



Title	Development of Cancer Education Program focusing on Adolescent health in Nepal [an abstract of dissertation and a summary of dissertation review]
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学位論文内容の要旨

看護科学科目群：博士（看護学）

氏名： Poudel Kritika

学位論文題名

Development of cancer education program focusing on adolescent health in Nepal  
(ネパールにおけるadolescent healthに焦点を当てたがん教育プログラムの開発)

Introduction:

Cancer is the one of the leading noncommunicable diseases. It causes 9% of the mortalities in Nepal. As adolescence brings significant physical, psychological, and social changes, unhealthy habits like tobacco or alcohol use, lack of physical activity, can jeopardize their current and future health. Hence, promoting healthy behaviors, and taking steps to protect oneself from health risks are critical for disease prevention. Many researchers have focused on the importance of increasing public awareness concerning cancer prevention and screening. While more information will lead to increased public awareness and will encourage some minimal effort by them to change their behaviors, the new habit tends to not persist.

Objectives:

The main objective was to develop new cancer education program for high school students based on the health belief model and learning partner model.

Methods:

A new cancer education program was developed using the health belief model and the learning partner model. It involved the sharing of information from peer leaders to students (that is, students trained as peer leaders conducting the class using active learning methods), students to students (with students forming groups and conduct photovoice research on the theme of cancer, followed by narration and group work), and students to sharing partners (joint assignment). This education program focused on helping students take their health more seriously, increase critical thinking, enhance cancer communication, and promote healthy behaviors. The effectiveness of this program was compared with a traditional lecture method. A quantitative, longitudinal, non-randomized control group pre-test post-test design study was conducted among 313 students and their sharing partners from three schools in Lalitpur, Nepal. Cluster random sampling was used. The lottery method was used to separate students into groups in the schools. A baseline test was conducted prior to education program, and it was followed up at

two weeks and at three months. Results was measured using a paired t-test, and a two-way repeated measures ANOVA. Ethical permission was obtained from Hokkaido University and Nepal Health Research Council.

### Results:

In this study, the mean age of students was  $14.6 \pm 1.1$  and the median age was 14. About 51.4% of students were female. The mean score of total cancer knowledge (range 0-14) was  $6.4 \pm 2.4$  and  $6.4 \pm 2.3$  in the control and intervention groups during baseline ( $p > 0.050$ ). The paired t-tests showed statistically significant differences in knowledge, health beliefs, self-esteem, and health promoting behaviors between the control and intervention groups during different time phases. The two-way repeated-measures ANOVA showed that there was significant main effect of intervention on students' knowledge ( $F=22.6$ ,  $p < 0.001$ ), health belief ( $F=63.1$ ,  $p < 0.001$ ), perceived susceptibility ( $F=274.4$ ,  $p < 0.001$ ), perceived severity ( $F=46.6$ ,  $p < 0.001$ ), perceived benefits ( $F=35.3$ ,  $p < 0.001$ ), perceived barriers ( $F=53.2$ ,  $p < 0.001$ ), self-esteem ( $F=221.2$ ,  $p < 0.001$ ), health promotion ( $F=30.4$ ,  $p < 0.001$ ) in both the control and intervention groups. It also showed that there was significant interaction of intervention and time on students' knowledge ( $F=8.6$ ,  $p < 0.001$ ), health belief ( $F=27.1$ ,  $p < 0.001$ ), perceived susceptibility ( $F=55.2$ ,  $p < 0.001$ ), perceived severity ( $F=22.5$ ,  $p < 0.001$ ), perceived benefits ( $F=17.6$ ,  $p < 0.001$ ), perceived barriers ( $F=25.0$ ,  $p < 0.001$ ), self-esteem ( $F=59.5$ ,  $p < 0.001$ ), and health promotion ( $F=24.1$ ,  $p < 0.001$ ) in the control and intervention group.

The diffusion of cancer communication was observed in sharing partners based on their scores. There was a significant interaction effect on the sharing partner's total health beliefs ( $F=0.08$ ,  $p < 0.001$ ), perceived susceptibility ( $F=6.46$ ,  $p < 0.001$ ), and self-esteem ( $F=3.22$ ,  $p= 0.040$ ). No significant interaction was seen on knowledge or on other health belief subscales.

### Discussion:

In preventive health behaviors, Health Belief Model does not suggest a strategy for changing health-related actions. Hence, by integrating with Learning Partner Model, this study showed change in health promoting activities. There was change in knowledge, health beliefs, self-esteem, and health promoting behaviors of adolescents in intervention group, suggesting the effectiveness of peer-led education in Nepali classroom settings. Joint assignment supported the idea of diffusion of information within family. Peer-led education programs can be adopted easily in any classes. Time constraints, lack of manpower and support groups might limit the use of this new program in Nepal. However, connecting communities, organizations, volunteer health workers, hospitals and survivors in this new education program can help in making it more sustainable and approachable.