

# **DEVELOPMENT OF A COMMITMENT MODEL FOR NURSING STUDENTS IN PROMOTING COMMUNITY HEALTH**

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**Abstract.** This action research was a survey coupled with a cross-sectional quasi-experimental design. The purpose of the study was to develop a commitment model for nursing students in promoting community health. Objectives were: (1) to survey and compare commitment levels, (2) to develop the model and (3) to evaluate the model for nursing students in promoting community health. A commitment test specially developed for the study was administered to 4,630 nursing students under the jurisdiction of the Ministry of Public Health countrywide. A trial of the model was conducted with nursing students from Phrapokklao Nursing College as the experimental group and Boromarajchonnanee Nursing College, Chonburi as the control group. Thirty subjects each were allotted to each class level in all four years. The results revealed that the overall commitment levels of nursing students related to community health development were fair. Students who were in higher educational levels had significantly higher commitment levels ( $p < .001$ ). As a result of the survey, the "Commitment Pattern Development" program was established. The program included objectives, contents, activities, tools, practical process, and evaluation segments. The program consisted of examining perceptions of community health, responding to community health development, appreciating community health development, planning community health development, and developing community health commitments. The time required was 32 hours. A Quasi Experimental research design was applied. 240 nursing students from two nursing colleges participated in this study. 120 nursing students at Phrapokklao Nursing College were assigned to the experimental group, whereas their counterparts from Boromarajchonnanee Nursing College, Chonburi were assigned to the control group. The result of this study showed that almost all of commitment levels of both experimental and control groups before applying the program were fair. The commitment levels of the nursing students in the experimental group after receiving the program were significantly higher than those of the nursing students before receiving the program ( $p < .001$ ). Compared to the control groups, the commitment levels of the experimental groups were significantly higher than those of the control groups ( $p < .001$ ). In the evaluation part, the commitment levels of community folks in terms of community health development, before participating with nursing students whose commitment levels were varied as to high and low levels. After participating in the action program facilitated by experimental nursing students; their commitment increased significantly to higher levels ( $p < .001$ ).

## **Background and Significance of the Study**

Institutions of higher education should realize the importance of academic services and promote the provision of such services to the community. This accords with the 1999 National Education Act, section 29, which states that:

"educational institutions in co-operation with individuals, families, communities, community organizations, local administration organizations, private persons, private organizations, professional bodies, religious institutions, enterprises and other social institutions shall contribute to strengthening communities by encouraging learning in the communities themselves".

In this regard, Srisa-arn (2000) claims that the foundation of a nation's development depends on its members, and each individual in the nation should be knowledgeable, healthy and economically sound. A review of the literature, however, shows very little research has been done on community education, despite the fact that it has become a major contemporary issue as a result of an educational paradigm shift.

Furthermore, community education plays a particularly vital role in the development of the nursing profession, various factors being taken into consideration. At present, the World Health

Organization's (WHO) and Thailand's health policies emphasize improving community health as a means to promote "good health for all" and to prevent people from being trapped in the "silly-poor-ill" cycle. Accordingly, in the year 2005, thirty-one nursing colleges under the Ministry of Public Health were seeking to respond to this policy. Unfortunately, this response has not yet affected the way that nurses are actually taught. From the present researcher's analysis of the currently in use 2002 Nursing Curriculum, it is clear that there is still a mismatch between the espoused community health policy and the present curriculum emphasis. That is, the latter focuses less on community health development than on treatment of patients. As a consequence, nursing graduates pay attention to the latter rather than to the former. In other words, they lack commitment to community services. This situation is in conflict with the educational and public health paradigm shifts referred to earlier, and thus the administration of nursing education is not satisfactory with regard to meeting the requirements of the world's and the country's health priorities. Therefore, nursing institutions should promote teaching and learning which encourage their students to realize the importance of community health development and their need to be committed to it.

In response to the problems outlined above, the present study seeks to develop a commitment model for nursing students in promoting community health: a model that has not been promoted before either in Thailand or abroad. The results of this research should be of benefit to those involved in the nursing profession in aligning educational system priorities with the world's and the country's health policies.

### **Research Objectives**

The purpose of this research was to develop a commitment model for nursing students to promote community health. Objectives were:

1. to survey and compare the commitment levels of nursing students;
2. to develop a commitment model for nursing students in promoting community health;
3. to evaluate the impact of the commitment model on nursing students and members of the community.

### **Scope of the Study**

The present study surveyed nursing students from thirty-one country wide nursing colleges of the Praboromrajchanok Institute for the Development of Health Workers under the Ministry of Public Health, in the year 2005. The commitment-related aspects also explored were: year of study, gender, cognitive level or G.P.A, and motivation to study nursing science.

In addition, past research and dissertations concerning the provision of academic services collected in the Department of Higher Education of the Faculty of Education, Chulalongkorn University, were analyzed. The provision of academic services is an important mission of higher education institutions, and the Department of Higher Education of Chulalongkorn University has been a central body for higher education studies since 1987.

Furthermore, the content of the 2002 Nursing Curriculum of the Praboromrajchanok Institute for the Development of Health Workers under the Ministry of Public Health was studied.

Finally, the commitment model developed in this study was implemented with an experimental group, consisting of 120 nursing students from Phrapokklao Nursing College. A control group consisted of 120 nursing students from Boromrajchonnane Nursing College, Chonburi. Both groups consisted of thirty students each from first, second, third and fourth years of study.

### **Definitions of Terms**

**Model:** refers to the representation or blueprint of a teaching program, which aims to create commitment. The teaching program is a clearly formulated procedure made up of objectives, content, activities, tools, practical processes and evaluation, which are required to satisfy certain goals.

**Commitment:** refers to affective factors involving interest, faith in and acceptance of as well as positive attitudes toward certain things; commitment to and demonstration of behaviors in accordance with the oath of one's institution; determination and devotion of physical and mental energy to accomplish things which one loves and believes; continuance in working and in following the normative standards of a society.

**Commitment of nursing students to community health promotion:** refers to willingness, interest and faith in, as well as realization of, community health promotion policies according to the principles of Six

Or's<sup>1</sup> ---ahaan (food), arom (emotion), okkamlangkaai (exercise), anaamai-singwaedlorm (public health), arokhaya (freedom from disease), and abaayamook (reduction and eradication of temptations); continuance in health promotion work; and determination to promote community health according to normative standards of a particular society. These can be measured or examined from one's intention, resolution, oath and expression of commitment to seriously follow the principles of the Six Or's (see above) according to one's knowledge and ability.

**Commitment of community members to community health promotion:** refers to positive attitudes toward, and interest in, taking care of one's health, measurable by one's oath to follow the principles of the Six Or's.

### Expected Outcomes

It is expected that this study will:

1. Provide guidelines for the nursing profession and institutions in accomplishing their objectives to encourage community members to have a commitment to personal health development, which will result in "good health for all" according to World Health Organization policy;
2. Provide guidelines to encourage a commitment to promoting community health for the general public;
3. Provide guidelines for the development of a nursing curriculum which would encourage nursing students to have commitment to community health promotion according to the principles of the Six Or's;
4. Provide guidelines for the development of teaching and learning of nursing science to produce nursing graduates, who have a commitment to community health promotion; and,
5. Ultimately improve the Thai people's health and quality of life.

### Research Procedures

This study is an example of action research using a survey and cross-sectional quasi-experimental design.

**Survey.** The survey was conducted to explore and compare the commitment levels of nursing students to community health promotion. To do this, the "*commitment of nursing students to community health promotion*" questionnaire was administered to 4,630 nursing students enrolled in thirty-one nursing colleges of the Praboromrajchanok Institute for the Development of Health Workers under the Ministry of Public Health, in the year 2005.

**Quasi-experimental research.** From the survey results, the "*commitment pattern development*" was produced and tried on the experimental group of 120 nursing students from Phrapokklao Nursing College. These subjects received thirty-two hours of training using the commitment model. The control group consisted of 120 nursing students from Boromrajchonnane Nursing College, Chonburi.

The commitment model was evaluated using fifteen highly committed nursing students from the experimental group. These students received field training in a community in Tachang District, Chantaburi Province.

### Data Analysis

The data were analyzed as follows:

1. The commitment levels of nursing students countrywide to community health promotion were analyzed, using  $\bar{X}$ , S.D. and percentages;
2. The factors related to the commitment levels of nursing students were analyzed, using ANOVA;
3. The commitment levels of nursing students in the experimental group prior to and after the treatment and of nursing students in the control group were compared, using a paired t-test;

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<sup>1</sup> The term "Or's" is used because each of the six words in Thai begins with the letter 'อ', which can be represented in English as 'Or'.

4. The commitment levels of nursing students in the experimental group and in the control group were compared, using an independent t-test;
5. The commitment levels of community members prior to and after receiving the treatment from highly committed nursing students were compared, using a paired t-test.

## Results

The research results are divided into three sections.

### Section 1: Results of the development of the model to encourage the commitment of nursing students to community health promotion.

The present author developed the commitment model according to the theories of model development by Joyce and Weil (1986) and Kaemmanee (2005), and of commitment by Krathwohl et al. (1973), Meyer and Allen (1997), and Perry (1970). The results are illustrated in the following figure.

#### The model to encourage the commitment of nursing students To community health promotion



From the figure, the development of the model to encourage the commitment of nursing students to community health promotion resulted from the paradigm shifts in higher education and public health administration. In other words, nursing students need to adjust their commitment pattern to respond to the

changing higher education and public health administration requirements. To develop the desired commitment pattern, three commitment-related frameworks were needed: Krathwohl et al.'s (1973) theory of emotional and affective development, Perry's (1970) framework of commitment development, Meyer and Allen's (1997) framework of commitment factors. Also, Joyce and Weil's (1986) and Kaemmanee's (2005) model development frameworks were taken into consideration. These were integrated to produce a unified commitment development model.

Following Joyce and Weil (1986) and Kaemmanee (2005), the model was developed, consisting of four elements: objectives, contents (including activities and materials), implementation procedures, and evaluation. The contents of the model were developed, following Krathwohl *et al.* (1973), Meyer and Allen (1997), and Perry (1970), and contained five tasks:

- Task 1: Perceiving community health
- Task 2: Responding to community health development
- Task 3: Appreciating community health development
- Task 4: Planning community health development
- Task 5: Developing community health commitments

The teaching and learning activities included in the model were developed following the CIPPA model, consisting of 1) construction of knowledge, 2) interaction, 3) physical participation, 4) process learning, and 5) application.

In the teaching and learning activities, the AIC technique and brain-based learning theories were employed. AIC stands for appreciation, influence and control. As for appreciation, learners were encouraged to give compliments to other learners. As for influence, learners were encouraged to use their creativity in order to help their group to accomplish work. As for control, learners were encouraged to complete their work according to plan.

The brain-based learning theories, according to Achava-Amrung (2005), Buasai (2005) and Jensen (2000), postulate that learners should be stimulated to think creatively 'outside the box', and to develop the belief that all work is easy and that nothing is beyond their capacity if they have determination and commitment. It is postulated that in a good environment, the brain will work at its fullest potential through the five senses of sight, sound, smell, taste and touch. Thus, in teaching and learning, learners sat in an air-conditioned room with optimal illumination; were provided with effective and adequate audio-visual aids; and had adequate space for group work.

Following the brain-based learning theories, the teaching and learning were based mostly on activities; aiming at promoting cognitive and affective development. For example, learners played games stimulating their thinking and eliciting their opinions. In addition, they sang songs meaningfully related to the nursing profession. Elizabeth (1997) mentions that songs have a positive impact on the function of the brain. Basically, positive feelings and emotions will be induced. The sound of songs creates brain mapping and encourages dendrites to extend, resulting in creative thinking. Furthermore, learners participated in activities in which they listened to recordings, the contents of which would help them to develop a more gentle state of mind with the attendant power to overcome obstacles in life. Also, learners were required to take an oath of commitment in front of the Buddha image, which involved the five senses: they saw the image; they said and heard the oath; they smelled the scent of joss sticks; and they did the "wai" (the pressing of the two palms to show respect). The activities developed by the researcher may be said to have a positive influence on cognitive and affective development; aiming at promoting commitment in nursing students.

**The development of a research tool.** The research tool was developed, following Krathwohl *et al.*'s, Meyer and Allen's and Perry's theories. The Kronbach alpha reliability tests indicated that the questionnaire used to survey the commitment levels of community members to personal health promotion had the reliability of 0.97.

## **Section 2: Results from the comparison of the commitment levels of nursing students to community health promotion.**

2.1 Results from the survey of the commitment levels of nursing students from thirty-one nursing colleges of the Praboromrajchanok Institute for the Development of Health Workers under the Ministry of Public health revealed that the majority of nursing students had a fair level of commitment to community health promotion, as shown in Table 1.

**Table 1: Mean, standard deviation, frequency and percentage of nursing students**

Commitment level	Range	Frequency	Percentage
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High	91-120	0	0
Moderate	61-90	562	12.1
Fair	31-60	2,189	47.3
Low	1-30	1,879	40.6

N = 4,630                      Max = 66;    Min = 26;     $\bar{X}$  = 36.65;    S.D = 12.37

2.2 Results from the analysis of factors related to the commitment levels of nursing students to community health promotion suggested that students in different years showed statistically significant differences in their commitment levels, at the degree of confidence level of .001. Nursing students in higher years had higher commitment levels than did those in lower years. Nursing students in third year had similar commitment levels to those in fourth year and those in first year were similar to those in second year, and the commitment levels of the first two groups were higher than those of the latter two. This is illustrated in Table 2.

**Table 2: Comparison of the mean commitment level scores of nursing students classified by year of study (multiple comparisons)**

	Year of study	Mean difference	S.D.	P=value
Year 4	Year 1	4.94	.29	.000***
	Year 2	4.50	.28	.000***
	Year 3	.090	.30	.995
Year 3	Year 1	4.85	.30	.000***
	Year 2	4.41	.28	.000***
Year 2	Year 1	.44	.24	.334

N = 4,630

\*p < .001

2.3 results from the comparison of nursing students in the experimental group and the control group before the treatment indicated no difference between the two groups, as shown in Table 3.

**Table 3: Comparison of the mean commitment level scores between the experimental group and the control group before the treatment**

Pre-treatment commitment level	$\bar{X}$	S.D.	T	p-value
Experimental group	35.79	14.94	.053	.958
Control group	35.89	14.36		

N = 240

2.4 Results from the comparison of the commitment levels of the experimental group before and after the treatment revealed that the post-treatment commitment levels were significantly different from the pre-treatment commitment levels. Before the treatment, the majority of students had a fair level of commitment. After the treatment, the majority of students had a high level of commitment. This is shown in Tables 4 and 5.

**Table 4: Mean, standard deviation, frequency and percentage of the experimental group classified by commitment level**

commitment level	Rang	Pre-test		Post-test	
		Frequency	Percentage	Frequency	Percentage
High	91-120	0	0	61	50.8
Moderate	61-90	9	7.5	59	49.2
Fair	31-60	60	50	0	0
Low	1-30	51	42.5	0	0

N = 120

**Table 5: Comparison of the mean commitment level scores of the experimental group before and after the treatment**

commitment level	$\bar{X}$	S.D.	T	p-value
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Pre-test	35.79	14.94	37.632	.000***
Post-test	90.84	9.92		
N = 120		***p < .001		

2.5 Results from the comparison of the commitment levels of the control group between the two tests administered before and after the treatment conducted on the experimental group indicated no statistically significant difference, as shown in Table 6.

**Table 6: Comparison of the mean commitment level scores of the control group between the two tests**

commitment level	$\bar{X}$	S.D.	T	p-value
Test 1 (Pre-test)	35.89	14.36	1.747	.083
Test 2 (Post-test)	35.92	14.39		

N = 120

2.6 Results from the comparison of the commitment levels between the experimental group and the control group suggested that the commitment levels of the two groups were statistically different at the degree of confidence level of .001. The experimental group had higher commitment levels than did the control group, as shown in Table 7.

**Table 7: Comparison of the mean commitment level scores between the experimental group and the control group after the treatment**

Pre-treatment commitment level	$\bar{X}$	S.D.	T	p-value
Experimental group	90.84	9.92	34.429	.000***
Control group	35.92	14.39		

N = 120

\*\*\*p < .001

### Section 3: Results of the evaluation of the impact of the commitment model on nursing students and community members.

The commitment model was evaluated as follows. Fifteen highly committed nursing students participated in a five-day activity to encourage commitment to health development to 130 community members in Tachang District, Chantaburi Province. The majority of community members were female (66.9%) and adult (51.5%), had received high school education (40%), and were merchants (30%). The results were as follows:

3.1 Results from the survey of the commitment levels of community members revealed that before the treatment, the majority of community members had a low degree of commitment (54.7% of N). After the treatment, they had a moderate degree of commitment (51.5% of N). These results are shown in Table 8.

**Table 8: Mean, standard deviation, frequency and percentage of community members classified by commitment level**

commitment level	Rang	Pre-test		Post-test	
		Frequency	Percentage	Frequency	Percentage
High	76-100	0	0	61	47.0
Moderate	51-75	5	3.8	67	51.5
Fair	25-50	59	45.5	2	1.5
Low	1-25	66	50.8	0	0

N = 130

Max = 71; Min = 3;

Max = 85; Min = 50;

$\bar{X}$  = 33.47; S.D. = 14.49  $\bar{X}$  = 81.05; S.D. = 10.32

3.2 Results from the comparison of the commitment levels of community members before and after the treatment indicated that the pre- and post-treatment commitment levels were statistically different at the degree of confidence level of .001. The commitment levels after the treatment were higher than those before the treatment, as shown in Table 9.

**Table 9: Comparison of the mean commitment level scores of the community members before and after the treatment**

commitment level	$\bar{X}$	S.D.	T	p-value
Pre-test	33.47	14.49	34.19	.000***
Post-test	81.05	10.32		

N = 120

\*\*\*p < .00

#### **Suggestions for Future Action**

1. Nursing colleges under the Ministry of Public health are responsible for producing nursing graduates who have the duty to promote, protect, rejuvenate and take care of the health of their community members. Therefore, a program or model should be established to educate nursing students in the significance of community health development and further to promote their wholehearted commitment to the ideas of community health service. This will ultimately result in the good health of the general public, implementing the policies of the World Health Organization and the 2002 National Agenda of Thailand.

2. Course contents concerning community health promotion should be added to the curriculum for first and second year students to stimulate them to perceive, respond to and have positive attitudes toward community health promotion from the very beginning. The commitment model developed in this study can be used as a foundation for doing so.

3. The commitment model developed in this study should be recommended to nursing professionals and community health officials and staffs to stimulate them to have commitment to community health promotion, which will have positive results in sustained health development.

4. The commitment model developed in this study should be used as a guideline for the development of the “Nursing Colleges to Promote Good Health with Six Or’s” project to establish a pilot nursing college to respond to the country’s health policies.

#### **Suggestions for Applications of the Model**

In applying the model developed in this study, various factors need to be taken into consideration.

1. The present model is suitable for encouraging nursing students to have commitment to community health promotion. Its applications to other objectives or other types of commitments should be done on the basis of adjustments in content and teaching and learning activities to respond to the changing requirements. In this process, Krathwohl *et al.*’s, Meyer and Allen’s and Perry’s theories can still be used as guidelines.

2. Teaching and learning activities should be adjusted to suit learners. In doing so, Joyce and Weil’s framework and the CIPPA model can still be used. According to Krathwohl *et al.* (1973), Meyer and Allen (1997), and Perry (1970), the activities should also aim at satisfying the objectives of affective development pertaining to each learning phase. Moreover, learners should be stimulated to develop cognitive, affective and social learning skills in tandem.

3. Environments facilitating both self- and collaborative learning should be created.

4. Objectives of teaching and learning activities should be clearly formulated by answering questions like “that skills or behaviors are learners expected to develop?”, “what results or outcomes are expected from learners?”, etc. Besides, instructional media and materials should be adequate to satisfy learning needs.

#### **Suggestions for Further Research**

1. Research should be conducted on the application of the present model to the development of nursing students under the Office of the University Affairs, nursing professionals, and community health officials and staffs.



2. Research should be conducted on the development of commitment of higher education students in other academic areas using the present commitment model as a guideline.

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