Effects of an Education Program on Intensive Care Unit Nurses' Attitudes and Behavioral Intentions to Advocate Deceased Donor Organ Donation

L.M. Lin[a], Chiu C. Lin[b,*], C.L. Chen[c], and Chih C. Lin[c]

[a]Liver Transplantation Center, Department of Nursing, Kaohsiung Chang Gung Memorial Hospital, and Chang Gung University College of Medicine, Kaohsiung, Taiwan; [b]College of Nursing, Kaohsiung Medical University, Kaohsiung, Taiwan; [c]Liver Transplantation Center, Department of Surgery, Kaohsiung Chang Gung Memorial Hospital, and Chang Gung University College of Medicine, Kaohsiung, Taiwan

ABSTRACT

Introduction. Organ shortage limits the application of organ transplantation. The attitudes of intensive care unit (ICU) staff play an important role in organ advocating. The effects of an education program for ICU nurses on organ advocating were uncertain. The purpose of this study was to explore the effects of an education program based on the Theory of Planned Behavior (TPB) on ICU nurses' attitudes and behavioral intentions to advocate deceased organ donation.

Methods. Participants were recruited from 3 different ICU units in medical centers and were randomly assigned to either an experimental group (n = 61) or a control group (n = 62). The nurses in the experimental group received comprehensive education programs, and the control groups received a brochure only. The outcome parameters were measured by questionnaires at 3 different time points of pretest, posttests immediately after education, and 2 months later.

Results. Before education, there was no difference in attitude and behavior intentions between the control and experimental groups. After TPB training, the nurses significantly changed their attitudes and behavior intentions on organ advocating, both immediately ($P < .01$) and 2 months after the education program ($P < .01$). In addition, multivariate analysis indicated that TPB training is significantly associated with the change of attitude ($P < .01$) and behavior intention ($P < .05$) of organ donation advocacy.

Conclusions. TPB education programs enhanced the ICU nurses' attitudes and behavioral intentions on advocating organ donation. Repeated education is advised to increase the participation of ICU nurses on organ advocacy.

ORGAN shortage remains the main obstacle for organ transplantation [1]. The donation rate is extremely low compared with that of Western countries, although organ advocacy has been promoted nationwide for several years in Taiwan [2]. The attitudes of intensive care unit (ICU) staff, the first-line caregivers for donors, play an important role in organ advocating. However, the ICU nurses are still reluctant to promote organ donation because of inadequate training and knowledge.

In the Theory of Planned Behavior (TPB), the attitude toward behavior is affected by behavioral belief and the behavioral outcome assessment. The subjective norm is influenced by the believed norm and motivation. Perceived behavior control is influenced by controlled belief and perceived power. All of these factors influence the behavioral intention [3,4]. Our previous results showed that education and video-illustrated lectures promote the intention of ICU nurses for organ advocating in limited

*Address correspondence to Chiu-Chu Lin, PhD, College of Nursing, Kaohsiung Medical University, Chiu-Chu Lin, No. 100, Shi-Chuan 1st Road, San Ming District, Kaohsiung 80708, Taiwan, ROC. E-mail: chiuchu@kmu.edu.tw

0041-1345/14/$–see front matter
http://dx.doi.org/10.1016/j.transproceed.2013.12.039

participants [5]. We postulated that the attitude of organ advocacy of ICU nurses would be more influenced by TPB-based education. Therefore, we designed the study to evaluate the effects of organ advocacy on ICU nurses by an educational training program based on TPB.

MATERIALS AND METHODS

Study Design

The study was approved by the Chang Gung Medical Foundation Institutional Review Board and Ethics Committee. In this study, 3 assessments were performed. The pretest assessment was performed before randomization. After completing the pretest assessment, the participants were balloted into either the control group or the experimental group. The experimental group would then undergo intervention, whereas the control group would only be given the organ donation promotional brochure. After the completion of intervention for the experimental group, both groups would undergo posttest assessment 1. To follow up the continual effect, the posttest assessment 2 would be performed 2 months later.

Allocation

Informed consent was obtained from all participants from July 2009 to January 2010. Participants were recruited from 3 different ICU units of general surgery, neurosurgery, and neurology and were required to have a minimum 3-month working period. Each ICU was randomized into control or experimental groups. Of 152 invited participants, 138 (90.8%) nurses agreed and entered the pretest stage.

The Consolidated Standard for Reporting Trials (CONSORT) workflow of this research is shown in Fig 1. The experimental group ($n = 73$) received an education program as the intervention, and the control group ($n = 65$) was given brochures only. Immediately after the education program, posttest assessment 1 was given to both groups. Three participants from the control group resigned from hospital work after the education. In the experimental group, 12 participants did not take the education program for personal reasons. The participants absent from the education program ($n = 12$) were excluded from analysis in the experimental group. Posttest analysis 2 was performed 2 months after the education program for both groups. No subject defaulted during this follow-up interval.

Intervention

The organ donation promotion brochure was given to all participants in the control group. The content included the significance and importance of organ donation, brain death certifying procedures, organ donation procedure information, legislation, and experiences of organ recipients and donor families. For the experimental group, in addition to the brochure, they also underwent an education program for organ donation based on the concept of TPB.

In the education program, activities such as viewing videos of organ donation promotion, journey of organ transplantation recipients and experience sharing, and journey of organ donor families and experience sharing were included in the education program, aiming to encourage the subjects to reflect on the significance of organ donation. Such activities were intended to promote a more positive attitude on organ donation among the participants. Moreover, neurosurgeons gave the 6-hour video and didactic lectures of "Introduction to Organ Transplant Act Legislation" and "Hospital Policies in Promoting Organ Donation." An experienced

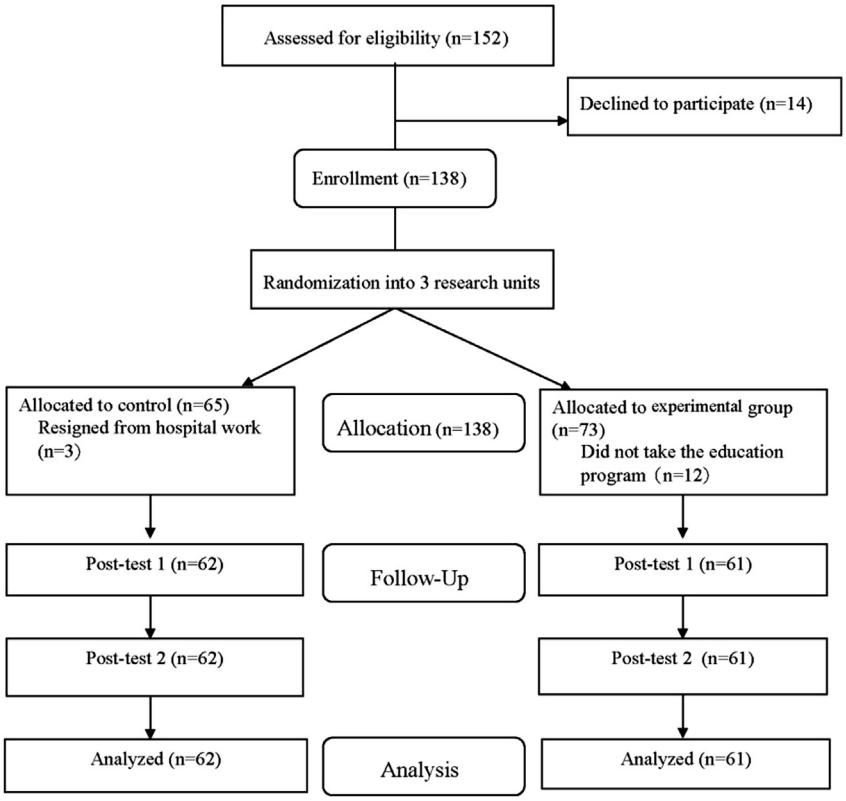

Fig 1. The Consolidated Standard for Reporting Trials (CONSORT) flowchart.