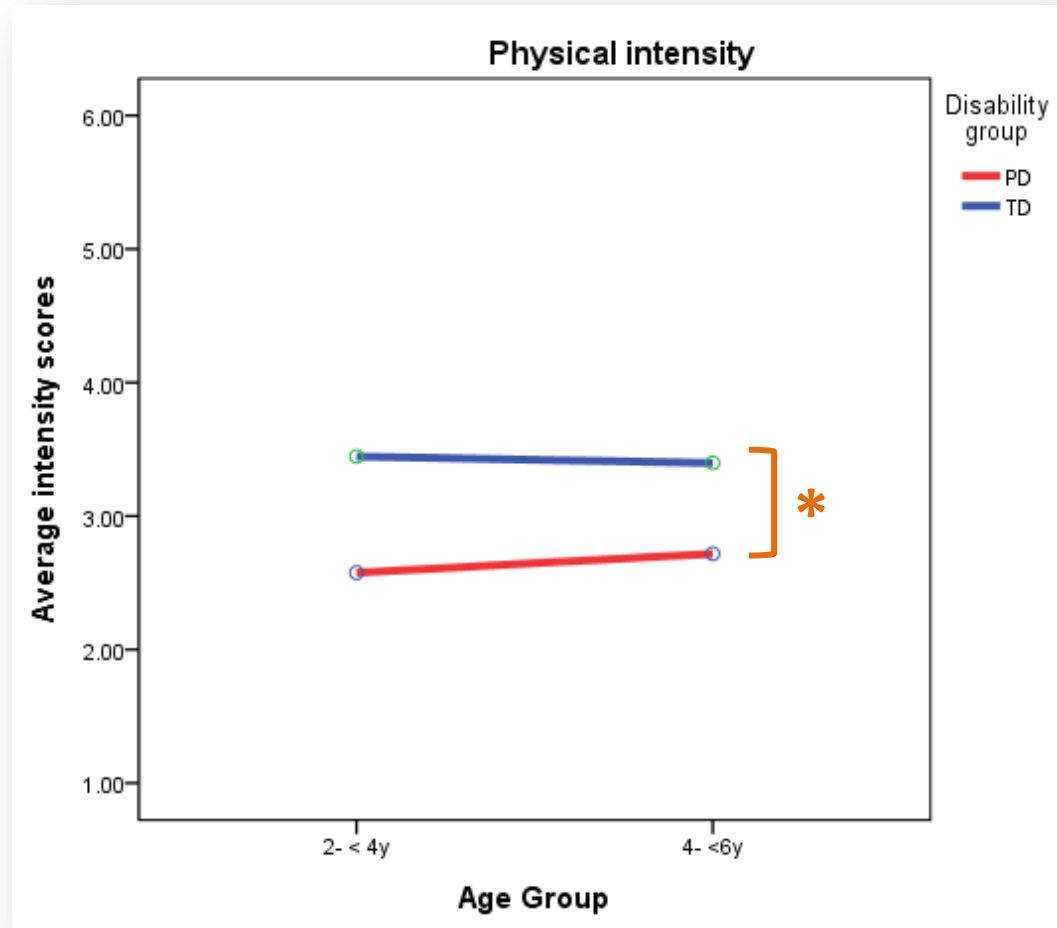
2-4y = 4-6y

$F_{(1, 276)} = 0.119; p = .73$

**Disability:**

**TD > PD**

$F_{(1, 276)} = 42.084; p < .001^*$



# Results: Social activities

*relatively lower intensity than other types*

**Age:**

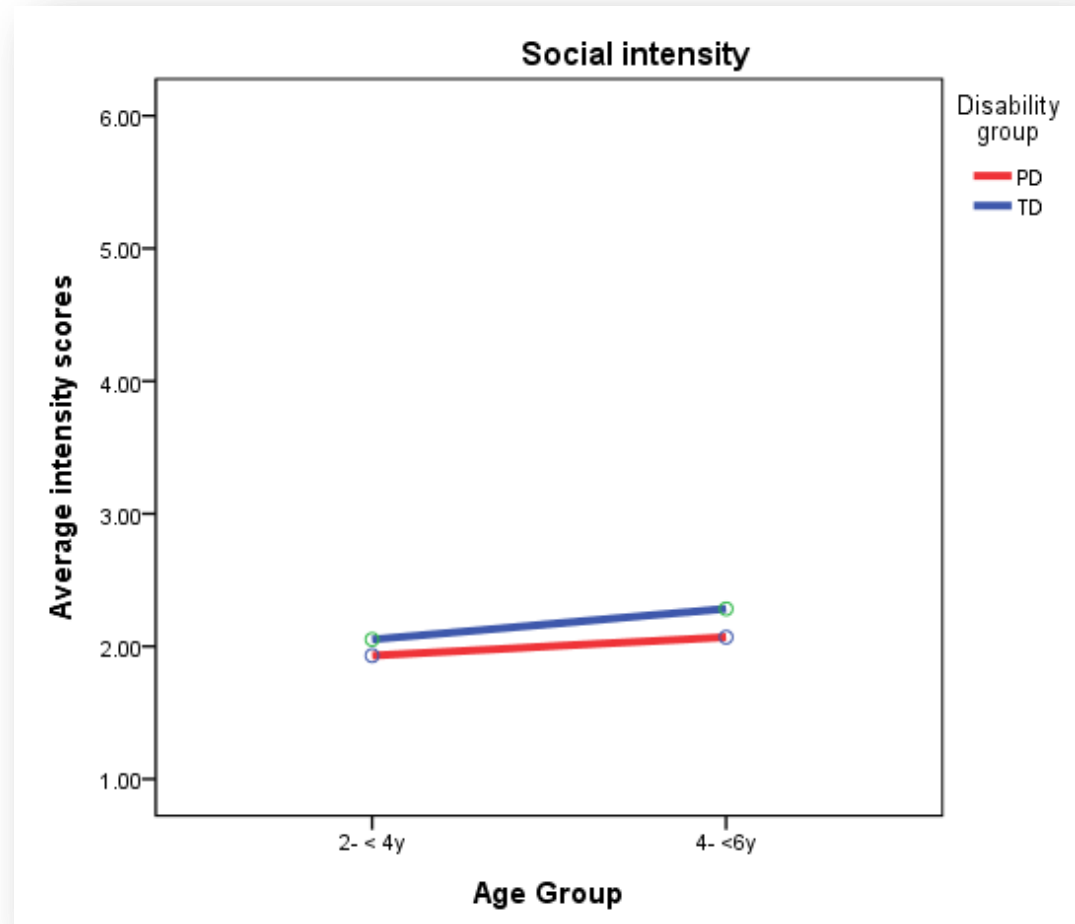
2-4y = 4-6y

$F_{(1, 276)} = 2.908; p = .09$

**Disability:**

TD = PD

$F_{(1, 276)} = 4.476; p < .04$



# Discussions

- Children in the two age groups were **comparable** in their intensity of participation, with the exception of skill development activities
- **Skill development** activities involve *'learning, practice or instruction that contribute to the development of skills, and competencies'* - the only activity type that differentiated between age groups at this young age

# Discussions

- Children with **physical disabilities** had lower intensity of participation than children without disabilities, with the exception of social activities
- Participation in **social activities** may depend more on the availability and time of families or peers.

# Conclusion

- The findings provide a profile for young children's participation in Taiwan
- Improved accessibility of **play, skill, and physical activities** desired by children with physical disabilities may help their inclusion in home and community life



# Acknowledgement

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科技廳

Ministry of Science and Technology

Thank you and  
bye-bye!

