NEW MAIN SCIENTIFIC CONTRIBUTIONS OF THE THESIS

Name of thesis: "***The stunting situation and preventive efficacy in children aged from 12 to 36 months at Kim Dong, Hung Yen in 2017***"

Speciality: Public Health

Code: 62.72.03.01

Full name: Nguyen Xuan Hung

Full name of supervisor:

1. Assoc. PhD. Dang Van Chuc
2. Prof. PhD. Pham Duy Tuong

Educational foundation: Haiphong University of Medicine and Pharmacy

Summary of new main scientific contributions of the thesis:

1. This was the first study done in Viet Nam by directly supplementing vitamin D together with healthy and nutritional education communication to improve the stunting status.

2. The thesis determined the high stunting and vitamin D deficiency and insufficiency incidence in children in Hung Yen (23.5% and 47.7% respectively), demonstrating that children with stunting were not only in shortage of protein-energy in long time but also vitamin D.

Some risk factors related to the stunting and the vitamin D deficiency and insufficiency included maternal height < 150cm, maternal gain weight during pregnancy < 12 kg, not fully breastfeeding in the first 6 months, weaning before 12 months, bacterial infections, not fully vaccinated according to the schedule, sun exposure < 6 h/week.

3. The vitamin D supplementation and all round care for children improved the stunting status and the vitamin D deficiency and insufficiency.

After 12 months of the intervention, the vitamin D concentration increased from 32.39 ± 9.06 ng/mL to 35.31 ± 6.52 ng/mL. The vitamin D deficiency and insufficiency incidence reduced from 38.9% to 18.2% and the improved incidence was 20.7% and the preventive efficacy was 53.21%.

In the intervention group, after the intervention, the mean height increased to 2.65 ± 0.3cm compared with before the intervention. In the control group, the mean height increased 1.24 ± 0.04 cm.

The stunting incidence reduced to 15.6% in the intervention group, the improved incidence before and after the intervention was statistically signifcant and the preventive efficacy went up to 61.1%.

The supplementation of vitamin D together with healthy and nutritional education communication showed the efficacy in reducing the stunting and vitamin D deficiecy and insufficiency incidence. This intervention need to multiply in healthy and nutritional care for children in the community.

Name of supervisors	**Name of graduate student**
(Name and signature)	*(Name and signature)*
	Nguyen Xuan Hung