

PH 012294 : MAJOR HEALTH SYSTEMS DEVELOPMENT PROGRAMME  
 KEYWORDS : PESTICIDES/PESTICIDE-RELATED SYMPTOMS/HEALTH  
 EFFECT

PAISIT BOONYAKAWEE: HEALTH EFFECTS OF PESTICIDES USE IN  
 AGRICULTURISTS AT TOMBON KRABINOI AMPHUR MEUANG  
 KRABI PROVINCE, 2007. THESIS ADVISOR: ROBERT SEDGWICK  
 CHAPMAN, M.D., M.P.H., 155 PP,

A cross-sectional study of 262 agriculturists was conducted in Tambon Krabinoi, Amphur Meuang, Krabi Province. Major study goals were; (1) to explore associations of pesticide-related symptom frequencies (dependent variables) with sociodemographic characteristics, occupational pesticide use, and other factors (independent variables); and (2) to explore interrelationships among pesticide-related knowledge, attitude, and practice. Using a standardized, pre-tested questionnaire, face-to-face interviews were conducted in July 2007. 134 subjects did not use pesticides, and 128 subjects used or contacted pesticides. The data were described using means, frequencies, percentages and standard deviations. Chi-square statistics were calculated to test for relationships between independent and dependent variables.

55.7% of subjects were male, average age was 47.19 years, 52.3% had education level at least pratom grade 4, 68.8% that smoked at present, 66.4% drank any kind of alcoholic beverage less than one time per month, 91.6% cultivated crops by themselves, 69.8% grew Para Rubber, 48.1% had done agriculture less than 15 years. Among the 128 subjects who used or contacted pesticides, 60.2% had used pesticides less than 5 years, 57.8% often use pesticide (1 – 3 times a year), 66.4% dissolved pesticide in water not above 50 c.c. per rai on average, 73.4% usually spray pesticide before 8.00 am., (43.8%) had most recently used or contacted pesticides 31 – 60 days ago. Among all subjects, 66.4% had good pesticide-related knowledge (10 – 12 points), the average knowledge score was 9.72 points. 69.1% had a medium level of attitude (37 – 47 point), the average attitude score was 44.18 points. 78.9% had good level of practice (more than 104 point), the average practice score was 109.44 points from a maximum possible of 130 points.

A total of 9 symptoms and symptom groups was analyzed. The most prevalent symptom was rash (45.3%). There was a tendency for symptom rates to be higher in subjects with higher or longer pesticide exposure, but this tendency was not strong. Gender, work characteristic, time duration in agriculture, type of cultivation, exposure level, duration using pesticides, pesticide use frequency, time of most recent pesticide use, and frequency of drinking alcohol were all associated with rates of one or more symptoms. Knowledge and practice in pesticide use also had limited associations with symptoms. Pesticide-related knowledge and attitude were positively associated, as were attitude and practice. However, knowledge was not associated with practice.

I recommend that the occupational health and health promotion authorities should be concerned with both knowledge and attitude, to reduce pesticide toxicity and improve pesticide management programs.

**Program : Health Systems Development Student's signature.....**

**Academic Year : 2007**

**Advisor's signature.....**