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Percentage of Pregnant Women Reading the Maternal and Child Health Handbook and Associated Factors at Srinagarind Hospital

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ABSTRACT

Objectives: To evaluate the percentage of pregnant women who read the maternal and child health handbook (MCHH) at Srinagarind hospital, associated factors, attitudes toward the MCHH and to compare maternal knowledge between handbook readers and non-readers.

Materials and Methods: This was a cross-sectional study conducted from September 2016 to March 2017. All primigravida pregnant women who had been given the MCHH at least for one month previously were included. A questionnaire-based interview was conducted for evaluating the percentage of participants who read the MCHH and associated factors. "Read" meant the participants had read more than 50% of the MCHH's contents and at least four of the eight topics.

Results: Out of 317 pregnant women, 206 (65%) read the MCHH. The most read item was dietary recommendations (78.2 %). The two least read items were iodine deficiency disease and prevention of mother to child transmission of HIV (49.5 %). The participants who read the MCHH were 2.5 times more likely to pass the exam than who did not. The most influential factor affected the reading of the MCHH was "reading prior current pregnancy". The top two reasons for not reading the MCHH were choosing to receive the information from other sources and the style of the handbook not being attractive.

Conclusion: The percentage of participants who read the MCHH in Srinagarind Hospital was 65%. The factor that affected the reading of the MCHH was "reading prior current pregnancy". Moreover, women who read the MCHH had a more knowledge about pregnancy compared with those who did not.

Keywords: read, maternal and child health handbook, pregnant women

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ร้อยละของสตรีตั้งครรภ์ที่อ่านสมุดบันทึกสุขภาพแม่และเด็ก และปัจจัยที่เกี่ยวข้อง, โรงพยาบาลศรีนครินทร์

วรรณรัตน์ อัตถากร, ปิยะมาศ ศักดิ์ศิริวุฒโฆ

บทคัดย่อ

วัตถุประสงค์: *เพื่อศึกษาจำนวนร้อยละของการอ่านสมุดบันทึกสุขภาพแม่และเด็กในสตรีตั้งครรภ์ที่มาฝากครรภ์ที่โรงพยาบาลศรีนครินทร์ รวมถึงปัจจัยที่สัมพันธ์กับการอ่าน ความคิดเห็นต่อสมุดฯ และเปรียบเทียบความรู้เกี่ยวกับการตั้งครรภ์ในสตรีตั้งครรภ์ที่อ่านกับไม่อ่านสมุดบันทึกสุขภาพแม่และเด็ก*

วัสดุและวิธีการ: *การศึกษาแบบ Cross sectional descriptive study ที่ทำการศึกษาในช่วงระหว่างเดือนกันยายน 2559 ถึง เดือนมีนาคม 2560 โดยศึกษาในสตรีตั้งครรภ์แรก ที่มาฝากครรภ์ที่ห้องฝากครรภ์ในโรงพยาบาลศรีนครินทร์และได้รับสมุดบันทึกสุขภาพแม่และเด็กที่ออกโดยกระทรวงสาธารณสุขไปแล้วอย่างน้อย 1 เดือน ทั้งนี้ใช้วิธีการตอบแบบสอบถามด้วยตนเอง แบบสอบถามและงานวิจัยได้ผ่านการพิจารณาจากสำนักงานคณะกรรมการจริยธรรมการวิจัยในมนุษย์มหาวิทยาลัยขอนแก่น การ "อ่าน" ในการศึกษานี้ คือ ผู้ทำแบบสอบถามประเมินตนเองว่า อ่านมากกว่าร้อยละ 50 ของเนื้อหาทั้งหมดในหัวข้อนั้นๆ และอ่านมากกว่าหรือเท่ากับ 4 หัวข้อจากทั้งหมด 8 หัวข้อ*

ผลการศึกษา: *จากอาสาสมัครผู้เข้าร่วมงานวิจัยจำนวนทั้งสิ้น 317 คน พบว่าสตรีตั้งครรภ์จำนวน 206 คน หรือคิดเป็นร้อยละ 65 ได้อ่านสมุดบันทึกสุขภาพแม่และเด็ก หัวข้อที่ได้รับการอ่านมากที่สุดคือ ข้อปฏิบัติการกินอาหารของหญิงตั้งครรภ์ (ร้อยละ 78.2) ส่วนสองหัวข้อที่ได้รับการอ่านน้อยที่สุดคือโรคจากการขาดไอโอดีน และการป้องกันการแพร่เชื้อเอชไอวีจากแม่สู่ลูก (ร้อยละ 49.5) อาสาสมัครในกลุ่มที่อ่านสมุดบันทึกสุขภาพแม่และเด็กทำแบบทดสอบผ่านเกณฑ์ที่กำหนดมากเป็น 2.5 เท่าเมื่อเทียบกับกลุ่มที่ไม่อ่านสมุดฯ ส่วนปัจจัยที่มีความสัมพันธ์กับการอ่านมากที่สุดคือ การเคยได้อ่านสมุดฯตั้งแต่ตอนก่อนตั้งครรภ์ ซึ่งสัมพันธ์กับการอ่านสมุดบันทึกสุขภาพแม่และเด็กที่มากขึ้นในขณะตั้งครรภ์ สาเหตุที่พบว่าทำให้สตรีตั้งครรภ์ไม่อ่านสมุดบันทึกสุขภาพแม่และเด็กมากที่สุดคือ การเลือกรับข้อมูลจากแหล่งความรู้อื่นมากกว่าและรองลงมาคือรูปเล่มไม่น่าสนใจ*

สรุป: *การอ่านสมุดบันทึกสุขภาพแม่และเด็กในสตรีตั้งครรภ์ที่มาฝากครรภ์ที่โรงพยาบาลศรีนครินทร์คิดเป็นร้อยละ 65 ส่วนปัจจัยที่มีความสัมพันธ์กับการอ่านมากที่สุดคือ การเคยได้อ่านสมุดฯตั้งแต่ตอนก่อนตั้งครรภ์ นอกจากนี้ยังพบว่าสตรีตั้งครรภ์ในกลุ่มที่อ่านมีความรู้เกี่ยวกับการตั้งครรภ์มากกว่ากลุ่มที่ไม่อ่าน*

คำสำคัญ: *การอ่าน, สมุดบันทึกสุขภาพแม่และเด็ก, สตรีตั้งครรภ์*

Introduction

Figures from the Department of Provincial Administration registration unit indicated that the population of Thailand in 2016 was 65,931,550 with a birth rate of around 704,000 people per year. The Maternal and Child Health Handbook (MCHH) was first published in 1985 to promote the health of pregnant women and children. Since then, the handbook has been periodically revised and updated to meet the evolving needs of both healthcare providers and users with the latest edition published in 2014. Contents include records of antenatal care examinations, information regarding the correct practices during pregnancy, pertinent information related to delivery, records of postpartum examinations, a child growth chart (weight and height) and child development and immunization records. The MCHH assists parents and healthcare providers to understand the importance of maternal, neonatal and child healthcare continuity. Using this handbook, parents can record their child's health details throughout the processes of pregnancy, delivery and child development. The MCHH is also useful as a reference document when a pregnant woman or child requires referral to another hospital[1].

However, despite the usefulness of the MCHH, insufficient data exists regarding the number of parents who read the handbook in Thailand, especially in the northeast of the country. A few studies were conducted to assess the number of pregnant women following MCHH guidelines in Central Thailand. They determined that the percentage of handbook readers was low[2].

This research project evaluated the percentage of pregnant women who read the MCHH, and also investigated associated factors including a comparison of the maternal knowledge of handbook readers and non-readers and also attitudes towards the MCHH by pregnant women who attended an antenatal care clinic at Srinagarind Hospital.

Materials and Methods

This cross-sectional study was conducted from September 2016 to March 2017. A total of 317 pregnant women were included and sample size was calculated using data collected by Aihara[2] in Kanchanaburi. Population proportion was 0.72 and precision errors of estimation were approximately 5%.

All primigravida pregnant women who attended the antenatal care clinic at Srinagarind Hospital, Khon Kaen University were given the MCHH at least one month before study recruitment. Pregnant women who could not read and write in Thai were excluded. After reading the information sheet, the subjects were required to give fully informed consent. A questionnaire developed based on the latest version of the MCHH was explained to the participants by nurses. The contents of the questionnaire consisted of four sections as follows:

1. Maternal characteristics (including gestational age, maternal age, education, marital status, occupation, residency, income, number of antenatal visits, gestational age of first antenatal care).

2. Topics were presented in the MCHH as eight main chapters. Answers include "read less than 50%," "read greater than or equal to 50%," "read 100%" and "did not read." Participants who answered "did not read" were asked to identify their sources of information regarding the subject matter.

3. Twenty questions concerning the contents of the MCHH were asked to test participants' knowledge after answering the second section. A result of "pass" indicated that participants had answered questions concerning four or more of the eight chapter topics successfully. Results were compared between participants who read the MCHH and those who did not.

4. Opinions concerning the MCHH.

When the participants had completed the questionnaire, logistic regression and multivariate analyses were performed using SPSS 19.0. The research protocol was reviewed and approved by the Khon Kaen University Ethics Committee, Faculty of Medicine.

The "read" group consisted of participants who had read more than 50% of the handbook or at least four of the eight chapters contained therein.

Results

A total of 317 pregnant women were included. Maternal characteristics are shown in Table 1. Mean gestational and maternal ages were 30.2 weeks and 29.1 years respectively. The majority of the women was married (96.8%) and had bachelor degrees or higher (53.6%). Most were civil servants (37.9%), lived in rural areas (53.9%) and had monthly incomes of less than 15,000 baht. The mean number of antenatal visits was seven and mean gestational age at the first antenatal care session was 10.3 weeks.

Table 1. Maternal characteristics (N 317).

Characteristic	Value
Gestational age (weeks): Mean ± SD	30.2 ± 7.1
Maternal age (years): Mean ± SD	29.1 ± 5.4
Education: n (%)	
Primary/ secondary school or lower	147 (46.4)
Bachelor degree or higher	170 (53.6)
Marital status: n (%)	
Married	307 (96.8)
Single/ Divorced/Widowed	10 (3.2)
Occupation: n (%)	
Student	5 (1.6)
Businessperson	58 (18.3)
Office employee	71 (22.4)
Agriculturist	15 (4.7)
Civil servant	120 (37.9)
Housewife	45 (14.2)
Others	3 (0.9)
Residency: n (%)	
Urban area	146 (46.1)
Rural area	171 (53.9)
Income: n (%)	
≤ 15,000 baht	190 (59.9)
> 15,000 baht	127 (40.1)
Number of antenatal visits: Mean ± SD	7 ± 3.1
Gestational age at first antenatal care session (weeks): Mean ± SD	10.3 ± 5.7

From the 317 pregnant women who participated, 206 (65%) had read the MCHH. The eight chapters in the MCHH were evaluated by the participants (Table 2). These included dietary recommendations, fetal development, maternal practices during pregnancy, thalassemia, maternal discomforts during pregnancy, family planning, iodine deficiency disease and prevention of mother to child transmission of HIV. The

most read chapter was dietary recommendations (78.2%). The two equally least read chapters were iodine deficiency disease and prevention of mother to child transmission of HIV (49.5%).

The third section evaluated participants' knowledge of the material contained in the handbook. Those who had read the MCHH were 2.5 times more likely to pass the exam than those who had not (OR: 2.5, 95%CI: 1.39 - 4.69, p = 0.002).

Many factors influenced whether or not the participants read the MCHH. Table 3 shows the results of the logistic regression and multivariate analyses. Factors included "reading prior to current pregnancy", "age", "education" and "income." The most influential factor was "reading prior to current pregnancy" (OR: 2.90, 95%CI: 1.40-6.02, p = 0.004) which was also associated with an increased rate of reading during pregnancy. Other factors were not related. The top three reasons for not reading the MCHH were choosing to receive the information from other sources, the style of the handbook not being attractive and being too busy (Table 4).

Table 2. Percentage of participants reading each chapter in the MCHH (N 317).

Chapter	Read n (%)
Dietary recommendations	248 (78.2)
Fetal development	238 (75.1)
Maternal practices during pregnancy	229 (72.2)
Thalassemia	199 (62.8)
Maternal discomforts during pregnancy	192 (60.6)
Family planning	184 (58.0)
Iodine deficiency disease	157 (49.5)
Prevention of mother to child transmission of HIV	157 (49.5)

Table 3. Factors determining reading the MCHH (N 317).

Factor	Read MCHH	Crude OR (95% CI)	Adjusted OR (95% CI)
Reading prior to current pregnancy: n (%)			
Yes	201 (63.4)	2.69 (1.22-5.94)	2.90 (1.40-6.02)
No	98 (30.9)		
Unknown	18 (5.7)		
Age: Mean ± SD	30.2 ± 7.1	1.07 (0.97-1.17)	1.04 (0.96-1.13)
Education: n (%)			
Primary school/ secondary school or lower	147 (46.4)	1.74 (1.05-2.87)	0.59 (0.23-1.50)
Bachelor degree or more	170 (53.6)		
Income: n (%)			
≤ 15,000 baht	190 (59.9)	1.31 (0.78-2.20)	1.72 (0.68-4.35)
> 15,000 baht	127 (40.1)		

Table 4. Reasons for not reading the MCHH (N 317).

Reason	%
Choosing to receive the information from other sources	28.6
Style of the handbook was not attractive	22.7
Too busy	17.5
Already knew the contents of the MCHH	13.0
Too much detail or too many pages	8.9
Others	9.3

* Remark: participants could select more than one reason

Discussion

Pregnancy is one of the most important periods of women's lives. Pregnant women, their partners and their families hope for the health of both the mother and the infant. The MCHH plays an important role in improving the health of children and pregnant women in Thailand. Result from this study was similar to findings of previous studies[3–5] and determined that participants who read the MCHH had greater knowledge than those who did not.

Previous authors found a low incidence rate of reading the MCHH in Thailand and a survey conducted in 2005 determined this at only 14.3%[2]. In contrast, a study conducted in Japan in 1999 found the reading rate to be 98.3%[1].

In our study, the MCHH reading rate was 65%, higher than found in previous studies conducted in Thailand. The difference may be due to participants' attendance at parental classes held every morning at Srinagarind Hospital antenatal care clinic which emphasized the importance of reading the handbook. Factors that affected whether or not participants read the MCHH were also evaluated. Results showed that participants who read prior to their current pregnancy were 2.9 times more likely to read during their pregnancy. This finding differed from other authors. Kawakatsu[6] determined that maternal age, health knowledge and household wealth index were related to the rate of reading, while Mori[7] indicated that higher socioeconomic status affected usage of the handbook. Similarly, we found that a significant benefit of reading the MCHH was improved the knowledge regarding pregnancy.

We tested the participants' knowledge; results showed that those who had read the MCHH were more likely to pass the exam compared with those who had not. Pregnant women who read the MCHH had increased pregnancy knowledge. We strongly believe that improved knowledge will enhance maternal health awareness and encourage mothers to seek appropriate healthcare services before complications occur.

We also explored the reasons why pregnant women did not read the MCHH. The two most important reasons were cited as the ability to receive information from the internet or television and the style of the handbook was not attractive.

Our study explored each chapter topic in detail, whereas previous studies[2,8] only assessed results of reading the whole book. The most read chapter was dietary recommendations with least read as iodine deficiency disease and prevention of mother to child transmission of HIV. Healthcare providers or health stakeholders can use our data to better understand reasons why some chapters are read more than others and help to improve the quality of the handbook.

Pregnant women who had received the MCHH for at least one month were included in the study. However, no exact duration was specified. Pregnant women with access to the MCHH for many months had more time to read and study the chapters than others. Time of study may influence participants' knowledge of the material.

Further studies should focus on the relationship

between reading duration and maternal knowledge. In addition, studies should be conducted concerning alternative methods of transmitting maternal knowledge. Those women who did not read the handbook stated the reason as access to other data sources such as the internet or television.

Clinical applications of our results can promote the reading of the MCHH, not only for pregnant women but also non-pregnant women and family members, especially with regard to the chapters that had lower reading rates.

Conclusion

The percentage of participants who read the MCHH in Srinagarind Hospital was 65%. The most read chapter was dietary recommendations and the least read were iodine deficiency disease and prevention of mother to child transmission of HIV. The factor that most affected whether or not participants read the MCHH was "reading prior to current pregnancy." The two most important reasons given by pregnant women as to why they did not read the MCHH were that they received the information from the internet or television and that the style of the handbook was not attractive.

Potential conflicts of interest

The authors declare no conflict of interest.

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