

Achieving Health Equality by Dissemination of a Maternal and Child Health Handbook

Miri Sato

22MP221

Master's Capstone Report submitted in partial satisfaction of the
requirements for the degree of
Master of Public Health

St. Luke's International University
Graduate School of Public Health

Supervisor: Dr. Satomi Sato

January 9, 2024

Abstract

Background: Home-based records (HBRs) are extensively utilized to improve maternal and child health (MCH) in more than 163 countries worldwide. Among the tools for managing health is the Maternal and Child Health Handbook (MCH Handbook). The MCH Handbook can improve MCH in both the physical and mental domains. It is also evident that the MCH Handbook employs diversity, equity, and inclusion (DEI) principles to attain health equity. However, it is still uncertain if disseminating an MCH Handbook results in improved health equality. Therefore, the purpose of this study is to identify if dissemination of a MCH Handbook contributes to the promotion of health equality.

Methods: The research comprised three distinct components. Research 1 is a literature review, focusing on three relevant chapters from “Kotch’s Maternal and Child Health: Problem, Program, and Policy in Public Health (4th edition).” The selected chapters included Chapter 18 “Assessment and Program Planning,” Chapter 21 “Advocacy and Policy Development,” and Chapter 22 “Leadership in Maternal and Child Health.” Additional literature was explored using keywords such as “maternal and child health handbook,” “mother and child handbook,” “maternal health services,” and “record.”

Research 2 involved a case study conducted in Beirut, Lebanon, utilizing the diary method of onsite inspection. The fieldwork took place over 38 days, from August 21st, 2023, to October 12th, 2023. The observation sites included the United Nations Children’s Fund (UNICEF) Lebanon Office, Halba Governmental Hospital, Al-Iman Primary Healthcare Center, and Ghobeiry Municipality Health Care and Social Center.

Research 3 consisted of an interview conducted on November 10th, 2023, with Professor Yasuhide Nakamura. Eleven questions were posed based on keywords identified from the literature review and the Lebanon case study. These keywords encompassed advocacy, community building, DEI (Diversity, Equity, and Inclusion), dissemination, health equality, implementation, inappropriately used, leadership, the Little Baby Handbook (LBH), policy development, program planning, public policy, structural racism, sustainability, and quality improvement.

Results: The findings from the three research are summarized as follows:

Research 1 discerned four distinct phases in MCH activities: advocacy, leadership, program planning, and policy development. Research 2 indicated that despite the widespread distribution of the MCH Handbook, achieving health equality remains elusive even with a 95% coverage rate. This disparity is attributed to a lack of recognition of the handbook's significance and improper use in the Lebanese context. Notably, improper utilization includes tearing off pages to fill out the vaccination record. Moreover, the study revealed that Lebanon predominantly engages in program planning, neglecting advocacy, leadership, or policy development. Research 3 extended the understanding of the four phases identified in Research 1—advocacy, leadership, program planning, and policy development—by categorizing them into three stages: developing, disseminating, and maintaining.

Conclusion: Merely disseminating the MCH Handbook is insufficient for achieving health equality. The Japanese experience highlights the significance of the three-stage approach encompassing development, dissemination, and maintenance—for the success of the MCH Handbook as an intervention. An internal key success factor observed in Japan was the central role of health motivation in the lives of the Japanese people. Sustaining the continuous recording of individuals' health motivations is crucial for ingraining the MCH Handbook as a

cultural practice and ensuring its long-term sustainability. In essence, addressing health inequality is achievable through fostering health motivation and maintaining the MCH Handbook.

Keywords: MCH Handbook, health equality, advocacy, leadership, program planning, policy development, developing stage, disseminating stage, and maintaining stage.

Acknowledgements

The author, Miri Sato was a recipient of the St. Luke's International University Graduate School of Public Health Educational Scholarship which supported the educational activities at St. Luke's International University.

Foremost, I would like to pay my special regard to my supervisor, Professor Satomi Sato. I sincerely appreciate your aspirational guidance, indisputable constructive criticism, inspiration, and perceptive remarks throughout the process. Without your supervision, my dissertation would not be able to be completed. I would also like to thank my mentor, Professor Emilie Matsumoto-Takahashi for the continuous support throughout the Master of Public Health course. Additionally, I would like to express appreciation to Professor Yasuhide Nakamura for letting me conduct an interview for this research.

List of abbreviations

ANC	Antenatal care
AUB	American University of Beirut
CoC	Continuum of care
DEI	Diversity, Equity, Inclusion
DMAIC	Define, measure, analyze, improve, and control
GHQ	General Headquarters
HBR	Home-based record
JICA	Japan International Cooperation Agency
LBH	Little Baby Handbook
LCT	Life course theory
LRC	Lebanese Red Cross
MCH	Maternal and child health
MCH Handbook	Maternal and Child Health Handbook
MERA	Mobile EPI registry application
MHLW	Ministry of Health, Labor, and Welfare
MoPH	Ministry of Public Health
MVU	Mobile vaccination unit
NICU	Neonatal Intensive Care Unit
PDSA	Plan-do-study-act
PHC	Primary healthcare
PHCC	Primary healthcare center
PHENICS	Primary Health Care Network Information & Communication System
PNC	Postnatal care

PPL	Palestinian Programme in Lebanon
SDG	Sustainable Development Goal
SDoH	Social determinants of health
SMART	Specific, measurable, achievable, realistic, and time-limited
SMARTIE	Specific, measurable, achievable, realistic, time-limited, inclusion, and equity
UHC	Universal health coverage
UNHCR	United Nations High Commissioner of Refugees
UNICEF	United Nations Children's Fund
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
WHO	World Health Organization
WWII	World War II

1. INTRODUCTION

1.1. Background Information

Home-based records (HBRs) play a crucial role in enhancing maternal and child health (MCH) globally, with over 163 nations utilizing these records.¹ Health management methods for mothers and children vary across countries, including the use of maternity handbooks, children's handbooks, immunization cards, and the unique *Maternal and Child Health Handbook* (MCH Handbook). HBR prevalence has reached high levels ($\geq 90\%$) in several countries, maintaining these levels consistently.²

MCH Handbooks, serving as the sole medium recording MCH information, facilitate the continuum of care (CoC) by ensuring uninterrupted access to healthcare without temporal or spatial fragmentation.³ By encompassing pregnancy, childbirth, and child health in a single handbook, coupled with the ability for parents/guardians to keep it readily accessible, the MCH Handbook emerges as a comprehensive tool.⁴

Japan introduced its first HBR in 1942 to separately record infant and maternal health: the Infant Physical Fitness Handbook and Maternity Handbook. Initially serving as coupons during World War II (WWII), these handbooks later transitioned into invaluable tools for monitoring and promoting MCH. More than 50 countries, including Indonesia, Mongolia, the Philippines, and Sudan, have adopted the MCH Handbook for various purposes, such as monitoring MCH, assessing healthcare service utilization, promoting health education, and providing MCH information to healthcare workers.⁵

A coherent MCH Handbook contributes to improvement in both physical and mental aspects of MCH. It records antenatal care (ANC) and postnatal care (PNC) visits, facilitates early diagnosis of conditions like biliary atresia through the inclusion of a stool color card, supports immunization follow-ups, and provides parenting guidelines. The MCH Handbook, has been instrumental in reducing infant mortality rates in Japan.⁶

Moreover, the MCH Handbook address mental health concerns by incorporating psychosocial support, parenting anxiety screening, and stress-related information.^{6,7} The inclusion of a growth chart section enables simultaneous tracking of physical and mental well-being, aiding in the identification of both physical diseases and hidden psychological issues. The MCH Handbook, with its emphasis on mental health, contributes to a holistic approach to maternal and child well-being.

Public health, as a discipline, focuses on protecting and enhancing individual and community health, striving for health equity and equality. The MCH Handbook, with its inclusive design, aligns with principles of diversity, equity, and inclusion (DEI),⁸ providing access to quality care regardless of social status. It addresses various social determinants of health (SDoH), including healthcare access and quality,^{9,10} thereby contributing to health equity.

Achieving health equality involves addressing material, psychosocial, behavioral, and biomedical elements.¹¹ The MCH Handbook aids in achieving health equality by promoting immunization, providing psychosocial support, influencing positive health behaviors, and detecting early signs of diseases through genetic and environmental risk factor interactions. The MCH Handbook's dissemination contributes to health equity, tackling disparities and promoting DEI in healthcare practices.

In conclusion, the MCH Handbook stands as a comprehensive tool that not only records vital MCH information but also fosters health equity and equality. Its unique design, coupled with an inclusive approach to health, positions it as a key instrumental in the global pursuit of optimal maternal and child well-being.

1.2. Hypothesis

Dissemination of the MCH Handbook achieves health equality regardless of social status as it enables equal access to healthcare. Although HBR have spread all over the world, it is still

uncommon for a country to use a consistent handbook that records MCH. The MCH Handbook has the function of achieving health equality and has content related to it. In countries that have introduced the MCH Handbook, such as Angola,¹⁸ Bangladesh,¹⁹ Indonesia,^{20,21} Mongolia,²² and Palestine,²³ improvements in health outcomes have been observed. Therefore, if it is made available to every person regardless of social status, religion, ethnicity, education, and income levels, equitable health outcomes can be expected. In other words, health inequalities can be mitigated through the widespread use of the MCH Handbook.

1.3. Objectives

This research aims to investigate whether dissemination of the MCH Handbook helps to achieve health equality. This aim will be achieved by conducting three components of research: (1) Literature review, (2) Case study of Lebanon using the diary method, and (3) An interview with Professor Yasuhide Nakamura, an expert in the MCH field, particularly on the MCH Handbook.

2. RESEARCH 1: LITERATURE REVIEW

2.1. Objectives

Research 1 aims to investigate essential factors influencing MCH activities and develop effective approaches to meet MCH needs. This research delves into the processes associated with diverse range of initiatives, programs, and interventions designed to enhance MCH, encompassing prenatal care, maternal health services, child immunization programs, nutrition support, and various other intervention. The primary goal to ensure optimal MCH outcomes during the crucial stages of pregnancy, childbirth, and early childhood. Additionally, Research 1 explores the significance of disseminating the MCH Handbook as a key element of MCH activities.

2.2. Methods

The handbook for MCH published in 2021, “Kotch’s Maternal and Child Health: Problems, Programs, and Policy in Public Health (4th Edition)” which has 630 pages was selected for the review. After consultations with the supervisor, chapters relevant to the research questions were identified from the table of contents and headings of the handbook. This handbook was selected because it provides a comprehensive overview of MCH information, from which perspectives relevant to the research questions were extracted. The inclusion criteria for the selection of the chapters were if they contained concepts related to “health equality” and “reference to the actual MCH activities.” From the evaluation, Chapter 18 “Assessment and Program Planning” (pages 495-512), Chapter 21 “Advocacy and Policy Development” (pages 585-602), and Chapter 22 “Leadership in Maternal and Child Health” (pages 603-614) were considered

relevant to the research question. In addition, a literature review was conducted in May 2023, and the literature identified through the key phrases “maternal and child health handbook,” “mother and child handbook,” “maternal health services,” and “record” were added to the analysis. Based on the handbook “Kotch’s Maternal and Child Health: Problems, Programs, and Policy in Public Health (4th Edition)” and the results of the literature review, factors that most constitute MCH activities were identified.

2.3. Results

The MCH activities mainly consisted of four phases: advocacy, leadership, program planning, and policy development (Table 1).^{24,25} The common goal for each phase is to improve MCH outcome. The process toward policy development, which plays a specific role in this process, is two-fold: advocacy and leadership, and program planning (Figure 1).

Table 1: Four MCH activity phases

Phase	Items	Summary	Original text
Advocacy	Definition	Process to achieve MCH goals.	Process of providing support for a position, proposal, or cause, and can be performed by individuals or groups, and for those who work in the field of maternal and child health (MCH), advocacy is an essential tool, necessary for the achievement of our goals.
		Evidence-based advocacy.	Public health professionals do not advocate strictly from emotion or opinion, but rather on basis of facts—through a good dose of human passion and political savvy can help bring the data to life and make it more relevant and actionable by policymakers.
		Relates to legislation.	Often linked to policy development and the political process.
		Towards federal, state, and local level, with public organization involved.	Regardless of the target of advocacy efforts, the involvement of professionals and constituents from the local level is critical to success at every level, be it local, state, or national. “Grassroots support” may be an over-used term, but the underlying meanings suggests strength in numbers and true constituent/public support for the advocacy agenda.
		MCH advocacy started since 1900s, during progressive era, for women speaking up to the right to vote, the elimination of child labor, and public education.	Much like the early 2000s, the early 1900s were marked by tremendous reform efforts propelled by vocal advocates. During this “Progressive Era,” women found their voice to advocate for—among other things—voting rights, an end to child labor, and public education. The women who advocated for a national response to the needs of children and their mothers were systematic, strategic, and tenacious.
		MCH advocacy fights for elimination of institutional racism, which is the root cause of many MCH disparities, and for advancement of racial justice.	Women and children have the most to gain from efforts designed to create conditions in which everyone can be healthy, to redress historical structural racism, and to embrace health as a human right. MCH advocacy is a tall order, but a

				necessary element of our work.
		Mixture of education and action.		Optimally, advocacy is an artful blend of education and action. Few MCH-related problems have only one best solution. Information and education lay important groundwork for identifying policy options and advocacy strategies.
		Anyone can be an advocate.		Anyone can be an advocate, and everyone in the field of MCH should be an advocate.
	Levels	Individual Levels	A person challenging an institution or organization on behalf of another person, serving as their mediator, defender, and protector.	An advocate is a person acting on behalf of another person as a defender, protector, mediator, supporter, investigator, negotiator, monitor, promoter, enabler, and/or counselor. Individual or case advocacy often involves challenging an organization or an institution on behalf of another, seeking more responsive, adequate, or effective services or supports for that individual. The advocate in this case can be a parent or guardian, or someone employed in this capacity, such as a case worker. In its most traditional sense, the term “advocate” refers to a lawyer representing a client. While advocacy for young children necessarily requires someone else to advocate on their behalf, adults and even adolescents can be effective advocates on their own behalf, particularly if armed with tools and supports such as relevant information and training.
		Organizational Levels	A person or organization working to monitor or influence the legislative, budgetary, and administrative processes by closely observing any changes that should be called out or any chance to support or advance a certain cause, such as fight for women’s reproductive	An advocate is a person or group attempting to alter or monitor legislative, budgetary, and administrative processes. The advocate in this case may be part of a professional association, a “watchdog” group, or a voluntary or special-interest group keeping close watch on any change that needs to be called out or any opportunity that arises to either defend or promote a particular cause. Advocacy groups that seek to protect women’s reproductive rights are a good example of those engaged in organizational advocacy.

			rights.	
		Community Levels	A person or organization working to change a system for the good of a particular community. Often, it starts out as case advocacy but grows to include other people who are passionate about the same problem, building strength in numbers and common resources like mass shootings.	Often consider systems approaches for defined classes of individuals; thus, an advocate at this level is an individual or a group seeking to reform a system to benefit a specific community. A community might be a geographic area, a group of people with something in common, such as interests or concerns. Advocacy to benefit a community may begin as case advocacy and expand to engage others interested in the same issue, creating strength in numbers and shared resources. Advocacy on behalf of a group or class of individuals—a specified community—is often precipitated by a sentinel event with broad public exposure and emotional impact. Mass shootings are one of example of this type of attention-grabbing event. On a broader and more insidious scale, we consider the public’s growing awareness of the problems of police brutality or mass incarceration, or the scope and consequences of lacking health insurance, or the dramatic increase in opioid-related deaths, as representing the types of issues or events that can be galvanize people who may have gotten involved due to an interest in a single individual, but who are now working collaboratively to create true systems change.
	Effect	With appropriate advocacy, appropriate implementation, such as for necessary resources, or for appropriate interpretation and enforcement, can be done.		When the necessary legislative or other policy basis is in place, we can advocate for effective implementation, for necessary resources, or for appropriate interpretation and enforcement.
		Promotes a positive cycle of health across generation by redressing historical racism and accepting health as human rights.		Scientific evidence supports what is intuitively obvious: A healthy woman enjoying a healthy pregnancy has a healthy child; a healthier child becomes a healthier adult; and so on, promoting a positive cycle of health across generations. Conversely, multiple insults over time that threaten this cycle contributes to negative health outcomes at all ages, taxing not just the quality of individuals’ lives but also the economic

			vitality and social well-being of the nation.
Leadership	Definition	The capacity to drive meaningful change, shepherd through the critical systemic reforms that our institutions so desperately need.	Much more than positional authority, such as that imbued in a person who runs an organization, agency, company, or program. An expanded definition of leadership includes those who have the ability to influence change, make a meaningful impact, and shepherd through the changes our systems so greatly require. In this sense, we can all be leaders in our own right, no matter what our title or administrative responsibility.
	Role	Support the efforts of the community.	The most effective role for MCH leaders is to support the efforts of communities and community leaders who have the first-hand experience and passion for an issue, backed by data and strategic insights that MCH professionals may be able to provide.
	Challenge	Structural racism. Need to take drastic measures to address the causes of inequity and establish environments in which everyone thrives.	More recently, we have recognized that the environments in which people live and develop (SDoH) and the lifetime experiences that impact their health and MCH outcomes (life course theory, LCT) are influenced by racism. Structural racism exists in every major system (health care, education, housing, workplace, child welfare, and criminal justice), causes intergenerational stress for the people it impacts, and influences the investments and policies that either support or hinder community well-being. Bold leadership will be required to truly bring about challenges that advance equity (both health and racial) and create systems that allow for the attainment of optimal health outcomes for all. We need bold action that takes us beyond where we have been previously, pushing past places of comfort to solutions that address the roots of inequity and create environments in which everyone thrives.
	Criteria	1) Imagination and creativity	Visionary
		2) Humility	Humble
		3) Strategy	Strategic

		4) Culturally competent	Reflective of those whom they serve/culturally competent
		5) Creativity	Willing to create a culture of learning
		6) Take it personally	Willing to make it personal: Alignment of purpose, passion, and position
		7) Challenge the status quo	Ready to challenge the status quo
Program planning	Definition	Components of a public health approach to program planning are: (1) population health perspective, (2) community engagement, and (3) approach to assessment, design, implementation, and evaluation.	A public health approach to program planning combines a population health perspective, community engagement with a broad group of stakeholders, and a structured approach to assessment, design, implementation, and evaluation.
		Enhance MCH outcomes by engaging multiple stakeholders, investigating various contexts where the programs will be implemented, and implementing evidence-based interventions.	Involves engaging multiple stakeholders; examining the social, political, cultural, and health system contexts within which programs will be implemented; and undertaking, when possible, evidence-based interventions for improving the health and well-being of mothers, infants, and children.
		MCH program planning provides the opportunity to include an equity framework in their work.	Program planning in MCH offers providers, planners, decision makers, policy makers, funders, and community leaders the ability to incorporate an equity frame into their efforts.
	Steps	1) Understand context	Context: Understanding the problem or issue of concern and the setting/situation (context) in which it is occurring.
		2) Community assessment	Community assessment: A team process that focuses on the assets, needs, challenges, and priorities in a given locale or jurisdiction, among a certain population of people.
		3) Program design	Program design: Goals and objectives are extremely important to choose in a collaborative manner with the community. Goals are broad directions of intent, whereas objectives are more specific, answering the questions of who, what, how much, and by when. These objectives can be behavior, community, and process oriented, which affects how the program will be

			implemented.
		4) Implementation	Implementation: Implementation science provides the necessary research and told for carrying out the selected evidence-based service or program and achieving the intended outcomes. At the center of this field are active implementation frameworks, which guide program practices that are both sustainable and scalable: implementation teams, drivers, usable interventions/innovations, stages, and improvement cycles.
		5) Evaluation and improvement	Evaluation and continuous improvement: Stakeholder engagement helps determine whether the program requires some adaptations or a complete overhaul to ensure that it is meeting the needs of the community and continues to evolve with new knowledge of best practices. Furthermore, to build the evidence base, programs must not only evaluate their outcomes but also disseminate their results. Practice-based evidence is as important as evidence-based practice.
Policy development	Definition	Essential MCH function.	An essential MCH function as well as other forms of advocacy outside the political process that are perhaps less familiar but no less important.
	Cooperation	MCH advocates should familiarize themselves with the legislative process.	The truth is that the public policy is indeed messy, but one in which we must be willing to engage if we are to success in effecting change for women, children, and families. There are many good websites available that describe the process of law-making at the national and state levels, and it is important that the MCH advocate become familiar with how this process works at the level at which advocacy efforts will be targeted so that opportunities to influence the process are not missed.

		Learn the legislative process.	It is essential that advocates learn the structure of legislature; identify the committees that will likely be key to their efforts (usually a health or health and human services committee, the finance and appropriations committees, possibly the education committee, or maybe a special or select committee dedicated to issues relating to children and families); and learn the names, backgrounds, and political affiliations of key members of each chamber (the senate and the house), each committee of interest to the advocacy agenda, and any special legislative commission.
		Know the budgetary.	It is also important to know the calendar for budget preparation and the process by which agencies develop their legislative agendas.

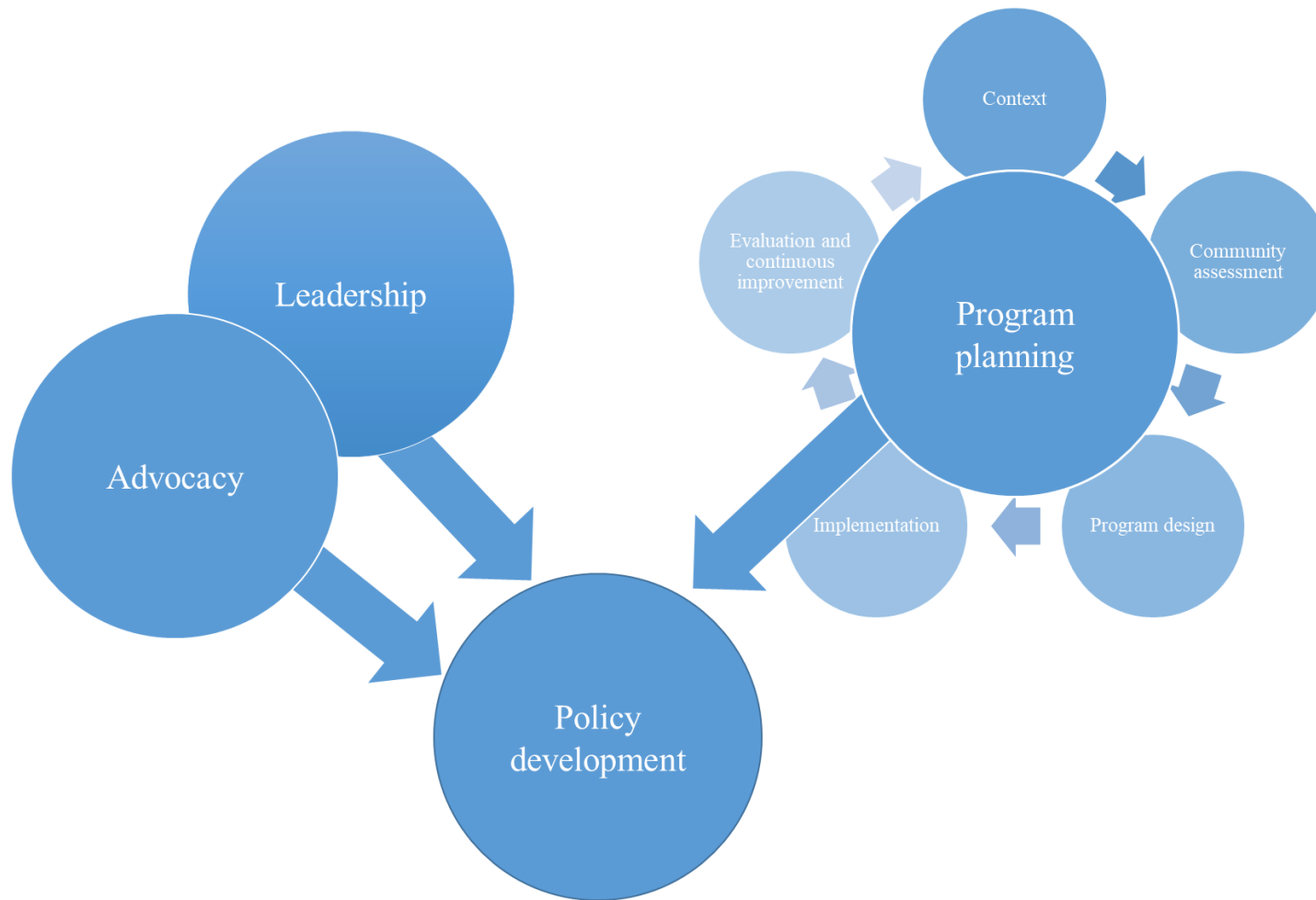


Figure 1: Process toward policy development

Advocacy and leadership are different from program planning in that they are external influences on policy development, so the arrows are pointing in two different directions.

2.3.1. Advocacy

Advocacy is an evidence-based process of supporting and enabling people to achieve certain goals.²⁴ In the MCH field, the goals are to eliminate institutional racism, which is the root cause of many MCH disparities, and to advance racial justice. As advocacy is done based on evidence, it is considered a mixture of education and action. It is frequently used in the development of policies and the legislative process at federal, state, and local levels, with public organization involvement. The origin of MCH advocacy dates to the 1900s, which is during the progressive era when women spoke up about their right to vote, the elimination of child labor, and public education.²⁴ Anyone can be an advocate to fight for MCH rights.

Advocacy can be conducted at three levels: (1) individual/case, (2) organizational, and (3) community level. Each level requires careful monitoring of the needs of the population and the nature and scope of the response. In the individual/case level, advocacy can manifest as a person challenging an institution or organization on behalf of others, serving as their mediator, defender, and protector.²⁴ This frequently entails speaking out against a company or establishment on behalf of others in an effort to get better, more appropriate, or efficient services or supports for that person. The advocate may be a parent, guardian, or a professional who serves in this role, such as a case worker. While advocating on behalf of young children always involves another person, adults or adolescents can be powerful advocates when given the right resources and assistance, such as pertinent knowledge and training.

Advocacy at an organizational level may manifest as a person or organization working to monitor or influence the legislative, budgetary, or administrative processes. One example of this is fighting for women's reproductive rights.²⁴ In this instance, the advocate might be a member of a professional association or a group that closely watches for changes that should be called out or for a chance to support or advance a certain cause.

At the community level, advocacy can manifest as a person or organization working to

change a system for the good of a particular community.²⁴ A community can be defined as a geographical location, a group of people who share a characteristic, such as race or gender, or a collection of individuals who have common interests or concerns. Often, it starts out as case, or individual advocacy but grows to include other people who are passionate about the same problem, for example, mass shootings. As more people get involved, community advocacy builds strength in numbers and common resources. On a larger and more subtle level, the public's increasing recognition of the issues can be taken as an example of the kinds of problems or incidents that can inspire people who previously may have become involved out of a personal interest in a particular person, but who are now cooperating to bring about real systemic change.

This work recognized two crucial effects of advocacy. Firstly, effective advocacy ensures proper interpretation, enforcement, successful implementation, and allocation of necessary resources, including the enactment of policies and securing healthcare resources. Secondly, MCH advocacy contributes to fostering a positive cycle of health across generations by addressing historical racism and recognizing health as a fundamental human right. Therefore, advocacy becomes indispensable for promoting favorable MCH outcomes in contemporary societies where structural racism persists.

2.3.2. Leadership

Leadership involves the capacity to instigate meaningful change and navigate critical systemic reforms urgently needed by our institutions.²⁵ There are seven essential requirements for effective leadership: (1) imagination and creativity, (2) humility, (3) strategic thinking, (4) cultural competence reflecting the communities served, (5) motivation to foster a culture of learning, (6) alignment in goals, passions, and perspective, and willingness to make it personal, and (7) a commitment to challenging the status quo.²⁵

Firstly, individuals with imagination and creativity can precisely define goals think unconventionally, enabling the design of innovative paths to achieve objectives. Second, humility is crucial for understanding the suffering endured by communities of color and appreciating the injustices they have faced, fostering genuine engagement. Additionally, recognizing the knowledge needed to address the range of challenges faced by new leaders emphasizes the importance of collective capabilities over individual capacities. Third, strategic thinking is essential to avoid wasting time and ensure the accomplishment of objectives through well-thought-out plans and defined end goals with measurable milestones. Fourth, understanding the experiences of impacted communities is crucial for developing solutions that genuinely enhance their quality of life, requiring leaders to authentically reflect the communities they serve. Fifth, fostering a learning culture involves acknowledging ignorance in a particular field, accompanied by a healthy sense of curiosity. Sixth, leaders should adopt a person-centric approach, personalizing issues to position themselves most effectively to make a difference in the face of serious crises. Seventh, recognizing the unfairness of current systems affecting MCH across the country is crucial. To realize a new reality, bold and courageous leadership is necessary.

The ongoing challenge in MCH leadership lies in the persistent existence of structural racism. Therefore, the focus should be on antiracism and racial equity, not solely on pursuing health equity²⁶ when aiming for lasting and meaningful change in the MCH population.²⁵ Effective leadership mandates drastic measures to address the root causes of inequity and establish environments where everyone can thrive.

2.3.3. Program planning

Program planning serves as a critical component in developing policies to improve MCH outcomes. The enhancement of MCH outcomes is achieved by involving various stakeholders,

exploring diverse implementation contexts, and employing evidence-based interventions.²⁷ In academic settings, program planning may involve the publications of papers such as reports and related materials. Additionally, local, state, and federal agencies issue reports containing information on programmatic initiatives and outcomes or conduct investigations into MCH outcomes associated with policy changes or implementation. National public health and policy groups release publications and briefs detailing current strategies, tools, and opportunities to improve health outcomes.

There are five key components in MCH program planning, each encompassing several steps and elements.²⁶ Figure 2 created by the author based on retrieved information regarding the MCH program planning process, illustrates these key components. As Japan initiated MCH activities during WWII to strengthen the army, the need for the Infant Physical Fitness Handbook and the Maternity Handbook emerged to support the healthy growth of children for the country.^{6,28}

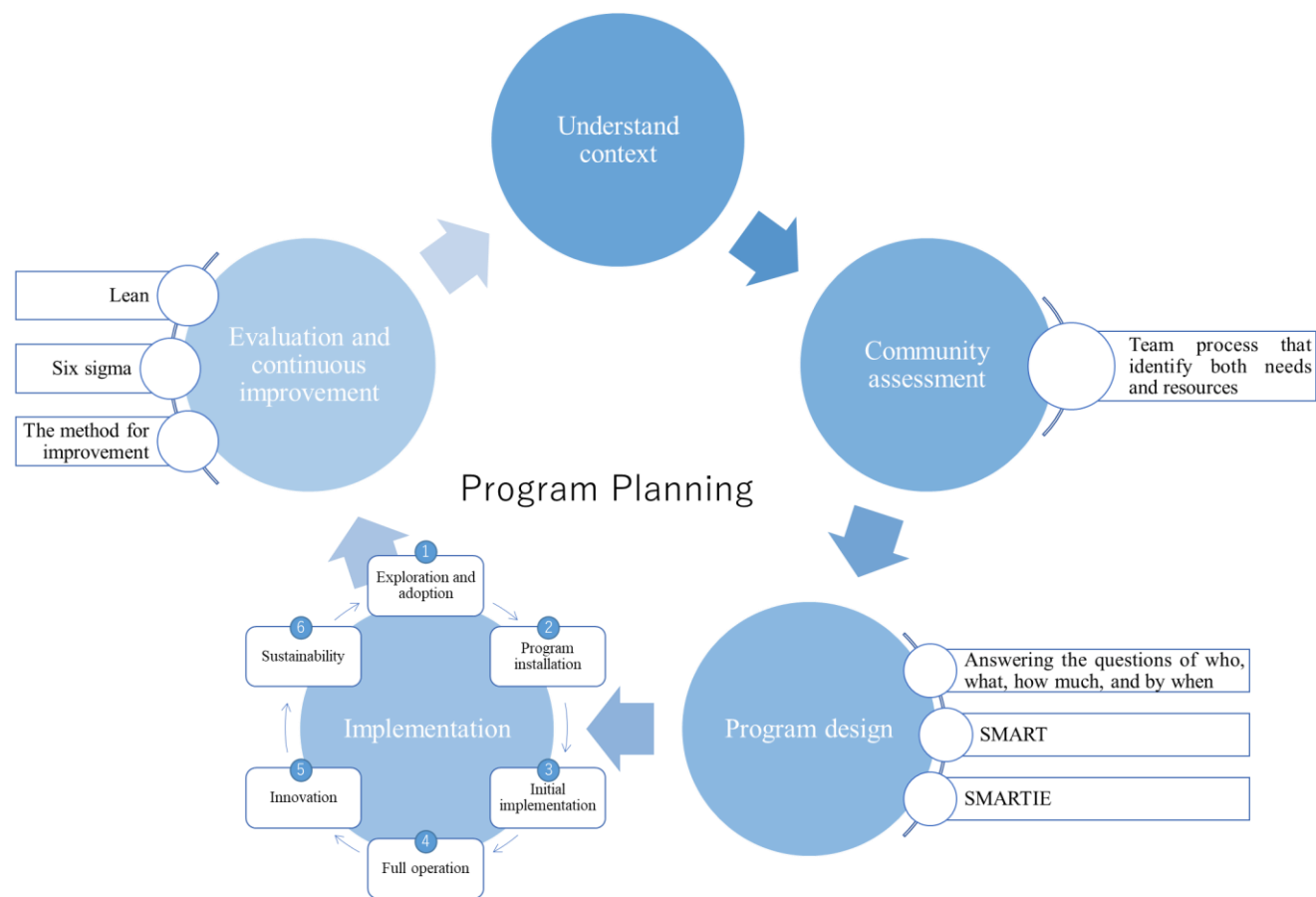


Figure 2: MCH program planning process

A concrete diagram of the program planning process shown in Figure 1.

Understanding the context involves recognizing the problem or issue at hand and the environment or circumstances in which it occurs, a process crucial for addressing the cycle of health across generations.²⁴ In 1938, Japan faced significant challenges, with over 300,000 estimated miscarriages and stillbirths, 5,000 maternal deaths due to pregnancy and childbirth, and over 60,000 infant deaths attributed to congenital weakness resulting from premature birth.⁷ Additionally, during WWII, food shortages, leading to poor nutritional status, were a major concern in Japan.^{29,30}

A community assessment is a collaborative process aimed at identifying the resources, needs, issues, and priorities of a specific population within a designated area or jurisdiction.²⁶ This step follows the acknowledgement that unhealthy conditions in pregnant women and children can lead to unhealthy adults. Solving complex issues and advancing health and well-being depend on partnerships within the public health domain.

Program design involves selecting goals and objectives through a community-wide collaborative approach.²⁶ Objectives, which focuses on who, what, how much, and by when are made SMART (Smart, Specific, Measurable, Achievable, Realistic, and Time-limited), or SMARTIE, with Inclusion and Equity considerations. Goals providing general directions, can be procedural, behavior-focused, or community-focused, influencing the program's execution. Examining the Infant Physical Fitness Handbook and the Maternity Handbook, were designed hastily during WWII to address the maternal and child deaths and food shortages, exemplifies a system established for rationing food, milk, and clothing to support the healthy development of mothers and children.^{6,28}

Implementation involves utilizing evidence-based programs or services, guided by implementation science principles to achieve desired results. Active implementation frameworks, encompassing implementation teams, drivers, stages, improvement cycles, and usable interventions/innovations, form the core of this discipline. Six stages for implementation are (1) exploration and adoption, (2) program installation, (3) initial implementation, (4) full

operation, (5) innovation, and (6) sustainability.

Evaluation and continuous quality improvement represent the final steps to ensure well-designed programs or determine necessary modifications using modest tests of change. Programs must disseminate findings, contributing to the body of evidence, as practice-based evidence is as crucial as evidence-based practice. Examples of quality improvement include: Lean, Six Sigma, and the Model for Improvement. Lean, an efficient improvement method emphasizes benefits retained after selection. Six Sigma reduces implementation variability through the Define, Measure, Analyze, Improve, and Control (DMAIC) method. The Model for Improvement performs Plan-Do-Study-Act (PDSA) cycles at the micro level, completed in days or weeks.

2.3.4. Policy development

Policy development is the culminating phase in the MCH activity process, representing a vital function for achieving the established goals.²⁴ The Maternal and Child Health Act, enacted in 1965 to uphold and advance MCH, ensures equal rights for all mothers and children under the law.³¹

In navigating the policy development process, advocates must acquaint themselves with the (1) legislative process, (2) legislative structure, and (3) legislative budgetary aspects. While public policy is complex, active participation is indispensable for successfully effecting change for women, children, and families. MCH advocates need a thorough understanding of this process at the specific level where their advocacy efforts are concentrated to capitalize on opportunities to influence the process. Health equality is emphasized, emphasizing that every individual has the opportunity to achieve optimal health through the existence of laws, with the MCH Handbook as a means to realizing these goals.

Advocates must comprehend the legislative process, including the names, backgrounds, and political affiliations of key members in both chambers, such as the senate and the house. Special legislative commissions and committees, which are likely to be crucial to their efforts, should also be identified. Typically, these may include the education committee, finance and appropriations committees, health or health and human services committee, or potentially a special or select committee focused on issues related to children and families.

Understanding the timeline for budget preparation and the methodology used by agencies to formulate legislative agendas is equally crucial. While some states follow an annual budget cycle, others adopt a biannual approach. For example, legislators often convene in the winter and spring, while agencies work on legislative agendas and budgets during the summer and fall. Advocacy efforts remain crucial throughout the year.

2.4. Discussion

MCH activities stand out as unique initiatives that not only prioritize the health of pregnant women but also aim to enhance outcomes for unborn lives, a characteristic not commonly found in other policies. Recognizing that the future belongs to the younger generation, including those yet to be born, emphasizes the significance of MCH activities in fostering a positive cycle of health through intergenerational transmission of MCH.

The MCH Handbook plays a pivotal role across the four phases—advocacy, leadership, program planning, and policy development—all geared towards the overarching goal of improving MCH outcomes.

Advocacy represents the foundational step in this journey, emphasizing evidence-based efforts at individual, organizational, and community levels. While anyone can be an advocate, addressing the needs of unborn lives poses a unique challenge, especially in the face of deeply rooted structural racism. Continuous advocacy serves to underscore the importance of the MCH Handbook leading to increase utilizations, dissemination, and effective innovation, ultimately improving MCH outcomes.

Leadership emerges as the catalyst for meaningful change, requiring vision, humility, strategic thinking, cultural competence, a commitment to learning, a personal connection to the cause, and a readiness to challenge the status quo. Leaders must tailor solutions to meet the needs of specific populations, ensuring that healthcare access is equitable for all, including the unborn.

Program planning, as the subsequent phase, involves developing initiatives to enhance MCH outcomes. Understanding the background of MCH and conducting community assessments become crucial, considering that these activities are also directed towards the unborn. Sustainable programs, rooted in continuous improvement, are essential to bridge the present to the future. The regular revision of the MCH Handbook every ten years in Japan

exemplifies this commitment to ongoing enhancement.

Policy development emerges as an essential function to sustain and promote MCH. Enacting laws that mandate the issuance of MCH Handbooks to pregnant women at the municipal level ensures reliable changes to MCH. Establishing a consistent MCH Handbook policy, recording comprehensive MCH information, contributes to healthier MCH outcomes and, consequently, shapes a better future.

The synergy of advocacy, leadership, program planning, and policy development brings MCH activities closer to success. The MCH Handbook, serving as a tangible embodiment of these efforts, helps prevent and ameliorate health inequalities. Through a comprehensive approach, the goal to improve MCH outcomes become tangible reality, thereby contributing to the ultimate aim of health equity.

3. RESEARCH 2: CASE STUDY—LEBANON

3.1. Objectives

Research 2 clarifies whether the four key factors identified in Research 1—advocacy, leadership, program planning, and policy development—is also seen in the actual MCH activities in Lebanon; characterized as one of the developing countries.

3.2. Methods

This research was conducted using the diary method of onsite inspection in Beirut, Lebanon during the time period of August 21st, 2023 to October 12th, 2023. Table 2 shows what kind of observations were made when, where, and from whom. Observation results of 2 to 15

noticing were recorded every night in a single B5 size notebook. Those recordings were based on brief comments written on a different notebook used for the work at UNICEF Lebanon. Photos were also taken at each of the observation site mentioned in Table 2.

Table 2: Observation overview

When	Where	What	Whom
August 21 st , 2023— October 12 th , 2023	United Nation Children’s Fund (UNICEF) Lebanon Office	Discussion	Lebanese, International, and Palestinian Colleagues
September 5 th , 2023	Halba Governmental Hospital	Neonatal Intensive Care Unit (NICU) observation	Dr. Mustafa (Neonatologist), Syrian refugee mother, and Lebanese mother
	Al-Iman Primary Healthcare Center (PHCC)	PHCC facility observation	Director of the PHCC, doctors, and registered nurse
September 9 th , 2023	Ghobeiry Municipality Health Care and Social Center	PHCC facility observation Digital application “PHENICS” observation	Doctor and registered nurse
	Mobile vaccination unit (MVU) at Mrouj Municipality	Digital application “MERA” observation	

3.3. Results

In Lebanon, two distinct refugee populations coexist—Palestinian refugees and Syrian refugees. Notably, the Palestinian refugees, although residing in camps, lack official recognition from the government. The Palestinian Programme in Lebanon (PPL) section at UNICEF Lebanon and insights gathered from Palestinian refugee colleagues, highlight the pervasive challenges faced by this community across various facets of life, encompassing education, employment, housing, and health care.

The obstacles begin with difficulties enrolling in schools, contributing to high unemployment rates, meager earnings, and unfavorable working conditions among Palestinian refugees. Moreover, the inability to own property in their names forces them into overcrowded and dilapidated camps, along with unofficial meeting places. Additionally, the healthcare coverage provided by the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) is minimal and restricted to registered Palestinian refugee. However, the majority of Palestinian refugees are presently unregistered, as only those meeting specific criteria are recognized as such—specifically, those “whose normal place of residence was Palestine during the period 1 June 1946 to 15 May 1948, and who lost both home and means of livelihood as a result of the 1948 conflict.”³²

Conversely, Syrian refugees in Lebanon enjoy access to medical services through Nextcare, an insurance policy specifically designed for this demographic (refer to Photo 1 and 2). Unlike Palestinian refugees, the government officially acknowledges the presence of Syrian refugees, facilitating their access to essential healthcare services.



Photo 1: Halba Governmental Hospital in Halba, Akkar



Photo 2: nextcare, an insurance policy for Syrian refugees

At Halba Governmental Hospital in Halba, Akkar on September 5th, 2023.

Lebanon's challenges extend beyond the refugee crises, encompassing economic and political instability, a healthcare crisis, and the devastating Beirut explosion. These factors have collectively rendered Lebanon a fragile state, marked by a dearth of functioning political and legal mechanisms. Notably, the country faced additional issues such as refugees operating unlicensed and unregistered motorcycles, and a deficiency in public garbage collection that led to overflowing waste on the streets, particularly around 2019.

Despite its fragile state, the United Nation Children's Fund (UNICEF) in Lebanon has prioritized key sectors, including health and nutrition, alongside water, sanitation and hygiene, and education. Noteworthy programs implemented include the introduction of the MCH Handbook in 1996 and collaborative vaccination initiatives with the Lebanese Red Cross

(LRC).

However, challenges persist concerning the sustainability of the MCH Handbook in Lebanon, particularly in the realms of advocacy, leadership, program planning, and policy development. The MCH Handbook faces issues related to its utilization, with two primary concerns: (1) underestimation of its significance as an educational tool for acquiring fundamental MCH knowledge and (2) incomplete usage, limited to with filling out only the immunization section by tearing off its pages. Table 3 elucidates the four phases of MCH activity, as identified in Research 1, contextualized within the Lebanese setting.

Table 3: Four MCH activity phases in Lebanon context

Advocacy	Advocacy on organizational level is not fully taking place. It is because the definition of advocacy as “a mixture of education and action” is not fulfilled. It is not utilized as a means of educational tool. However, action is taking place by UNICEF, American University of Beirut (AUB), World Health Organization (WHO), Ministry of Public Health (MoPH) since they are working on MCH activities.
Leadership	No leadership because there has been no meaningful change.
Program planning	Program planning, especially evaluation and continuous improvement is done as the MCH Handbook has been revised with the cooperation of UNICEF.
Policy development	Policy development cannot be done in fragility context as the law does not mean anything because it is not obeyed.

The chief of the Health and Nutrition section at UNICEF Lebanon noted that approximately 95% of births in Lebanon occur in healthcare facilities aligning with the corresponding coverage rate of the MCH Handbook, which also stands at 95%. Despite this high coverage, the full potential of the MCH Handbook as an educational tool remains underutilized. While the MCH Handbook serves as a valuable resource for acquiring knowledge, not only for mothers but also for physicians, it faces challenges in being recognized for its educational utility. Particularly, physicians, especially those who are not specialists, often underestimate its significance, overlooking the basic MCH knowledge it can offer.

This underestimation has tangible consequences, as witnessed by the author in Lebanon, where the health of a newborn was jeopardized. A Syrian refugee mother received advice from a local general physician asserting that “Breastmilk is poisonous” and was prescribed an alternative formula. Unfortunately, the infant experienced repeated vomiting, necessitating admission to the Neonatal Intensive Care Unit (NICU), at Halba Governmental Hospital (Photo 1 and 3). This scenario highlights instances that could have been prevented if the MCH Handbook had been widely disseminated, and both mothers and physicians had a better understanding of MCH. The lack of effective leadership in Lebanon is evident in the absence

of meaningful change in MCH practices to date.



Photo 3: Syrian refugee baby in NICU

Admitted to Halba Governmental Hospital due to vomiting by prescribed alternative formula.

Moreover, the effective utilization of the MCH Handbook faces challenge in Lebanon. The specific contents of the Lebanese MCH Handbook are outlined in Table 3. However, in practice, the Health Passport, a document focused solely on recording vaccination records, takes precedence in Lebanon (Photo 4). Primary healthcare centers (PHCC), such as Al-Iman PHCC in North Akkar (Photo 5), and Ghobeiry Municipality Health Care and Social Center, in Beirut, predominantly copy the vaccination column for their records, neglecting the other sections of the MCH Handbook. This selective emphasis on vaccination undermines the comprehensive role that the MCH Handbook is intended to play.

During the visits to these healthcare facilities, it was observed that only the vaccination

section of the MCH Handbook was torn off and used for recording purposes. This practice not only diminished the holistic functionality of the MCH Handbook but also restricts its potential impact on MCH outcomes in Lebanon. Efforts to promote the MCH Handbook's broader usage, encompassing all relevant sections, are essential for realizing its intended role in advancing MCH practices.

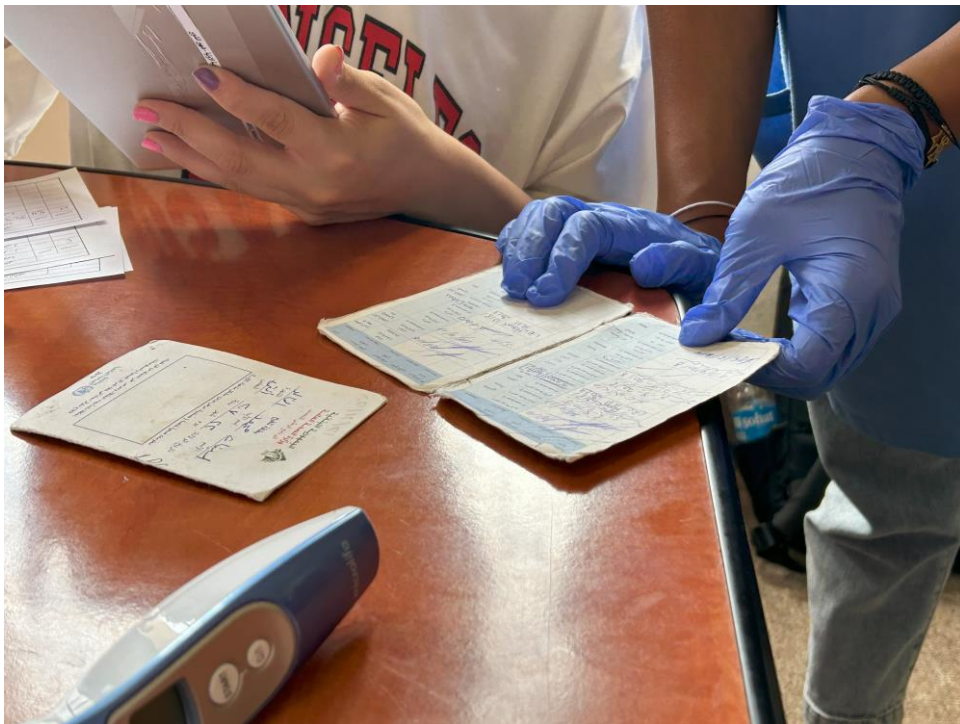


Photo 4: Vaccination record for Lebanese children at MVU site

Field work for MVU observation at Mrouj Municipality on September 9th, 2023. Registered nurse (right) and LRC staff (left) checking which vaccination to give for the child.



Photo 5: Al-Iman PHCC in North Akkar

Field work for PHCC facility observation on September 5th, 2023.

Furthermore, in Lebanon, access to education is contingent on having a complete vaccination record. Notably, during our visit to the mobile vaccination unit (MVU) activities conducted by the Lebanese Red Cross (LRC) and PHCC, vaccine records were meticulously recorded on an immunization card and through the use of the MERA app (mobile EPI registry application) (Photo 6). The MERA app is designed to operate offline and automatically synchronize data with PHENICS (primary health care network information and communication system), the main domain, when connected to the internet (Photo 7).

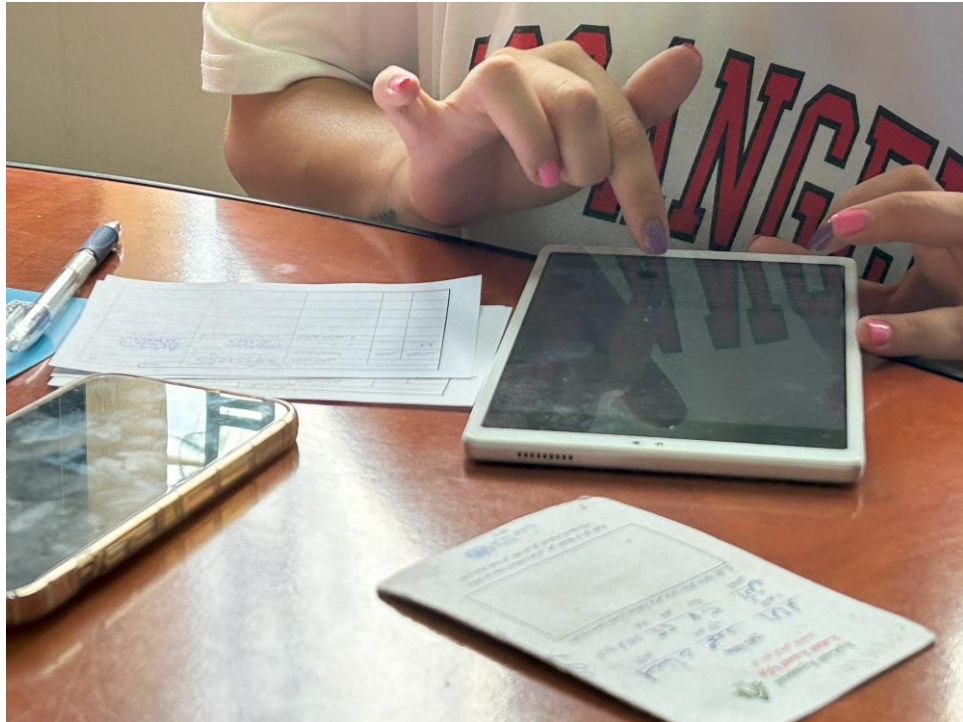


Photo 6: Recording vaccination status on MERA at MVU site

Once recording on MERA, the data will automatically be sent to PHENICS, the main domain.



Photo 7: The screen of PHENICS, the main domain, at Ghobeiry Municipality Health Care and Social Center

Field work for PHENICS observation on September 9th, 2023.

Despite the existence of the comprehensive MCH Handbook, the reliance on a separate vaccination record card indicates a lapse in its proper utilization. The coexistence of these records suggests that efforts are needed to encourage a more integrated approach, wherein the MCH Handbook can serve as a central repository for comprehensive MCH information, including vaccination records. This would not only streamline data management but also enhance the effectiveness of MCH initiatives in Lebanon.

Additionally, there is a noticeable absence of both leadership and advocacy in the context of the MCH Handbook in Lebanon. While UNICEF has engaged in a program focused on the MCH Handbook and collaborates with the American University of Beirut (AUB) on MCH activities, it is essential to acknowledge that this can be classified as organizational-level advocacy. In 2023, UNICEF Lebanon has demonstrated commitment by working diligently to update the contents of the MCH Handbook since its initial introduction in 1996. This collaborative effort involves partnerships with the World Health Organization (WHO) and the Ministry of Public Health (MoPH), reflecting an example of program planning with a focus on evaluation and continuous improvement. However, the current utilization of the MCH Handbook does not align with the comprehensive definition of advocacy, which combines education and action as outlined in Research 1. The emphasis lies primarily on organizational action rather than employing the MCH Handbook as an educational tool.

It is noteworthy that, despite organizational efforts and the presence of advocacy on a superficial level, the activities in Lebanon fall short of fully meeting the defined criteria of advocacy. Given that effective advocacy involves not only actions but also education, the MCH Handbook in Lebanon is yet to serve its potential as an educational instrument. This discrepancy highlights the need for a more holistic approach, encompassing both educational initiatives and organizational actions for comprehensive MCH advocacy.

Moreover, it is crucial to recognize that, even with effective advocacy, the translation of these efforts into policy development remains a significant challenge in Lebanon. The country's

fragility and systematic challenges, including the characteristic failure to implement existing laws, create barriers that hinder the advancement of MCH policies. Consequently, despite the presence of advocacy efforts, these efforts have limited influence on policy development, and the potential impact on promoting the MCH Handbook is constrained within the existing socio-political context.

Table 4: MCH Handbook contents comparison between Japan and Lebanon

The contents of the Japanese MCH Handbook in the table refer to the ministerial form enacted in 2023 and do not include the contents of the optional form. The Lebanese MCH Handbook is also created in 2023.

		Japan	Lebanon
Personal and demographic information	Parents information	○	○
	Child information	○	○
Antenatal period	Family history	○	○
	Brothers and sisters	×	○
	Previous pregnancy period	○	○
Maternal occupation and environment		○	×
Maternal own record		○	×
Pregnancy progress		○	×
Inspection record		○	○
Mother's class participation record		○	×
ANC/PNC dental condition		○	×
Delivery		○	○
Maternal progress after delivery		○	×
Early neonatal progress		○	○
Post neonatal progress		○	○
One month old	Parents record	○	×
	Stool color card	○	×
	Medical checkup	○	○
3-4 months old	Parents record	○	×
	Medical checkup	○	○
6-7 months old	Parents record	○	×
	Medical checkup	○	○
9-10 months old	Parents record	○	×
	Medical checkup	○	○
One year old	Parents record	○	×
	Medical checkup	○	○
	Dental checkup	×	○
1.5 years old	Parents record	○	×
	Medical checkup	○	○
Two years old	Parents record	○	×
	Medical checkup	○	○

	Dental checkup	×	○
Three years old	Parents record	○	×
	Medical checkup	○	○
	Dental checkup	×	○
Four years old	Parents record	○	×
	Medical checkup	○	○
	Dental checkup	×	○
Five years old	Parents record	○	×
	Medical checkup	○	○
	Dental checkup	×	○
Six years old	Parents record	○	×
	Medical checkup	○	○
	Dental checkup	×	○
Seven years old	Dental checkup	×	○
Eight years old	Dental checkup	×	○
Nine years old	Dental checkup	×	○
Ten years old	Dental checkup	×	○
11 years old	Dental checkup	×	○
12 years old	Dental checkup	×	○
13 years old	Dental checkup	×	○
14 years old	Dental checkup	×	○
15 years old	Dental checkup	×	○
16 years old	Dental checkup	×	○
17 years old	Dental checkup	×	○
18 years old	Dental checkup	×	○
Growth chart	Height/weight for age	Ae 0-1 Age 1-6	Age 0-5 Age 5-10 Age 5-19
	Head circumference for age	Age 0-1	Age 0-5
	Weight for height	○	○
	BMI for age	×	○
Immunization record	Hepatitis B	×	○
	IPV	×	○
	OPV	×	○
	DPT-Hib-Hep B	×	○
	Hib	○	○

	PCV	×	○
	Measles	○	○
	Mumps	×	○
	Rubella	○	○
	DPT	○	○
	dT	×	○
	Streptococcus pneumoniae	○	×
	BCG	○	×
	MR	○	×
	HPV	○	×
	Japanese encephalitis	○	×
Allergies		○	○

3.4. Discussion

The findings from Research 2 underscore the critical importance of understanding and appropriately utilizing the MCH Handbook for effective MCH outcomes, challenging the notion that a high coverage rate alone can address health inequalities. Despite the MCH Handbook achieving a commendable coverage rate of 95% in Lebanon, this study reveals that mere utilization without a comprehensive understanding of its significance fails to mitigate health disparities. Furthermore, the examination of the Lebanese context highlights the dominance of advocacy in the MCH activity process.

As detailed in Table 5 regarding leadership, it becomes evident that the criteria for effective leadership are not fully met in the Lebanese context. A clear vision, a fundamental requirement for successful leadership, is notably absent. Although there is a treatment focus for refugees who have experienced injustice. The overall goal lacks clarity in terms of broader humanitarian objectives (Photo 2). While the MCH Handbook preparation showcases strategic planning through collaboration with UNICEF, questions arise about cultural competence. The presence of Palestinians with limited educational opportunities challenges assumptions of universal literacy and information literacy, suggesting that the current content of the MCH Handbook may not be tailored to their needs. This discrepancy raises concerns about the MCH Handbook's inclusivity. Moreover, the absence of motivation to foster a culture of learning is evident, especially for individuals with limited access to educational recourses. The lack of a person-centered approach further underscores the disparities in educational opportunities. However, the ongoing revision of the MCH Handbook represents a bold and courageous initiative that challenge the status quo, demonstrating a commitment to improvement and adaptation in MCH activities.

Table 5: Leadership criteria in Lebanon context

Imagination and creativity	×
Humility	○
Strategy	○
Culturally competent to reflect of those whom they serve	×
Motivation to create a culture of learning	×
Aligned in goals, passions, and perspective, and willing to make it personal	×
Keen to challenge the status quo	○

Advocacy appears to be at play on an organizational level in the implementation of MCH activities. However, when assessed against the definition of advocacy established in Research 1, it becomes evident that it falls short of functioning as a comprehensive blend of education and action. The failure to leverage the MCH Handbook as an educational tool for both physicians and mothers highlights a critical gap in the advocacy process. The repercussions of this shortfall were witnessed in situations where the health of newborns was compromised, underscoring the failure of using the MCH Handbook to fulfill its role in maintaining and promoting MCH. Instances of incomplete documentation, particularly limited to immunization records, further indicate a lack of proper utilization.

Despite the widespread introduction of the HBR since 1996, more than 25 years later, its suboptimal utilization can be attributed to the country's economic challenges, political instability, and low literacy rates. Lebanon, facing ongoing development and frequent crises, requires stability for the population to adapt to and embrace change effectively. Additionally, the significant refugee population and disparities in education contribute to low information literacy, further hindering the proper usage of the MCH Handbook.

Comparisons with the Japanese MCH Handbook, reveal notable differences, such as the absence of sections for mothers to record information about their children, the lack of a record for the mother's postpartum condition, and variations in the content of preventive medical care, including dental examinations for and children. The limited scope of the Lebanese MCH

Handbook, despite having essential elements for maintaining and promoting MCH outcome.

This analysis clarifies that even with imperfect process in advocacy, leadership, program planning, and policy development, the mere dissemination of the MCH Handbook does not automatically rectify MCH inequalities. Beyond the identified process of MCH activities, the successful implementation and sustainability of the MCH Handbook are intricately linked to the country's economic well-being and the literacy levels of its population.

4. RESEARCH 3: INTERVIEW

4.1. Objectives

Research 1 unveiled the critical aspects of MCH activities, emphasizing the pivotal role of policies in their implementation—spanning advocacy, leadership, program planning, and policy development. Meanwhile, Research 2 underscored the challenges associated with the effective dissemination of the MCH Handbook, revealing its underutilization. In Research 3, we delve into the key factors contributing to the successful dissemination of the MCH Handbook in Japan and explore strategies for applying these successes to extend its impact globally.

4.2. Methods

This research involved conducting interviews with Professor Yasuhide Nakamura, the President of the WHO Japan Association and Emeritus Professor of Osaka University. Professor Nakamura is widely recognized as an expert in the MCH field, with a particular focus on the MCH Handbook. His expertise extends to healthcare initiatives in developing countries, where he has actively promoted the MCH Handbook, exemplified by his work in Indonesia with the Japan International Cooperation Agency (JICA) and his role as a medical officer for Afghan refugees at the United Nations High Commissioner for Refugees (UNHCR). In recognition of his contributions, Professor Nakamura received the 43rd Medical Achievement Award in 2015 for his efforts in advancing the MCH Handbook globally. Given his comprehensive perspective on the MCH Handbook and its dissemination, interviewing Professor Nakamura was crucial to gaining insights into its utilization, both in Japan and abroad.

Interview was conducted with 11 questions, which were formulated based on the findings of Research 1 and 2 (refer to Table 6), with keywords guiding the inquiry process.

Table 6: Interview questions

	Questions	Key words	Related Study
1	As MCH Handbook was created in conjunction with the national policy of "Be fruitful, and multiply," even though it has lost its political value after the end of the war, MCH Handbook system has not ended, but has continued and is still in widespread use. Primary factor for this is "improved educational opportunities for women," "economic growth," and "a culture of mothers and children are highly bonded." What do you think were the success factors that led to the almost 100% dissemination of the MCH Handbook in Japan?	Dissemination	R1
2	In the course of dissertation research, I learned that there is the challenge of structural racism when providing leadership in the MCH field. This has implications for investments and policies that support or hinder community wellbeing. What do you think is essential for newly introducing the MCH Handbook, adopting it as a policy, and to disseminate it further nationwide in the area where such deep-rooted structural racism remain?	Leadership	R1
		Structural racism	R1
		Policy development	R1
3	Just because MCH Handbook has been created with cultural considerations (illustrations, color print, religion, etc.) when implementing it in abroad does not mean that it cannot be used sustainably unless the country has the same background that has made the Japanese MCH Handbook successful for 80 years. What do you think should be taken into consideration in addition to the culture of the country in order to promote it in other countries as well as in Japan?	Sustainability	R1
4	In Lebanon, American University of Beirut, MoPH, and UNICEF have collaborated to create the MCH Handbook and are attempting to disseminate it. However, there are two problems: the MCH Handbook has not been completely disseminated, and even if people own it, they use it inappropriately, cutting out only the pages for vaccinations, which does not fulfill the function of MCH Handbook. In addition, the country is characterized by a lack of functioning politics and economy. In order to promote the use of MCH Handbook in such a country, how do you think	Dissemination	R1
		Inappropriately used	R2
		Advocacy	R1
		Leadership	R1

	leadership should be exercised, advocacy activities should be conducted, program planning should be done, and policies should be formulated?	Program planning	R1
		Policy development	R1
5	This research hypothesizes that if the MCH Handbook is disseminated throughout the country regardless of people's social status, the health inequality will be corrected. The Toronto Declaration clarified that "MCH Handbook is equipped with DEI principles" as there are a wide variety of versions of the handbook, including Braille, foreign language versions, and Little Baby Handbooks (LBH). MCH Handbook is designed to realize equity, so that no one is left behind and more people can own MCH Handbook, but do you think that health equality will be achieved by owning it? Health equity can be achieved but do you think it can achieve health equality as well?	DEI	R1
		Health equality	R1
6	According to the handbook, "Kotch's Maternal and Child Health: Problems, Programs, and Policy in Public Health 4 th Edition," implementation follows the steps of (1) exploration and adoption, (2) program installation, (3) initial implementation, (4) full operation, (5) innovation, and (6) sustainability. What do you think are the reasons why full operation has not been achieved even after trial operation, and what do you think are the issues in countries where full operation is not sustainable even if it is achieved?	Implementation	R1
		Sustainability	R1
7	Improvement is essential to guarantee the functionality of the MCH Handbook and to enhance its contents. The revision and quality improvement of the MCH Handbook, which takes place every 10 years, is based on which of the following known methods of quality improvement?: (1) Lean; efficiency-oriented, eliminating waste as much as possible, and what remains is what benefits users, (2) six sigma; definition, measurement, analysis, improvement, and control method to reduce implementation variation, and (3) the model for improvement; mainly done in a short period of days to weeks based on plan-do-study-act cycle, which is not appropriate for the revision of the handbook.	Quality improvement	R1
8	In terms of the LBH, if the municipality they live in do not have it, is that	LBH	R1

	mean parents cannot possess it?		
9	Professor Mitsuo Segi explained the need for an integrated MCH Handbook system. What do you think were the factors that led his opinion to the policy?	Policy development	R1
10	The LBH was created based on the mothers' circle. Was it due to the existence of the MCH Handbook that encouraged community formation, or because of the strong culture of such inter-community ties in Japan?	Community building	R1
11	In Japan, information is centralized from the time MCH Handbook is issued, and the parents are notified of age-specific checkups and vaccines. In Lebanon, parents will be notified of the next vaccination only when they downloaded the smartphone application called " <i>sohatna</i> " and registered the information of received vaccinations. Considering the issue that mothers need to be aware of MCH, the MCH Handbook also plays a major role as a public policy. What do you think are the differences between Japan and other countries in terms of the MCH Handbook as a public policy?	Public policy	R1, 2

4.3. Results

Table 6 outlines the 11 interview questions formulated based on the outcomes of Research 1. The questions address various aspects, with some containing multiple keywords. Questions 1 and 4 focus on dissemination, while Questions 2 and 4 delve into leadership and policy development. Question 9 touches upon policy development and additional keywords include structural racism (Question 2) and advocacy, program planning, and inappropriately used (Question 4), which is the sole keyword extracted from Research 2. Sustainability is covered in Questions 3 and 6, with the latter also encompassing elements of implementation. Question 5 involves keywords DEI and health equality, Question 7 relates to quality improvement, Question 8 pertains to the Low birthweight Handbook (LBH), Question 10 explores community building, and Question 11 delves into public policy.

The interview outcomes revealed that the MCH Handbook had widespread dissemination in Japan, primarily serving as a rationing handbook (Question 1). Notably, MCH specialists played a key role in its promotion, along with active involvement from local governments (Question 1). An example is the establishment of the Maternal and Child Health Section dedicated to developing the MCH Handbook, covering comprehensive MCH information as part of the Section's mandate to care for mothers and children together (Question 9). Collaboration with professional associations was emphasized to ensure the integration of diverse healthcare layers during MCH activities (Question 4).

Addressing sustainability of the MCH Handbook, the incorporation of a multi-ethnicity element, including various language options, was identified as important (Question 2). Legislation and allocation of paper resources were highlighted as factors contributing to the sustainability of the MCH Handbook within the country, although challenges exist in scaling up the policy for full implementation (Question 6). The success and sustainability of the MCH Handbook were identified as contingent on the country's commitment to health and peace,

along with financial resources (Question 6).

Furthermore, the MCH Handbook was recognized for expanding and strengthening the network of medical staff and local governments (Question 10). This network facilitates outreach to mothers during pregnancy and childbirth for Japanese mothers (Question 11). Additionally, the MCH Handbook, grounded in proper medical services by healthcare personnel at medical facilities, serve as a facilitator for healthcare access (Question 5).

In Japan, improvement methods such as Lean, Six Sigma, and the Model for Improvement are employed when enhancing the MCH Handbook (Question 7). Contrary to this, most other countries engage in policy development before discussions, making it easier for professional associations to decide on achieving their policy objectives.

Lastly, while the LBH is not universally developed in all areas of Japan, there is a hopeful expectation for its implementation in each local government by 2024. Specific answers to each question are presented in Table 7.

4.3.1. Overview of interviewee

The interview subject was Professor Yasuhide Nakamura, an expert in MCH, especially on MCH Handbook. The interview survey was conducted once online over the videoconferencing software Zoom, for approximately 90 minutes on November 10th, 2023.

4.3.2. Analysis of interview content

The responses and summaries obtained based on the interview content are presented in Table 7. Four categories of Research 1—advocacy, leadership, program planning, and policy development—were extracted from the interview results (Table 8).

Table 7: Interview responses and summary

	Questions	Responses	Summary
1	<p>As MCH Handbook was created in conjunction with the national policy of "Be fruitful, and multiply," even though it has lost its political value after the end of the war, MCH Handbook system has not ended, but has continued and is still in widespread use. Primary factor for this is "improved educational opportunities for women," "economic growth," and "a culture of mothers and children are highly bonded." What do you think were the success factors that led to the almost 100% dissemination of the MCH Handbook in Japan?</p>	<p>To begin with, MCH Handbook was first created in 1948 as Maternity Handbook. This was a Japanese invention. At the time, new projects could not be undertaken without the permission of General Headquarters (GHQ), but even they did not have the idea of MCH Handbook. Sadako Ogata once said that the pocketbook was an "American idea" because it was created during the GHQ era, but when we checked with people who were involved in the creation of MCH Handbook at that time, they told us that the idea of integrating the mother's information and the child's information into a single booklet was "definitely Japanese." The reason why an integrated handbook called the MCH Handbook was created was that the Maternal and Child Health Section had just been established in the Ministry of Health and Welfare then, and there were obstetricians, pediatricians, and midwives in the section.</p> <p>It is important to note that MCH Handbook did not spread nationwide immediately after its establishment in 1948. Although I do not have the proper data, according to my personal research, in Wakayama Prefecture, for example, by 1955, almost everyone had their own MCH handbook, or had lost it but had seen it before. However, in the 1950s, the majority of people did not have one or had never seen one. In other words, it took about 10 years to spread. Of course, there are people in large cities such as Tokyo, Osaka, and Fukuoka who have a copy of the 1948 edition. However, in rural areas, it did not spread for various reasons. One example is the lack of paper. The reality is that it took quite a long time to spread.</p> <p>The reasons why it succeeded in almost 100% dissemination spread in</p>	<p>The MCH Handbook was promoted by MCH specialists. Namely, advocacy was done.</p>

		<p>Japan have not been fully analyzed, and I think it would be worthwhile to study them, but there are three possible factors.</p> <p>First, there were people who promoted it. As has become clear in Wakayama Prefecture and many other places, if you look at the local newspapers of the time at the library, you will see that public health nurses and midwives are doing their best to advertise, saying, "We have developed such a good MCH Handbook," and "Please use this." Even if a good product is developed, it will not suddenly become popular because no one has ever seen it before. After all, there are people who have worked hard for the dissemination. It became popular because public health nurses and midwives in the community said, "This is good" and spread it. In this way, the MCH Handbook is featured in public newsletters issued by local governments and in local newspapers. In Wakayama, it has been surveyed, but the reality is that it has not been surveyed on a nationwide basis. However, the fact that there are people who have made an effort is the most important factor that has led to the dissemination of the MCH Handbook.</p> <p>Secondly, it was a rationing handbook. It was created in 1948 as a means of ration book and had a section for it until rationing was discontinued in 1952 and 1953. In 1948 and 1949, those who had MCH Handbook received monthly rations of sugar and milk. In 1952 and 1953, although it still had a ration column, they received only one or two rations: once during pregnancy and once after the delivery. This was because Japan was rapidly losing its role as a ration handbook as the country became economically very affluent. Conversely, the sudden spread of MCH Handbook in 1948</p>	<p>The MCH Handbook served as a rationing handbook.</p>
--	--	--	---

		<p>and 1949 was due to the fact that it had too much significance as a ration book. In this sense, the incentive of rationing was a major factor in the dissemination.</p> <p>Third, local governments were involved. I don't think there are enough data on this issue. However, it would be a big job just to find out how many copies of MCH Handbook was issued in each region of the country or in each municipality, and how it was disseminated in each municipality.</p>	<p>Local governments were involved in dissemination of the MCH Handbook.</p>
--	--	--	--

2	<p>In the course of dissertation research, I learned that there is the challenge of structural racism when providing leadership in the MCH field. This has implications for investments and policies that support or hinder community wellbeing. What do you think is essential for newly introducing the MCH Handbook, adopting it as a policy, and to disseminate it further nationwide in the area where such deep-rooted structural racism remain?</p>	<p>It is a very simple story in Japan. There were hardly few foreigners in Japan when the MCH Handbook was introduced. A little more to the point, it leads to the current attitude of the Ministry of Justice and the issue of detention center for foreigners regarding immigration law. Particularly after the WWII in Japan, what to do with Korean and Taiwanese residents in Japan was a major issue. In this regard, the government tried to solve the foreigner policy by maintaining the prewar system as it was and proceeding with the U.S. military occupation as well. In other words, Japan's healthcare policy was to create a postwar Japanese system without giving much thought to the existence of foreigners, as if the problem of foreigners had been solved in Japan. The Korean War was also a factor, and the U.S. military accepted the policy and continued it as it was. Therefore, the MCH Handbook was produced without much consideration of the presence of foreigners. When the Maternal and Child Health Act was revised in 1965, the Japanese version of the MCH Handbook was considered sufficient. The same problem has been faced with universal health coverage (UHC), which has been in place since 1967 and does not cover non-Japanese nationals. This changed in 1981 when Japan ratified the Refugee Convention. From the standpoint of human rights, this change was made so that foreigners living in Japan could receive the same services as Japanese nationals. This is why the UHC was established to ensure equity that foreigners living in Japan could receive the same healthcare services as Japanese nationals. In many ways, I had to fight with Ministry of Health and Welfare then. The reason was that the government had no intention of providing any foreign language services with a strong attitude of “you now can receive services,” “please go ahead to study Japanese and receive services,” and “please find English speaking physicians by yourself.” In the 1990s, the Immigration Control Act was revised and the number of foreigners began to increase. As I was working at the Tokyo Metropolitan Government then, I decided to make Japan's first foreign-language version of the MCH Handbook. I</p>	<p>From the standpoint of human rights, foreigners living in Japan should also be able to receive the basic healthcare. Thus, preparing the MCH Handbook written in various languages is important.</p>
---	--	---	---

		<p>went to negotiate with the Ministry of Health and Welfare to transfer the copyright of the MCH Handbook to the Tokyo Metropolitan Government and I was told that there is no copy right for the MCH Handbook. They also said I can do whatever I want to do to create not only English version, but also Korean and Chinese. With that, the Tokyo Metropolitan Government produced its own foreign language version of the MCH Handbook in 1992, which was copyright-free so that people in other prefectures could also establish their own. As a result, the MCH Handbook in about 10 languages are available with various organizations being produced, including the Mothers and Children's Health and Welfare Association. This is the approach of Japanese MCH Handbook for foreigners.</p> <p>In other countries, how to make the MCH Handbooks in a multiethnic country is a very important issue, and I was very conscious of it. However, even in Indonesia, a multiethnic and multilingual country, it took about 10 years to disseminate the MCH Handbook throughout the country. We decided not to develop the Japanese-Indonesian translated MCH Handbook. Since I was fluent in Indonesian, I worked with local people in Indonesian from the beginning. In principle, we discussed everything with the opponent in Indonesian, from the number of pages to how the content of the MCH Handbook would be. Discussing in Indonesian, not in English is a matter of course as we were trying to develop Indonesian version of the MCH Handbook. This led to the completion and dissemination of the MCH Handbook. At the time, we were working on a JICA project, so we were not limited to Indonesian, but also was possible to create the MCH Handbook in their own language, such as Minangkabau. I told them that JICA would pay for the printing cost if they would make it in their own language, for example, Minangkabau language. However, they said they only need Indonesian version. There were two reasons for this. First, is that the physicians and nurses are educated in Indonesian. Second, is that not all physicians in the village where the ethnic group lives can speak the</p>	<p>The language of the MCH Handbook in a multi-ethnic country should be the native language as medical staffs are educated in the native language and can speak rather than minority language.</p>
--	--	---	--

		<p>language of the village. Indonesian is the national language, so every people can speak it. Even if the MCH Handbook is written in the language of the village, midwives from a different region may not be able to understand it when they record it in. Therefore, it is better to develop the MCH Handbook in Indonesian. In this sense, the language of the medical profession is also important. It is often inevitably the native language is used. However, in the process of spreading throughout the country, the language of notation may be revised. In Cameroon, the official languages are English and French, so both languages are included from the beginning. When I was working on the foreign-language version, I wrote both Japanese and the language. Japanese medical personnel can look at the Japanese and foreigners can check what is described in their native language. This also has the advantage that those with foreign partners can understand. In Cameroon, the forms were prepared in English and French separately, but I was glad to hear that they were changed to imitate the Japanese annexed form.</p>	<p>It is also a great idea to write in two languages such as Japanese and English for foreigners living in Japan, or English and French in Cameroon where there are two national languages.</p>
--	--	--	---

3	<p>Just because MCH Handbook has been created with cultural considerations (illustrations, color print, religion, etc.) when implementing it in abroad does not mean that it cannot be used sustainably unless the country has the same background that has made the Japanese MCH Handbook successful for 80 years. What do you think should be taken into consideration in addition to the culture of the country in order to promote it in other countries as well as in Japan?</p>	<p>The MCH Handbook in Japan became sustainable in this sense because it was included in the law. The MCH handbook was established in 1948, but it became a law in 1965 with the Maternal and Child Health Act. It took more than 20 years until then, but even without the law, it was almost 100% widespread. What is somewhat troublesome is that the law states that each municipality must issue the MCH Handbook. This means that if a municipality decides that they want to use the "Parents Handbook" instead of the "MCH Handbook," they cannot change it on their own. If you look closely at the Parents Handbook issued in various parts of Japan, you will see that they are labeled "MCH Handbook" in small letters at the bottom of the Handbook. The excuse can be made that the MCH Handbook was issued for the mother and child. It would be nice if it were set by law, but there is a tricky aspect to it. Legislation is indispensable in order to popularize it in other countries. If the MCH Handbook is not legislated rather than merely compared, it will not work well when the president or insurance minister changes. Currently, the MCH Handbook is being disseminated in 52 countries, but there is still no legislation in place at all. It is important to add the phrase "MCH Handbook" to the law, and we are currently working on various fronts.</p> <p>In addition, whether paper or digital is better differs from country to</p>	<p>Legislate the MCH Handbook.</p>
---	---	---	------------------------------------

		<p>country, so there is no need to meddle with that from the outside. It is quite sustainable if you dig it up. In a town called Salatiga in Indonesia, where I first visited about 10 years ago, it had been about 15 years since they started using the MCH Handbook. On the way home by taxi, after having heard all about how to use it locally, I stopped by the driver's house and asked him to show me his MCH Handbook. After showing me the contents and asking me how to use it, the mother asked, "We have such a good MCH Handbook, but do you have one in Japan?" It was a moment when I felt that their MCH Handbook was becoming "theirs."</p> <p>I once interviewed the person who created the Japanese MCH Handbook in 1948 for the Ministry of Health and Welfare. The most difficult bottleneck in the production process was paper. At that time, paper was rationed in Japan. There were so many children that it was difficult to make 100 or 200 MCH Handbooks, and it was difficult to find the money for tens of thousands of them. When the government did not have the money for paper, they were about to put advertisements for powdered milk, such as Meiji Milk, in the MCH Handbook. This was the case in Japan. Similarly, many developing countries in Africa are struggling to find money for printing when the cooperation of UNICEF, JICA, and non-governmental organizations is lost. Several Japanese companies are also supporting the project. For example, Lion Dentifrice, Unicharm, and other companies in Japan support the printing cost as well as them doing a little advertising instead.</p>	Securing paper resources.
4	In Lebanon, American University of Beirut, MoPH, and UNICEF have collaborated to create the MCH Handbook and are attempting to disseminate it. However, there are two problems: the MCH Handbook has not been	<p>This is an issue that is being faced in many countries. To be honest, this may not have been the case in Japan in the past, but in many ways, when the Ministry of Health and Welfare says, "We will do this," doctors and nurses are not always in direct opposition. In Japan, when the national government decides on a policy, the same thing is done at hospitals, health centers, and clinics. However, in other countries, even if the Ministry of Health makes a decision, doctors sometimes do not listen to the government, saying, "We will not use what we will not use. This is true in Indonesia and other places as well. In Indonesia, some hospitals do not use</p>	Cooperate with each professional associations to secure the different layers of healthcare.

	<p>completely disseminated, and even if people own it, they use it inappropriately, cutting out only the pages for vaccinations, which does not fulfill the function of MCH Handbook. In addition, the country is characterized by a lack of functioning politics and economy. In order to promote the use of the MCH Handbook in such a country, how do you think leadership should be exercised, advocacy activities should be conducted, program planning should be done, and policies should be formulated?</p>	<p>the MCH Handbook very often, and in some cases, they even create their own Handbooks. The issue is how to deal with clinicians and insurance. In Indonesia, when the MCH Handbook was first published, I visited pediatric societies, obstetrics and gynecology societies, and midwives' associations to hold symposiums on the MCH Handbook, and to collaborate with people in each professional organization who said, "The MCH Handbook is good!" Interesting, midwives were the only ones who could make an impact on the campaign to change the idea of midwives. Even if a pediatrician from Japan says something, midwives in Indonesia do not act immediately. It is only when an influential midwife in Indonesia says, "Good" to the MCH Handbook that they move forward. In this way, we carefully asked each professional organization to ask for someone who understands the MCH Handbook and have them play a central role in the process. Only then would people in the professional associations use the MCH Handbook. No matter how good it is, it is the medical professionals who write on it and use it in the field. According to data from a study I conducted with local doctors in Indonesia, simply distributing the MCH Handbook does not increase knowledge of the MCH Handbook or change their behavior. If the distribution of the MCH Handbook is enough to bring about a change on the high street, then it is enough to distribute brochures in front of the train station. But that does not mean that change will occur. Behavioral change occurs when the MCH Handbooks are handed out and healthcare providers explain about MCH care. In order for the MCH Handbook to be effective, it is necessary to have a different layer of healthcare providers. In order for the MCH Handbook to be effective, it is necessary to have a stratification of the medical staff. In order for this to happen, the medical personnel must understand. And the medical personnel who will understand must be divided into different professions. I thought it would be different if Lebanese leaders and medical professionals could participate in the discussion and talk to each professional organization.</p>	
5	<p>This research hypothesizes that if the MCH Handbook</p>	<p>The stance is very clear. The MCH Handbook alone cannot save a person's life. Medical care is necessary to properly protect the lives of mothers and</p>	<p>No, the MCH Handbook only achieves promoting the</p>

	<p>is disseminated throughout the country regardless of people's social status, the health inequality will be corrected. The Toronto Declaration clarified that "MCH Handbook is equipped with DEI principles" as there are a wide variety of versions of the handbook, including Braille, foreign language versions, and LBH. The MCH Handbook is designed to realize equity, so that no one is left behind and more people can own the MCH Handbook, but do you think that health equality will be achieved by owning it? Health equity can be achieved but do you think it can achieve health equality as well?</p>	<p>children. Medical care itself will not change unless it is provided as a proper medical service by medical personnel and medical facilities. If that is not ensured, there will be no change. Therefore, I do not believe that the MCH Handbook alone can solve all problems. For example, as is the case with vaccinations, it is necessary to train people to administer vaccinations, to have facilities to administer vaccinations, to transport vaccines safely, to have facilities to store vaccines with proper temperature control, and to have management to prevent stock-outs. With these things in place, the MCH Handbook can improve access. In this sense, the MCH Handbook is of great significance. The MCH Handbook will of course contribute greatly to improving health inequalities. Even in the absence of advanced technology, NICUs, perinatal facilities, and ventilators, Japan was able to achieve Sustainable Development Goal (SDG) target 12, a neonatal mortality rate of less than 10 per 1000 live births. One of the major factors in achieving this was the existence of the MCH Handbook. In many ways, the MCH Handbook is meant to improve the quality of life and change people's perceptions, but the MCH Handbook itself does not necessarily reduce the mortality rate. In order to reduce the mortality rate, it is necessary to provide services in an environment of facilities and medical personnel.</p>	<p>healthcare access. With the basis of a proper medical services by medical personnel at the medical facilities, the MCH Handbook can serve as the facilitation of the healthcare access.</p>
6	<p>According to the handbook, "Kotch's Maternal and Child Health: Problems, Programs, and Policy in Public Health 4th Edition," implementation follows the steps of (1) exploration and</p>	<p>It is a very big subject and there is no end to what we can say about each country. Among the successful countries, Indonesia has spread and is making its own revised version. Thailand, Vietnam, and Laos have also spread almost nationwide and made revised versions. In Africa, Kenya is working on revision in this way. The reason why it worked so well differs from country to country. The situation is also different. For example, Timor-Leste, with the cooperation of UNICEF, has developed its own</p>	<p>Scaling up the policy is the challenge for the full implementation.</p>

	<p>adoption, (2) program installation, (3) initial implementation, (4) full operation, (5) innovation, and (6) sustainability. What do you think are the reasons why full operation has not been achieved even after trial operation, and what do you think are the issues in countries where full operation is not sustainable even if it is achieved?</p>	<p>submarine and is now spreading it throughout the country. It may be important to analyze what happened in those countries as a model. There are many countries around the world where the program did not go well. Gaza in Palestine also has MCH Handbook, but it does not work well in the current Israel-Hamas War. Afghanistan has been working hard to create the MCH Handbook and is still doing so, but when I actually talk to people in Afghanistan, I find that many areas are not using it. There is the issue of health, peace in the country, and money. It is not easy to spread a project nationwide just because it works well in one region. As is often said of international organizations, I think this is one of the problems that prevent them from scaling up. However, I think that if we can do a good analysis of countries that have done well, we can apply that to other countries. It would be interesting to see an analysis of countries that have done well.</p>	<p>With health and peace in the country, and money, the MCH Handbook becomes sustainable.</p>
7	<p>Improvement is essential to guarantee the functionality of the MCH Handbook and to enhance its contents. The revision and quality improvement of the MCH Handbook, which takes place every 10 years, is based on which of the following known methods of quality improvement?: (1) Lean; efficiency-oriented, eliminating waste as much as possible, and what remains is what benefits users, (2) six sigma; definition, measurement, analysis,</p>	<p>I will say three things. First, the Japanese approach to revising the MCH Handbook is not one of the three methods. Once every 10 years, the Ministry of Health, Labor and Welfare (MHLW) calls on the Japan Medical Association, the Japan Pediatric Society, the Japan Society of Obstetrics and Gynecology, and the Japan Nurses Association to invite representatives from each professional organization. The MHLW holds three to four meetings with about 20 people, and revises the manual based on the results of the opinions expressed at these meetings. In the past, it was only professional associations, but recently, non-profit organizations have been including representatives of mothers involved in the process. In Japan, the process is to identify areas for improvement, discuss what needs to be improved, and then make revisions. In many other countries, representatives of professional associations are invited to gather opinions and make revisions. On the other hand, in other Asian countries, such as Thailand and Vietnam, the government decides on policies at a very early stage. Japan may be far away from the three improvement methods. To put it more clearly, in Thailand and Indonesia, for example, the decision on whether to digitalize</p>	<p>Japanese MCH Handbook is not adapting any of the improvement methods. Each professional associations gather at one place for the discussion and make decision of improvement. However, in most of the other countries, policy development is done before the discussion. Thus, it is easier for professional association to make decision of how to achieve its policy.</p>

	improvement, and control method to reduce implementation variation, and (3) the model for improvement; mainly done in a short period of days to weeks based on plan-do-study-act cycle, which is not appropriate for the revision of the handbook.	or remain with a paper MCH Handbook is made in advance as a national policy, whether to do both or only digitalization. Many places are revising the MCH Handbook after that. In other words, when revising, rather than innovating the existing system to make it better, most of them make a policy decision and move in this direction in response to the new situation. Japan has been rather slow to adopt this approach. It is difficult for the field to move forward without a clear idea of what to do in the digital world. In this sense, Asian countries make policy decisions first and then decide on digitalization. Thailand has decided to go digital, but they are not going all the way considering the existence of ethnic minorities, people who do not speak Thai, and people who live in areas where there is no smartphone signal. They will leave the paper MCH Handbook behind because it would mean cutting them off from the MCH activities. However, 90% of the people living in the cities have smartphones, so for them the smartphone will take on the function of a MCH Handbook. In principle, the policy decision is being made ahead of time, in a way that leaves paper media behind in many places for the improvement.	
8	In terms of the LBH, if the municipality parents live in do not have it, does that mean they cannot own it?	The LBH is being done in the form of a publication by local governments. Therefore, we need to have it published in all 47 prefectures, and we are hopeful that it will be published in all prefectures by 2024. Some people have suggested that the national government should take the initiative and make a policy because that approach is muddled, but they have lobbied the MHLW, but they really will not budge. The minimum weight that can be recorded in the MCH Handbook is 1 kg, and even though we have asked them to reduce it to zero, they still refuse to change it. There may be many reasons for this, but if they are not willing to change what they have been doing, it would be better to change things from the local level. This is the spirit of primary health care (PHC). PHC is not a way of doing everything that is decided by the central government in each region, and from a global perspective, the best way is not to follow what is decided by the WHO in Geneva. PHC should be a matter of self-determination and self-decision, with local communities making their own decisions and becoming	Yes, thus the LBH should be implemented at each local government hopefully by 2024.

		independent. The LBH is a policy that differs greatly from one region to another. I think it's okay to have different policies in different regions. As long as there is at least a similar safety net for little babies and their families, I think it is okay if the LBH differ from prefecture to prefecture in their structure and content.	
9	Professor Mitsuo Segi explained the need for an integrated MCH Handbook system. What do you think were the factors that led his opinion to the policy?	It is an opinion of Professor Segi, an obstetrician-gynecologist and head of the Maternal and Child Health Section, that he advocated for the need of MCH Handbook. However, I once had an interview in the late 90's with the public health nurses, pediatricians, midwives, and administrative officials who made the MCH Handbook in 1948 at that time. According to what they said, it was not the opinion of Professor Segi alone, but something that was thought up by all of them, and they came to the conclusion that they would work to unify MCH information by the MCH Handbook. In order to obtain GHQ's approval, a teacher who could speak English translated the English into Japanese each time and obtained their approval. I understand that the Maternal and Child Health Section as a whole worked together to create this MCH Handbook. The Maternal and Child Health Section was established to "take care of mothers and children together," and people from various occupational fields gathered in this section. The Maternal and Child Health Section was the first of its kind in Japan at the time, and the MCH Handbook was established the following year. Midwives, nurses, pediatricians, obstetricians, and gynecologists, as well as administrative officials, gathered there and jointly produced the MCH Handbook. According to the minutes of the first meeting, pediatricians, doctors, and nurses were the only ones who could fill in the newborn section of the MCH Handbook. However, during the deliberations of the Diet Committee, midwives were allowed to fill in the newborn section because they were also seeing various things, and it was not sufficient for doctors and nurses alone to fill in. They had a lot of discussion about the newly completed form and came up with a good one. I believe that this is a product of truly multi-sectoral collaboration.	It is not Professor Segi alone's idea, but of Maternal and Child Health Section's to develop the MCH Handbook that every MCH information is covered as the Section was established to take care of mothers and children together.
10	The LBH was created based on the mothers' circle. Was it due to the existence of the MCH Handbook that encouraged community	It is a simple story. The MCH Handbook was created in a poor environment where nothing existed, and it started as a rationing system to protect the lives and health of mothers and their children. The MCH Handbook was not the only solution to the problem, and as it was used, medical equipment, doctors, nurses, and midwives increased, and they played a role in the spread of the MCH Handbook. The	The MCH Handbook expanded and strengthened the network of medical staffs and local governments.

	formation, or because of the strong culture of such inter-community ties in Japan?	organizer became a network of ties and a CoC was established. Such a concept did not exist in Japan at that time. The MCH Handbook connected the medical staff working at each workplace, so that they could know when, where, and what kind of services mothers and child received. I think the network of MCH care services has since expanded. The MCH Handbook did not exist because such a network existed from the beginning. The MCH Handbook was not the reason for the expansion of the network, but the MCH Handbook was the basis for the expansion of occupations, which were established after the WWII. The network was strengthened when these people used the MCH Handbook.	
11	In Japan, information is centralized from the time MCH Handbook is issued, and the parents are notified of age-specific checkups and vaccines. In Lebanon, parents will be notified of the next vaccination only when they downloaded the smartphone application called " <i>sohatna</i> " and registered the information of received vaccinations. Considering the issue that mothers need to be aware of MCH, the MCH Handbook also plays a major role as a public policy. What do you think are the differences between Japan and other countries in terms of the MCH Handbook as a public	As for the system itself, the timing of health checkups and the method of immunization differ from municipality to municipality, whether it is group or individual. In this sense, it is great that Japanese local governments not only issue MCH Handbooks, but also provide outreach to mothers during pregnancy and childbirth. Not only the MCH Handbook, but also other various information can be obtained from public health nurses. An Indonesian doctor who focused on the usefulness of the MCH Handbook said, "Providing the minimum necessary information in MCH Handbook leads to the empowerment of mothers." This is a major role of the MCH Handbook that we do not consider in Japan.	Japanese MCH Handbook provides outreach to mothers during pregnancy and childbirth.

	policy?		
--	---------	--	--

Question 1 aimed to identify the factors that facilitated the 100% dissemination of the MCH Handbook in Japan. Professor Nakamura noted that in the 1950s, while most urban dwellers in cities like Tokyo, Osaka, and Fukuoka had the 1948 original MCH Handbook, individuals in less urban areas did not possess it or had never seen it. Reflecting on the situation in Wakayama Prefecture in 1955, it took approximately ten years for dissemination. The complete spread in Japan can be attributed to three main factors: advocacy, the MCH Handbook as a rationing system, and the involvement of local governments. Professor Nakamura highlighted that MCH specialists promoted the MCH Handbook through local newspapers and public newsletters, emphasizing its importance in recording MCH information in one booklet. Additionally, individuals sought the MCH Handbook to receive incentives like clothing and food, as it served as a rationing handbook. Furthermore, local governments played a role in the dissemination of the MCH Handbook.

Question 2 aimed to determine how leadership and policy making function in the presence of structural racism. From a human rights perspective, foreigners living in Japan should have access to basic healthcare. Therefore, it is crucial to prepare the MCH Handbook in various languages. In a multi-ethnic country, the language of the MCH Handbook should ideally be written in the native language, considering that medical staff are educated in the native language and can communicate effectively. It is also a commendable idea to provide the MCH Handbook in two languages, such as Japanese and English for foreigners in Japan, or English and French in countries like Cameroon, where there are two national languages.

Question 3 clarified the sustainability of the MCH Handbook. To achieve sustainability, legislating the MCH Handbook is crucial. Professor Nakamura observed sustainability during his visit to Salatiga, Indonesia, where the MCH Handbook became an integral part of the culture through policy development in collaboration with JICA. Securing paper resources is also vital for the sustainability of the MCH Handbook. Even in Japan, there were challenges in

obtaining enough paper to copy the MCH Handbook for every mother and child, as paper was a rationed material during that time.

Question 4 focused on how to disseminate MCH Handbook in a country where it is already available but inappropriately used by tearing off only the immunization part. The four phases of MCH activity—advocacy, leadership, program planning, and policy development—play a crucial role in such a context. While most countries follow government decisions, there are cases where decisions are not heeded. Collaborating with doctors and midwives from Japan is essential to create and advocate for the MCH Handbook. Medical professionals who use the MCH Handbook need to understand its importance and advocate for its proper use. Cooperation with professional associations is vital to secure the cooperation of different layers of healthcare.

Question 5 sought Professor Nakamura's opinion on whether the dissemination of the MCH Handbook achieves both DEI and health equality. Professor Nakamura emphasized that the MCH Handbook itself does not save lives but significantly contributes to promoting healthcare access. Japan achieved SDG target 12, with a neonatal mortality rate of less than 10 per 1000 live births, showcasing that the MCH Handbook greatly aids in improving health inequalities. With proper medical services provided by healthcare professionals at medical facilities, the MCH Handbook facilitates healthcare access.

Question 6 addressed the challenge of full implementation after program initiation and sustainability. Several countries, including Indonesia, Thailand, Vietnam, Laos, and Kenya, have succeeded in full implementations, but the factors differ. Challenges exist in areas affected by conflict, such as Gaza, Palestine, and some parts of Afghanistan, where the MCH Handbook is not being used. The key reasons include the difficulty of scaling up policies universally and the necessity of stability in the country—both politically and economically—for the MCH Handbook to function properly.

Question 7 focused on the quality improvement method of the MCH Handbook in Japan. Professor Nakamura highlighted that the Japanese MCH Handbook does not adopt specific improvement methods—like Lean, Six Sigma, or the Model for Improvement. In Japan, revisions are determined through meetings involving representatives from professional organizations and, more recently, mothers who use the MCH Handbook. In contrast, countries like Thailand and Vietnam follow a government led general revision policy before determining specific revisions, making it easier for professional associations to decide.

Question 8 clarified the implementation of the LBH. Professor Nakamura expects the LBH to be published by each local government in all 47 prefectures by 2024. He emphasized the importance of program planning at the local level, particularly in PHC. The LBH serves as a safety bet for parents of low-birth-weight infants.

Question 9 explained why Professor Segi's idea about the importance of the MCH Handbook was reflected in policy. The MCH Handbook was created in 1948 under the principle of “take care of mothers and children together” by the Maternal and Child Health Section of the Ministry of Health and Welfare. This section, to which Professor Segi belonged at the time, comprised not only pediatricians but also midwives, nurses, obstetricians, and gynecologists—a testament to multi-sectoral collaboration.

Question 10 identified the role of the MCH Handbook as a community building tool. The MCH Handbook established a CoC where both mothers and children, along with medical staff, can retrieve information about when and where they received healthcare services. While the MCH Handbook may not directly strengthen community building, it created, expanded, and strengthened the network between healthcare professionals and local governments.

Question 11 sought Professor Nakamura's opinion on the MCH Handbook as a public policy. In Japan, local governments not only publish MCH Handbooks but also reach out to expectant and new mothers, addressing variations in healthcare facilities between communities.

Public health nurses, in addition to having access to the MCH Handbook, also have access to additional resources. An Indonesian physician quoted by Professor Nakamura emphasized that mother empowerment results from providing the minimum necessary information in the MCH Handbook. While empowering mothers is one of the primary functions of the MCH Handbook, this perspective may not align with how it is viewed in Japan.

The four identified phases of MCH activities—advocacy, leadership, program planning, and policy development—reaffirmed through interview responses (Table 7). Advocacy is evident at all levels in the field of MCH activities. Cultural competencies, particularly in language, are considered essential in leadership. Program planning involves incorporating an equity framework, implementation, and continuous improvement in the MCH field. In the realm of policy development, it is crucial to issue the MCH Handbook at each local government. However, the challenge lies in the time required for full dissemination. With appropriate policy development, the MCH Handbook becomes sustainable, acts as a safety net, and empowers mothers.

Table 8: Four MCH activity phases retrieved from interview responses

Phases	Item	Explanation	Reference
Advocacy	Individual level	Indonesian midwives giving out comments that the MCH Handbook is “good” which enabled people to utilize them.	Q4
		Indonesian physician saying, "Mother empowerment results from providing the minimum necessary information in the MCH Handbook."	Q11
	Organizational level	Developing the MCH Handbook by Maternal and Child Health Section lobbying GHQ for permission to create it.	Q9
	Community level	Local midwives and public health nurses promoted the importance of the MCH Handbook through local newspapers and public newsletters.	Q1
		Developing the LBH at each local governments as a result of advocacy at a community level.	Q8
Leadership	Visionary	Local midwives and public health nurses took the part for mothers to use the MCH Handbook by saying “this is good.”	Q1, 4
	Humble	Local midwives and public health nurses in Japan took the part for mothers to use the MCH Handbook.	Q1, 4
	Strategic	Maternal and Child Health Section developing the MCH Handbook.	Q9
	Culturally competent	The MCH Handbook written in native language of the country.	Q2
		The MCH Handbook written in two languages, such as Japanese and foreign language for those foreigners living in Japan; and English and French in Cameroon where there are two native languages.	Q2
	Willing to create a culture of living	People who actually use the MCH Handbook in the field are taking the initiative.	Q1
	Willing to make it personal	Foreigners living in Japan should be incorporated in the healthcare system to receive basic healthcare.	Q2

	Ready to challenge the status quo	Developing the unified MCH Handbook at Maternal and Child Health Section despite existing other forms of HBR.	Q1, 9
Program planning	Community engagement	Development of the LBH.	Q10
	Engage with multiple stakeholders	Achievement of multi-sectoral collaboration.	Q9
	Include an equity framework	Disseminated as the MCH Handbook to ensure fair rationing for all.	Q1
	Implementation	Difficult to scale up when it comes to full implementation.	Q6
		Health, peace of the country, and money is necessary for the MCH Handbook to be sustainable.	Q6
	Evaluation and continuous improvement	In Japan, the policy direction is set as a result of meeting. Conversely, in many other countries, policy direction is made first so that specific changes can be decided at a meeting afterwards.	Q7
Policy development	Role	Each local government issued the MCH Handbook.	Q1
	Challenge	It took approximately ten years for dissemination, especially due to the lack of paper, even though people have seen the MCH Handbooks.	Q1
	Effect	Legislation would make the MCH Handbook sustainable.	Q3
		The LBH has been developed in each prefecture as a safety net that also takes into account the health of babies born with low birthweight.	Q8
		As a result of reaching out to mothers with the MCH Handbook as a public policy, it leads to empower mothers.	Q11

4.4. Discussion

Research 3 uncovered distinctions in the stages of developing, disseminating, and maintaining the MCH Handbook. The four phases of MCH activities identified in Research 1—advocacy, leadership, program planning, and policy development—can be systematically categorized into each stage (refer to Table 9). The development and disseminating stages of the MCH Handbook encompass advocacy, leadership, program planning, and policy development. As for the maintenance stage, it predominantly comprises program planning and policy development.

Table 9: Three stages of developing, disseminating, and maintaining the MCH Handbook

Four phases	Stages		
	Development	Dissemination	Maintenance
Advocacy	○	○	×
Leadership	○	○	×
Program planning	○	○	○
Policy development	○	○	○

First, in the development of the MCH Handbook, advocacy, leadership, program planning, and policy development are indispensable. For instance, when the Maternal and Child Health Section in Japan decided to create the unified MCH Handbook to consolidate MCH information, they had to secure permission from General Headquarters (GHQ). The development of the LBH also involved advocacy at the community level. Without advocacy, the promotion and maintenance of MCH outcomes through such activities would not have been achieved. Leadership played a crucial role in conveying the importance of the MCH Handbook to GHQ and local governments, especially when cultural competency was essential in its development. Each local government issuing the MCH Handbook as a means of rationing system for equal

distribution underscores the importance of policy development in achieving increased MCH outcome.

Second, during the dissemination stage, all four phases—advocacy, leadership, program planning, and policy development—are crucial. In Japan, 100% dissemination of the MCH Handbook was driven by local level efforts emphasizing its importance through newspapers and public newsletters. Advocacy at individual levels, such as midwives in Indonesia, contributes to the broader community of healthcare professionals. Leadership from both those implementing the MCH Handbook and those at the grassroots level is vital. Scaling up implementation through program planning remains a challenging yet necessary task for full dissemination.

Third, in the maintaining stage, program planning and policy development are the key components. Professor Nakamura emphasized that the sustainability of the MCH Handbook depends on factors such as the overall health, peace of the country, and financial considerations. Legislative support is crucial for the maintenance of the MCH Handbook. The current situation in Gaza, Palestine, exemplifies how external factors like conflict can impact the utilization of the MCH Handbook. Continuous improvement and policy direction are vital for its sustained effectiveness.

Developing, disseminating, and maintaining the MCH Handbook all require considerable effort, time, and ongoing commitment. As MCH activities are forward-looking, continuous program planning and policy development are essential for continually improving MCH outcomes.

5. OVERALL DISCUSSION

This study highlights that the dissemination of the MCH Handbook does not inherently lead to health equality, despite ensuring equal access to healthcare services. The findings from the three research emphasize that the MCH Handbook serves as a tool for facilitating access to healthcare services, ensuring individuals receive appropriate care.

However, achieving health equality requires more than just disseminating the MCH Handbook, as evident in the case of Lebanon, where crucial elements of the four identified phases in Research 1—advocacy, leadership, program planning, and policy development—are lacking. The three stages outlined in Research 3—developing, disseminating, and maintaining—further contribute to the understanding of the complexities involved (Table 10).

Table 10: Comparison of three stages of developing, disseminating, and maintaining the MCH Handbook in Japan and Lebanon

Four phases	Stages					
	Developing		Disseminating		Maintaining	
	Japan	Lebanon	Japan	Lebanon	Japan	Lebanon
Advocacy	○	○	○	×	×	×
Leadership	○	×	○	×	×	×
Program planning	○	○	○	○	○	○
Policy development	○	×	○	×	○	×

Research 2 underscores Lebanon’s deficit in leadership and policy development during the developing stage. Similarly, the absence of advocacy is observed in dissemination stage, where the mere distribution of the MCH Handbook without active follow-up, unlike the comprehensive approach seen in Japan as revealed in Research 3, does not fulfill the requirements. This limitation extends to the maintenance stage, emphasizing the critical role of advocacy, identified in Research 1 as a blend of education and action.

In summary, the study emphasizes that the dissemination of the MCH Handbook, while a

crucial component, is insufficient on its own to achieve health equality. A comprehensive approach that includes advocacy, leadership, program planning, and policy development throughout all stages is essential for addressing the complexities of healthcare access and promoting health equality.

For the MCH Handbook progress to the dissemination stage, its development is a prerequisite. However, relying solely on higher-ups wielding power to lead advocacy activities may not be sufficient. In Lebanon, despite advocacy at the organizational level, the MCH Handbook faced functionality issues. This highlights the crucial role of advocacy and leadership at the grassroots level by mothers and midwives, mirroring the successful approaches observed in Japan and Indonesia. Ground-level advocacy and leadership are pivotal, not only for organizational effectiveness but also for driving the development of the MCH Handbook persuasively. Therefore, a comprehensive approach encompassing advocacy and leadership at individual, organizational, and community levels is indispensable to ensure the proper use of the MCH Handbook.

Furthermore, it is evident that program planning and policy development play vital roles. The combined conceptual diagram in Table 11 synthesizes insights from Research 1, 2, and 3. In Lebanon, although the MCH Handbook has been developed and revised, its proper utilization is hindered by the absence of legislation. Lebanon's fragility as a country, where laws may not be effectively implemented even if enacted, contributes to this challenge. In contrast, Japan has a robust legal framework, with the Maternal and Child Health Act mandating each local government to issue its MCH Handbook. The content is standardized by national government regulations, preventing local deviations. Public health nurses, upon issuing the MCH Handbook, actively engage with pregnant women, providing essential information on pregnancy, childbirth, and childcare. This collaborative, multi-sectoral approach underscores that the MCH Handbook is a product of collective efforts.

Table 11: Combined conceptual diagram

Phase	Item	Research 1: Literature review		Research 2: Case study	Research 3: Interview
Advocacy	Definition	Process to achieve MCH goals.		UNICEF, AUB, WHO, and MoPH are collaborating for the MCH activity.	Advocacy by midwives and nurses in the field to disseminate the word that the MCH Handbook is a good idea through local newspapers and public newsletters.
		Evidence-based advocacy.			
		Relates to legislation.			
		Towards federal, state, and local level, with public organization involved.			
		MCH advocacy started since 1900s, during progressive era, for women speaking up to the right to vote, the elimination of child labor, and public education.			
		MCH advocacy fights for elimination of institutional racism, which is the root cause of many MCH disparities, and for advancement of racial justice.			
		Mixture of education and action.			
		Anyone can be an advocate.			
	Levels	Individual Levels	A person challenging an institution or organization on behalf of another person, serving as their mediator, defender, and protector.	N/A	Indonesian midwives giving out comments that the MCH Handbook is “good” which enabled people to utilize them.
					Indonesian physician saying, "Mother empowerment results from providing the minimum necessary information in the MCH Handbook."
Organizational Levels		A person or organization working to monitor or influence	Advocacy on organizational level is taking place.	Developing the MCH Handbook by Maternal and Child Health Section lobbying GHQ for permission to create it.	

			the legislative, budgetary, and administrative processes by closely observing any changes that should be called out or any chance to support or advance a certain cause, such as fight for women's reproductive rights.	i.e. UNICEF, AUB, WHO, MoPH is working on MCH activities.	
		Community Levels	A person or organization working to change a system for the good of a particular community. Often, it starts out as case advocacy but grows to include other people who are passionate about the same problem, building strength in numbers and common resources like mass shootings.	N/A	Local midwives and public health nurses promoted the importance of the MCH Handbook through local newspapers and public newsletters.
	Effect	With appropriate advocacy, appropriate implementation, such as for necessary resources, or for appropriate interpretation and enforcement, can be done.		N/A	Utilizing the MCH Handbook is becoming a “culture” that almost everyone uses them to record MCH information.

		Promotes a positive cycle of health across generation by redressing historical racism and accepting health as human rights.	Unlikely to promote positive cycle of health as the MCH Handbook has not been utilized well.	
Leadership	Definition	The capacity to drive meaningful change, shepherd through the critical systemic reforms that our institutions so desperately need.	No leadership because there has been no meaningful change.	Maternal and Child Health Section was just established in Ministry of Health and Welfare, and many medical staffs with necessary leadership skills were working.
	Role	Support the efforts of the community.		
	Challenge	Structural racism. Need to take drastic measures to address the causes of inequity and establish environments in which everyone thrives.		
	Criteria	Imagination and creativity	×	Local midwives and public health nurses in Japan took the part for mothers to use the MCH Handbook.
		Humility	○	Local medical personnel, not Professor Nakamura, a pediatrician from Japan, should take the lead in creating the MCH Handbook in Indonesia.
		Strategy	○	Maternal and Child Health Section developing the MCH Handbook.
		Culturally competent	×	The MCH Handbook written in native language of the country. The MCH Handbook written in two languages, such as Japanese and foreign language for those foreigners living in Japan; and English and French in Cameroon where there are two native languages.

		Creativity	×	People who actually use the MCH Handbook in the field are taking the initiative.
		Take it personally	×	Foreigners living in Japan should be incorporated in the healthcare system to receive basic healthcare.
		Challenge the status quo	○	Developing the unified MCH Handbook at Maternal and Child Health Section despite existing other forms of HBR.
Program planning	Definition	Components of a public health approach to program planning are: (1) population health perspective, (2) community engagement, and (3) approach to assessment, design, implementation, and evaluation.	Program planning, especially evaluation and continuous improvement is done as the MCH Handbook has been revised with the cooperation of UNICEF.	N/A
		Enhance MCH outcomes by engaging multiple stakeholders, investigating various contexts where the programs will be implemented, and implementing evidence-based interventions.		Developing the LBH at each local government.
		MCH program planning provides the opportunity to include an equity framework in their work.		Disseminated as the MCH Handbook to ensure fair rationing for all.
	Steps	Understand context		The MCH Handbook was developed as a means of rationing system as people lacked in food and clothing at the time of the WWII.
		Community assessment		Difficult to scale up when it comes to full implementation.
		Program design		Health, peace of the country, and money is necessary for the MCH Handbook to be
		Implementation		

				sustainable.
		Evaluation and improvement		In Japan, the policy direction is set as a result of meeting. Conversely, in many other countries, policy direction is made first so that specific changes can be decided at a meeting afterwards.
Policy development	Definition	Essential MCH function.	Policy development cannot be done in fragility context as the law does not mean anything because it is not obeyed.	Each local government issued the MCH Handbook.
	Cooperation	MCH advocates should familiarize themselves with the legislative process.		It took approximately ten years for dissemination, especially due to the lack of paper, even though people have seen the MCH Handbooks.
		Learn the legislative process.		Legislation would make the MCH Handbook sustainable.
		Know the budgetary.		The LBH has been developed in each prefecture as a safety net that also takes into account the health of babies born with low birthweight.

Moreover, challenge in reducing health inequality, lies not only in the dissemination stage but also in the maintenance stage. Tables 9 and 10 highlight the absence of leadership in the maintenance stage of MCH Handbooks in Japan. This absence of leadership indicates that the MCH Handbook has achieved sustainability without the need for ongoing transformative leadership; it has seamlessly integrated into Japanese culture. The Indonesian example further illustrates that the MCH Handbook functions effectively when the four phases and three stages are interwoven. This demonstrates that the MCH Handbook becomes an indispensable part of people's lives and sustains itself naturally. Hence, a synergistic collaboration across the four phases and three stages is crucial for the MCH Handbook to effectively address health inequalities.

Within this framework, six key success factors emerge, elucidating Japan's success in the dissemination and sustainability of the MCH Handbook (Figure 3). An internal factor contributing to success is health motivation. Originally developed as a handbook for wartime rationing, the MCH Handbook in Japan was conceived with the dual purpose of maintaining and promoting MCH for the overall prosperity and strength of the nation. This dual purpose instigated a behavioral shift in people, encouraging them to use the MCH Handbook as a means of safeguarding their lives. Additionally, it is noteworthy that incentives, akin to those in Japan, are absent in Lebanon, potentially explaining the lack of behavioral change and insufficient health motivation in the Lebanese context.

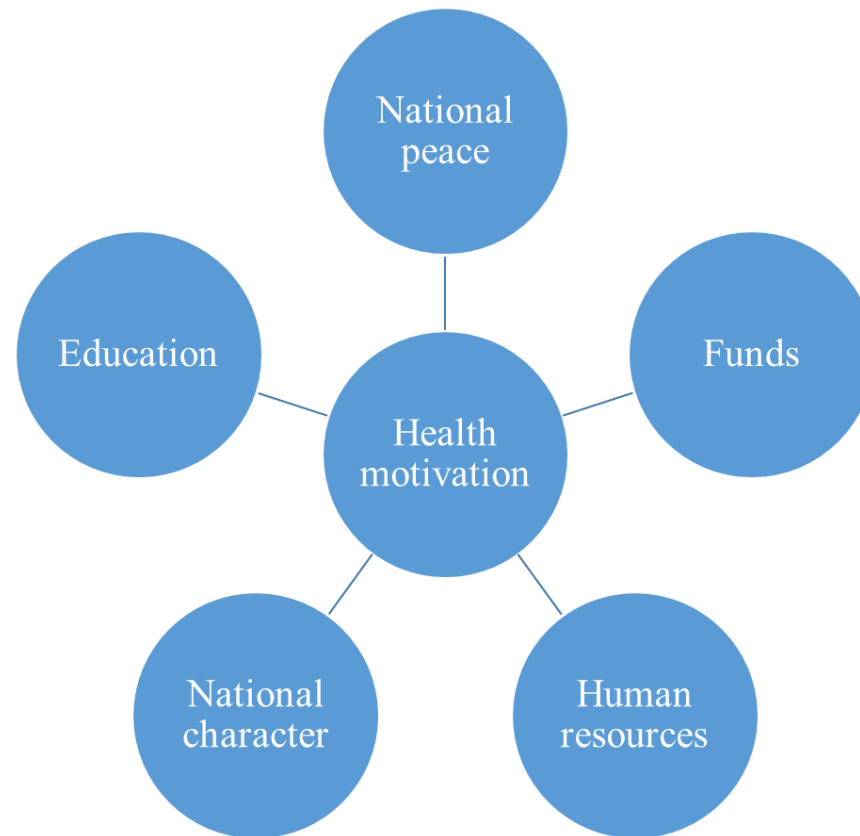


Figure 3: Six key success factors for the dissemination and sustainability
Health motivation is the internal key success factor and the other are five external factors.

Moreover, five external factors played a crucial role in shaping the success of the MCH Handbook in Japan during that period: national peace, funds, human resources, national character, and education. Initially, Japan witnessed postwar economic growth, rendering the rationing system obsolete. Unlike the politically and economically stable environment in Japan, Lebanon faced significant instability. Additionally, Japan did not require external funding, benefiting from a state of peace, while earlier corporate sponsorship was necessary. The Maternal and Child Health Section in Japan boasted a wealth of medical professionals who effectively conducted training, emphasizing the value of the MCH Handbook. Furthermore, Japanese mothers actively engaged in record-keeping activities, a practice lacking in Lebanon despite the widespread distribution of the MCH Handbook. The educational opportunities for women in Japan improved, leading to enhanced literacy and information literacy, allowing mothers to naturally understand how to use the MCH Handbook without formal instruction.

Consequently, dissemination alone proves insufficient to mitigate health inequalities; it is imperative to leverage the MCH Handbook as a health incentive for child-rearing. In Japan, despite the absence of advanced technology and NICUs, the MCH Handbook was extensively utilized as an incentive, significantly reducing the infant mortality rate. This success was primarily attributed to the health motivation of mothers, driven by a desire to raise their children in a healthy manner. In contrast, Lebanon has achieved wide dissemination with 95% coverage, but unlike in Japan, proper utilization and sustainability are hindered as distribution alone is not enough. Leadership and health motivation need to be exercised by healthcare providers at individual and community levels, extending to the frontline where mothers and the CoC are actively nurtured. The success factors of the MCH Handbook in Japan—national peace, funding, human resources, national character, education, and, above all, health motivation—underscore the intricate interplay of these elements for sustained impact.

5.1. Limitations of the three research

Research 1, 2, and 3 have constraints with several factors. Research 1 relies within the framework of the handbook referred. Although the handbook is comprehensive covering all facets of MCH, other key phases could be identified with a different handbook. Research 2 is limited by the absence of pilot studies conducted on the MCH Handbook in Lebanon. Additionally, information beyond MCH activities, as provided by the author in Lebanon, has not been incorporated. The exclusion of these data points raises the possibility that important crucial details relevant to the development of MCH Handbooks in Lebanon may have been overlooked. Consequently, it is advised to treat the Lebanese case as a preliminary case study, emphasizing the need for further research to gather specific data on MCH Handbooks in Lebanon.

Moreover, Research 3 is constrained by the fact that only one person was interviewed. While the insights gained from the interview provide valuable information, the reliability of the data could be enhanced through interviews with multiple MCH experts. A broader range of perspectives would contribute to a more comprehensive understanding of the subject matter. The limitation of a single-person interview may result in the omission of important information. Therefore, future research endeavors should involve interviews with several experts to enrich the data and ensure a more robust analysis.

5.2. Implications for Practice

While the mere dissemination of the MCH Handbook may not directly lead to health equality, the success observed in Japan can be attributed to the comprehensive approach encompassing the development, dissemination, and maintenance phases of the MCH Handbook. A critical internal factor contributing to this success was the health motivation of

the Japanese population, serving as a key driver for the MCH Handbook's integration into societal practices. To ensure the sustained integration of the MCH Handbook and foster its longevity, it is imperative to consistently record individuals' motivations for maintaining their health.

In light of these findings, addressing health inequalities can be achieved through a dual strategy involving both health promotion initiatives and the continual upkeep of the MCH Handbook. By actively engaging individuals in recording and maintaining their health motivations within the MCH Handbook, a more profound and lasting impact on health outcomes and equality can be achieved. This approach recognized the symbiotic relationship between individual health motivations and the sustained utilization of the MCH Handbook as a tool for health promotion and awareness.

5.3. Conclusion

In conclusion, this study emphasizes that the sole dissemination of the MCH Handbook is insufficient for achieving health equality; rather, it requires ongoing maintenance. Additionally, a crucial element is the cultivation of health motivation among individuals utilizing the MCH Handbook at the grassroots level. This approach is vital to curbing the widening health inequalities. Therefore, by fostering health motivation and ensuring the continual maintenance of the MCH Handbook, the goal of achieving health equality can be realized.

6. References

1. Carandang RR, Sakamoto JL, Kunieda MK, et al. Roles of the Maternal and Child Health Handbook and Other Home-Based Records on Newborn and Child Health: A Systematic Review. *Int J Environ Res Public Health*. 2021;18(14):7463. DOI: 10.3390/ijerph18147463.
2. Brown DW, Gacic-Dobo M. Home-based record prevalence among children aged 12–23 months from 180 demographic and health surveys. *Vaccine*. 2015;33(22):2584-2593. <https://www.clinicalkey.es/playcontent/1-s2.0-S0264410X15004405>. DOI: 10.1016/j.vaccine.2015.03.101.
3. JICA. JICA が取り組む母子保健. 2022.
4. Nakamura Y. A Historiography on the development and extension of Maternal and Child Health Handbook in Japan after the Second World War. 2009.
5. Aoki A, Mochida K, Kuramata M, et al. The RE-AIM framework-based evaluation of the implementation of the Maternal and Child Health Handbook program in Angola: A mixed methods study. *BMC Health Serv Res*. 2022;22(1):1071-9. DOI: 10.1186/s12913-022-08454-9.
6. Nakamura Y. 【母子健康手帳:過去、現在、未来】. *小児臨*. 2012;65(8):1745-1755. <https://search.jamas.or.jp/link/ui/2012344293>.
7. Nakajima M. 【母子健康手帳:過去、現在、未来】母と子の健康を支援する手帳制度の変遷. *小児臨*. 2012;65(8):1767-1777. <https://search.jamas.or.jp/link/ui/2012344295>.
8. Toronto declaration "making me visible". 2022.
9. Social Determinants of Health at CDC. Centers for Disease Control and Prevention Web

site. <http://www.cdc.gov/socialdeterminants/FAQ.html>. Accessed Aug. 22, 2023.

10. Artiga S, Hinton E. Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity. 2018.

11. Arcaya M, Arcaya A, Subramanian S. Inequalities in health: Definitions, concepts, and theories. *Global Health Action*. 2015;8(1):27106. <https://www.tandfonline.com/doi/abs/10.3402/gha.v8.27106>. DOI: 10.3402/gha.v8.27106.

12. Balogun O, Tomo C, Mochida K, et al. Impact of the Maternal and Child Health handbook in Angola for improving continuum of care and other maternal and child health indicators: Study protocol for a cluster randomised controlled trial. *Trials*. 2020;21(1):737-w. DOI: 10.1186/s13063-020-04664-w.

13. Tobe R, Haque S, Mubassara S, Rahman R, Ikegami K, Mori R. Maternal and child health handbook to improve continuum of maternal and child care in rural Bangladesh: Findings of a cluster randomized controlled trial. *PLoS One*. 2022;17(4). DOI: 10.1371/journal.pone.0266074.

14. Kusumayati A, Nakamura Y. Increased utilization of Maternal Health Services by Mothers Using the Maternal and Child Health Handbook in Indonesia. *Journal of International Health*. 2007;22(3):143-151. https://www.jstage.jst.go.jp/article/jaih/22/3/22_3_143/article/-char/en. DOI 10.11197/jaih.22.143.

15. Nashi C. Effectiveness of Introducing “Maternal and Child Healthcare Notebook System” in Indonesia: Changes in Mother for Child Care. 2005:79-85.

16. Mori R, Yonemoto N, Noma H, et al. The Maternal and Child Health (MCH) Handbook in Mongolia: A Cluster-Randomized, Controlled Trial. *PLoS One*. 2015;10(4):e0119772. DOI: 10.1371/journal.pone.0119772.

17. Hagiwara A, Ueyama M, Ramlawi A, Sawada Y. Is the Maternal and Child Health (MCH) handbook effective in improving health-related behavior? Evidence from Palestine. *J*

Public Health Policy. 2013;34(1):31-45. DOI: 10.1057/jphp.2012.56.

18. Petersen D, Hess C. Advocacy and Policy Development. In: *Kotch's Maternal and Child Health: Problems, Programs, and Policy in Public Health 4th edition*. Jones & Bartlett Learning; 2021:585-602.

19. Webb J. Leaderships in Maternal and Child Health. In: *Kotch's Maternal and Child Health: Problems, Programs, and Policy in Public Health 4th edition*. Jones & Bartlett Learning; 2021:603-614.

20. Marshall J, Liller K, Kirby R, Hanson P, Parish A. Assessment and Program Planning. In: *Kotch's Maternal and Child Health: Problems, Programs, and Policy in Public Health 4th edition*. Jones & Bartlett Learning; 2021:545-512.

21. Telfair J, Kelley A, Dave Gaurav. Program Monitoring and Evaluation. In: *Kotch's Maternal and Child Health: Problems, Programs, and Policy in Public Health 4th edition*. Jones & Bartlett Learning; 2021:513-543.

22. Kono G. 【母子健康手帳:過去、現在、未来】母子手帳の黎明期. *小児臨*. 2012;65(8):1757-1764. <https://search.jamas.or.jp/link/ui/2012344294>.

23. Goto Y, Nakayama Y, Yagi T. Influence of the WWII Food Shortage on the Incidence of Diabetes. 1958;7(2):133-135. DOI: <https://doi.org/10.2337/diab.7.2.133>.

24. Kobayashi, Hori, Yamamoto, Yano. Koshihikari: A premium short-grain rice cultivar – its expansion and breeding in Japan. *Rice*. 2018;11(1):15-12. <https://link.springer.com/article/10.1186/s12284-018-0207-4>. DOI: 10.1186/s12284-018-0207-4.

25. Maternal and Child Health Act. 1965;1-4.

26. UNRWA. Palestine refugees. UNRWA Web site. <https://www.unrwa.org/palestine-refugees>. Accessed December 19, 2023.

27. Matsui A. 【母子健康手帳:過去、現在、未来】母子健康手帳に便色見本が掲載された意義 . 小児臨 . 2012;65(8):1778-1786.
<https://search.jamas.or.jp/link/ui/2012344296>.

28. Matsui A, Gu Y. 【新しい母子健康手帳とその活用】新しい変更点 新生児便色カード「赤ちゃんのうんちの色は何番ですか?」 . 2013;16(12):841-845. <https://search.jamas.or.jp/link/ui/2014104912>.