



## Applying Intervention-Mapping Approach to Develop a Health-Related Intervention and Malaria Prevention for International Students

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### Dear Editor-in-Chief

Despite increasing interest in evidence –based interventions and a growing body of evidence for effectiveness of this approach, health educators and health promoters continue to do their routine practice due to complexity and barriers to apply evidence –based interventions. With the movement toward best practices, intervention mapping (IM) as a systematic process of intervention development highly recommended by researchers (1, 2). The authors pointed health educators and promoters must have the knowledge and skills to develop effective interventions to help individuals and communities change health risk behavior and initiate health-promoting behavior.

To prevent the health problem and malaria prevention among international students, implication of health-related intervention required.

To addressing the barriers that affect public health practice, we discuss IM approach for developing evidence-based interventions. The protocol of IM consist of six fundamental steps: 1) Conduct the needs assessment, and assess community capacity among the participatory planning group. Moreover, set specify program goals for

health and quality of life improvement of international student regarding preventing and control malaria. 2) Create matrices of change objectives through specifying performance and behavior change objectives, it is important and changeable determinants based on collected information were selected to create the matrix of change objectives. 3) Selecting theory-based intervention methods and practical applications, after consult with the planning group. During the meeting, the planning group, discussed appropriate theoretical methods, designed practical applications and what needs to change regarding behavioral outcomes. 4) Intervention program through organizing methods and applications into the health-related intervention. First, representatives of international students and implementers were consulted. Second, the program themes, scope, sequence of activities and material list were formed. Then, draft of program protocol and materials were prepared. Finally, pretest program protocol. 5) Specifying adoption and implementation plans, after identifying potential adopters and implementers, specify determinants for adoption and implementation health- related intervention. At



the end, the planning group based on selected methods and practical applications, designed intervention plan. 6) Generating the evaluation plan, the focus of this step is to facilitate program evaluation. The final product is the evaluation plan that includes the evaluation questions, indicators and measures and resources required to conduct the evaluation.

During planning group meeting, the program discussed evaluation questions, and developed indicators for evaluation plan.

Mohr and his colleagues (3) pointed out the limitations of step 2 and 4 of IM. The authors explicitly proposed that transition from the need assessment or cause of health problem to assess what changes should be addressed by possible intervention required actions to state the behavioral outcomes to be specific and linked to the health and quality of life outcomes. Performance objectives have to be specified to subdivide the behavior outcomes into smaller parts (3, 4). In our case, promoting healthy behavior by encouraging students to use bed net.

In step 3, methods and applications are selected to influence the determinants in the desired direction.

“In step 4, the methods and applications are organized in a program plan. This gets round the limitation of the Oinas-Kukkonen model” that “does not discuss how individual intervention elements may be varied or integrated into a larger treatment program” (5). IM has been used to develop Health interventions and promotion (6, 7). Moreover, the intervention developers focuses on the importance of parameters for use in technical aspect (7). When planning for adoption, stakeholders should be involved (8, 9). In our case, the health promotion intervention to be put into use, the students must first decide to adopt the intervention and may need to seek the approval from the university.

Overall, we propose IM as a systematic approach that provide a step-by- step evidence-based public health practice and malaria elimination (10).

## Conflict of interest

The authors declare that there is no conflict of interest.

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