

Research Article

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Bach Xuan Tran <sup>1,4\*</sup>, Quyen Le Thi Nguyen <sup>2,4</sup>, Vuong Minh Nong <sup>1,4</sup>, Rachel Marie Maher <sup>1,4</sup>, Anh Tuan Nguyen <sup>1,4</sup>, Huyen Anh Nguyen <sup>1,4</sup>, Cuong Tat Nguyen <sup>1,4</sup>, Huyen Phuc Do <sup>3,4</sup>, Hoa Thi Lai <sup>1,4</sup> and Huong Thi Le <sup>1</sup>

<sup>1</sup>Institute for Preventive Medicine and Public Health, Hanoi Medical University, Hanoi, Vietnam

<sup>2</sup>School of Medicine and Pharmacy, Vietnam National University, Hanoi, Vietnam

<sup>3</sup>Hanoi School of Public Health, Hanoi, Vietnam

<sup>4</sup>Health Economics and Policy Research Alliance (HEPORA), Vietnam

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\*Corresponding author: Bach Xuan Tran, Lecturer in Health Economics, Hanoi Medical University, Institute for Preventive Medicine and Public Health, 1 Ton That Tung, Hanoi, 10000, Vietnam, Tel: 084982228662; E-mail: [btran.hmu@gmail.com](mailto:btran.hmu@gmail.com)

Received April 12, 2014; Accepted May 15, 2014; Published May 20, 2014

Citation:



items. Higher scores indicated higher levels of improvements. Reliability of measurement using the VESOP was estimated using Cronbach's alpha. In addition to the students public health knowledge acquisition – which is indicated by the grades they received - these changes represented the learning outcomes attained by the students.

### Statistical analysis

Descriptive statistical analysis was used to describe the characteristics of respondents. Chi-square and Student's t-test were used to examine the variation in these results. Exploratory factor analysis was applied to examine the construct validity of the VESOP. Five factors were extracted by the principle component analysis at an eigenvalue of 1.95, which was the threshold, defined using the screen test, where the eigenvalue curve flattened out. Orthogonal Varimax rotation with Kaisers' normalization was used to reclassify the measure items in order to increase the interpretability of these factors. The cut-off point for factor loadings was set at 0.40. For those items, which had cross-loadings, we assigned them into one domain based on the nature of the questions justified by expert's opinions. Internal consistency



Measures	Level of improvement		Distribution (%)			
	Mean	(95% CI)	1-None	2-Small	3-Moderate	4-



