

# The Application of Intervention Mapping in Developing a Parental Behavior Modification Program for Pesticide Exposure Prevention Among Children in Agricultural Areas for a Sub-District Health Promotion Hospital, Thailand

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**Abstract:** This study used a research and development (R&D) design consisting of two phases. Phase 1 aimed to understand parental behavior regarding pesticide exposure among children in agricultural areas. Data were collected by multiple parent focus group in Sakon Nakhon Province. Data collected was then analyzed using content analysis. Phase 2 aimed to develop and study the quality of a parental behavior modification program for pesticide exposure prevention among children in agricultural areas. The results in phase 1 were used as input factors to develop the foreside program by the Intervention Mapping (IM). The developed program was then tests and reviewed and reviewed by nine experts. Data were analyzed with mean and standard deviation. We found that parent's behavior in preventing pesticide exposure in their children was influenced by a least three factors, namely: attitudes toward pesticide exposure in their children, social norms and perceived behavioral control about pesticides exposure in their children. This meets the basic structure of Theory of Planned Behavior. The second phase involved developing a parental behavior modification program for pesticide exposure prevention in children in agricultural areas for a Sub-District Health Promotion Hospital. The components of the developed program were: 1) background and significance; 2) objective; 3) organization; 4) role of involved people; 5) guidelines for organizing four learning activities for the parent behavior modification program; 6) monitoring and evaluation and 7) program management. The results of the program's quality assessment found that the overall quality of the program is in a very good level. When considered each aspect, it was found that all aspects; accuracy standard, utility standard, appropriateness standard, feasibility standard and generalizability standard were in very good quality as well. The findings of this study suggest that the developed program should be implemented with parents who had desirable pesticide exposure prevention behaviors.

## INTRODUCTION

Young children (1-3 years old) living in an agricultural society are exposed to pesticides. Also, the studies on the pesticide exposure in 1-3 years old children living in agricultural areas in Sakon Nakhon Province found pesticides on children's skin up to 60 percent and Sakon Nakhon Province is the top 10 provinces of the country with highest number of cases having chemical poisoning and pesticides in children under the age of 5 years.

Although various departments involving diseases from poisoning and pesticides in children have been looking for solutions, but previous studies showed that the problem is still unable to be solved truly. Based on literature review of effective and efficient parental behavior modification programs in the prevention of pesticides in children living in agricultural areas, it was found that there is no such program in Thailand

## OBJECTIVE

This study, therefore, to develop and study the quality of a parental behavior modification program for pesticide exposure prevention among children in agricultural areas for a Sub-District Health Promotion Hospital in Sakon Nakhon Province, Thailand.

## METHODOLOGY

This research was conducted as a research and development (R&D) by dividing into 2 phases. **Phase 1** was the searching for the internal causal factors of parents with children aged 1-3 years in agricultural areas. The research results were input and applied as data in **Phase 2** for the development and study of the quality of the developed program by applying Intervention Mapping:IM as a base for development as follows.

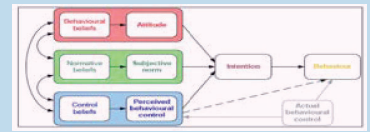


Phase 1

Phase 2

## RESULTS

### The study results in Phase 1



1. Unpreventable exposure
2. Everyone must accept the condition
3. My difficult duty

Causal factors of parents' prevention behaviors, least three factors, namely: attitude toward behavior, social norm and perceive behavioral control. meets the basic structure of Theory of Planned Behavior: TPB

### The study results in Phase 2



Parental Behavior Modification Program for Pesticide Exposure Prevention Among Children in Agricultural Areas for a Sub-District Health Promotion Hospital Handbook

- #### The components of the program
- 1) background and significance; 2) objectives;
  - 3) organization; 4) role of involved people;
  - 5) guidelines for organizing four learning activities for the parent behavior modification program;
    - Learning activity 1 – It can be prevented with understanding
    - Learning activity 2 - Everyone can take good care of their children
    - Learning activity 3 – Believe that you can do it
    - Learning activity 4 – Visit and follow up “Can it be done?”
  - 6) monitoring and evaluation
  - 7) program management.

Evaluate the program quality by 9 experts

The program's quality is in a very good level.

## CONCLUSION

This study has shown that the quality in very good level of a parental behavior modification program for pesticide exposure prevention among children in agricultural areas for a Sub-District Health Promotion Hospital with the application of IM. The results of this study indicate that related public health agencies in agricultural areas should take such program into practice by integrating with the routine work of agencies and applying to fit with the context of people and society for sustainability accordingly.

