

DOCTORAL DISSERTATION INFORMATION

Research title: *“Physical growth of preterm and small for gestational age children, and its relationship to child cognition from birth to 10 years in Thai Nguyen”*

Specialization: Pediatrics;

Code number: 9720106

Researcher : Ms. Phuong Thi Nguyen

Advisor 1 : Dr. Phuong Hong Nguyen

Advisor 2 : Prof. Dr. Son Van Nguyen

Training Institution: University of Medicine and Pharmacy, Thai Nguyen University

NEW CONTRIBUTIONS OF THE THESIS

This is the first study in Vietnam to examine physical growth and cognitive development patterns in two groups: children born preterm and children born small for gestational age (SGA), from birth to 10 years old. The study was designed as a longitudinal study, spanning from the pre-pregnancy stage, through pregnancy, childbirth, childhood, and early adolescence, conducted in a resource-limited setting with a high follow-up rate (87%) at 10 years old. The results of the study described the growth characteristics of preterm and SGA children, as well as their cognitive development during the first 10 years of life. Additionally, the study identified the relationship between physical growth in the first 1,000 days of life and cognitive development. Notably, maternal education and the home environment play important roles in the cognitive development of children. Preterm and SGA have both direct and indirect effects (through physical growth) on the development of children at age 10 years across all developmental domains. The findings of this study are valuable for improving the health care of preterm and SGA infants, contributing to the overall enhancement of child health in Vietnam.

**THE APPLICATION AND PRACTICAL IMPLICATIONS
SUGGESTIONS FOR FUTURE RESEARCH**

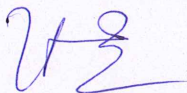
The findings of this study provide foundational knowledge about the growth and development of preterm and SGA children, which can be used to develop long-term care programs. These programs should involve collaboration between obstetricians and gynecologists, pediatricians, endocrinologists, nutritionists and educational psychologists to ensure timely interventions that help children achieve optimal growth and development. Additionally, educators should be encouraged to develop special education programs that support learning for preterm and SGA children, while guiding families to build an environment that stimulates their children's development. The study also highlights the need for appropriate health insurance policies to ensure that preterm and SGA children can access to essential health care and development services without financial barriers.

Future research should aim for a larger scale, broader scope, and longer duration on growth and development patterns of preterm and SGA children, to deepen understanding on the factors influencing their growth and development, thereby proposing specific, appropriate, and effective policies in health care for preterm and SGA children.

Thai Nguyen, 13 /2/ 2025

Advisors

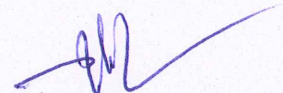
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