**臺灣兒童學齡前階段之行為發展模式:早產與早期介入之影響**

**Behavioral Trajectories in Taiwanese Children at Pre-School Age:**

**Effects of Preterm Birth and Early Intervention**

黃婉琦1 謝武勳2 許瓊心3 吳晏慈1 吳盈瑾1 游硯婷1 鄭素芳1,4,\*

Wan-Chi Huang1 Wu-Shiun Hsieh2 Chyong-Hsin Hsu3 Yen-Tzu Wu1

Ying-Chin Wu1 Yen-Ting Yu1 Suh-Fang Jeng1,4,\*

1 臺灣大學醫學院物理治療學系暨研究所

School and Graduate Institute of Physical Therapy, College of Medicine, National Taiwan University, Taipei, Taiwan

2 臺灣大學醫學院附設醫院小兒部新生兒科

Division of Neonatology, Department of Pediatrics, National Taiwan University Hospital, Taipei, Taiwan

3 馬偕紀念醫院台北總院小兒部新生兒科

Division of Neonatology, Department of Pediatrics, Macky Memorial Hospital, Taipei, Taiwan

4 臺灣大學醫學院附設醫院物理治療中心

Physical Therapy Center, National Taiwan University Hospital, Taipei, Taiwan

**Background and Purpose:** Infants born with prematurity are at risk of behavioral and developmental problems. Although extensive evidence has demonstrated short- to medium-term benefit of early interventions on developmental outcome in preterm infants, the effect on behavioral outcome remains to be determined. Therefore, the aims of this study were: 1) to examine if term and preterm children have different trajectories in behavioral development when longitudinally followed up at 2, 3 and 4 years of age; and 2) to assess whether early intervention influences the behavioral development among preterm children. **Methods:** This study included 62 term infants and 178 preterm children in northern Taiwan that preterm children were randomized into the home-based intervention preterm infants (HBIP), clinic-based intervention preterm infants (CBIP), or usual care preterm infants (UCP) in early life. Interventions were provided to preterm children from hospitalization until one year of corrected age. All children were prospectively assessed their behavioral performance using the Children Behavior Checklist/1.5-5 (CBCL/1.5-5) (internalizing, externalizing and total behavioral problem scores) at 2, 3, and 4 years of age. **Results:** Trajectories of total and internalizing behavioral problem scores in term children at 2 to 4 years of age were significantly classified into normal and clinical patterns, while preterm children’s were significantly categorized into normal, improved, worse, and clinical patterns. However, term and preterm children did not vary in the trajectories of externalizing behavioral problem score. Analyses of the effect of early interventions revealed that the HBIP group children were more likely to show improvement in the internalizing behavioral problem across ages, whereas the UCP group children tended to exhibit persistent internalizing behavioral problem of clinical range (*p*=0.04). **Conclusion:** Preterm birth appeared to alter the trajectory of behavioral development, specifically the internalizing and total behavioral problem, in Taiwan children at preschool age. Furthermore, early interventions, specifically the HBIP, yielded long-term benefit in decreasing the risk of internalizing behavioral problems in Taiwanese preterm children at preschool age. **Clinical Relevance:** Our results provide important information to help the design of intervention program for preterm children with potential behavioral problems in Taiwan