

The Effectiveness of the Practical Skills Teaching and Learning management Program for Bachelor of Nursing Students to Promote Learning of Breastfeeding

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Received: 13-May-2023

Revised: 08-June-2023

Accepted: 02-July-2023

Abstract

Background and importance of the problem: Professional nurse be a health worker who is an important health personnel

in promoting exclusive breastfeeding to be extremely effective. Development of the capacity of professional nurses that should begin with the creation of nursing graduates who have appropriate the capacity of cognitive domain, affective domain and psychomotor domain in promoting and supporting exclusive breastfeeding. The purpose of the research was to investigate whether the Practical Skills Teaching and Learning Management Programs (PSTLMP) in Bachelor of Nursing Students to improve learning of breastfeeding compared with a standard teaching and learning management programs.

Materials and methods: The research was conducted in the 3rd year nursing students, academic year 2022, Bachelor of Nursing Science Program, Faculty of Nursing, Western University, Watcharapol Campus, 80 people from January to May 2023 were Quasi-Experimental assigned to receive the Practical Skills Teaching and Learning Management Programs or PSTLMP (intervention group) or to receive a routine standard Learning Management Programs (control group) with 40 Bachelor of Nursing Science Program in each group. Intra-group comparison was carried out using paired t-test and one-way ANOVA for inter-group comparison. Compare the competency score of cognitive domain, affective domain and psychomotor domain between the intervention group and the control group on pre-test, post-test and after 1 month follow up-test by calculating the test on various groups, and calculated by Chi-square test.

Results: The finding showed the capacity score of cognitive domain, affective domain and psychomotor domain of learning about breastfeeding in the intervention group after and 1 month follow-up after being given the Practical Skills Teaching and Learning Management Programs or PSTLMP were significantly higher than those when compared in before being given the program at the .05 level ($P < 0.001$ total). Additional that the capacity score of cognitive domain, affective domain and psychomotor domain of learning about breastfeeding in the intervention group after being given the program was significantly higher than those when compared with the control group at the .05 level ($P < 0.041$, $P < 0.044$ and $P < 0.038$ respectively). And the capacity score of affective domain and psychomotor domain of learning about breastfeeding in the intervention group in 1 month follow-up after being given the program was significantly higher than those when compared in the control group at the .05 level ($P < 0.020$ and $P < 0.034$ respectively).

Conclusion of the research: The Practical Skills Teaching and Learning Management Programs or PSTLMP significantly improves the capacity score learning of breastfeeding are cognitive domain, affective domain and psychomotor domain with statistical significant at .05 levels.

Index Terms—Bachelor of Nursing Science Program, Practical Skills Teaching and Learning Management Programs (PSTLMP), The performance of cognitive domain, affective domain and psychomotor domain

I. INTRODUCTION

“Breast milk” is perfect natural food to feed babies [1], because it contains more than 200 nutrients important for brain development and advantageous for both physical growth and psychological development of babies [2]. Also breastfeeding can continuous to contribute to a healthy life at all ages, as well as reducing the chances of chronic non-communicable diseases in adulthood. And it is widely accepted for the benefits of breastfeeding for mothers, babies, families and society, most notably in promoting bonding and attachment through the process of breastfeeding. In the same way, Ministry of Public Health, The Department of Health together with network partners has given importance and has continued to promote, support and protect breastfeeding. Also they have encouraged the target group those are pregnant women family members, the general public, special health care team for work together to successfully breastfeed according to the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) who suggested the exclusive breastfeeding until approximately 6 months with continued breastfeeding lengthways with other food for at least the first 2 years of baby's life [3]. But the statistical survey of Thailand reflected a great concern of exclusive breastfeeding situation that the breastfeeding rate dropped dramatically to 14% [4]. From that result, is an important point for health care of breastfeeding team who turns to seriously realize to review the policy to promote and support learning of breastfeeding. This may lead to further development opportunities to improve the rate of exclusive of breastfeeding [5].

Breastfeeding is a public health issue and the answer to the low rates in the international needs to be multi-faceted. Healthcare professionals have a key part to act in the overall multi-dimensional raise and support of breastfeeding. There is a fundamental need to increase breastfeeding skills among healthcare professionals. There is a need for high excellence learning suggestion to develop the plan and distribution of skills-based breastfeeding learning for healthcare professionals. [6]. Exactly, professional nurse is a health worker who is a significant mechanism for development and promoting effective breastfeeding. Also they are personnel who take care of women since pregnancy to after birth closely. Therefore, it is essential that every nurse practitioner should have basic knowledge including the practice of solving breastfeeding problems correctly [7]. Professional nurses are therefore an important force in promoting breastfeeding that must start from creating knowledge, attitudes and skill towards pregnant women, families and society to realize the benefits, importance and success of breastfeeding [8].

Currently teaching and learning about breastfeeding and the development of the competency of professional nurses should begin with the creation of nursing graduates who capable of practicing nursing in have appropriate knowledge, attitudes and competencies in promoting and supporting breastfeeding. However, at present, there are still limitations in teaching breastfeeding at the bachelor of nursing science level [9]. Therefore, the lack of breastfeeding instructional development will directly affect the knowledge, understanding, attitude and ability, of students to continue working to help mothers continue breastfeeding [5]. Therefore the effective breastfeeding nursing should be provided and improved to specifying the objectives of the learning to cover the capacity in three domains learning of breastfeeding. Those are cognitive domain, affective domain and psychomotor domain that related with Bloom's concept of evaluating capacity [10].

For that reasons, the researcher was interested in the study that realized the importance of developing the potential of nursing graduates to have the capacity in three domains of breastfeeding learning as cognitive domain, affective domain and psychomotor domain by using the Practical Skills Teaching and Learning Management Programs (PSTLMP) to investigate whether the PSTLMP in Bachelor of Nursing Students to improve learning of breastfeeding compared with a standard teaching and learning management Programs.

II. RESEARCH OBJECTIVES

The objective of the study was to investigate whether Practical Skills Teaching and Learning Management Programs (PSTLMP) in Bachelor of Nursing Students to improve learning of breastfeeding compared with a standard teaching

and learning management programs.

III. RESERCH METHODOLOGY

The study was conducted in 3rd year nursing students, academic year 2022, Bachelor of Nursing Science Program, Faculty of Nursing, Western University Watcharapol Campus, and 80 people from January to May 2023.

After being certified by the Research Ethics Committee, Western University, Volunteers who meet the collection criteria and had agreements to participate in the study project, were Quasi-Experimental assigned to receive the Practical Skills Teaching and Learning Management Programs or PSTLMP (intervention group) or to receive a standard teaching and learning management programs (control group) with 40 each group in 3rd year nursing students, academic year 2022, Bachelor of Nursing Science Program, which collected data and managed by researcher and informed the purposes and processes of the study, then the defense of human rights in this study. The researcher explained positive human relationships and opening ask some questions to promote self-reliance in participation as a volunteer to meet the collection criteria for both groups of 80 people in 3rd year nursing students, academic year 2022, Bachelor of Nursing Science Program, Faculty of Nursing, Western University

Watcharapol Campus. A quasi-experiment is an interventional study used to evaluation the causal influence of an involvement on object without random allocate, it exclusively lacks the part of random assignment to study or control. [11].

After the researcher has controlled the condition that will disturb the results of the study by selecting samples that are similar (Homogeneous Selection) in terms of intelligence and sex. There was a method of group matching (Group Matching) and randomly drawn names to be selected into the intervention group and the control group, 40 people each. The participants will not know whether they are in the intervention group or the control group. The treatment of participants in the two experimental groups was identical in all respects except for the study program.

IV. RESEARCH MATERIALS AND METHOD

This quasi-experiment study with research materials consisted of The Practical Skills Teaching and Learning Management Programs (PSTLMP) and the instrument used for data collection. PSTLMP developed a teaching and learning program base on the model of theory and practice of knowledge sharing together with empowerment, Knowledge Sharing Practices with Empowerment Strategies (KSPES) (Jutamart, 2021) [1]. It includes the theoretical concept of Knowledge Sharing (KM) with Gibson (1991)

[11] Empowerment Theory that designed for Bachelor of Nursing students to promote learning of breastfeeding. It consists with documents and teaching aids such as Learner's guide, Trainer's guide, PowerPoint, Supermom bag, VDO on breastfeeding and a guide on promoting breastfeeding with five stages of breastfeeding based on Harrow's concept [13]. There are imitation stage, manipulation stage, precision stage, articulation stage and naturalization stage which have clearly set the learning objectives of capacity of cognitive domain, affective domain and psychomotor domain [10] as shown in **figure 1**.

Another, the instrument used for data collection in this study, was a questionnaire from the literature and research related to the development and the transition from the research of the K. Jutamart K (2021) [1], which the researchers prepared 3 questions using the check list and rating scale 5 as test, questionnaire and the capacity assessment form of cognitive domain, affective domain and psychomotor domain. The instrument used for data collection in this study has been verified for Content validity by requesting 5 qualified professionals and tested Reliability by 30 similar characteristics sample with Kuder-Richardson 20.



Education Class

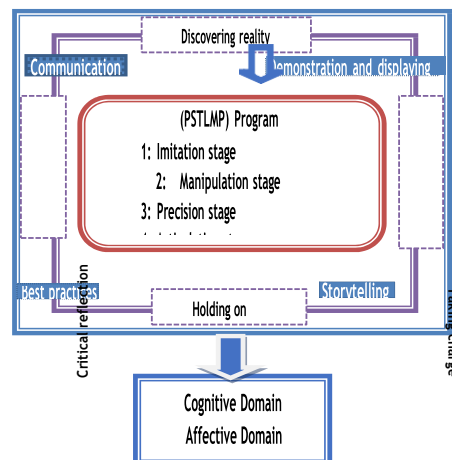


Figure1. Practical Skills Teaching and Learning Management Program (PSTLMP)

Statistics used in data analysis

The researcher studied the data collected using the program SPSS / PC version for statistical analysis. Results are showed as adjusted odds (OR) with 95% confidence interval (CI) P-value < 0.05, considered to be statistically significant.

Intra-group comparison was carried out using paired t-test and one-way ANOVA for inter-group comparison. Compare the competency score of cognitive domain, affective domain and psychomotor domain between the intervention group and the control group on pre-test, post-test and after 1 month follow up-test by calculating the test on various groups, and calculated by Chi-square test.

V. RESEARCH RESULTS

The participate in the study was Quasi-Experimental assigned to receive the Practical Skills Teaching and Learning Management Programs or PSTLMP (intervention group) or to receive a routine standard learning management programs (control group) with 40 Bachelor of Nursing Science Program in each group. It was found that the sample of nursing students, in 3rd year nursing students, and academic year 2022, Bachelor of Nursing Science Program, 80

people (100%), that the samples were not lost during the study, as summarized in Figure 2

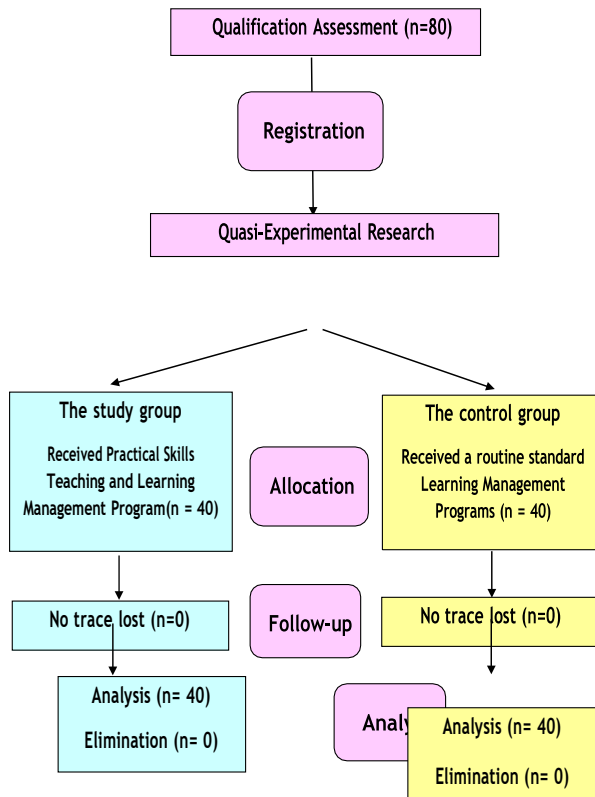


Figure 2. Screening, quasi-experiment, Termination and Loss to follow-up

Factors for demographic characteristics (age, marital status, learning status, intention and plan to learn about breastfeeding, education level, religions, learning about breastfeeding experience and health status) was showed in **Table 1**, the number and percentage of demographic data, intention and plan to learn about breastfeeding, learning about breastfeeding experience and health status of the intervention and control groups demonstrated that regarding the demographic factor, the intervention group received the Practical Skills Teaching and Learning Management Programs or PSTLMP while the control groups received a routine standard learning management programs. There was a statistically significant difference of 0.05 as demographic characteristics only of education level. The leading factors for demographic characteristics were age, marital status, learning status, intention and plan to learn about breastfeeding, religions, learning about breastfeeding experience and health status. There was no significant difference in 0.05, as concise in **Table 1**.

Regarding the result showed the average mean score the capacity of cognitive domain, affective domain and psychomotor domain to promote learning of breastfeeding that compared between being given the Practical Skills Teaching and Learning Management Programs or PSTLMP in the intervention group and a routine standard learning management programs in the control group in 3rd year nursing students, academic year 2022, Bachelor of Nursing Student. It was found that before receiving the program in the intervention group and the control group, there was a difference of 0.05 statistical significance towards learning of breastfeeding only the capacity of psychomotor domain (p-value = 0.001*). Nevertheless, no difference was found in the statistical significance of 0.05 the performance of cognitive domain and affective domain (p-value = 0.161 and 0.095 respectively).

About the result showed the average mean score the capacity of cognitive domain, affective domain and psychomotor

domain to promote learning of breastfeeding after being given the program in the intervention group compared with being given the program the control group, was a difference of 0.05 statistical significance of all three domains (p-value = 0.001*, 0.001* and 0.004* respectively). Moreover the average mean score the capacity of cognitive domain, affective domain and psychomotor domain to promote learning of breastfeeding after being given the program in the intervention group was higher than the score of the capacity all three domains in the control group, statistically significant at 0.05(p-value = 0.041*, 0.044* and 0.038* respectively).

When comparing the average score of capacity of cognitive domain, affective domain and psychomotor domain to promote learning of breastfeeding as 1month follow-up being given the program in the intervention group compared with the program in the control group was a difference of 0.05 statistical significance of all three domains(p-value = 0.001* total). Also the average mean score the capacity of two domains as affective domain and psychomotor domain in the intervention group was higher than the score of those two domains in the control group, statistically significant at 0.05 (p-value =0.020* and 0.034* respectively, as described in **Table 2**.

Demographic characteristics	Intervention group (N=40)		Control group (N=40)		Total (N=80)		P-value
	Number	Percent	Number	Percent	Number	Percent	
Ages (years)							
1. < 20	5	12.5	4	10.0	9	11.25	.089
2. 21-25	34	85.0	32	80.0	66	82.5	
3. 26-30	1	2.5	4	10.0	5	6.25	
Marital status							
1. Single	39	97.5	40	100.0	79	98.75	.099
2. Married	1	2.5	0	0.0	1	1.25	
Learning status							
1. Only study	37	92.5	35	87.5	72	90.0	.084
2. Study together with work	3	2.5	5	12.5	8	10.0	
Intention to learn about breastfeeding							
1. Intentional	39	97.5	33	82.5	72	90.0	.069
2. Unintentional	1	2.5	7	17.5	8	10.0	
Plans for learn about breastfeeding							
1. Planned	24	60.0	26	65.0	50	62.5	.082
2. Unplanned	16	40.0	14	35.0	30	37.5	
Education level							
1. high school year 6 or equivalent	34	85.0	24	60.0	58	72.5	.025*
2. Bachelor's degree	6	15.0	16	40.0	22	27.5	

Religions							
1. Buddhism	38	95.0	38	95.0	76	95.0	1.000
2. Islam	2	5.0	2	5.0	4	5.0	
learning about breastfeeding experience							
1. No	31	77.5	26	65.0	57	71.25	.058
2. Yes	9	22.5	14	35.0	23	23.75	
- 1 year experience	5	55.6	10	71.4	15	65.2	
- more than 1 year experience	4	44.4	4	28.6	8	34.8	
Health status							
1. be strong	32	80.0	30	75.0	62	77.5	0.88
2. not feeling well often	8	20.0	10	25.0	18	22.5	

Table1. Number and percentage factors of Bachelor of Nursing Students of the intervention group and control group

Questionnaire	Intervention group (N=40)		Control group (N=40)		P-value	P-value (Sig 2- tailed)
	X	S.D.	X	S.D.		
Cognitive Domain						
Before	2.13	0.56	1.93	0.69	0.238	0.161
After	2.73	0.45	1.15	0.66	0.041*	0.001*
1 month follow-up	2.58	0.59	1.48	0.68	0.958	0.001*
Affective Domain						
Before	1.98	0.39	2.14	0.43	0.674	0.095
After	2.64	0.38	1.32	0.42	0.044*	0.001*
1 month follow-up	2.71	0.39	1.58	0.62	0.020*	0.001*
Psychomotor Domain						
Before	2.52	0.76	1.93	0.62	0.076	0.001*
After	2.56	0.60	1.25	0.69	0.038*	0.004*
1 month follow-up	2.75	0.44	1.27	0.61	0.034*	0.001*

Table2. Mean capacity scores of cognitive domain, affective domain and psychomotor domain to promote learning of breastfeeding before, after and 1 month follow-up from receiving the Practical Skills Teaching and Learning Management Programs or PSTLMP in the intervention group and obtaining a routine standard learning management programs in the control group

When the research compared the average scores capacity of cognitive domain, affective domain and psychomotor domain to learning of breastfeeding before, after and 1 month follow-up to be receiving the Practical Skills Teaching and Learning Management Programs or PSTLMP in the intervention group. It was found that there was a statistically significant difference at 0.05 of the average scores capacity of cognitive domain, affective domain and psychomotor domain ($p = 0.001^*$ total). Additionally, the average mean score capacity of cognitive domain, affective domain and psychomotor domain to promote learning of breastfeeding after and 1 month follow-up being given the program was higher than the average scores capacity of all three domains before being given the program in the intervention

group, statistically significant at 0.05(p-value = 0.001* total)

As well as when the study compared the average thecapacity scores of cognitive domain, affective domain and psychomotor domain to learning of breastfeeding before,after and 1 month follow-up to be receiving a routine standard learning management programs in the control group, It was found that there was a statistically significant difference at 0.05 only of affective domain (p = 0.040*). Theopposing way, no difference was found in the statisticalsignificance of 0.05 as cognitive domain and psychomotor domain (p-value = 0.128 and 0.120 respectively) as described in **Table 3**.

Questionnaire	Intervention group (N=40)		Control group (N=40)	
	Mean \pm SD of difference	P- value	Mean \pm SD of difference	P- value
Cognitive Domain	2.13 \pm 7.73 \pm 5.58	0.001*	1.93 \pm 1.15 \pm 1.48	0.128
Affective Domain	1.98 \pm 4.64 \pm 3.71	0.001*	2.14 \pm 5.32 \pm 4.58	0.040*
Psychomotor Domain	2.52 \pm 6.56 \pm 4.75	0.001*	1.93 \pm 1.25 \pm 1.27	0.120

Table3: Mean scores and differences the capacity of cognitive domain, affective domain and psychomotor domain to promote learning of breastfeeding before, after and 1 month follow-up receiving the Practical Skills Teaching and Learning Management Programs or PSTLMP in the intervention group and obtaining a routine standard learning management programs in the control group

DISCUSSION

Discussion of the study “The Effectiveness of the Practical Skills Teaching and Learning management Program for Bachelor of Nursing Students to Promote Learning of Breastfeeding”, a quasi-experiment study that was composed with the research objectives, research methodology, research hypothesis and research results. For the purpose of the research was to investigate whether the Practical Skills Teaching and Learning Management Program or PSTLMP in bachelor of nursing students to improve learning of breastfeeding compared with a standard teaching and learning management Program.

For the results, was found that the average mean capacity score of cognitive domain, affective domain and psychomotor domain to promote learning of breastfeeding after and 1 month follow-up being given the Practical Skills Teaching and Learning management Programs or PSTLMP was higher than the average mean capacity score of all



three domains before being given the program in the intervention group, statistically significant at 0.05, corresponds to Phanthipa BuaKai [14] research “The effect of the

In addition, The authors compared the results of average mean score the capacity of cognitive domain, affective domain and psychomotor domain to promote learning of breastfeeding before, after and 1 month follow up between the intervention group and the control group, presented that the average mean capacity score of three domains to promote learning of breastfeeding after being given the program in the intervention group was higher than the average mean capacity score in the control group, statistically significant at 0.05. As well as the result of 1 month follow-up of average mean capacity score of two domains as affective domain and psychomotor domain in the intervention group was higher than the capacity score of two domains in the control group, statistically significant at 0.05. Also, the result was similar to the study of Piyaporn P., Nittaya S., Tassanee P., and Chukiatt V. [16], showed that the rate of 6-month-exclusive breastfeeding of the effects of breastfeeding abilities training and support program in the study group, was significantly higher than those in the control group. Average scores of breastfeeding self-efficacy were significantly higher in the study group than those in the control group at discharge and at 6-weeks postpartum, correspondingly. Furthermore, relates to the study of S. A. van Dellen, B. Wisse, M. P. Mobach & A. Dijkstra [17], As “The effect of a breastfeeding support program programmed on breastfeeding duration and exclusivity: a quasi-experiment”

empowerment program on knowledge, perception of self-power and health behavior during pregnancy and after childbirth of pregnant and postpartum mothers with children attached to female inmates” found that during pregnancy and postpartum period, self-empowerment scores were significantly higher than those before the receiving the program as well. Moreover, the result matched with “Using Simulation to Teach Breastfeeding Management Skills and Improve Breastfeeding Self-Efficacy” of Elaine Webber, Nadine Wodwaski, and Renee Courtney’ study [15]. That found the simulation proved to be an attractive method by which to educate undergraduate nursing students about breastfeeding support and management and offer them with the important of breastfeeding skills. Students' replications following the workshop exposed an increase not only in breastfeeding self-efficacy but a heightened consciousness of the health implications of breastfeeding as well. Students increased a considerable of Healthy People 2020 breastfeeding goals and expressed positive attitudes concerning the importance of breastfeeding.



establish that among mothers in the breastfeeding support study group, there was on average less danger of cessation of any breastfeeding and on average less danger of cessation of exclusive breastfeeding at any point in time compared to those in the control group.

Those results from past studies have corresponds to the result of this study “the Effectiveness of the Practical Skills Teaching and Learning management Program for Bachelor of Nursing Students to Promote Learning of Breastfeeding.” Presumably, the researcher was realized the importance of developing the potential of nursing graduates to have capacity and competency in three domains of breastfeeding learning as cognitive domain, affective

domain and psychomotor domain by using the PSTLMP, that to investigate whether PSTLMP in Bachelor of Nursing Students to improve learning of breastfeeding compared with a standard teaching and learning management programs. That was developed from the conception of theory practice of knowledge sharing together with empowerment as Knowledge Sharing Practices with Empowerment Strategies (KSPES) [1]. It includes the theoretical idea of Knowledge Sharing (KM) with Gibson (1991) [11] Empowerment Theory that designed for people to promote the capacity and competencies learning of breastfeeding with five stages based on Harrow's concept [13]. There are imitation stage, manipulation stage, precision stage, articulation stage and naturalization stage which have clearly set the breastfeeding learning objectives of capacity as cognitive domain, affective domain and psychomotor domain. Psychomotor domain focuses on the improvement of physical fitness, dexterity, agility, and body control to complete a high level of capability [13] as including being able to apply and develop in learning of breastfeeding effectively.

CONCLUSION

The Effectiveness of the Practical Skills Teaching and Learning management Program (PSTLMP) for Bachelor of Nursing Students was able to promote the capacity of cognitive domain, affective domain and psychomotor domain of learning about breastfeeding.

ACKNOWLEDGEMENTS

The authors wish to acknowledge Western University for Research funding, Dr. Nillavat Kupratakul, M.D., Cherdwong Dokkaew, Deputy director, Punnisa Dokkaew, Professor of Pasang industrial and community education college and Dr. Jurewan Maneesang, the dean of Nursing Science Program, Faculty of Nursing, Western University Watcharapol Campus for program recommendation.

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