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## OBSTETRICS

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# Knowledge, Attitudes and Practices Regarding Breastfeeding Support among Village Health Volunteers in Nakhon Nayok, Thailand

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### ABSTRACT

**Objective:** To assess the knowledge, attitudes and breastfeeding support practices provided by village health volunteers.

**Materials and Methods:** The subjects were 72 village health volunteers from three sub-districts; Klong Yai, Buangsan and Chomphol of the Ongkharak district in the Nakhon Nayok province. The study was done during the period from the beginning of March to the end of June, 2014. The questionnaire has been designed to assess the knowledge, attitudes and breastfeeding support practice provided by the village health volunteers. The questionnaires were distributed to the village health volunteers and the data analyzed. The 6-month exclusive breastfeeding rates of each area were determined by home visitation. The data was collected and analyzed by the Chi square and Kruskal-Wallis test.

**Results:** The knowledge score totaled 8 points. The median of the knowledge scores of Klong Yai, Buangsan and Chomphol were 7, 8 and 7 points, respectively. The attitude score totaled 30 points. The median of attitude scores of Klong Yai, Buangsan and Chomphol were 26, 30 and 28 points; percentages of the village health volunteer's home visits and breastfeeding support were 75.0, 90.5 and 87.5; and the exclusive breastfeeding rates for six months were 33.3%, 39.3% and 37.0%, respectively.

**Conclusion:** The knowledge, attitudes and breastfeeding support practices among village health volunteers in the three sub-districts were high and were consistent with the 6-month, exclusive breastfeeding rates for each area.

**Keywords:** exclusive breastfeeding, knowledge, attitudes and practices, village health volunteer

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## Introduction

Breastfeeding is a gold standard for infant feeding and it has been recognized as providing many health benefits for both mother and child. Exclusive breastfeeding for six months has been recommended by the World Health Organization since 2001. After the first six months, complementary food is fed to the infant while breastfeeding may continue for two years or longer<sup>(1,2)</sup>. In Thailand, exclusive breastfeeding rates are low at 5.4-15.2 % as had been determined in a previous study<sup>(3-5)</sup>.

Village Health Volunteers (VHVs) are established from a collaboration of the public healthcare system here in Thailand. VHVs are responsible for communicating health information to public health authorities in the villages; recommending health education to neighbors and family health leaders; and assist health workers in the healthcare services, surveillance and prevention of public health problems in the villages. In addition, VHVs are a mainstay in convincing people of the village to join in the activities of public health in the planning and development of community healthcare solutions. Therefore, one of VHV roles is home visit the mother after giving birth for breastfeeding support. It is interesting to investigate in on the knowledge, attitudes and the breastfeeding support practices among the village health volunteers and their relationships in this study.

## Material and Method

### *Design*

This study was a descriptive cross-sectional study. The subjects were the VHVs who had responsibilities in three sub-districts of Ongkharak, Nakhon Nayok province. The questionnaire on the knowledge, attitudes and breastfeeding support practice was created and tested for validity and reliability. The questionnaires were distributed to the VHVs in communities. After the VHVs completed answers, the questionnaires were collected in the close envelop and sent to the researcher. Exclusive breastfeeding rates of the mothers from these communities were obtained by hospital health professional's home visitations.

### *Setting*

The study was performed in Nakhon Nayok province, rural area at the central part of Thailand. Data was collected during the period of March to June, 2014. Nakhon Nayok province had four districts; Ongkharak, Banna, Muang and Phakplee. Ongkharak district had eleven sub-districts. We chose three sub-districts; Klong Yai, Buangsan and Chomphol because they were in same healthcare administrative structure. The VHVs in three sub-districts were chosen by simple randomization.

### *Inclusion criteria*

The inclusion criteria was the VHVs who had responsibilities in the Klong Yai, Buangsan and Chomphol sub-districts of Ongkharak, Nakhon Nayok province, Thailand.

### *Exclusion criteria*

The exclusion criteria were; the VHVs who had severe neurological diseases or were not willing to participate in this research.

### *Sample size*

The sample size calculation was based on effect size = 0.5, 0.05 of  $\alpha$  error and 0.95 of power (calculated by G\*Power program)<sup>(6)</sup>. The calculated sample size was 66. The sample size was added up 10 percents for data lost. So the samples that we collected were 72 cases.

### *Questionnaire*

The questionnaire on the knowledge, attitudes and breastfeeding support practice was created by Obstetrics and Gynecology Department, Faculty of Medicine, Srinakharinwirot University. The questionnaire has been validated by 10 experts in related fields. The reliability was tested by 20 VHVs and calculated reliability using Cronbach's alpha. The validity of the questionnaire was 0.86 and the reliability was 0.78. A total of 8 questions regarding the knowledge pertaining to the practice of breastfeeding were included in the questionnaire. The questions regarding knowledge

were in true or false format. The right answer was scored 1 point and a wrong answer was scored zero. There were 6 questions regarding attitude. The format of the attitude questions was a five-level Likert scale; 1. Strongly disagree, 2. Disagree, 3. Neither agrees nor disagree, 4. Agree, 5. Strongly agree and the points of answers were 1-5 points, respectively. The question regarding breastfeeding support practice was 'Did you help the mother breastfeed her infant during home visit?, e.g. breastfeeding counseling, teaching of milk expression and milk collection and refer the mother to clinic when she has breastfeeding problem'. If the mother answered 'Yes', the data was collected in practice group.

### **Ethical considerations**

This study was approved by The Ethical committee of the Faculty of Medicine, Srinakharinwirot University, Thailand.

### **Statistical analysis**

Demographic data was reported as mean and percentage. We used Kruskal-Wallis test to compare the knowledge and attitude scores between VHVs in each sub-district. We compared the knowledge, attitude, practice and exclusive breastfeeding rate between VHVs in each sub-district by Chi-square test. A p-value less than 0.05 was considered statistically

significant. Statistical analysis was performed using SPSS IBM Singapore Pte Ltd (Registration No.1975-01566-C).

## **Results**

Of the 72 village health volunteers that had been enrolled; 33 were from Klong Yai, 22 were from Buangsan and 17 were from Chomphol. The demographic data of the VHVs revealed mean age of  $47.6 \pm 9.1$  years of age. The percentages of females and males VHVs were 93.1% and 6.9%, respectively. The marital status was classified as married, divorced or separated and single were at 71.0%, 18.8% and 10.1%, respectively. The percentage of the VHVs educational status has shown that 55.6% of them graduated below college and 44.4% graduated either a bachelor's or master's degree. A total of 65.4% of the VHVs were mothers themselves and had firsthand experience in breastfeeding. The scores regarding knowledge in each sub-district are presented as percentages and p-values. The knowledge scores of the statements; "During the first six months, babies do not need water, drinks or supplements" and "The VHV's home visit makes mothers breastfeed their babies better" have shown statistically significant differences. The scores of other questions have shown no difference. The details are shown in Table 1.

**Table 1.** Percentage of the knowledge scores.

Percentage of knowledge scores	Klong Yai (n=33) N (%)	Buangsan (n=22) N (%)	Chomphol (n=17) N (%)	P
1. The mother would breastfeed her baby exclusively for at least six months.	33 (100.0)	22 (100.0)	17 (100.0)	-
2. During the first six months, babies do not need water, drinks or supplements.	22 (66.7)	22 (100.0)	7 (41.1)	< 0.001*
3. Breastfeeding helps in the prevention of infection and reduces infant mortality from certain causes.	25 (75.7)	21 (95.5)	15 (88.2)	0.180
4. The breastfed infant has a lower risk for allergies, diabetes and obesity	30 (90.9)	21 (95.5)	16 (94.1)	0.784

**Table 1.** Percentage of the knowledge scores. (Cont.)

Percentage of knowledge scores	Klong Yai (n=33) N (%)	Buangsan (n=22) N (%)	Chomphol (n=17) N (%)	P
5. There are ways to help working mothers breastfeed their babies.	33 (100)	20 (90.9)	17 (100.0)	0.102
6. The husband; if a government officer can obtain leave to help his wife after giving birth: each leave shall not exceed 15 consecutive days.	17 (51.5)	18 (81.8)	9 (52.9)	0.082
7. The husband's assist and support of the breastfeeding mother can make breastfeeding easier.	24 (72.7)	21 (95.5)	12 (70.6)	0.075
8. The VHV's home visit makes mothers' breastfeed their babies better.	31 (93.9)	17 (77.3)	17 (100.0)	0.042*

\* Statistically significant (p<0.05)

The scores concerning attitudes in each area are represented as percentages. The attitude scores of the statements; "Exclusive breastfeeding for at least six months is critical"; "Teaching the mother to breastfeed her baby improves breastfeeding rate" and "The

paternity's leave to help his wife breastfeed her baby encourages breastfeeding rate" have shown statistically significant differences. The details are shown in Table 2.

**Table 2.** Percentage of the attitude score.

Percentage of attitude score	Klong Yai (n=33) N (%)	Buangsan (n=22) N (%)	Chomphol (n=17) N (%)	P
1. Exclusive breastfeeding for at least six months is critical.				0.011*
Strongly agree	25 (75.7)	20 (90.9)	8 (47.1)	
Agree	8 (24.2)	2 (9.1)	9 (52.9)	
Neither agree or disagree	0	0	0	
Disagree	0	0	0	
Strongly disagree	0	0	0	
2. Giving breastfeeding knowledge to mother improves her breastfeeding practices.				0.050
Strongly agree	16 (48.5)	19 (86.4)	10 (58.8)	
Agree	17 (51.5)	2 (9.1)	7 (42.1)	
Neither agree or disagree	0	1 (4.5)	0	

**Table 2.** Percentage of the attitude score. (Cont.)

Percentage of attitude score	Klong Yai (n=33) N (%)	Buangsan (n=22) N (%)	Chomphol (n=17) N (%)	P
Disagree	0	0	0	
Strongly disagree	0	0	0	
3. Teaching the mother to breastfeed her baby improves breastfeeding rate.				0.043*
Strongly agree	15 (45.5)	18 (81.8)	11 (64.7)	
Agree	18 (54.5)	4 (18.2)	6 (35.3)	
Neither agree or disagree	0	0	0	
Disagree	0	0	0	
Strongly disagree	0	0	0	
4. The husband's encouragement improves breastfeeding rate.				0.210
Strongly agree	14 (42.4)	15 (68.2)	8 (47.1)	
Agree	19 (57.6)	6 (27.3)	8 (47.1)	
Neither agree or disagree	0	1 (4.5)	1 (5.9)	
Disagree	0	0	0	
Strongly disagree	0	0	0	
5. The paternity's leave to help his wife breastfeed her baby encourages breastfeeding rate.				0.018*
Strongly agree	8 (24.2)	13 (59.1)	10 (58.8)	
Agree	19 (57.6)	7 (31.8)	6 (35.3)	
Neither agree or disagree	6 (18.2)	2 (9.1)	1 (5.9)	
Disagree	0	0	0	
Strongly disagree	0	0	0	
6. The VHV's home visit can help mothers improve breastfeeding rate.				0.101
Strongly agree	15 (45.5)	16 (72.7)	10 (58.8)	
Agree	17 (51.5)	6 (27.3)	7 (42.1)	
Neither agree or disagree	1 (3.0)	0	0	
Disagree	0	0	0	
Strongly disagree	0	0	0	

\* Statistically significant (p<0.05)

The median knowledge scores in Klong Yai, Buangsan and Chomphol were 7, 8 and 7 points; the median attitude scores were 26, 30 and 28 points; and the percentages of the village health volunteer's home visits and breastfeeding support were 75.0, 90.5 and 87.5, respectively. The survey of 116 mothers from the

three areas found that 9 out of 27 cases (33.3%) of mothers from Klong Yai, 11 of 28 cases (39.3%) of the mothers from Buangsan and 17 of 46 cases (37.0%) of the mothers from Chomphol had exclusive breastfeeding for six months. The details are shown in Table 3.

**Table 3.** Median scores of knowledge and attitudes, the percentages of practices and the 6-month exclusive breastfeeding rates.

Variables	Klong Yai	Buangsan	Chomphol	P
Median of knowledge score	7	8	7	0.045*
Median of attitude score	26	30	28	0.014*
Percentage of practices	75.0	90.5	87.5	0.121
6-month exclusive breastfeeding rate (%)	33.3	39.3	37.0	0.023*

\* Statistically significant ( $p < 0.05$ )

## Discussion

The demographic data of VHVs have shown that the majority of them were middle-aged, married females, graduated the secondary school level. As many of them had children of their own, most had breastfeeding experience. As they were middle aged, most had stable and steady emotions which allowed them to gain the mothers' trust<sup>(7)</sup>. Furthermore, their prior, firsthand, breastfeeding experience helped them in providing guidance and support for teaching breastfeeding to new mothers.

In knowledge part, the statement; "The mother would breastfeed exclusively for at least six months," has shown high scores as the correct answer was the only answer chosen. However, it was possible that the VHVs would not understand that exclusive breastfeeding meant that the babies were fed solely breast milk; "no water drinks or supplements during the first six months" as the answer to the statement; "During the first six months, babies do not need water, drinks or supplements" was answered wrong by more than half of VHVs in the Chomphol province. As such, the medical staff would need to clarify this point. These actions allowed the VHVs to understand the goals of exclusive breastfeeding more clearly. The knowledge regarding the benefits of breastfeeding and techniques to help the working mother breastfeed her baby was positive. Although the VHVs had knowledge about the husband having the ability to help his wife in breastfeeding her baby, there is a policy that the husband who is a government officer, "can request 15-consecutive-day paternity leave to help his wife after she has given birth." This policy had only covered about 50 percent of the cases in 2 of 3 sub-

districts. The communication between medical staffs and the VHVs, the public relations in healthcare news from the media (television, radio, the internet and social campaigns) enable the widespread delivery of information to help in the promotion of breastfeeding. "The role of the VHVs in home visits to the postpartum mothers to assist her with the improvement of breastfeeding practices," the VHVs knew this although there were statistically significant differences in each of the sub-districts. The knowledge that babies do not require additional water, drinks or supplements during the first six months has shown statistically significant differences in the sub-districts as well. The medical staffs who work with the VHVs need to analyze, in detail, the differences in this aspect for each sub-district to properly train the VHVs. The standard pattern of VHV's training would concentrate on the benefits of home visitation and the proper teaching of exclusive breastfeeding<sup>(8-10)</sup>.

Regarding the VHV's attitudes on the importance of exclusive breastfeeding, educating mothers, teaching mothers to breastfeed their babies and home visits to promote breastfeeding; nearly all of them were in agreement or in strong agreement. However, there were significant differences in some attitudes between three sub-district VHVs and 5.0-18.2 % were still unsure about the role of the husband in assisting and supporting breastfeeding. The VHVs needs to get more knowledge about exclusive breastfeeding, the benefits of the husband's role for breastfeeding support and researching further case studies of these benefits which would help in modifying their attitudes<sup>(11-13)</sup>.

The rates of 6-month exclusive breastfeeding in



the three sub-districts were 33.3-39.3 % higher than had been found in the overall rates for the country (5.4-15.2 %)<sup>(3-5)</sup>, as knowledge, attitudes and the practices in the promotion of breastfeeding in these three sub-districts were high. The Buangsan sub-district exhibited the greatest knowledge, attitude and practice. The medians of knowledge and attitude scores have shown statistically significant differences that suggest the knowledge and attitudes of breastfeeding support takes a greater role on the exclusive breastfeeding rates. The health professionals should focus on creating the proper knowledge and attitudes for the promotion of breastfeeding for the VHVs who would then forward this to the mother in the hopes of increasing the exclusive breastfeeding rates.

This study was limited by the lack of data regarding the VHVs' training and the length of the VHVs' training. This lack of data may have an effect on knowledge and attitude. The health professionals would collect the VHVs' training data to develop continuing healthcare education and standardize the VHVs' teachings. The regular breastfeeding training course would be set for the new VHVs or the VHVs who attended the last course longer than three years.

## Conclusion

The scores for knowledge and attitude in the promotion of breastfeeding for village health volunteers are high. The village health volunteer has shown high knowledge and positive attitude and these are brought into action in the support for breastfeeding. There is a consistency of knowledge, attitude and practices on the 6-month exclusive breastfeeding rate.

## Acknowledgment

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## Potential conflicts of interest

None.

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## ความรู้ ทักษะ และ การปฏิบัติ ในการสนับสนุน การเลี้ยงลูกด้วยนมแม่ ของอาสาสมัครสาธารณสุข ประจำหมู่บ้าน ในจังหวัดนครนายก

ภาวีน พัวพรพงษ์, เกษม เรืองรองมรกด, วิภาดา เหล่าสุขสถิตย์, สุชาติ เกษสุวรรณ, ศิณัฐชานันท์ วงษ์อินทร์

**วัตถุประสงค์:** ศึกษาความรู้ ทักษะ และ การปฏิบัติ ในการสนับสนุน การเลี้ยงลูกด้วยนมแม่ ของอาสาสมัครสาธารณสุข ประจำหมู่บ้าน

**วัสดุและวิธีการ:** ศึกษาอาสาสมัครสาธารณสุข ประจำหมู่บ้าน 72 คน จาก 3 ตำบล คือ คลองใหญ่ บึงศาล และ ชุมพล ในอำเภอองครักษ์ จังหวัดนครนายก ตั้งแต่เดือนมีนาคม 2557 ถึงมิถุนายน 2557 โดยแจกแบบสอบถามความรู้ ทักษะ และ การปฏิบัติ ในการสนับสนุน การเลี้ยงลูกด้วยนมแม่ ให้แก่อาสาสมัครสาธารณสุข ประจำหมู่บ้าน ในชุมชน และ ข้อมูลสำหรับตอบกลับ แก่ผู้วิจัย พร้อมสำรวจอัตราการเลี้ยงลูกด้วยนมแม่ อย่างเดียว หก เดือน ในพื้นที่ที่อาสาสมัครสาธารณสุข ประจำหมู่บ้าน รับผิดชอบ โดยการเยี่ยมบ้าน ข้อมูลจะรวบรวม และ วิเคราะห์ โดยใช้สถิติ Chi-square และ Kruskal-Wallis test

**ผลการศึกษา:** คะแนนความรู้ จากคะแนนเต็ม 8 คะแนน อาสาสมัครสาธารณสุข ประจำหมู่บ้าน คลองใหญ่ บึงศาล และ ชุมพล ได้ค่ามัธยฐานของคะแนนความรู้ 7 คะแนน, 8 คะแนน และ 7 คะแนน ตามลำดับ คะแนนทัศนคติ จากคะแนนเต็ม 30 คะแนน อาสาสมัครสาธารณสุข ประจำหมู่บ้าน คลองใหญ่ บึงศาล และ ชุมพล ได้ค่ามัธยฐานของคะแนนทัศนคติ 26 คะแนน, 30 คะแนน และ 28 คะแนน ตามลำดับ อัตราการเยี่ยมบ้าน และ ให้การสนับสนุน การเลี้ยงลูกด้วยนมแม่ ของอาสาสมัครสาธารณสุข ประจำหมู่บ้าน คลองใหญ่ บึงศาล และ ชุมพล ร้อยละ 75, 90.5 และ 87.5 อัตราการเลี้ยงลูกด้วยนมแม่ อย่างเดียว หก เดือน ในพื้นที่ คลองใหญ่ บึงศาล และ ชุมพล ร้อยละ 33.3, 39.3 และ 37.0 ตามลำดับ

**สรุป:** ความรู้ ทักษะ ในการสนับสนุน การเลี้ยงลูกด้วยนมแม่ ของอาสาสมัครสาธารณสุข คลองใหญ่ บึงศาล และ ชุมพล ในจังหวัดนครนายก สูง ซึ่งสอดคล้องกับการปฏิบัติ และ อัตราการเลี้ยงลูกด้วยนมแม่ อย่างเดียว หก เดือน ในแต่ละพื้นที่

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