

นิพนธ์ต้นฉบับ

การทบทวนขอบเขตงานวิจัยด้านสุขภาพแม่และเด็กที่ได้รับการตีพิมพ์โดยแพทย์เวชศาสตร์ครอบครัวไทย: “โครงการประเมินผลกระทบของแพทย์เวชศาสตร์ครอบครัวไทยในช่วงสองทศวรรษ”

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Received: July 28, 2024;

Revised: August 6, 2024;

Accepted: August 19, 2024

บทคัดย่อ

ที่มา: ในประเทศไทยผู้ให้บริการระบบสุขภาพปฐมภูมิมีบทบาทสำคัญในการดูแลสุขภาพแม่และเด็ก แต่ยังคงขาดการประเมินบทบาทของแพทย์เวชศาสตร์ครอบครัวไทยในการทำวิจัยด้านนี้ การศึกษานี้มีวัตถุประสงค์เพื่อทบทวนขอบเขตงานวิจัยด้านสุขภาพแม่และเด็กที่ได้รับการตีพิมพ์โดยแพทย์เวชศาสตร์ครอบครัวไทย

แบบวิจัย: การทบทวนขอบเขต

วัตถุประสงค์และวิธีการ: ทำการป้อนรายชื่อของแพทย์ที่ได้รับวุฒิบัตรฯ สาขาเวชศาสตร์ครอบครัวประเทศไทยในโปรแกรม “Famscholar” ซึ่งเป็นฐานข้อมูลที่พัฒนาโดยภาควิชาเวชศาสตร์ครอบครัว มหาวิทยาลัยเชียงใหม่ ฐานข้อมูลนี้ดึงข้อมูลวรรณกรรมที่เกี่ยวข้องกับสุขภาพแม่และเด็กจากฐานข้อมูล Scopus และ ThaiJo ที่ได้รับการตีพิมพ์ในวารสาร ระหว่าง พ.ศ. 2534-2566 ทั้งภาษาไทยและอังกฤษ

ผลการศึกษา: มีการศึกษา 47 บทความ จาก 564 รายการ ที่เข้าเกณฑ์และนำมาทบทวนขอบเขตงานวิจัย บทความเกือบหนึ่งในสามเป็นการศึกษาเชิงตัดขวาง (15 บทความ, ร้อยละ 31.9) และส่วนมากเกี่ยวกับการดูแลสุขภาพแม่ (33 บทความ, ร้อยละ 70) เมื่อแบ่งตามปัญหาเกี่ยวกับสุขภาพแม่และเด็ก มี 11 บทความ (ร้อยละ 23.4) สนใจเรื่องสุขภาพผู้พยายัพ ยังพบว่า มี 25 บทความ (ร้อยละ 53) ทำวิจัยในโรงพยาบาล และ 32 บทความ (ร้อยละ 68) เกี่ยวกับการสร้างเสริมสุขภาพและป้องกันโรค

สรุป: งานวิจัยด้านสุขภาพแม่และเด็กของแพทย์เวชศาสตร์ครอบครัวไทย แสดงให้เห็นถึงบางส่วนของการดำเนินการดูแลสุขภาพแม่และเด็ก แต่ควรเน้นเรื่องสุขภาพเด็ก และเพิ่มการศึกษาที่ทำในชุมชนมากขึ้น

คำสำคัญ: สุขภาพแม่และเด็ก เวชศาสตร์ครอบครัว ประเทศไทย

ORIGINAL ARTICLE

Scoping Review of the Maternal And Child Health Research Published by Thai Family Physicians: “The Two Decades of Thai Family Physician Impact Evaluation (TFPIME) Project”

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Received: July 28, 2024;

Revised: August 6, 2024;

Accepted: August 19, 2024

ABSTRACT

Background: In Thailand, primary care providers play a vital role in maternal and child health (MCH). However, there is a lack of evidence to evaluate the roles of Thai family physicians in MCH research. The objective of this study was to review the MCH-related literature published by Thai family physicians.

Design: A scoping review

Methods: A scoping review was carried out in English and Thai. The name list of Thai Family Medicine diploma holders was entered into “Famscholar”, a database developed by the Department of Family Medicine at Chiang Mai University in Thailand. This database extracts MCH-related literature from Scopus and Thai Journals Online (ThaiJo), covering publications between 1991 and 2023. The scoping review included original articles, integrative reviews, systematic reviews, and meta-analyses published in peer-reviewed journals in both English and Thai.

Results: The scoping review comprised 47 publications from a total of 564 identified. The majority of these publications were cross-sectional studies (15 publications, 31.9%). Most of the studies focused on the local situations and programs management on maternal health (33 publications, 70%). According to the concern in MCH, 11 studies (23.4%) focused on migrant health. 25 studies (53%) were conducted in hospitals. Furthermore, 32 studies (68%) were related to health promotion and disease prevention.

Conclusion: Thai family physicians’ MCH research shows some parts of current situations and the management of MCH programs related to family physicians’ practices. The gaps in child health and community-based programs should have a greater focus.

Keywords: maternal and child health, MCH, family medicine, Thailand

Introduction

Maternal and child health (MCH) is a significant public health issue. Improving MCH is one of the most important aspects of the World Health Organization (WHO). The aim is to eliminate preventable mortality among pregnant women and children while improving their health and well-being.¹ Deaths from pregnancy, childbirth, and postnatal period complications have decreased by 38% in the last two decades. Ending preventable maternal mortality may remain at the top of the international agenda.² Protecting and improving children's health is the essential importance. Children's mortalities can be prevented with vaccinations, sufficient home care, access to healthcare services, increased breastfeeding rates, and better nutrition. Therefore, WHO executed the Global Strategy for Women's, Children's, and Adolescent Health to accomplish the Sustainable Development Goals (SDGs) by 2030.¹ The World Organization of Family Doctors (WONCA) became a partner of Women's, Children's, and Adolescent's Health (PMNCH) which is the world's largest alliance working in partnership to deliver high-quality universal health to every woman, child, and adolescent globally.³

The Thai government has prioritized MCH based on the concept of a continuum of care. Following the implementation of Universal Health Coverage (UHC), Thailand has demonstrated positive MCH outcomes concerning mortality rates, vaccination rates, and antenatal care (ANC) visits. The WHO 2015-2016 report reveals that between 1990 and 2015, the under-5 death rate in Thailand decreased from 37 per 1,000 live births to 12.3 per 1,000 live births. The maternal mortality ratio likewise exhibited a declining trend, reaching 20 per 100,000 live births in 2015.⁴ The Ministry of Public Health of Thailand defined MCH as the health service provided to mothers (women of their childbearing age) and children's health from birth until 5 years of age.⁵

Primary care providers play a vital role in MCH in Thailand. The Royal College of Family Physicians of Thailand (RCFPT) includes; a section on maternal health as a part of women's health, and a section on child health as a part of children's and adolescent health in the family medicine residency training curriculum.⁶ However, the studies on the role of family physicians in terms of MCH practice and research receive less attention and few studies.

The objective of this study is to examine the research on MCH published by Thai family physicians until 2023.

Methods

Study design

A scoping review of the research literature was performed to include the studies relevant to MCH.

Search strategies and information sources

"Famscholar"⁷ is a research database developed by the Department of Family Medicine at Chiang Mai University, Thailand. It functions as an online academic research resource, aggregating publications from various fields, not exclusively from Thai family physicians, and includes content from both the Scopus and ThaiJo databases. The RCFPT provided a name list of 1,565 members, in both Thai and English, who hold a diploma from the Thai Board of Family Medicine. In November 2023, we utilized this RCFPT-provided list of Thai family physicians, along with MCH-related search terms as specified in Table 1, to conduct our search. The database includes publications covering the period from 1991 to 2023.

After obtaining the records, the titles and abstracts were first screened to exclude irrelevant studies. The remaining articles were subjected to full-text review. During this review, we verified the authorship of each article through the following steps:

1. We cross-referenced the author lists of the identified articles with the official RCFPT member list to ensure that at least one author was a certified Thai family physician.

2. In cases where there was a possibility of misspellings or changes in names, we performed additional verification, such as consulting institutional websites or directly contacting the corresponding author, to confirm their status as Thai family physicians.

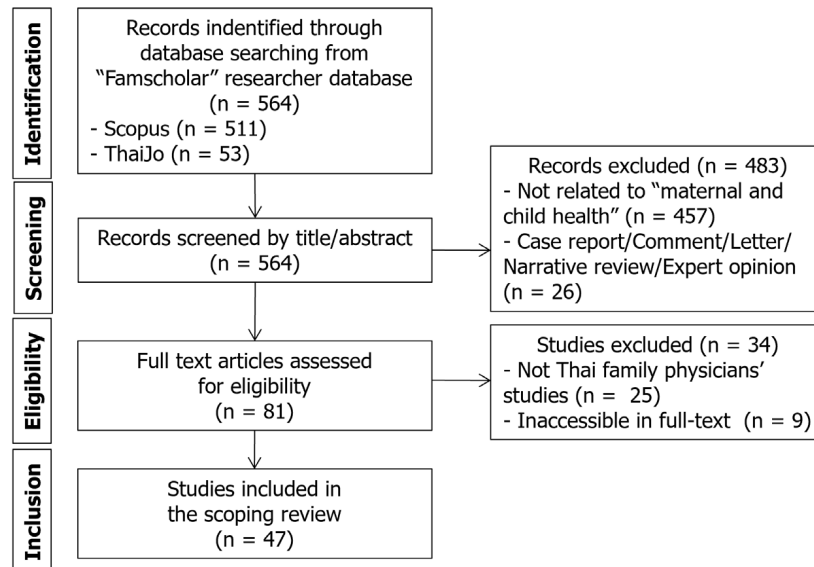
Study selection

In this study, the two researchers (C.R. and Si.Sa.) collected and screened the articles based on titles and abstracts independently. If the study and result of the decision could not be met, the full-text articles were reviewed by two researchers together again. Disagreements in the screening process were resolved through discussion and

Table 1. Search terms utilized to identify MCH-related articles in this scoping review

Domain	Keywords
Maternal and Child Health	Fetal, antenatal care, baby, domestic violence, child, postpartum, pediatric, breastfeeding, breastmilk, maternal, pregnan*, birth, ANC, vaccination, school

*Keyword for pregnant, pregnancy

**Figure 1.** PRISMA flow diagram of the searching process

consultation with a third researcher (R.T.).

Inclusion criteria

- Article Types: Original articles, integrative reviews, systematic reviews, and meta-analyses
- Language: Published in both Thai and English
- Journal Types: Peer-reviewed journals
- Authorship: Authored by at least one Thai family physician, considering all authors

Exclusion criteria

The full-text article was unavailable.

Results

A total of 564 articles were identified through a search in the "Famscholar" researcher database. Of these, 511 articles were published on Scopus, and 53 articles were published on ThaiJo. After screening the titles and abstracts, 483 articles were excluded: 457 were unrelated to MCH, and 26 were other types of articles that did not meet the inclusion criteria. Consequently, 81 articles were selected for full-text review. Following this review, 34 studies were excluded from the analysis: 25 studies were not authored by Thai family physicians, considering all authors (these were authored by other professionals, such as nurses or educators), and nine studies were inaccessible

in full-text. Ultimately, 47 studies were included in this scoping review. The PRISMA flow diagram of the search process, based on "Famscholar," is shown in Figure 1. The primary data, comprising author, year, title, database, research methodology, setting, and results of the 47 included studies are presented in Supplementary Table 1.

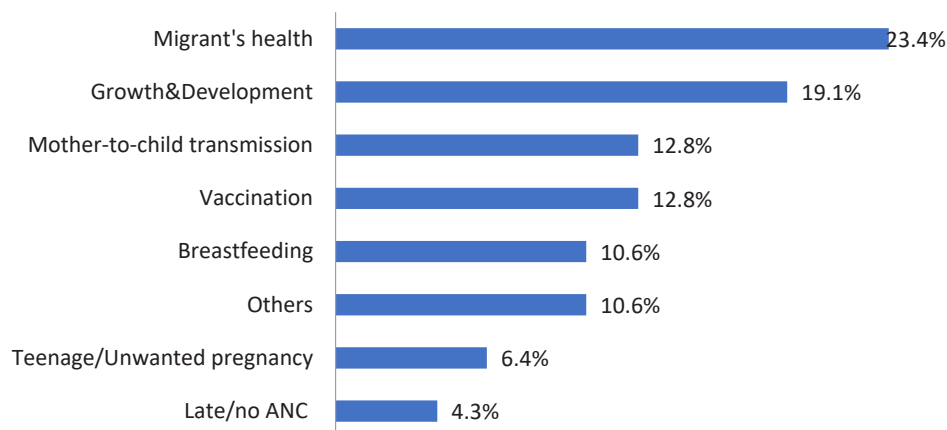
Seven research publications were published between 1991 and 2000, 12 between 2001 and 2010, 17 between 2011 and 2020, and 11 between 2021 and 2023.

Out of 47 studies, 41 (87.2%) were on the Scopus database and 6 (12.8%) on the ThaiJo database. Regarding study design, the majority of them were observational studies; with 15 (31.9%) being cross-sectional, 10 (21.3%) being cohort, five (10.6%) being case-control, and three (6.4%) being qualitative. A small proportion of research was experimental; five (10.6%) were randomized controlled trials, and two (4.3%) were non-randomized controlled trials. In addition, as shown in Table 2, there were four meta-analyses (8.5%), one systematic review (2.1%), one mixed method study (2.1%), and one other method (2.1%).

The 33 studies (70%) focused on maternal health, when categorized by the period of care,

Table 2. Article Methods

Method	Scopus N = 41 (87.2%)	ThaiJo N = 6 (12.8%)	Total N = 47 (100%)
Observational			
Qualitative study	3	-	3 (6.4)
Cross-sectional study	10	5	15 (31.9)
Case-control study	5	-	5 (10.6)
Cohort study	10	-	10 (21.3)
Experimental			
Clinical trial (RCT)	5	-	5 (10.6)
Clinical trial (non-RCT)	1	1	2 (4.3)
Mixed method study	1	-	1 (2.1)
Systematic review	1	-	1 (2.1)
Meta-analysis	4	-	4 (8.5)
Other	1	-	1 (2.1)

**Figure 2.** Percentage of articles on MCH specific issues

revealed 26 research studies on antenatal care (ANC) and seven research studies on postpartum care. Additionally, 13 research studies (28%) focused on child health, including eight studies on newborns and five studies on preschool-age children. Only one study (2%) focused on both maternal and child health.

In this scoping review, the studies on MCH were categorized by specific issues. These included migrant's health (23.4%), growth and development (19.1%), prevention of mother-to-child transmission (12.8%), vaccination (12.8%), breastfeeding (10.6%), other issues (10.6%), teenage or unwanted pregnancy (6.4%), and late or no ANC (4.3%). These categorizations are depicted in Figure 2.

The majority of these studies were conducted in hospitals (25 studies, 53%), with 19 studies (41%) taking place in the community. While three studies (6%) were conducted concurrently in both community and hospital settings.

The domain of the research was divided into two parts: 1) health promotion and disease prevention (32 studies, 68%), covering vaccination, antenatal care, prevention of mother-to-child transmission, breastfeeding, nutrition, growth and development, teenage pregnancy, and well-baby clinic. 2) disease management (15 studies, 32%).

Discussion

This scoping review revealed that the majority of MCH studies published by Thai family physicians on the Scopus database involved international collaborations focusing on global health issues and program management, such as vaccination,⁸⁻¹¹ nutrition,¹²⁻¹⁵ migrant's health,¹⁶⁻¹⁹ and clinical trials.²⁰⁻²³ Meanwhile, research on the ThaiJo database concentrated on local situations of population health issues in the researchers' service areas²⁴⁻²⁷ and dealing with the government policy.²⁸

Seventy percent of the research included in this review focused on maternal health, which

consisted of ANC,^{25,29-30} postpartum care^{19,31}, and breastfeeding,^{12,32-35} with additional emphasis on specific groups such as migrants. These studies show the current practices among Thai family physicians in local settings. All of these are associated with WHO and WONCA's goal of supporting healthy pregnancy, eliminating preventable maternal death, ensuring an effective transition to positive labor, as well as increasing the rate of exclusive breastfeeding in the first six months to at least 50%.^{1,36,37} As the 2030 SDGs were launched, WONCA made progress toward achieving universal access to health and well-being services for women, children, and adolescents. Skilled and competent healthcare providers play a unique role in identifying and supporting advocacy efforts for critical issues and challenges in women's, children's, and adolescents' health and well-being,³ as well as promoting best practices that can be implemented nationally to ensure that no one is left behind. Consequently, child health is an issue that needs more attention.³⁸ In Thailand's health system, obstetricians and pediatricians were primarily responsible for the care of MCH. This might explain why family physicians have undertaken relatively limited research on MCH.

This study demonstrates that research has predominantly focused on working with migrants on MCH. The majority of them were international collaborations concerned with health burdens and barriers to accessing healthcare services. As WHO responds to refugee and migrant health, everyone should be able to access people-centered and high-quality health services without financial impediments. Therefore, WHO collaborates with nations to establish strong health systems that meet the needs of refugees and migrants.³⁹ Furthermore, this might reflect the changing migrant population in local areas where family physicians operate.

Some of the research in this review focused on children's growth and development, which is influenced by a variety of factors including maternal health, nutrition, and nurturing care, particularly in the early years. The Nurturing Care Framework was established by WHO and the United Nations Children's Fund (UNICEF), aim to promote healthy growth development in children. This approach emphasizes the need for early interventions and continuous interaction with caregivers and young

children, starting from pregnancy.⁴⁰ In response, Thailand's Ministry of Public Health launched the "1,000 Days Miracle" initiative to improve the quality of ANC and establish a child and family care team to support children in surviving and thriving from pregnancy to the age of two years. This initiative ensures that Thai children achieve optimal growth and development.²⁸

More than half of the research was conducted in hospital settings, which may reflect the majority of family physicians' practices. Therefore, to satisfy the Entrustable Professional Activities (EPAs) requirements for Thai family physicians' professional skills in system and community-based practice, further studies in community settings should be explored. The majority of the research focused on health promotion and disease prevention, which is a crucial role for family physicians, as outlined in the EPAs.⁶

There was an interesting innovation to improve MCH care applied in the context of the service area: the "Better Border Healthcare Program", an application for smartphones integrated into the healthcare system as a communication tool to enhance maternal health on ANC and reduce child mortality through the Expanded Program on Immunization (EPI) in the Thai-Myanmar border area.⁴¹ This is correlated with professionalism, propagating working ideas, and innovation in medical practice, which is one of the core competencies of the residency training curriculum in family medicine.⁶

Conclusions

MCH is a worldwide priority. Thai family physicians have published several studies on MCH using a variety of methodologies over the past two decades. The findings of this scoping review on family medicine in Thailand provide some parts of the current situation of MCH in local settings of Thai family physicians. These findings can be used to improve MCH practices by prioritizing longitudinal studies over cross-sectional studies for deeper insights into continuous care. Child health research should be prioritized to balance maternal health research and align with global health goals. More research in community settings can better integrate family physicians' roles in health promotion and disease prevention, according to the EPAs. Furthermore, leveraging these insights can help in the development of

policies and initiatives to improve family medicine training and practice, particularly preventive care and comprehensive primary health management.

Strengths and limitations

This scoping review retrieved articles from Famscholar, which comprises the Scopus and ThaiJo databases. However, it is not linked to PubMed, a major global database; therefore, this study covers only some of the studies published by Thai family physicians.

Author contributions

R.T. originated the study concept and designed the research plan. C.R. wrote the main manuscript, performed revisions, analyzed, and interpreted the data. C.R., R.T., and Su.Sr. developed the discussion structure. Si.Sa. provided research data and contributed to the discussion. R.T. and Su.Sr. assisted in shaping the discussion and reviewed the manuscript. All authors approved the final version.

Disclosure

The authors declare that there are no conflicts of interest.

Funding

The study was supported by The Royal College of Family Physicians of Thailand (RCFPT) under “The Two Decades of Thai Family Physician Impact Evaluation Project (TFPIME)”.

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