

## Confirmatory Factor Analysis of an Instrument to Assess Quality in Pharmacy Service of Highly-Active Antiretroviral Therapy Program

Wacharin Chaitha<sup>1\*</sup>, Chupen Viboonsunti<sup>2</sup>, Unchalee Permsuwan<sup>2</sup>,  
Ratanaporn Awipan<sup>2</sup> and Penkarn Karnjanarat<sup>2</sup>

<sup>1</sup>*Chiang Saen Hospital, Ministry of Public Health, Chiang Saen, Chiang Rai 57150, Thailand*

<sup>2</sup>*Department of Pharmaceutical Care, Faculty of Pharmacy, Chiang Mai University, Chiang Mai 50200, Thailand*

\*Corresponding author. E-mail: [itchaita@yahoo.com](mailto:itchaita@yahoo.com)

### ABSTRACT

*The purpose of this study was to validate the instrument scale to measure patients' perception of quality in pharmacy service of the highly active antiretroviral therapy (HAART) program. The PSQ-HAART instrument which was developed, with an underpinning in the Gap Theory, in pharmacy context of the HAART program in community hospital in Chiang Rai province, was revised based on confirmatory factor analysis and replication of item analysis. Psychometric test was conducted during February 2005 among a random sample of 200 patients from HIV clinic at four community hospitals in Chiang Rai province. A total of 199 questionnaires were returned (99.5 % response rate). Of these, 183 questionnaires were used for data analysis. The results indicated that the instrument had high internal consistency reliability and construct validity. A six-factor structure: tangible-reliability, assurance-empathy, empathy, responsiveness I, responsiveness-assurance and responsiveness II was confirmed. The results also indicated that the 33-item scale had better fit than the 36-item scale. The instrument may allow pharmacy administrators to assess quality in pharmacy service when necessary, develop methods to balance service quality with knowledge/skill prior to providing service. Further testing of the instrument would provide more comprehensive evidence for its construct validity when assessing quality in pharmacy context of the HAART program of the country.*

**Key words:** Chiang Rai province, Community hospital, Confirmatory factor analysis, Gap Theory, Highly-active antiretroviral therapy, Pharmacy service, PSQ-HAART, Service quality, HAART

### INTRODUCTION

To be an effective practitioner in health profession, many service quality instruments have been developed and used in the study of health, and in health professions (e.g., especially medicine and nursing) for their specific purposes,