



Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.jfma-online.com



ORIGINAL ARTICLE

Medication knowledge to be improved in participants in community universities in Taiwan: Outcome of a nationwide community university program



Yen-Ming Huang^{a,b}, Yea-Huei Kao Yang^c, Swu-Jane Lin^d,
Karin Chiung-Sheue Chen^e, Chuan-Chi Kuo^f,
Fe-Lin Lin Wu^{b,d,e,*}

^a Division of Social and Administrative Sciences, School of Pharmacy, University of Wisconsin-Madison, Madison, WI, United States

^b Department of Pharmacy, National Taiwan University Hospital, College of Medicine, National Taiwan University, Taipei, Taiwan

^c Department of Clinical Pharmacy and Pharmaceutical Sciences, College of Medicine, National Cheng Kung University, Tainan, Taiwan

^d Graduate Institute of Clinical Pharmacy, College of Medicine, National Taiwan University, Taipei, Taiwan

^e School of Pharmacy, College of Medicine, National Taiwan University, Taipei, Taiwan

^f Yuanda Pharmacy, Taipei, Taiwan

Received 18 August 2013; received in revised form 26 June 2014; accepted 26 December 2014

KEYWORDS

health education;
knowledge;
pharmacist;
Taiwan

Background/Purpose: To assess knowledge improvement by the participants in a pharmacist-facilitated national community education program over a 4-month semester and to identify the educational needs of adults related to medications.

Methods: This was a single-group, pre- and post-program comparative study. From February 2005 to February 2006, 1983 community residents participating in the education program implemented at 57 community universities nationwide were included. A questionnaire consisting of 50 true/false questions was administered before and after the program to assess the participants' medication knowledge. Paired *t* test was used to analyze the pre- and post-program differences and generalized linear mixed models were applied to examine the demographic variables that might influence the background knowledge and outcome after adjusting for school effects.

Results: A total of 848 participants (42.8%) completed the pre-to-post questionnaire. Baseline medication knowledge was positively correlated with participants' education level and

Conflicts of interest: The authors have no conflicts of interest relevant to this article.

* Corresponding author. Graduate Institute of Clinical Pharmacy, College of Medicine, National Taiwan University, 33 Linsen South Road, Taipei City 10050, Taiwan.

E-mail address: flwu@ntu.edu.tw (F.-L.L. Wu).

<http://dx.doi.org/10.1016/j.jfma.2014.12.001>

0929-6646/Copyright © 2015, Elsevier Taiwan LLC & Formosan Medical Association. All rights reserved.

negatively correlated with age. Significant improvement (11.3%, $p < 0.001$) in medication knowledge was evident at the end of the program. The age and education level were significant determinants in the improvement of the pre-to-post program test score. The specific areas that required improvement most in the knowledge of the participants were: instructions on refill prescriptions, proper storage of medication, the health insurance system, drug use in special populations, and over-the-counter drugs.

Conclusion: This national program improved participants' medication knowledge over a 4-month period. Patient counseling focusing more on the knowledge deficiency identified in this study during patient care is recommended.

Copyright © 2015, Elsevier Taiwan LLC & Formosan Medical Association. All rights reserved.

Introduction

Because of failure to separate pharmacy from medical practice in Taiwan, few prescriptions are filled in community pharmacies.^{1,2} Pharmacy technicians are not allowed to fill prescriptions and many hospital pharmacists are occupied by distributive work. Most patients get information of their drugs mainly from the labeling on the drug envelopes.^{2,3} Inappropriate use of medication and inadequate knowledge of drug therapy among the general population have long been problems.^{1,4} Based on the successful experience of pharmacist-led patient education programs in Western countries,^{5,6} the Bureau of Pharmaceutical Affairs in the Department of Health in Taiwan sponsored the national Community Education Program on Medication Use (CEPMU) beginning in 2002. The CEPMU is a 5-year program designed to transfer medication knowledge from pharmacists to the general public in community universities.

With support from the government, other medical professions, and patient advocates, practice environment, pharmacy education, and interactions among pharmacists, patients, and other health practitioners have been considerably improved in the past few years in Taiwan. The 5-year CEPMU was one of the most critical contributing factors for all these encouraging changes. A study between September 2003 and January 2004 revealed that CEPMU improved the short-term medication knowledge of participants and led to greater appreciation of the role of pharmacists as knowledge workers.^{1,2} In 2005, efforts were made to improve the courses, teaching materials, and assessment tools and methods. After the improvements, a study was conducted to determine the effects of CEPMU. Different from previous studies, this study not only assessed knowledge improvement of the participants but also identified areas where the general public did not have adequate knowledge in medication use.

Prior to 2000, there was sparse research on the medical knowledge of the general public in Taiwan.⁷ The limited local studies showed that the general population required assistance from health practitioners to make good use of medical resources for better health.^{8,9} Most of the studies focused on patients with specific diseases or conditions (e.g., diabetes, asthma, pain control) and their families to improve the knowledge on disease managements and self-care.^{10–13} Although there were some health education programs at the community level, all of them were either held in a small scale and in restricted areas or were implemented as one-time training only.^{7,8} Different from previous studies, CEPMU targeted on the public population

to delivery general health care information when self-care was warranted. A preliminary evaluation of the program in 2003–2004 indicated that the general public did not have sufficient knowledge in self-care of health conditions, sources of obtaining drug information, or patient rights in the National Health Insurance in Taiwan.¹ Subsequently, we modified the contents of courses and questionnaire to adjust the program to better meet the needs of the public.

The primary objective of this study was to determine how much the participants knowledge had improved by doing the national community education program over the 4-month semester. A secondary objective was to identify the educational needs of adults related to medications.

Methods

Setting

The community university system is a nonformal educational institution for adults, under the supervision and subsidization of local governments with the goal of lifelong learning.¹⁴ The community universities usually locate in schools that can be easily accessed by public transportation. Currently, there are 83 community universities in Taiwan, and 57 of them collaborated with the Department of Health to provide CEPMU for the public. There is no known difference between the community universities that did and did not participate in the CEPMU program. Furthermore, to reduce the disparity between rural and urban areas, the CEPMU was offered in at least one community university in each rural or urban county.

Study design

This was a single-group pre- and post-program comparative study. A questionnaire was administered twice every semester: prior to the first lecture and again at the end of the 4-month program. Although an institutional review board approval was not required by our regulations, the questionnaire clearly stated the purpose of the study, and the participants answered the questions and signed their name of their own free will.

Participants

No formal qualifications were required to enter this program other than being older than 18 years old. Those who

Download English Version:

<https://daneshyari.com/en/article/3478383>

Download Persian Version:

<https://daneshyari.com/article/3478383>

[Daneshyari.com](https://daneshyari.com)