

## REVIEW

# Prospects for maternal and child health in Japan

Hisayoshi Morioka<sup>1</sup>, Hiroyoshi Watanabe<sup>2</sup>, Hajime Iwasa<sup>3</sup>, Shoji Kagami<sup>2</sup>, and Minoru Irahara<sup>3</sup>

<sup>1</sup>Department of Public Health, Graduate School of Biomedical Sciences, Tokushima University, Tokushima, Japan, <sup>2</sup>Department of Pediatrics, Graduate School of Biomedical Sciences, Tokushima University, Tokushima, Japan, <sup>3</sup>Department of Obstetrics and Gynecology, Graduate School of Biomedical Sciences, Tokushima University, Tokushima, Japan

**Abstract :** In Japan, outcome measures for maternal and child health measures such as maternal, perinatal, and infant mortality have consistently shown a trend toward improvement. On the other hand, the problems of the declining birth rate, child abuse, and domestic violence have become evident since the 1990s. In terms of Japan's maternal and child health, it is necessary to take measures to preserve mental health of mothers and children, and also to respond to family issues such as abuse and violence. The services needed such as comprehensive support centers for families with children and new postpartum care programs have been established. It is necessary to further improve the competence of doctors, public health nurses, and midwives working in the maternal and child health field and to promptly construct a cooperation system in the community. *J. Med. Invest.* 69:159-164, August, 2022

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## INTRODUCTION

In Japan, the annual number of births recorded in 1949 were 2,696,638, followed by a decreasing trend, resulting in 865,239 in 2019 (1) (Figure 1). The total fertility rate, which is the sum of the age-specific fertility rates (female, 15-49 years old), was 4.54 in 1947, but 1.36 in 2019, which is one of the lowest developed countries (1, 2) (Figure 1 and 2). In Japan, the number of children, mothers, and pregnant women eligible for maternal and child health coverage continues to decline.

On the other hand, Barker *et al.* reported in their epidemiological study that poor fetal growth was associated with lifestyle diseases, such as type II diabetes and coronary artery disease (3, 4). Subsequently, the concept of the developmental origins of adult health and disease (DOHAD), according to which the environmental factors to which individuals are exposed from fetal stage to childhood determine the development of diseases in adulthood, was proposed (5). In Japan, a large-scale cohort study that involved 100,000 parents and children was launched in 2011 (6). Furthermore, the need for health measures to nurture the health of future generations has also been recognized due to the high percentage of low-birthweight babies in Japan, among OECD countries (7, 8).

In this context, the Basic Act on Child and Maternal Health and Child Development was established in 2018 to facilitate collaboration between health care, welfare, and educational associations related to children (9). In 2016 and 2019, the Maternal and Child Health Act was revised, and comprehensive support centers for families with children were established in various parts of the country (10). Additionally, a new postpartum care program will be launched in various parts of the country (11).

In recent years, efforts related to maternal and child health in Japan have changed significantly. This article reviews these

efforts in Japan to date and describes the direction of maternal and child health responses based on the current environment surrounding mothers and children.

## HISTORY

We will introduce the main efforts of the maternal and child health administration in Japan beginning with the enactment of the Midwifery Rules in 1899 and the establishment of Midwife Qualifications (Table 1). The Public Health Center Act was enacted in 1937, and public health centers became responsible for measures to protect the health of mothers and children. In 1942, during World War II, a maternal health handbook (the present maternal and child health handbook) was issued that included records of rationed goods. Against the backdrop of a surge in orphans and babies after World War II, the Child Welfare Act was enacted in 1947 and the Eugenic Protection Act in 1948. The Child Welfare Act stipulates child welfare, such as childcare and midwifery, and the Eugenic Protection Act stipulates abortion and dominant surgery (sterilization). Subsequently, health checkups for pregnant women and preschool-aged children were carried out in the municipalities, and maternal and child health centers were set up in the municipalities. In 1965, the Maternal and Child Health Act regulating these maternal and child health services was enacted. As such, Japanese maternal and child health has been practiced for many years based on the Maternal and Child Health Act.

On the other hand, the problems of the declining birth rate, child abuse, and domestic violence have become evident since the 1990s. In 2000, the Act on the Prevention of Child Abuse was enacted, and it was legally prohibited for parents to use violence against their children for discipline, etc. In addition, the Japanese government has decided to implement birthrate decline measures such as ensuring childcare on multiple occasions. In "Healthy Parents and Children 21," which was formulated in 2000, not only included maternal and child health but cooperation with birthrate decline measures and child welfare were also promoted.

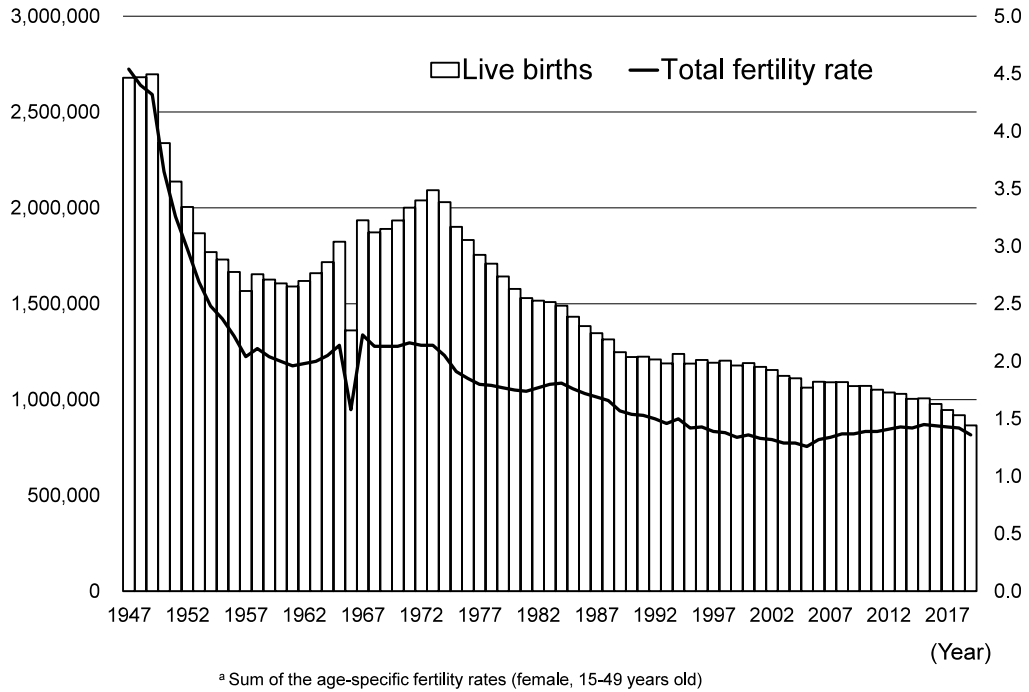
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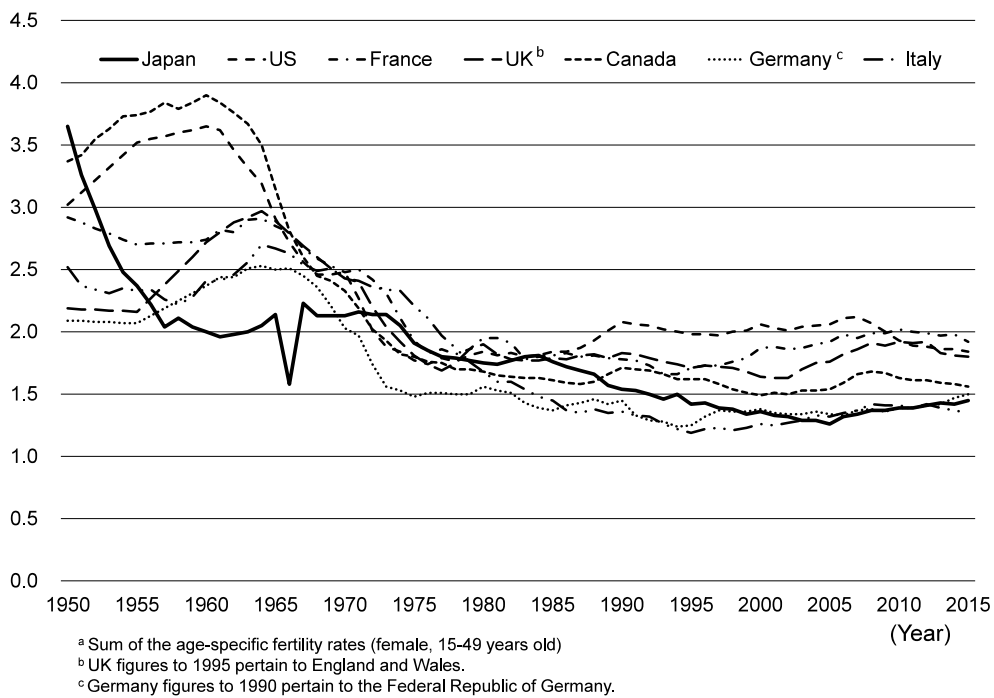
Address correspondence and reprint requests to Hisayoshi Morioka, Department of Public Health, Graduate School of Biomedical Sciences, Tokushima University, 3-18-15 Kuramoto-Cho, Tokushima 770-8503, Japan and Fax : +81-88-633-7453. E-mail : hisayoshi.morioka@tokushima-u.ac.jp

consistently shown a trend toward improvement (1) (Table 2). Regarding the maternal death rate, we believe that the change in the place of delivery from home to a health facility and the es-

tablishment of perinatal medical centers with neonatal intensive care units have had a significant effect on the perinatal and infant death rates.



**Fig 1.** Trends of live births and total fertility rate<sup>a</sup> in Japan after World War II (Data from vitalstatistics in Japan)



**Fig 2.** Trends of total fertility rates<sup>a</sup> in G7 countries after World War II (Data from vitalstatistics [Japan], demographic yearbook [UN], national vital statistics report [US], Eurostat population and social conditions, and statistics [Canada])

Table 1. Maternal and child health history timeline in Japan

Start year	Act and services on maternal and child health in Japan
1899	Midwifery rules
1937	Public Health Center act
1942	Maternal health handbook
1947	Child Welfare Act
1948	Health checkups for pregnant women and preschool children
1948	Eugenic Protection Act
1958	Medical aid program for premature babies
1965	Maternal and Child Health Act
1977	Newborn mass screening for congenital metabolic disorders
1994	“Angel Plan”(Birthrate decline measures of Japanese government)
1996	Maternal Health Act
2001	Act on the Prevention of Child Abuse
2001	Healthy parents and children 21
2003	Basic act for measures to cope with society with declining birthrate
2015	Healthy parents and children 21(2nd)
2016	Comprehensive Support Centers for Families with Children
2018	Basic act on Child and maternal health and child development
2019	New postpartum care program

Table 2. Maternal and child health statistics of Japan after World war II (Data from vital statistics in Japan)

Year	Maternal deaths		Perinatal deaths <sup>a</sup>		Infant deaths	
	n	Rate <sup>b</sup>	n	Rate <sup>c</sup>	n	Rate <sup>d</sup>
1950	4,117	161.2	n/a	n/a	140,515	60.1
1955	3,095	161.7	n/a	n/a	38,646	39.8
1960	2,097	117.5	n/a	n/a	27,362	30.7
1965	1,597	80.4	n/a	n/a	21,260	18.5
1970	1,008	48.7	n/a	n/a	16,742	13.1
1975	546	27.3	n/a	n/a	12,912	10.0
1980	323	19.5	32,422	20.2	7,796	7.5
1985	226	15.1	22,379	15.4	4,910	5.5
1990	105	8.2	13,704	11.1	3,179	4.6
1995	85	6.9	8,412	7.0	2,615	4.3
2000	78	5.8	6,881	5.8	2,106	3.2
2005	62	5.7	5,149	4.8	2,958	2.8
2010	45	4.1	4,515	4.2	2,450	2.3
2015	39	3.8	3,729	3.7	1,916	1.9

n/a, not available

<sup>a</sup> Sum of foetal deaths after 22 weeks of pregnancy and early neonatal deaths

<sup>b</sup> Per 100,000 total births

<sup>c</sup> Per 1,000 total births

<sup>d</sup> Per 1,000 live births

## CURRENT STATUS AND PROBLEMS

Recently, annual maternal, perinatal, and infant deaths in Japan have fallen below 50, 4,000, and 2,000, respectively (1) (Table 2). Both the maternal death rate and perinatal death rate are at the lowest level worldwide (12, 13) (Figure 3). If the mortality rate alone is evaluated, it is considered that the targets of the measures for maternal and child health in Japan have almost been achieved.

On the other hand, the problems of the declining birth rate, child abuse, and domestic violence that have emerged since the 1990s have not improved. In 1990, the number of live births was 1,221,585, and to date, the annual number of live births has decreased by more than 0.3 million (1). In addition, a survey conducted by the Japanese government revealed that more than 70% of people feel burdened and anxious about raising children (14) (Figure 4). Furthermore, the number of child consultation offices receiving child abuse consultations and providing guidance on aid policies continues to increase on a yearly basis (15) (Figure 5).

Taken together, in terms of Japan's maternal and child health, it is necessary to take measures to preserve mental health in addition to the physical aspects of the mother and child and also to respond to family issues such as abuse and violence. To do so, it is essential not only to provide maternal and child health support, but also to collaborate with non-governmental parenting support organizations such as child welfare, education organizations, and Nonprofit organizations. In addition to the services lacking in protecting maternal and child health under the Maternal and Child Health Act, it is also necessary to add functions that facilitate coordination.

In 2016, the Maternal and Child Health Act was amended to include provisions on comprehensive support centers for families with children (10) (Table 1). Public health nurses at the centers set up in the municipalities assess the condition of pregnant women and coordinate the necessary child-rearing support

services. In addition, an amendment to the Maternal and Child Health Act in 2019 added provisions for the operation of postpartum care programs (Table 1). More specifically, postpartum mothers are provided with mental health-centered checkups twice, and a postpartum care program is provided to mothers in need (Figure 6). The postpartum care program includes short-term admission to a hospital or midwifery center, care for a user who has daytime visits, and visits by the person in charge person to the user's home. The Japanese government is calling for all municipalities to provide the program by fiscal year 2024 (11). In addition to these, standardization of data on maternal and child health services is required, such as the results of medical examinations for pregnant women and infants, and to transfer data between municipalities using the "my number" system (16).

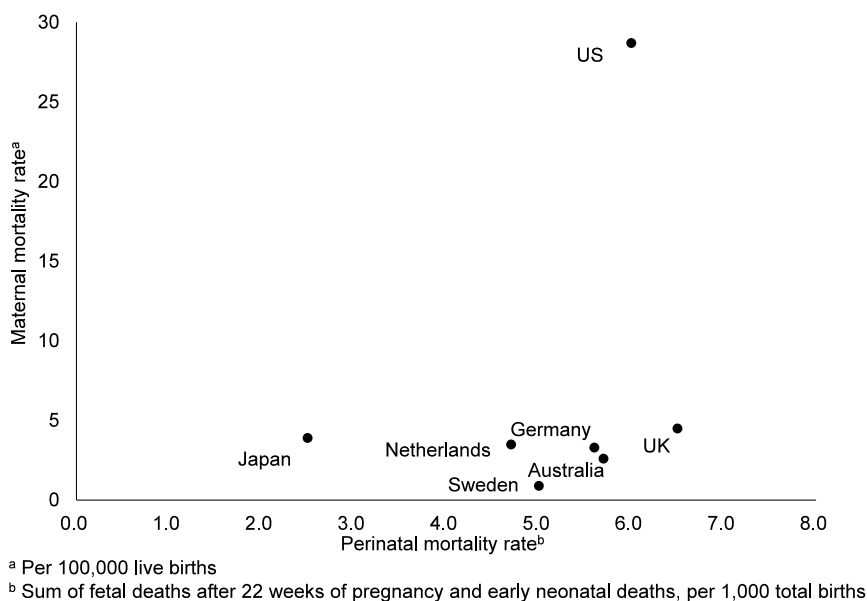
## PROSPECTS

In Japan, the economy continues to grow slowly against the background of a declining birthrate and an aging population, and there is a need for further improvement of the environment to facilitate the birth and upbringing of children. Under these circumstances, efforts related to maternal and child health are becoming more important and more difficult.

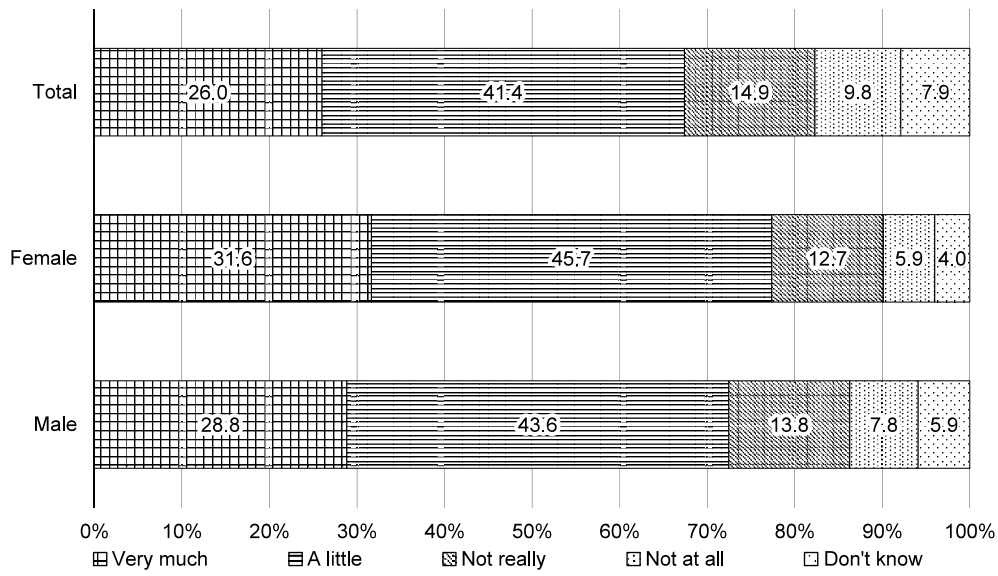
Legislation to support future maternal and child health has been put in place, and the services needed have been rapidly established. It is necessary to further improve the competence of doctors, public health nurses, and midwives working in the maternal and child health field and to promptly construct a co-operation system in the community.

## CONFLICT OF INTEREST

All authors declare no conflicts of interests.



**Fig 3.** Maternal mortality rate and Perinatal mortality rate, 2015 (Data from vitalstatistics [Japan], demographic yearbook [UN])



\* The figures are people who have children aged 0-15.

Fig 4. Proportion of people who feel burdened and insecure regarding child rearing in Japan (Data from "Awareness Survey for a Society with Declining Population" by Japanese government in 2015)

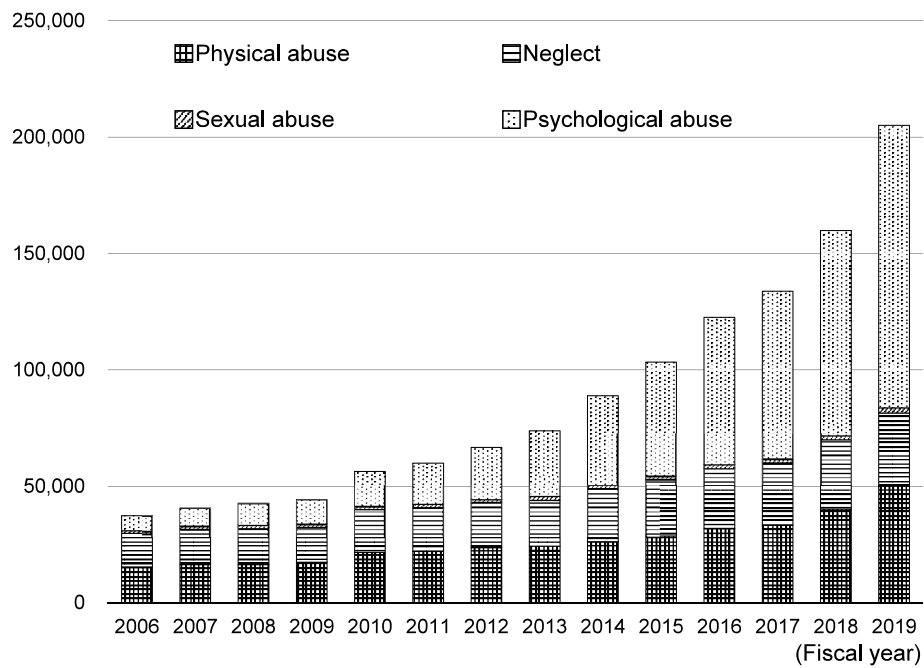


Fig 5. Number of cases handled by child consultation offices in Japan (Data from report on Japanese social welfare administration and services)

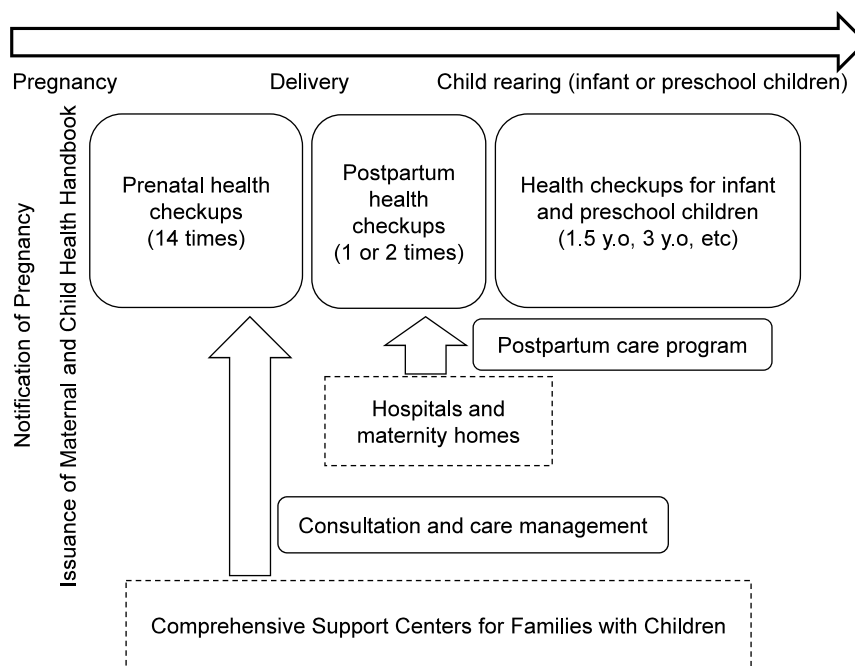


Fig 6. Seamless maternal and child health support from pregnancy to child-rearing period

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