Association between Related Factors and Knowledge of Thai Traditional Medical Postpartum Care Service among Pregnant Pomen in Bangkok: A Preliminary Survey

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Abstract

Thai traditional medical postpartum care, also known as ″Yu-fai″, has existed since the Ayutthaya period. It aids in increasing blood flow, increasing breast milk production, preventing mastitis, treating breast engorgement and plugged milk ducts, lowering the level of the uterus, and relieving muscular aches. Knowledge is one of the key elements influencing service use. Therefore, this study aims to evaluate knowledge of Thai traditional medical postpartum care service and examine the association between related factors and Thai traditional medical postpartum care service knowledge among pregnant women in Bangkok. A cross-sectional study using a self-administer questionnaire was conducted from September to December 2023 in 192 pregnant women who are over 18 years old at Siriraj hospital, Klang hospital, Taksin hospital or Sirindhorn hospital. This study found that the knowledge scores of most participants were low. Multivariable logistic regression showed that the participants who were not born in Bangkok had a chance to have a knowledge score 2.14 times higher than those who were born in Bangkok. The pregnant women who had an attitude towards Thai traditional medical postpartum care score of 15-20 had a chance to have a knowledge score 5.71 times higher than those who had an attitude score of less than 15. Other factors, including age, religion, education level, occupation, number of pregnancies, number of births of viable offspring, and experience using Thai traditional medicine services and Yu-Fai, did not associate with the knowledge among pregnant women. Therefore, our findings are beneficial for government agencies or those involved in promoting the use of Thai traditional medical postpartum care service. It also helps in the conservation of Thai traditional medicine.

Keywords: Yu-fai, Thai Traditional Medicine, Postpartum Care, Pregnant Women, Knowledge

1. Introduction

"Yu-fai", or Thai traditional medical postpartum care, has been around for a long time. Its mention dates back to the Ayutthaya era. The principles of Thai traditional medicine are that four elements become unbalanced after childbirth, with the fire element being most affected (Termwiset, 2005). An imbalance of elements in the body may cause postpartum women to feel uncomfortable, have body aches, get cold easily, and have breast engorgement (Center of Applied Thai Traditional Medicine, 2021). A previous study found that within the first eight weeks after giving birth, 87% of women reported experiencing at least one health issue. These issues included fatigue (59%), breast issues (36%), backaches (24%), depression (21%), constipation (20%), etc. Furthermore, 76% of them reported that these issues persist for up to 18 months (Glazener et al., 1995). Thus, Thai traditional medical postpartum care is crucial. It is required to maintain the abdomen's warmth. If not, postpartum women can experience uterine pain (Termwiset, 2005). It has been updated to reflect modern times. The most popular Thai traditional medical postpartum care services available today are "Thai Traditional Massage", "Hot Herbal Compress", "Hot Salt-Pot Compress", and "Herbal Steam Bath". Massage and hot herbal compress aid in increasing blood flow, relaxing tense muscles, and easing pain (Laohapand & Jaturatamrong, 2014). Breast massage and warm herbal compresses aid in increasing breast milk production, preventing mastitis, and treating engorgement in the breasts and plugged milk ducts

(Witt et al., 2016; Zakarija-Grkovic & Stewart, 2020). A hot salt-pot compress can aid postpartum women by lowering their level of uterus, waist circumference, and uterine pain. Furthermore, it may facilitate a quicker return to normalcy of the amniotic fluid (Magnud et al., 2018). It also aids in the relief of muscle aches (Suwannatrai et al., 2014). Herbal steam bath promotes blood circulation, eases aches and pains in the muscles, clears airways, cleanse the skin, and eliminates waste through sweat (Laohapand & Jaturatamrong, 2014).

At present, postpartum women are increasingly interested in Thai traditional medical postpartum care service. Clinics that provide Yu-fai and providing Thai traditional medical postpartum care service at home are also increasing due to increased demand. One of the important factors affecting service utilization is knowledge. A cross-sectional study showed that the available postnatal care services knowledge positively associated with the use of postnatal care services in 600 mothers of Mangochi district, Malawi (AOR = 4.06, 95%CI 2.22-7.41) (Sagawa et al., 2021). A mixed-methods study found that participants who were not aware of postnatal care services were less likely to use the services (AOR = 0.12, 95%CI 0.05-0.30). A qualitative data reported that incorrect understanding of the benefits of using the postnatal care service was a barrier to service utilization (Zeleke et al., 2021).

However, there are very few studies dealing with knowledge of Thai traditional medical postpartum care service and there is no report on the association between related factors and this knowledge. Therefore, we aim to evaluate knowledge of Thai traditional medical postpartum care service and examine the association between related factors and the knowledge among pregnant women in Bangkok. We expected it to be beneficial to Thai government agencies, related organizations, and Thai traditional medicine practitioners for planning to provide knowledge of Thai traditional medical postpartum care service and advice to pregnant and postpartum women appropriately. Moreover, it increases the opportunity to access alternative medicine information on restoring health and relieving various symptoms that may occur after birth.

2. Objectives
1) To evaluate knowledge of Thai traditional medical postpartum care service among pregnant women in Bangkok
2) To examine the association between related factors and knowledge of Thai traditional medical postpartum care service among pregnant women in Bangkok

3. Materials and Methods
3.1 Study design and areas
A cross-sectional descriptive study using a self-administer questionnaire was conducted from September to December 2023 in the antenatal ward at Siriraj hospital, Klang hospital, Taksin hospital and Sirindhorn hospital, Bangkok, Thailand.

3.2 Study population
This was a preliminary study. The participants were pregnant women who were over 18 years old, had a gestational age of 14 weeks or more, were Thai citizens, and had no history of serious illness or no serious obstetric complications. A total of 192 pregnant women with the criteria were enrolled in this study using purposive sampling technique.

3.3 Measurement tools
The questionnaire consisted of three parts. The first part covered demographic data, including age, religion, domicile, education level, occupation, number of pregnancies, and number of births of viable offspring. The second part was designed to explore the experience of using Thai traditional medicine services and attitudes toward Thai traditional medical postpartum care. The attitude questions were adapted from

previous studies (Ng et al., 2022). A 5 Likert's scale (1 = Very Strongly Disagree, 2 = Strongly Disagree, 3 = Neutral, 4 = Strongly Agree, and 5 = Very Strongly Agree) was used to evaluate it. The last part was used to evaluate knowledge of Thai traditional medical postpartum care service. This part consisted of 17 questions. There were five questions about principles and procedures for Yu-fai, five questions about the appropriate period for starting and number of days of service, five questions about precautions and postpartum advice, and two questions about service providers and universal health coverage. The answers were "True" or "False" or "Don't know". The questionnaire was tested for content validity (Index of Consistency: IOC) by four experts in the field of Thai traditional medicine, obstetric nursing, or public health. After that, the questionnaire was revised. Then, the questionnaire was pre-tested with 30 women who did not participate in the study to check its reliability (Cronbach's Alpha Coefficient) before it was used.

3.4 Data collection

After receiving permission from the hospital authorities to conduct the study and ethics approval was obtained from the "Siriraj Institutional Review Board, Faculty of Medicine Siriraj Hospital, Mahidol University" with SIRB protocol No. 550/2566 (IRB1) and the "BMA Human Research Ethics Committee (BMAHREC)" with a reference number of U023hh/66_EXP. We started collecting data in the hospitals. We recruited participants based on the selection criteria and according to the consent of participants. Each participant was informed of the study procedures and signed a consent form according to her wishes. After that, participants answered the questions truthfully and matched their opinions as much as possible.

3.5 Data analysis

SPSS version 28 was used for statistical analysis of the data. Descriptive statistic was used to describe the characteristics of the population in the independent variable. The categorical variables were summarized using frequency and percentage. Binary logistic regression was used to examine the association between related factors and Thai traditional medical postpartum care service knowledge among pregnant women in Bangkok. The variables that bivariate regression p-value was less than 0.2 were used to generate a multivariable logistic regression model. The statistical significance threshold was set at $p < 0.05$. The adjusted odds ratio (AOR) was computed with a 95% confidence interval (CI).

3.6 Operational Definition

Knowledge: Seventeen questions were used to measure the participant's knowledge about Thai traditional medical postpartum care service. The participants were divided into groups by the first quartile. Participants who answered "true" were considered accurate responses, and we categorized those "false" and "do not know" responses as incorrect responses. The total score for knowledge was 17.

Attitude: Four questions were used to measure the participant's attitude towards Thai traditional medical postpartum care. The participants were divided into groups by the first quartile. Each question was evaluated using a 5 Likert's scale (1 = Very Strongly Disagree, 2 = Strongly Disagree, 3 = Neutral, 4 = Strongly Agree, and 5 = Very Strongly Agree). The total score for attitude was 20.

4. Results and Discussion

4.1 Results

A total of 192 pregnant women in Bangkok agreed to participate in this study. The demographic characteristics, as shown in Table 1, indicated that more than half (51.6%) of the participants aged between 25 to 34 years. The majority of them were Buddhist (94.8%). About 35% of participants were born in Bangkok. Around two-thirds (68.2%) had below-bachelor degrees. 76.6% were employed. Around 41% were

pregnant for the first time. About half of all pregnant women had living children. Approximately 85% never used Thai traditional medicine services and about 82% never used Yu-Fai. Precisely, 70.8% of pregnant women had an attitude towards Thai traditional medical postpartum care score of 15-20, and 29.2% had an attitude score of less than 15. The mean knowledge score of the participants was 5.35 ± 3.27, ranging from 0 to 16 points. Moreover, around one-thirds (31.2%) had a knowledge score of 3 or less.

The present study found that pregnant women who were not born in Bangkok, had living children, had ever used Thai traditional medicine services, had ever used Yu-Fai, and had an attitude score of 15-20 were significant predictors of Thai traditional medical postpartum care service knowledge of more than 3 points among pregnant women in Bangkok ($p < 0.05$; Table 2). The odds ratios for pregnant women who were not born in Bangkok were 1.88 (95% CI 1.00-3.53), had living children were 2.10 (95% CI 1.13-3.91), had ever used Thai traditional medicine services were 3.11 (95% CI 1.03-9.41), had ever used Yu-Fai were 4.30 (95% CI 1.44-12.80), and had an attitude score of 15-20 were 4.58 (95% CI 2.35-8.92).

Multivariable logistic regression analysis, as shown in Table 3, also indicated that the participants who were not born in Bangkok had a chance to have a knowledge score of >3 points, 2.14 times more than those who were born in Bangkok (AOR = 2.14, CI 1.02-4.47). Moreover, pregnant women who had an attitude score of 15-20 had a chance to have a knowledge score of >3 points, 5.71 times more than those who had an attitude score of less than 15 (AOR = 5.71, CI 2.69-12.14).

Table 1 Descriptive demographic characteristics of participants (n = 192)

Variables	Frequency	Percent
Age (years old)		
18 - 24	60	31.2
25 - 34	99	51.6
≥ 35	33	17.2
Religion		
Buddhism	182	94.8
Christianism or Islamism	10	5.2
Domicile		
Bangkok	67	34.9
Other provinces	125	65.1
Level of education		
< Bachelor Degrees	131	68.2
$\geq$ Bachelor Degrees	61	31.8
Occupation		
Unemployed	45	23.4
Employed	147	76.6
Number of pregnancies		
1	79	41.1
> 1	113	58.9
Number of births of viable offspring		
0	91	47.4
≥ 1	101	52.6
Have ever used TTM#		
No	164	85.4
Yes	28	14.6
Have ever used Yu-Fai		
No	157	81.8
Yes	35	18.2
Attitude (score)		

Variables	Frequency	Percent
< 15	56	29.2
15-20	136	70.8
Knowledge (score), mean ± SD = 5.35 ± 3.27		
≤ 3	60	31.2
> 3	132	68.8

[#] Thai traditional medicine services

Table 2 Bivariate logistic regression analysis between related factors and knowledge of Thai traditional medical postpartum care service among pregnant women in Bangkok (n = 192)

Variables	Unadjusted odds ratio (95%CI)	p-value
Age (years old)		
18 - 24		
25 - 34	1.43 (0.73-2.81)	0.299
≥ 35	2.31 (0.86-6.17)	0.095
Religion		
Buddhism		
Christianism or Islamism	1.06 (0.27-4.27)	0.930
Domicile		
Bangkok		
Others	1.88 (1.00-3.53)	0.049*
Education		
< Bachelor Degrees		
≥ Bachelor Degrees	1.27 (0.65-2.47)	0.491
Occupation		
Unemployed		
Employed	0.99 (0.48-2.04)	0.982
Number of pregnancies		
1		
> 1	1.69 (0.91-3.14)	0.094
Number of births of viable offspring		
0		
≥ 1	2.10 (1.13-3.91)	0.019*
Have ever used TTM[#]		
No		
Yes	3.11 (1.03-9.41)	0.044*
Have ever used Yu-Fai		
No		
Yes	4.30 (1.44-12.80)	0.009**
Attitude (score)		
< 15		
15-20	4.58 (2.35-8.92)	< 0.001**

[#] Thai traditional medicine services
* Statistically significant at p < 0.05
** Highly statistically significant at p < 0.01

Table 3 Multivariate logistic regression analysis of the association between related factors and knowledge of Thai traditional medical postpartum care service among pregnant women in Bangkok (n = 192)

Variables	Unadjusted OR (95%CI)	p-value	Adjusted OR (95%CI)	p-value
Age (years old)				
18 - 24				
25 - 34	1.43 (0.73-2.81)	0.299	0.63 (0.28-1.46)	0.284
≥ 35	2.31 (0.86-6.17)	0.095	0.76 (0.23-2.51)	0.647
Domicile				
Bangkok				
Others	1.88 (1.00-3.53)	0.049*	2.14 (1.02-4.47)	0.044*
Number of pregnancies				
1				
> 1	1.69 (0.91-3.14)	0.094	0.71 (0.18-2.77)	0.625
Number of births of viable offspring				
0				
≥ 1	2.10 (1.13-3.91)	0.019*	2.68 (0.65-11.13)	0.174
Have ever used TTM#				
No				
Yes	3.11 (1.03-9.41)	0.044*	1.77 (0.52-6.03)	0.363
Have ever used Yu-Fai				
No				
Yes	4.30 (1.44-12.80)	0.009**	2.59 (0.74-9.06)	0.135
Attitude (score)				
< 15				
15-20	4.58 (2.35-8.92)	< 0.001**	5.71 (2.69-12.14)	< 0.001**

Thai traditional medicine services
* Statistically significant at $p < 0.05$
** Highly statistically significant at $p < 0.01$

4.2 Discussion

This study showed that the mean knowledge score of the participants was 5.35 ± 3.27 from the total score of 17. It indicated that participants had limited knowledge of Thai traditional medical postpartum care service. This was consistent with a previous study in 400 participants who lived in the lower central region of Thailand, namely Suphanburi, Kanchanaburi, Ratchaburi, Nakhon Pathom, Samut Sakhon, Samut Songkhram, and Phetchaburi. It was reported that 95.75% of participants had low level of Thai traditional medicine and folk medicine knowledges (Pechmanee et al., 2021). Moreover, the range of scores was very wide. The minimum score was 0 and the maximum score was 16. This might be because the participants came from various backgrounds. Therefore, healthcare professionals should provide basic knowledge and information about Yu-fai, namely principles and procedures, an appropriate period for starting and number of days of service, precautions, postpartum advice, service providers, and universal health coverage.

According to the analysis of the association between the related factors and Thai traditional medical postpartum care service knowledge, we found that the participants who were born outside Bangkok had a chance to have a knowledge score 2.14 times higher than those who were born in Bangkok (p = 0.044). This might be because elders in the upcountry still used Yu-Fai in the present and passed on the practice to their descendants. So, people who were born in other provinces had more opportunities to gain knowledge than people who were born in Bangkok. This was consistent with a qualitative study in Amnat Charoen, Thailand that reported that the population in the province has accumulated local wisdom regarding postpartum care, e.g., Yu-Fai, taking herbal baths, using herbs, etc., for a long time. The process of passing on knowledge is usually passed from ancestors to descendants, especially in families with elderly people or grandparents. They also strictly support using Yu-Fai after giving birth and teach people how to do Yu-Fai (Pumtong et al., 2010).

[384]

Pregnant women who had an attitude score of 15-20 had a chance to have a knowledge score 5.71 times higher than those who had an attitude score of less than 15 ($p < 0.001$). This might be because attitude reflects a person's beliefs, opinions, and knowledge. Therefore, it is possible that if people have a good attitude towards Thai traditional medical postpartum care, they may also have good knowledge. This was consistent with a study that reported a significant correlation between knowledge and attitudes in the public understanding of science(Evans & Durant, 1995). In an online cross-sectional survey in 2021 with 446 participants, attitude towards traditional Chinese medicine was significantly influenced by various variables, which one of them was knowledge(Ng et al., 2022). Moreover, attitudes and preferences impact the search for information(Marchionini, 1995). Therefore, it is possible that people with a good attitude would search for information on the subject and have better knowledge about it. From cognitive component of attitude, a person's beliefs, opinions, knowledge, and thoughts on objects are reflected in their attitude(Hewstone et al., 2008). This was consistent with studying about beliefs in Yu-Fai among 80 mothers giving birth at Nong Bua Lamphu Hospital, Thailand. 88.8% of postpartum women had a positive attitude toward Yu-Fai. They believed that Yu-Fai aided in blood circulation, lochia flow, uterine involution, body strengthening, increased production of breast milk, and decreased back and abdominal pain (Promsaka Na Sakolnakorn, 2022). Factors that can affect attitude include experience, social norms, classical and operant conditioning, and observation in environment (Cherry, 2023). Therefore, these factors should be used in methods of providing knowledge. For example, taking them to see a Thai traditional clinic in the hospital, while Yu-fai is provided to women after giving birth, or women who have experience using the service share the experience that they gained about the process, benefits, and advantages of Yu-fai. These methods will make them have a better attitude after observing people around them in a real environment.

5. Conclusion

Knowledge scores of most of the participants in Bangkok were low. The factors that affected the knowledge scores were their domicile and attitude towards Thai traditional medical postpartum care. Thus, Thai governments, especially the National Health Security Office, related organizations, and each hospital should plan to provide basic knowledge of Thai traditional medical postpartum care service by proactive methods to all pregnant women. So that they will have the same and correct knowledge. In addition, they will have an increased chance of accessing Yu-Fai and a better attitude towards Thai traditional medical postpartum care. These findings are beneficial for government agencies or those involved in promoting the use of Yu-fai. It also helps in the conservation of Thai traditional medicine.

6. Acknowledgements

7. References

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