## **Development of an Instrument for Measuring Attitudes towards** Safe Motorcycle Driving Behaviors among Thai Adolescents

Chanchai Yothayai<sup>1\*</sup>, Sujitra Tiansawad<sup>1</sup>, Warunee Fongkaew<sup>1</sup>, Jayanton Patumanond<sup>2</sup> and Carol Loveland-Cherry<sup>3</sup>

<sup>1</sup>Faculty of Nursing, Chiang Mai University, Chiang Mai 50200, Thailand <sup>2</sup>Faculty of Medicine, Chiang Mai University, Chiang Mai 50200, Thailand <sup>3</sup>School of Nursing, The University of Michigan, Michigan 48109, USA

## **ABSTRACT**

This study was a part of the main study using an ecological context to develop instruments to measure factors influencing safe motorcycle driving behaviors among Thai adolescents. The study aimed to develop an instrument to specifically measure Thai adolescents' attitudes towards these behaviors. The participants were purposefully recruited from students studying in vocational certificate levels 1-3 from vocational and technical colleges in Chiang Mai, Thailand. The instrument development research design included two phases.

The first phase was scale construction. The relevant terms and concepts were clarified and defined based on a literature review. Thirty six items with a 4-point Likert-type scale were generated using data obtained from focus group discussions and the literature. Content validity was assured by six experts. The items' CVI ranged between .83 to 1.00 and the scale's CVI was .90. Then the instrument was critiqued by six students to ensure clarity and readability. After the students' review, the revised scale consisted of 35 items with 6-point Likerttype scale.

The second phase was a psychometric properties evaluation using 491 students. The construct validity was evaluated with exploratory factor analysis. Six dimensions were extracted from 25 items. The total explained variance was 58.94%. The scale's alpha coefficient was .89 and for each dimension the coefficient ranged between .72 and .83. These results indicate that the scale is valid and reliable and can be used to assess attitudes towards safe motorcycle driving behaviors among Thai adolescents.

**Key words:** Scale development, Attitude, Adolescent, Motorcycle driving behavior

<sup>\*</sup>Corresponding author: E-mail: jane@chiangmai.ac.th