

THE NEW MAIN SCIENTIFIC CONTRIBUTION OF THE THESIS

1. **Name of thesis:** Lead contamination in children living near the mine - the results of interventions at two study sites in Bac Kan and Thai Nguyen in 2016-2018
2. **Speciality:** Public Health
3. **Code:** 62.72.03.01
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6. **Educational foundation:** Haiphong University of Medicine and Pharmacy
7. **Summary of new main scientific contribution of the thesis**

The research has contributed to the national data on the status of lead contamination and of the physical and mental development in children living near the mine at Ban Thi, Bac Kan and Tan Long, Thai Nguyen - which has not been studied before in Viet Nam. Researching among large number of children with invasive testing is one of the major difficulties. The study results showed that the percentage of children with blood lead concentrations $\geq 10 \mu\text{g/dl}$ was 65.76% included 80.51% in Ban Thi and 51.92% in Tan Long. In Tan Long, 1.92% had blood lead levels above $45 \mu\text{g/dl}$. The average blood lead concentration is $14.41 \pm 9, 42 \mu\text{g/dl}$. Children who have high blood lead levels tend to be lower in height (1 to 4 cm), weight (0.5 to 2.5 kg), chest index (0.5 to 1.3 cm), BMI (0.12 to 0.3) and Hb (3g/l) compared to the others. Children having lead-contaminated also had a higher risk of anxiety disorders and attention deficit hyperactivity according to the DBC-P and Vanderbilt scales.

Factors related to lead contamination in children were polluted environment, male gender and living near mining areas.

The research results illustrated also that the low-cost intervention model by health education communication combined with the use of pectin product is feasible and has a positive effect, contributing to changing attitudes and practices knowledge of the people on preventing lead poisoning for children while reducing the level of lead contamination and improving of children's health, which can be applied in other places with high risk of lead poisoning in Vietnam.

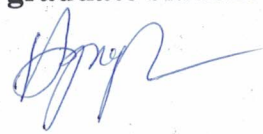
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