

**DEVELOPMENT AND EVALUATION OF
TOBACCO EDUCATION
FOR PHARMACY STUDENTS AND PHARMACISTS
IN YOGYAKARTA PROVINCE, INDONESIA**



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Several organizations encourage pharmacists to take an active role in promoting tobacco cessation. Lack of knowledge and a lack of cessation counseling skills and confidence are important barriers for pharmacists in practicing tobacco cessation counseling. This study aimed to develop and evaluate tobacco education (TE) for pharmacy students and pharmacists in Yogyakarta province, Indonesia.

Our study is a quasi-experimental study, using a pretest and posttest design with a control group. A total of 242 pharmacy students (137 intervention and 105 control group) and 241 pharmacists (127 intervention and 114 control group) in Yogyakarta province, Indonesia served as study samples. The developed TE comprised of four sequential modules (3-hour lecture) and three case scenarios (3-hour role-play). The contents of TE, were modified from the 5A's version (comprehensive counseling version) of the Rx for Change program to match with the Indonesian context. The developed TE was administered to 137 fifth-year pharmacy students at Gadjah Mada University (GMU) and 127 community pharmacists who participated in the tobacco-related continuing education. After TE completion, the effects of the developed TE was evaluated in term of knowledge, perceived role, self-efficacy, and ability to perform tobacco cessation counseling. In addition, cessation counseling provision at the practice site was also evaluated among pharmacists 4 weeks after TE completion, using the mysterious shopper (MS) method.

For both pharmacy students and pharmacists, significant improvement in knowledge, perceived role, and self-efficacy in the intervention group were identified. With respect to the ability to perform tobacco cessation counseling, 89.7% of pharmacy students and 65% of pharmacists in the intervention group were able to perform such counseling after training. In addition, we found that 62.2% of pharmacists in the intervention group were able to provide cessation counseling in practice sites during the 4 weeks follow up, as compared to none of the pharmacists in the control group.

The results revealed that the TE was successfully developed and implemented in both pharmacy students and pharmacists. Dissemination of TE to pharmacy students and pharmacists nationwide is strongly recommended.

**KEY WORDS :TOBACCO/ EDUCATION/ PHARMACY STUDENTS/
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