

Global Warming Education Effect on Nursing Students at Boromarajonani College of Nursing, Chang Wat Nonthaburi

Utsanee Tepworachai, Ed.D. *

Suntaree Pinyomit, M.N.S. **

Nopparat Muanmee ***

Sirilak Dejphet ***

บทคัดย่อ

สาเหตุที่สำคัญของการเกิดภาวะโลกร้อน ส่วนมากเกิดจากการกระทำของมนุษย์ โดยมนุษย์มีการใช้ทรัพยากรธรรมชาติอย่างฟุ่มเฟือย ในกลุ่มนักศึกษาพยาบาลพบว่า มีพฤติกรรมการใช้ไฟฟ้าและน้ำประปาอย่างไม่เหมาะสม การวิจัยในครั้งนี้จึงต้องการศึกษาถึงความรู้เกี่ยวกับภาวะโลกร้อนที่เกี่ยวข้องกับความตระหนักต่อภาวะโลกร้อนของนักศึกษาพยาบาล โดยใช้การวิจัยกึ่งทดลอง (Quasi – Experimental Reserch) เพื่อเปรียบเทียบคะแนนเฉลี่ยก่อนและหลังการร่วมกิจกรรม วัตถุประสงค์ของการวิจัยเพื่อศึกษาผลของการทำกิจกรรมให้ความรู้เรื่องภาวะโลกร้อนแก่นักศึกษาพยาบาล โดยมีสมมติฐานการวิจัยว่า นักศึกษามีความรู้เรื่องภาวะโลกร้อนหลังร่วมกิจกรรมมากกว่าก่อนร่วมกิจกรรม กลุ่มตัวอย่าง คือ นักศึกษาพยาบาลศาสตร์ชั้นปีที่ 1 จำนวน 139 คน ใช้วิธีการเลือกกลุ่มตัวอย่างแบบเฉพาะเจาะจง (Purposive Random Sampling) เครื่องมือที่ใช้ในการวิจัยเพื่อวัดความรู้ก่อนและหลังการทำกิจกรรม คือ แบบวัดความรู้ จำนวน 25 ข้อ กิจกรรมที่ใช้ คือ เสียงตามสาย บอร์ดนิทรรศการ วิดีทัศน์ และบรรยายโดยวิทยากร เรื่องกลวิธีลดภาวะโลกร้อน ผลการวิเคราะห์ความรู้ก่อนและหลังการทำกิจกรรม ใช้การวิเคราะห์ t - test ผลการวิจัยพบว่ามีความแตกต่างอย่างมีนัยสำคัญทางสถิติ ($p > .05$) ผลการวิจัยครั้งนี้ไม่สนับสนุนสมมติฐานที่ตั้งไว้ ซึ่งอาจอธิบายได้ดังนี้ กลุ่มตัวอย่างไม่มีความตระหนักถึงความสำคัญของปัญหาภาวะโลกร้อน เพราะคิดว่าเป็นปัญหาไกลตัว หรือกลุ่มตัวอย่างมีความรู้เรื่องภาวะโลกร้อนมาก่อนเข้าร่วมกิจกรรมในครั้งนี้

คำสำคัญ: ภาวะโลกร้อน นักศึกษาพยาบาล

Abstract

The purpose of this quasi-experimental study using one group pretest-posttest design was to examine the effects of global warming education activities on the first year students of Boromarajonani College of Nursing, Chang Wat Nonthaburi. A non-probability, purposive sample consisted of 139 first year nursing students who enrolled in academic year 2008. The intervention activities for providing global warming education to the students included a broadcasting global warming radio program on the campus, watching VCD about global warming education, visiting global warming exhibition and attending the conference on strategies reducing global warming with the leading scientist. The research instrument was a pre-post test for assessing knowledge relating to global warming. The data were analyzed using descriptive statistics and t - test for pretest-posttest differentiation.

* Director of Boromarajonani College of Nursing, Chang Wat Nonthaburi

** Nursing Instructor of Boromarajonani College of Nursing, Chang Wat Nonthaburi

*** Nursing students of Boromarajonani College of Nursing, Chang Wat Nonthaburi

The results of the study revealed that there were no statistically significant differences in the mean scores of knowledge about global warming before and after participating in the activities. It can be concluded that the intervention activities may not match or be effective for increasing the knowledge of the students. In addition, the students may already have previous knowledge relating to global warming, but not concern or aware of the importance of global warming problems.

Keyword: Global Warming, Nursing Students

Introduction

Global warming or climate change was the increase of global temperature resulted from Green House Effect (Panyathai organization, 2009). Green house effect is crucial to world as it can change the climate of the world. The main causes of Green House Effect were CO₂ and Methane released by fuel combustion, transportation and industrial factory. CO₂ collects some heat within the atmosphere. If green area is destroyed, an efficiency of CO₂ reuse mechanism will be reduced. These gases would obtain or collect the heat on the earth instead of reflecting to the atmosphere. Therefore, later the earth may have its atmosphere similar to the moon which is cold at night and hot in the daytime. This occurred because there was not enough atmosphere left to filtrate solar energy, especially if human cut more trees or damaged the green areas. Eventually, everything human have done will bounce back to harmful them as global warming is an evidence of that.

From many studies about global warming, it was found that there were many negative

impacts caused by global warming such as an increase of temperature from the green house effect, climate change, iceberg pole melting, and lack of fresh water because of high sea level. More over, some of aquatic animal and vegetable may stop growing and vanish. Several epidemic diseases may occur from food and water. These would also affect on economics resulted from flooding, deaths of people, less people work in the agriculture area and abandon their properties. The persons who would get more of these negative effects would be our children.

One of the reasons causing global warming was an increase of material and energy consumptions such as water, electricity, paper, and etc, without thinking of the limited resources existing in the world. The researchers found that nursing students at Boromarajonani College of Nursing, Chang Wat Nonthaburi had devoured tap water and electricity. Some students wasted tap water while brushing their teeth. Some students turned on the lights, and fans, while they were not in the room. Some of them charged the battery and left the charger on for the whole night. These behaviours increased an annual expense of the college for electricity, from October 2007 to October 2008 to 1,531,642.6 baht and tap water expense in the same period was 666,627.81 baht. It was very high comparing with our previous expenses. An overuse of these resources also led to an overuse of energy and power which can result in increasing green house effect. Thus, if the students could save or decrease the consumptions of the resources, they could help save the world in the meanwhile. The researchers, therefore were interested in creating activities to provide the students with the knowledge regarding global warming and, examine the result.

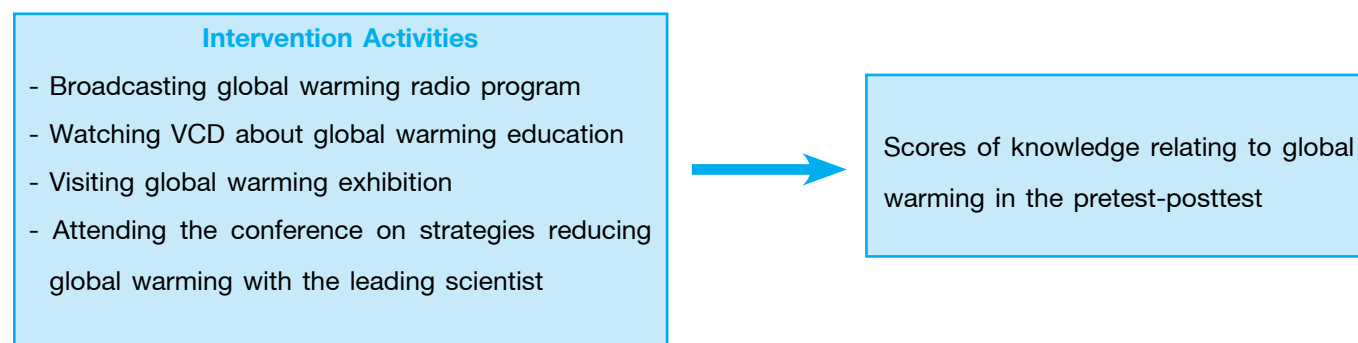
Objective

The purpose of this study was to examine the effects of global warming education activities on the first year students at Boromarajonani College of Nursing, Chang Wat Nonthaburi.

Hypothesis

The posttest scores of students' knowledge relating to global warming were higher than the pretest scores.

Conceptual Framework



Research Methodology

A quasi-experimental study was conducted using one group pretest-posttest design.

Population

The population of this study was composed 824 nursing students of Boromarajonani College of Nursing, Chang Wat Nonthaburi.

Sample

The purposive sample consisted of 139 first year nursing students who enrolled in academic year 2008.

Variables

Independent variables were the intervention activities for providing knowledge about global warming including a broadcasting global warming radio program on the campus, watching VCD about global warming education, visiting global warming exhibition and attending the conference on strategies reducing global warming with the leading scientist.

Dependent variables were the scores of knowledge relating to global warming in the pretest and posttest.

Instrument

The research instrument included a program of global warming education and a pre-post test for assessing knowledge relating to global warming. It consisted of 25 items and was developed by the researcher team after reviewing the literature, reports and articles relating to global warming. It was checked for the content validity by three experts. Then, the corrections of the instrument were done for both language and appropriation regarding the aim of the study.

Data Collection

The data were collected by the following steps:

1. Providing the information of the study including the objective, methods of data collection, time used and utilization of the study to the first year students of Boromarajonani College of Nursing, Chang Wat Nonthaburi.

2. Distributing the instrument as a pretest for assessing knowledge relating to global warming to the students, and giving 10 minutes for them to answer it.

3. Implementing the intervention activities

for six weeks.

4. Distributing the same instrument used in the pretest to assessing knowledge about global warming to the students after participating in the activities, and also giving 10 minutes for answering it.

5. Checking for the data completion and analyzing the data.

Data Analysis

The data were analyzed using descriptive statistics and *t* - test for pretest-posttest differentiation.

Results

The results of the study showed that the mean scores of knowledge relating to global warming before and after the students participating in the global warming education activities were 16.48 and 16.42, respectively (see Table 1). In addition, there was no statistically significant difference in the mean scores of knowledge about global warming before and after participating in the activities.

Table 1 Comparison of means and standard deviations of knowledge relating to global warming before and after participating in the activities

Knowledge relating to global warming	Pretest		Posttest		<i>t</i> – test	<i>p</i> - value
	\bar{X}	S.D.	\bar{X}	S.D.		
	16.48	1.90	16.42	2.26	0.242	0.809

**p* < .05

Discussion

The discussion can be divided into 2 parts as the following:

1. Knowledge relating to global warming in the pre-test and post-test.

The results of the study revealed that students had already had the knowledge relating to global warming before participating the intervention activities and were higher than in the posttest. This had occurred because, there were many resources providing and promoting about reducing use of energy which directly impacted on global warming such as television media, radio and newspapers. From the data collection with the students, they were active to the information and news relating to global warming reduction such as turn off the lights or fans when not using, using

clothing bags instead of plastic bags. There were many organizations help in preserving the energy and environment in order to reduce global warming, for instance, the Department of Promoting Environment Quality, Ministry of Natural Resources and Environment had developed the manual with 80 strategies for stopping global warming (Panyathai organization, 2009) and distributed to people in the communities in Thailand.

2. There were no significant differences in the knowledge of the students.

The intervention activities may not match or be effective for increasing the knowledge of the students. In addition, the students may already have previous knowledge relating to global warming, but did not concern nor aware of the importance of global warming problems.

Conclusion and Suggestions:

It can be concluded that the activities used in the study were not effective for improving the knowledge of the students about the importance and awareness of global warming. Therefore, further studies should be focused on creating the intervention activities that will help to improve the knowledge and awareness of students relating to global warming effectively.

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