

Table 6 Sociodemographic characteristics of interview participants

Sociodemographic characteristics	Mothers	Health centre staff	VHVs and TBAs
Number	20	8	10
Mean age (range)	26.8 (21–33)	37.5 (25–53)	50.8 (29–56)
Sex			
Male	0	4	4
Female	20	4	6
Education			
None	8	0	2
Primary school	7	0	2
Secondary school	4	4	2
High school	1	3	4

discharge'. Some respondents stated that, while understandable, some words required additional information to explain the underlying reason for the depicted event. Illiterate mothers reported that some content was difficult to understand; however, after additional explanations from nurses and midwives, they were able to understand the material and recall what was taught by looking at the illustrations.

We asked the mothers if they had shown the handbook to their husbands. Of the 20 mothers who responded to this question, 17 had shown it to their husbands. Some husbands showed interest and commented that the book was useful and contained meaningful illustrations. Some husbands explained the contents of the handbook to their wives and advised them to obtain ANC, avoid salty food, or refrain from working too hard.

We asked the health centre staff, VHVs and TBAs whether they used the handbook for health education; all of them answered in the affirmative. Some VHVs mentioned that it was initially difficult to use the handbook for health education; they were nonetheless able to provide health education using the handbook, however, and no longer found it difficult at the time of the interviews. Others mentioned that while the handbook was useful, health education was difficult because some mothers were reluctant to listen to the advice of the VHVs because it was inconsistent with their cultural beliefs.

Discussion

This study was the first to examine the effectiveness of the MCH handbook in Cambodia. Both the quantitative and qualitative results indicated that the MCH handbook positively influenced the promotion of ANC attendance, delivery with SBAs and delivery at a health facility. Further, the MCH handbook was associated with increased healthcare knowledge in mothers.

The DID analyses revealed that the MCH handbook effectively promotes the key indicators examined in our study (i.e. ANC attendance, delivery with SBAs and delivery at health facilities). The effect of the handbook on these variables was robust, even after controlling for sociodemographic indicators, except for ANC attendance at least once.

In Thailand (Aihara *et al.* 2006) and Bangladesh (Bhuiyan *et al.* 2006; Kusumayati and Nakamura 2007), use of an MCH

handbook was associated with ANC acquisition. Our results were consistent with these findings, because use of the handbook was associated with an increase in ANC by more than four visits. However, the number of first-time ANC visits was not significantly greater after controlling for confounding factors. This may have been due to an already high level of coverage before the intervention. Although DID analysis indicated a positive impact of the intervention on this variable, the high existing level of coverage may have resulted in an increase that was too small to reach statistical significance.

The effect of the MCH handbook on delivery with SBAs and at health facilities has not been well explored. Baequni and Nakamura (2012) conducted a meta-analysis of five studies and found that the MCH handbook positively increased the likelihood of delivery at a health facility but did not increase SBA attendance. Osaki *et al.* (2013) found that ownership of an MCH handbook was associated with SBA-assisted delivery; however, the study compared women who owned the MCH handbook with those who received but misplaced it, indicating a possible selection bias whereby those who retained the handbook might have initially been more concerned with their childbirth. A recent study of MCH handbook effectiveness in Palestine (Hagiwara *et al.* 2013) using DID analysis showed that use of the handbook improves maternal health-seeking behaviour. However, in Palestine, the MCH handbook represented the first standardized home-based maternal and child record for the country; thus, a comparison could not be made between card-type home-based records and the MCH handbook.

Our study revealed that the MCH handbook significantly increases the likelihood of delivery with SBAs and at health facilities, even after adjusting for maternal age, education level and economic status. This improvement may have resulted from handbook distribution and enhanced communication between respondents and health professionals (Hagiwara *et al.* 2013).

Previous studies showed that the MCH handbook increases the likelihood of exclusive breastfeeding (Pandara 2006) and child immunization (Osaki *et al.* 2009, 2013). Handbook use is also associated with greater knowledge of the risks of membrane rupture (Hagiwara *et al.* 2013), ANC information, proper nutrition during pregnancy and child health care (Baequni and Nakamura 2012). Our study corroborates these results, indicating the advantage of the MCH handbook over current card-type or prototype maternal and child records.

The effect of the intervention on knowledge items ranged from -5.1 to 19.7. This may have been because some information was conveyed only in words, whereas other information contained illustrations. The quality of the illustrations may have also influenced respondent attention to certain items. In particular, respondents who received the handbook were not significantly more cognizant of the risk of severe bleeding after birth. The local belief system might have influenced this result. In rural Cambodia, people traditionally believe that maternal bleeding is necessary after delivery. It is thought that if a woman does not sufficiently bleed, the stagnant blood in her uterus will cause illness. Even though severe bleeding is presented pictorially in the handbook as a risk during pregnancy and the postpartum period, the message might not be strong enough to alter public opinion.

The qualitative analysis demonstrated that the attractive appearance of the handbook appealed to mothers who otherwise would not have obtained ANC. Moreover, as respondents became familiar with the midwives during the ANC appointments, they were more likely to have an SBA-assisted delivery. Increased ANC attendance also provided more opportunities for health professionals to provide mothers with health education regarding the importance of delivery with SBAs.

These findings may have resulted from the dual effects of the handbook: the health education provided by health professionals using the handbook and the illustrations that enable the effective conveyance of information to all mothers, irrespective of literacy level. Written material that contains similar health-related information to that relayed in health facilities may facilitate the recollection and comprehension of such information in mothers (Murira *et al.* 1996). Corroboratively, previous studies showed that educational materials, such as booklets and pamphlets, considerably improved maternal knowledge and beliefs (McMaster *et al.* 1996; Brown and Smith 2004; Thompson and Harutyunyan 2009).

The qualitative results of the effectiveness of the MCH handbook were remarkably positive. Almost all of the mothers and health workers preferred the handbook to the current record, thereby indicating adequate acceptance (similar to other home-based or consumer-held health records) (Mahomed *et al.* 2000; De Clercq *et al.* 2003). Respondents reported that they preferred the handbook because of the attractive appearance, practical health content, convenience of combined records and long-lasting value as a source of health information.

In Cambodia, different organizations have developed a variety of health cards and records for MCH programs, aiming for a specific health intervention at a time. They included the Child Health Card (growth monitoring and immunization record), Mother Health Record (ANC and delivery record), tetanus toxoid immunization card, birth control pill booklet and others. Some are focused on maternity and others on children. Some were developed as a medical record for professional use, whereas others were for laypeople. Although simple cards seem to be inexpensive and easy to produce, this can cause an overlap of programs, and the aggregation of various card productions may result in high cost. They also create confusion and inconvenience to mothers. Because maternal records and child records are kept separately, there is a lack of continuum of care from perinatal to infant care.

The MCH handbook combines information about both mothers and children. It records information about pregnancy, delivery and the postpartum period for mothers. It also records growth monitoring, immunization and childhood illnesses until a child reaches the age of 5 years. Thus, it acts as a bridging tool between mothers and children as well as prenatal to postnatal care.

Qualitative study results showed that women noticed the value of the handbook and wanted to keep it longer as a reference for child rearing and their own health. Some mothers showed it to their husband or daughters to read the educational section. It is not only for mothers and children but also for their family. Therefore, mothers would like to have the handbook durable and covered.

This study revealed that the MCH handbook is potentially more effective than a prototypical home-based maternal record

in terms of health education material. The handbook is acceptable and feasible to implement and worth providing in developing countries.

There were several limitations to this study. First, reassessments could not be conducted on all mothers because of the low initial frequency of repeated ANC visits. Therefore, we evaluated the community rather than individual subjects. This led to a cross-sectional study and made it difficult to conclude the effect of the intervention at an individual level. However, as mentioned in the preceding text, the study revealed the effectiveness of the MCH handbook at a population level. When the proportion of mothers who attended ANC four times or more increased, individual-level evaluations with paired samples would be performed. In addition, the intervention was conducted 1½ years before the evaluation. This may not have been a sufficient period for the intervention to have a significant impact on the community as a whole. Finally, for the qualitative study, the answers of the participants might be biased in favour of the handbook because they had been informed of the usefulness of the handbook. However, the fact that some mothers living outside the intervention areas visited the intervention health centres and asked for the handbook showed the popularity of the handbook. At the request of both health professionals and mothers, we decided to introduce the handbook to the control areas after the study was completed.

Despite these limitations, efforts were made to maintain the quality of the quasi-experimental design throughout the intervention period. The results of both the quantitative and qualitative studies indicate that the MCH handbook may confer greater benefits than traditional home-based records.

Conclusions

We developed a Cambodian version of the MCH handbook and compared its effect with that of a prototypical home-based maternal record. Approximately 20 years have passed since the first home-based maternal record was introduced, so policy makers should consider more effective alternatives, such as the MCH handbook. Consistent and widespread dissemination of the MCH handbook may markedly improve maternal knowledge and behaviour and consequently promote safe delivery and child health in Cambodia.

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Ethical approval

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Session 3

Maternal and Child Health**

—Work together and learn together for maternal and child health handbook—

JMAJ 57(1): 1-4, 2014

Yasuhide NAKAMURA¹
(Takemi Fellow 1996-97)

It was quite a while ago that I studied in Boston as a Takemi Fellow, but the days I spent in the scholarship program still remain one of the most exciting and fruitful periods of my life. It was a year in which I encountered many different people, learned a lot, and came to realize many things that I hadn't noticed before. The participants of the program included a number of brilliant people from all over the world, who are now working in influential roles such as professors in Thailand, Korea, and Brazil. Through daily interactions with them, I found that they wanted to learn about Japan during the era when it was a developing country. They wanted me to share about the process of how Japan achieved a healthcare wonder. I didn't have the answers at that time, and through my discussions with these colleagues, I learned that Japan should be more aware of the value of its past achievements.

One thing that I came to appreciate in the course of these discussions was the magnificent decrease in Japan's infant mortality rate (Slide 1). Today, the world is striving to attain the UN Millennium Development Goal of reducing by two-thirds the child mortality rate over a 25-year period. Although countries are working towards this goal with the target year of 2015, many are frustrated by the slow progress. Japan reduced its infant mortality rate at twice that speed, cutting it down to one-sixth in 25 years, and this incredible achievement was based on the country's own initiative. At present, the average life expectancy at birth for females in Japan is 86.4



years, which is a surprisingly long life expectancy for anyone in the world. Everyone wants to know how this was achieved, and I feel that we need to understand and fully appreciate the value of this process.

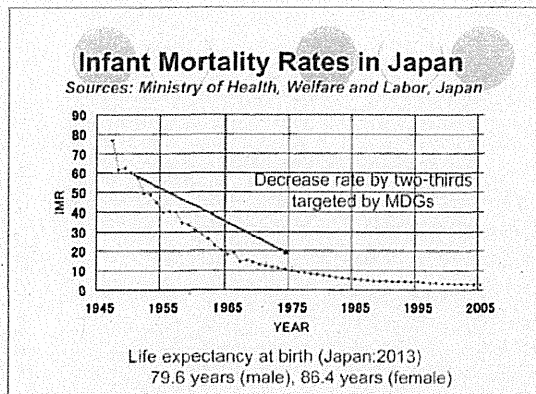
This slide shows a comparison of the infant mortality rates in Japan and the US (Slide 2). The infant mortality rate in Japan declined rapidly after the end of the chaotic period following World War II, falling below that of the US in 1964, which just so happened to be the year of the Tokyo Olympics. Japan was still a developing country then. Although Japan developed the bullet train, it had to take a loan from the World Bank to do so. Despite this dependence on international assistance, Japan recorded a mortality rate lower than that of the US. What enabled this achievement? Japan's health indicators went up before the country developed economically, and this fact aroused considerable interest among American researchers. I conducted joint research with the team of Professor Wallace, who is an expert in maternal and child health, at the University of San Diego, as well as Dr. Hirayama and his colleagues at the Japan Child and Family Research Institute. We arrived at five reasons for Japan's low infant mortality rate.

*1 This article is a revised transcription of the presentation of the author which was delivered at the Takemi Program 30th Anniversary Symposium at the JMA office Tokyo on November 23, 2013.

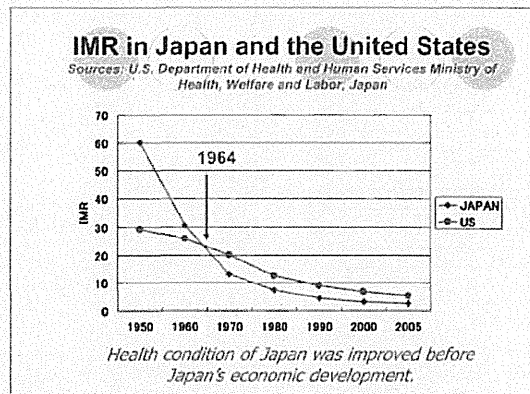
Due to space limitations, not all of the slides shown in the original presentation appear in this article.

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(Slide 1)



(Slide 2)



Among others, the second reason is universal health insurance coverage. The fourth reason is health checkups for expectant and nursing mothers and for babies and toddlers. The first reason is a narrow socio-economic gap. The fifth reason is the high social value placed on raising children. Because this study was conducted in the 1990s, there is some question as to whether these explanations still hold for Japan perfectly today. However, what we listed as the third reason—the maternal and child health handbook (MCH handbook)—was used then and is still used today.

The MCH handbook is a record of prenatal checkups, delivery, child development, and vaccinations. One feature of the handbook is that it treats maternal and child health as one. Another feature is that the parent keeps the handbook. Under the Maternal and Child Health Act, the handbook is provided for free to expectant mothers who submit a notice of pregnancy to the government. The handbook is divided into pages that are the same nationwide, as prescribed by the Ministry of Health, Labour and Welfare, and other pages.

Today, MCH handbooks are used in over 30 countries, but only in Japan the book was handed out to a pregnant woman upon submission of a notice of pregnancy to the government (Slide 3). This practice in Japan startles people in other countries, who would observe; “Do you really notify the government of such a private thing as pregnancy?” This has made me feel that the Japanese, who have continued to notify the government of pregnancies, have special attitude

(Slide 3)

History of MCH Handbook in Japan

- 1942 Handbook of Pregnant mothers
- 1947 Law of Child Welfare
- 1948 Mother and Child Handbook (Boshi-Techo) (20 pages)
- 1956 Law of Maternal and Child Health
- 1970 Maternal and Child Health (MCH) Handbook
- 1996 Upgrading of MCH Handbook (72 pages)

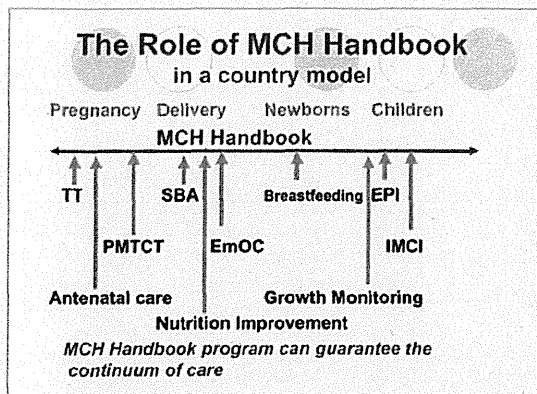
MCH Handbook in Japan (1948)
In the Possession of Dr. Goro KUROKI

Mother and Child Handbook in 1948

in this regard. MCH handbooks originated in Japan. Handbooks for expectant and nursing mothers were distributed with a food ration handbook during the war in 1942. Thereafter, Japan created the world's first MCH handbooks in 1948 in a way separately from but based on their predecessors. It was the first time in the world that a maternal handbook, pregnancy and delivery handbook, and child's handbook had been combined. Seventeen years later, “maternal and child handbooks” were legislated in Japan under the Maternal and Child Health Act. Later they were renamed “maternal and child health handbooks.”

Let us consider the role of this handbook from a global health standpoint. It is clear that the handbook is not merely a pocket notebook (Slide 4). OB/GYNs or midwives conduct pre-

(Slide 4)



(Slide 5)



natal checkups. After the delivery, the midwife or a public health nurse conducts a newborn visit to the family's home. Infant checkups and vaccinations are conducted at a health clinic. Throughout the process of pregnancy and delivery, many different specialists are involved at different locations and different times in a continuous flow of events leading to the birth of a child. The question of how to ensure continuity across these different medical services is a major issue not only in developing countries but also in developed countries. In this respect, Japan has used MCH handbooks for the past 60 years to ensure a continuum of care by enabling the entire train of medical events from pregnancy to be grasped.

Now, realizing the usefulness of this tool, different countries are starting to introduce MCH handbook initiatives. Already more than 30 countries have started initiatives and the International Conference on MCH handbooks was held in Nairobi in October 2012. Dr. Kiyoshi Kurokawa and Kenya's Minister of Health attended the conference. This slide shows the Kenyan MCH handbook. It was created by a Kenyan pediatrician who studied at Tokyo Women's Medical University and is very familiar with Japan's MCH handbook. That physician said that the MCH handbook is the best tool for providing a continuum of care for mothers and children in Kenya, including fighting AIDS. Three hundred people from 25 countries, including African countries that have developed or envisage introducing MCH handbooks, gathered together for discussion.

The various MCH handbooks that have been

developed in different countries are really interesting (Slide 5). They have been adopted not only in developing countries but also in developed countries. Utah in the US designed maternal and child handbooks as a keepsake to be passed on from mother to child. The person in charge of the program said that the state had copied Japan's MCH handbooks. Fathers appear on the covers of Indonesia's MCH handbooks.

In this context, an important element of any international cooperation is "Lessons Without Borders." When the Great East Japan Earthquake hit, Japan instantly turned from an assistance donor to an assistance recipient. In Sudan, which I visit often, high school students created a Great East Japan Earthquake Special Week, during which they made friends, raised money, and donated it to the embassy. They worked hard for a week to collect money for the people afflicted by the disaster. These efforts are really appreciated. I felt that in return, instead of interacting from the *donor-recipient* standpoint, we should develop relationships of mutual learning and cooperation among all the countries involved. The experience of developing countries regarding MCH handbooks has also been used for the improvement of Japan's MCH handbooks. Japan's Health Ministry conducted a study on MCH handbooks making use of a questionnaire developed in Indonesia. Color-printed pages were added for the first time to Japanese MCH handbooks with a revision in April 2012, following the examples of developing countries using color-printed handbooks. In response to the question from a developing country asking

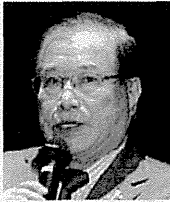
whom MCH handbooks belong to, Japan wrote in the handbooks for the first time, "It is meaningful for you as parents to give the handbook to your child when he or she becomes an adult." We have reached a time when we can learn from each other in this way.

For your information, the 9th International Conference on MCH handbooks will be held in 2014 in Cameroon, which was the first country in the world to make a bilingual MCH handbook in English and French.

What I learned through my efforts to spread MCH handbooks outside Japan are the problems in Japan. Dr. Miriam Were (past Dean of the Faculty of Medicine at the University of Nairobi and Director of the United Nations

Population Fund office in Ethiopia) has said that MCH handbooks are a miracle. We Japanese have come to take MCH handbooks for granted so much that we don't even realize what a blessing they are. People in Africa, on the other hand, say that Japan is a wonderful country because it has these amazing MCH handbooks. We need to take more notice of the high value of MCH handbooks. JMA physicians gathered here today should make an effort to improve MCH handbooks within our communities, adapting them to community circumstances and needs, for the benefit of the children who will take over Japan's future. That is what I learned in working with people from developing countries.

Comment



Shigehito ISHIGURO²

For us pediatricians, the maternal and child health handbook is an extremely important source of information for learning about the relationship between a mother and her child. They have been improved successively for ease of use, especially with the addition of information on management of the mother's body, check-ups after delivery, and vaccinations, as well as the revision after each amendment to vaccination and other programs. In the past, I was involved in revising the maternal and child health handbook. After hearing today's speech, I agree with Dr. Nakamura that a maternal and child health handbook should be considered a special gift that carries a message from the mother to her child. A mother can write down her worries, joys, expectations, and many other feelings when they occur while raising her child and, as Dr. Nakamura said, give it to the child. I would like people to know that this kind

of maternal and child health handbook, in addition to being a gift filled with parental love, contains extremely important information connected to health over an individual's entire lifespan, including school health, community health, and developmental health. I hope that maternal and child health handbooks will evolve so that the information in them may be used even after the child reaches adulthood.

There are eight United Nations Millennium Development Goals, the 4th and the 5th of which are related to maternal and child health. Goal number 4 is to reduce child mortality. Shortly after World War II, the infant mortality rate in Japan was 78 or 80 per 1,000 births, but today it is around 2.3 in Japan, which now has the lowest child mortality rate in the world. In the developing world, on the other hand, many countries are tracking numbers like those seen in Japan following the war at around 80, while there are some countries, especially in sub-Saharan Africa, with numbers as high as 157.

As for the 5th UN Millennium Development Goal—to improve maternal health—the developing world has the inconceivably high number of 480 delivery-related deaths per 100,000 pregnancies. Making use of maternal and child health

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handbooks in countries such as these would be very important.

In particular, three conditions are necessary to derive the full value of the handbooks. The first is to raise the national literacy rate, especially the literacy rate of women. The second is to improve knowledge of public health. Lastly,

the most important thing is to create countries where children can be born and raised with peace of mind—that is, create peaceful societies that are free of conflict. This is the most important thing for a country that uses maternal and child health handbooks.



LETTER TO THE EDITOR

Global Health Action: surviving infancy and taking first steps – the window is open, new challenges for existing niche may enlighten global health

With reference to the editorial '*Global Health Action*: surviving infancy and taking first steps', we commend the success of the innovations in this newly established open-access global health journal, which sets a challenge to the world of scholars who deal with global health as an academic topic (1). The strategies of publishing Capacity Building and Study Design papers, as well as PhD Reviews, and providing mentorship have, in our opinion, not only filled the niches but have also bridged the 10/90 gap in health research that exists in global health (2, 3).

We welcome the Capacity Building article approach, as many overseas development assistance projects emphasize the importance of the process rather than the outcome, in order to ensure sustainability. Much time is required to foster mutual trust, achieve consensus, and plan a viable program in partner countries. Important lessons are learned throughout this process, and we strongly believe that sharing such lessons will help ensure the sustainability of both policy dialogs and the development which the project has nurtured (4). However, scientific journals on global health, other than *Global Health Action*, stress on a results-based approach and provide no opportunity to include these important lessons. We also expect the Study Design articles and PhD Reviews to provide a rich reservoir of ideas and advice and, as such, to provide a valuable knowledge base. In Japan, some of the young researchers coming from low- and middle-income countries are bureaucrats with access to national data, and their work has the potential to yield high-quality research evidence. They can certainly benefit from the mentorship provided by *Global Health Action*.

Finally, we support *Global Health Action's* concept of publishing article translations as supplementary online material, as this provides an avenue for getting research in other languages into the published literature. For example, in Japan, we have valuable experience in research and discussion on global health topics; unfortunately, such experience is documented in the Japanese language, making it impossible to share our discussion globally. This is no doubt the situation with other languages. Thus, we propose that *Global Health Action* should invite editors familiar with languages other than English. The invited editors could have three roles: 1) Organize special supplementary issues that deal with hot topics discussed in their respective countries. The editors could invite the contributions of several authors from these countries, write

editorials that reference articles in other languages, and perform the role of contributing editor (as is already done in *Global Health Action*) (5). 2) Introduce a curated selection of English abstracts of articles on themes that may attract international readers. 3) Check for plagiarism in the original-language article. We expect that editors who perform the aforementioned functions would make *Global Health Action* a very global journal.

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南スーダンにおける紛争後の初等教育と 学校運営の実態

—教授言語の変更に着目して—

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はじめに

南スーダン共和国(以下、南スーダン)は、2011年7月にスーダン共和国の南部10州が分離独立した世界で最も新しい国家である。国土は長期間にわたり紛争下にあり、22年にわたる第二次内戦(1983年~2005年)では、250万人が死亡、数百万人の難民・国内避難民を生み出している⁽¹⁾。同国の人口が1千万人程度であることを考えると、この内戦がいかに多くの命と人びとの日常生活を奪ったかがわかる。純就学率(2012年)は、初等教育42.1%、中等教育2.5%であり、教育の普及は極めて限定的である⁽²⁾。南スーダンの人びとは日々生存を脅かされ、教育を受ける権利からこれほど遠ざけられた国民は他にない⁽³⁾。

この第二次内戦は、北部のアラブ系住民を中心とした政府に対する南部の非アラブ系黒人の戦闘という側面があった。政府系学校の教授言語はアラビア語であったが、反政府組織であるスーダン人民解放軍(Sudan People's Liberation Army: SPLA)の支配地域では、英語による学校教育が行われていた。したがって、独立により公用語および教授言語がアラビア語から英語へ変更されたのは、SPLAを母体とする新政権にとっては当然のことでもある。しかし、公用語等が変わることは、人びとの生活、特に学校教育、なかでも教員に大きな影響を与えている。

このような厳しい南スーダンの状況に対し、国際社会からの支援は潤沢に行われている。それだけに、同国に関する教育情報の多くは、援助機関やその関係者が作成した報告書に依拠しており、マクロなデータを中心とした表面的な

分析と援助を前提とした課題の抽出に終わっている⁽⁴⁾。いまだ武力衝突の頻発する治安状況の悪い同国においては、学校を基点とした学術的な事例研究はほとんど行われていない。教育統計については、近年、情報量豊富なデータベースも構築されている。しかし、このような数値からは肝心の学校運営の実態はわからない。

本研究の目的は、南スーダンの初等教育の実態について、教員や生徒、保護者の視点から、特に公用語、教授言語の変更が学校運営や人びとの教育に対する行動にどのような影響を与えているかを明らかにすることである。本稿では、まず教育統計を慎重に検討しながら国全体の状況を把握し(第1節)、教育法規および政策等を整理した後(第2節)、調査の対象と方法を提示し(第3節)、小学校における調査結果にもとづき、教授言語変更の影響を中心として考察する(第4節)。

1. 南スーダンの国情と初等教育

(1) 国の概要

南スーダンは、国境を7か国と接している。国土の南北を白ナイル川が流れ、首都のジュバ(人口27万人)から北部には、大湿地帯が広がる。国土面積64万平方キロメートル、人口1,084万人(2012年)、1人当たり国民総所得(GNI)790ドル(同年)である⁽⁵⁾。陸路での移動は元来困難であったが、内戦の影響で道路や橋の整備はほとんど行われていない。2013年12月に勃発した武力紛争は、2005年の南北包括和平合意(Comprehensive Peace Agreement: CPA)後の平和構築と戦後復興の努力を無駄にしてしまう可能性すらある⁽⁶⁾。この紛争地では1,200校が閉鎖され、9,000人が少年兵として利用されていると推定されている⁽⁷⁾。

これらの数値および社会基盤の状況は、まさにこの国の特徴を表しており、教育の普及を困難としている一因もここにある。まず、人口密度が周辺国と比べると圧倒的に低い⁽⁸⁾。国民の大半は農村部で生活し、遊牧牧畜、農業などの生業に従事している。一方で、豊富な石油資源により1人当たりGNIは低くないが、この利権をめぐる争いが第二次内戦の一因でもあり、国民の教育や医療などの社会サービスに活用されていない。国家予算としては、歳入の98%を