



Postpartum Health Development: A Comparative Study of China and Singapore

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Abstract. This study compares postpartum health development in China and Singapore, using mixed methods to analyse government reports and health data. It highlights China's progress in reducing maternal mortality and Singapore's comprehensive healthcare system with a focus on mental health. Both countries integrate traditional practices into modern care. Economic factors significantly impact care quality and accessibility, with Singapore's higher GDP allowing for better-specialised services. China faces urban-rural disparities, while Singapore struggles with high private care costs. The research emphasizes culturally sensitive policies and the potential of combining traditional and modern approaches. It suggests exploring digital technology and climate change impacts in future studies.

Keywords: Postpartum health, Maternal care, China-Singapore comparison, Healthcare policy, Cultural practices, Economic factors, Urban-rural disparities, Mental health support, Healthcare systems, Policy development, Mixed-methods research.

1 Introduction

1.1 Background on Postpartum Health Importance

Women's health and social justice are closely intertwined, encompassing issues like healthcare access, reproductive rights, gender-based violence, economic equality, education, mental health destigmatization, cultural practices, occupational safety, and women's roles in healthcare [1]. Despite progress, maternal mortality remains a global concern. In 2020, the WHO reported 287,000 maternal deaths worldwide [2], with a global rate of 223 per 100,000 live births [3]. China and Singapore showed significant differences, reporting 16.9 and 7 deaths per 100,000 live births, respectively [4]. Postpartum depression affects 17.22% of the global population. In developing countries [5], maternal mental disorders during pregnancy and postpartum are prevalent at 15.6% and 19.8%, respectively [6]. China reports a higher rate of depression among pregnant women (43%) compared to Singapore, where the lifetime prevalence of major depression and anxiety among women of childbearing age ranges from 7.7% to 9.2% [7].

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Postpartum health, crucial for maternal and infant well-being, involves managing physical and emotional changes after childbirth. Proper care includes physical recovery, emotional support, infant care education, and screening for postpartum complications. The disparity in postpartum healthcare between China and Singapore highlights the need for improved global maternal health strategies, addressing both physical and mental health aspects.

1.2 Brief Overview of the Reason to Choose Singapore to Compare with China and Clarify China and Singapore's Healthcare System

This study compares postpartum health policies and practices in China and Singapore, chosen for their shared Chinese cultural traditions and differing economic development levels, healthcare systems, and population sizes. The research aims to: 1) Fill a gap in East Asian comparative studies. 2) Assess policy impacts using mixed methods. 3) Explore integration of modern medicine with cultural practices. Both countries practice "zuo yue zi" (postpartum confinement) but have different healthcare outcomes. In 2020, China's maternal mortality ratio was 16.9 per 100,000 live births, while Singapore's was 7 [7]. Despite population size differences, both face low fertility rates: China at 1.3 [8] and Singapore at 1.22 [9] in 2020.

This comparison offers insights into diverse approaches to postpartum health, considering cultural similarities and developmental differences. The study aims to provide evidence-based policy recommendations to improve maternal and child well-being, serving as a model for other multicultural nations balancing traditional practices with modern healthcare. Singapore's healthcare system ranks highly globally, providing a benchmark for China's reforms. This comparison reveals how cultural norms, economic progress, and healthcare systems impact postpartum care, potentially influencing policies in both countries and similar contexts worldwide.

1.3 Thesis Statement

In recent years, postpartum health research has made remarkable progress globally, and the relevant literature can be roughly divided into the following aspects:

1) Policy Research: This comparative study of postnatal care policies reveals that Nordic countries, Germany, Canada, and the UK offer the most generous maternity leave benefits globally. China's postnatal care has evolved through four stages since 1949, progressing from basic maternity services to a more comprehensive system. However, addressing the rural-urban gap remains a significant challenge [10].

2) Cultural influence: Cultural practices like 'zuo yue zi' in Singapore demonstrate how traditional customs can complement modern medical interventions to improve postpartum health [11]. In contrast, rural China faces challenges due to limited attention to postnatal health care and lack of maternal health knowledge. The study aims to explore the impact of cultural beliefs on postnatal care development in rural China [12].

3) Economic condition: After analysing the relationship between the quality of postpartum care and the level of national economic development, it has been determined that there is a positive correlation between GDP and the postpartum health index [13].

This paper uses policy research literature to examine postpartum health development in China and Singapore through qualitative and quantitative methods. It aims to compare both systems to identify mutual improvements and lessons China can learn from Singapore's policies.

2 Methodology

This research uses a mixed methods approach to thoroughly examine postpartum health development in China and Singapore. By integrating qualitative and quantitative data, it aims to provide a comprehensive view of postpartum care, identify best practices, and offer evidence-based policy recommendations and potential knowledge transfer between the two countries.

2.1 Qualitative

China's Government Reports [14]. The data for quantitative analysis were obtained from the Report on the development of maternal and child health in China (2019). The samples were selected based on the disease screening rate of women from 2009 to 2018, the prenatal examination rate from 1996 to 2018, and the neonatal mortality rate from 2003 to 2014. The data support provided by observation reports can strongly prove the feasibility and accuracy of the policy.

(1) Comprehensive protection of women's health.

Efforts to enhance disease screening have steadily increased the rate among women to 75.5% in 2018. We aim to improve women's awareness of disease prevention and treatment, encourage self-care, and emphasize personal responsibility for well-being. Our historical analysis has enabled us to provide targeted treatments, reducing conditions like uterine prolapse and urinary fistula. In rural China, cervical and breast cancer screening programs have expanded significantly from 200 to over 1,700 regions between 2009 and 2018, reaching about 85 million women for cervical cancer and 20 million for breast cancer.

(2) Pre-pregnancy counselling on maternal mental health and treatment effects.

Women and adolescents with severe depression or anxiety who might become pregnant should receive personalized information on how their mental health and treatment could affect them and their baby. This guidance helps in making informed family planning decisions and preparations before conception. Nationwide prenatal check-up rates rose from 83.7% in 1996 to 96.6% in 2018, with rural areas improving from 80.6% to 95.8%.

(3) Improve the management of children's health.

We will enhance treatment for critically ill newborns by ensuring close collaboration among in-hospital pediatricians before, during, and after delivery, with a trained neonatal resuscitation professional present at each delivery site. We will manage premature infants, promote kangaroo care, and improve their quality of life with early health care and resuscitation technologies. From 2003 to 2014, infant asphyxia mortality rates decreased significantly—by 75.1% at birth, 81.3% within 24 hours, and 76.9% within

seven days—due to improved neonatal care, including better feeding practices, nursing, disease prevention, and early treatment.

Singapore's Government Reports [7]. The quantitative analysis used data from the Consensus Statement on Singapore perinatal mental health guidelines on depression and anxiety - Annals Singapore, and the sample was selected specifically for the prevalence of postnatal depression, drug use among pregnant women, and the importance of pre-pregnancy mental health. By looking at the data, Singapore made its policy, to better protect women's health.

1) Improving Mental Health Before Conception

Recent mental health surveys in Singapore indicate that 7.7% to 9.2% of women of childbearing age may experience major depression, and 1.9% to 2.2% have generalized anxiety disorder. Around 7% to 9% will face antenatal depression, rising to about 18% among those with high-risk pregnancies. Recommendations include a healthy diet, maintaining a healthy weight, avoiding smoking and alcohol, taking folic acid, and engaging in physical activity and mindfulness to alleviate symptoms and improve overall well-being.

2) Reconsidering Medication Use in Reproductive Planning

When considering medications for long-term mood disorders in women or adolescent girls who might become pregnant, the focus must be on the safety of the chosen psychotropic or mood-stabilizing drugs. As maternal mental health tends to stabilize throughout the period from preconception to pregnancy, establishing the minimum necessary dose of psychotropic medications for maintaining well-being during conception is advisable.

3) A Multi-faceted Approach to Preconception Mental Health

To foster optimal preconception mental health, a comprehensive strategy that incorporates psychological therapies and addresses social stress factors is highly recommended. This approach aims to control and manage pre-existing depression or anxiety disorders effectively, potentially minimizing the required antidepressant usage. Discernment regarding the cessation of medications should take place during initial prenatal care discussions. Moreover, prioritizing the resolution of any couple's disputes is critical, as a harmonious relationship plays a significant role in mitigating the risk of perinatal depression.

2.2 Quantitative

Using SPSS for descriptive statistics, SPSS was chosen for its powerful statistical capabilities and wide academic recognition.

I created a table of postpartum needs by surveying 2,000 women who used the Chinese Postpartum Rehabilitation and Recovery Center - Fanns. The data, organized using SPSS, highlights key aspects of postpartum recovery and physical demands, providing clear insights into their pain points.

Table 1. The physical needs of pregnant women.

Category	Percentage (of 2000 people)
Physical recovery (e.g., elimination of oedema)	43.29%
Body shaping (e.g., weight loss)	11.70%
Skincare (e.g., brightening and anti-ageing)	2.47%
Reproductive care (e.g., private parts care)	2.75%
Special care room - maternal and child health care	39.80%

As shown in Table 1, data on the Postpartum rehabilitation needs of pregnant women in China. The section shows that Chinese women are most concerned with physical recovery (43.29%) and specialized maternal and child health care (39.80%) during the postpartum period. Body shaping is a distant third priority at 11.70%, while skincare and reproductive care are less emphasized.

Figure 1. China’s maternal mortality rate, 2010-2020 [15].

I searched the table of maternal mortality in China from 2010 to 2020 through the information disclosure of the National Bureau of Statistics. It can be clearly seen that under the gradual development of policies, the renewal of medical equipment, and the country's attention to maternal mortality, the mortality rate has been reduced year by year.

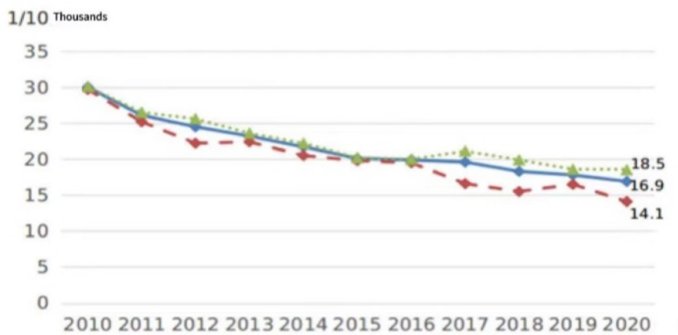


Fig. 1. 2010-2020 National maternal mortality rate

Figure 1 shows that, in 2020, China's maternal mortality rate will be 16.9 per 100,000, 43.7% lower than in 2010, and the indicator level is among the highest in the world's middle and high-income countries. The maternal mortality rate in urban and rural areas was 14.1 per 100,000 and 18.5 per 100,000, respectively, down 52.5 per cent and 38.5 per cent from 2010.

3 Postpartum Health Development in China

3.1 Current Policies

The National Health and Health Commission's Circular on the Maternal and Infant Safety Action Enhancement Plan (2021–2025) mandates national implementation starting in 2021 to boost maternal and child health services, enhance safety, ensure optimal birth policies, and protect women's and children's health rights. The plan includes: 1) Implementing pregnancy risk assessments in line with the "Norms for the Assessment and Management of Pregnancy Risks," standardizing screening, and improving dynamic assessment and postpartum evaluation. 2) Enhancing medical coordination with specialized departments managing obstetric safety, improving consultation and referral systems, establishing cooperation for critically ill cases, forming multidisciplinary treatment teams, and involving neonatologists in delivery room care. Effective communication with patients' families during critical care will be ensured by assigning an obstetrician to handle interactions. 3) Strengthening key specialities involves piloting collaborative diagnosis and treatment programs across multiple disciplines related to pregnancy and childbirth and establishing obstetrics sub-specialities. These efforts aim to improve obstetric diagnostic capabilities and foster collaboration among maternal and child specialists at various administrative levels. 4) Optimizing medical resource allocation includes evaluating institutional capacities, assessing healthcare needs, adhering to bed and resource allocation standards, ensuring adequate staffing and facilities, and matching resources with service volume. As of 2023, the national maternal mortality rate is 15.1 per 100,000 live births, and the infant mortality rate is 4.5 per 1,000 live births [16].

3.2 Challenges

The National Health Insurance Bureau reports that the conditions are not yet favorable for the inclusion of services like pelvic floor muscle repair in health insurance payments. China's health insurance financing level and affordability are still very low, with the per capita financing level for urban and rural residents' health insurance in 2022 being only 960 yuan [17]. To effectively tackle the issue of insufficient coverage for pelvic floor muscle therapy in China's medical insurance system, a comprehensive approach is necessary. It is important to note that the average cost of health insurance falls short of covering these essential treatments. Therefore, various strategies can be implemented to expand coverage while ensuring financial sustainability. These strategies may include the introduction of tiered insurance plans with higher premiums to provide more extensive coverage, establishing partnerships between public and private sectors to offer supplementary coverage, and launching awareness campaigns aimed at educating the public about the importance of pelvic floor health. Managing the financial impact can be achieved through a gradual integration approach that initially focuses on basic treatment and gradually expands over time. Additionally, valuable insights and financial flexibility can be gained by introducing flexible spending accounts with tax benefits and collaborating with countries that have successfully implemented similar

coverage systems. By striking a balance between improving women's healthcare and considering China's healthcare system's economic realities, these recommendations aim to enable more comprehensive and accessible pelvic floor treatment within the framework of medical insurance.

China's population will start to grow negatively in 2022, with the total fertility rate falling below 1.1, the lowest in the world [17].

4 Postpartum Health Development in Singapore

4.1 Current Policies

Singapore offers extensive postpartum support through various channels including healthcare services, community programs, and family assistance. This approach ensures the physical and mental well-being of new mothers. Typically, new mothers have a six-week check-up with their OBGYN to monitor recovery and may be screened for postpartum depression. Additional services include breastfeeding consultations, often provided by lactation consultants who can also visit homes, and pelvic floor therapy to address any issues like incontinence and aid recovery. Mental health counseling can help new mothers dealing with emotional issues or postpartum depression. Singapore offers community programs like the New Mothers Group and Breastfeeding Mothers' Support Group, which provide events and workshops for new mothers. Family support is also crucial; partners and family members can assist with childcare, meals, and household chores, and help monitor for signs of postpartum depression [18].

4.2 Strengths of the System

(1) An extensive and easily accessible healthcare system. (2) A strong emphasis on mental health in the care of new mothers. (3) Carefully supervised and superior involuntary nanny services.

5 Comparative

5.1 Similarities and Differences

Similarities. Both nations have sizable Chinese populations, and they both adhere to some of the same customs related to childbirth, such "zuo yue zi" (the confinement period). Both countries incorporate traditional practices into modern postpartum care. Both have national-level policies addressing postpartum health.

Differences.

1) Economic

China: An economy that is expanding quickly and moving from middle-class to affluent status.

- GDP per capita (2021): \$12,617.5USD [19]
- Healthcare expenditure as % of GDP (2021): 5.38% [19]

Singapore: A highly prosperous and sophisticated economy.

- GDP per capita (2021): \$79,601.4USD [19]
- Healthcare expenditure as % of GDP (2021): 5.57% [19]

Underlying cause: The discrepancy in economic development between China and Singapore directly influences the quality and accessibility of postpartum care. Singapore's higher GDP per capita enables greater investment in specialized care facilities and services.

2) Healthcare system

China: Pursuing universal health care through a combination of public and private providers.

- Hospital beds per 1,000 people (2017): 4.3 [19]

Singapore: Renowned for having an innovative finance model and an effective healthcare system (3M: Medisave, MediShield, Medi fund).

- Hospital beds per 1,000 people (2017): 2.5 [19]

Underlying cause: Singapore's 3M system fosters a culture of individual accountability for healthcare expenses, resulting in heightened engagement in preventive care and postpartum services. Conversely, China's system, despite its pursuit of universal coverage, may encounter challenges in delivering specialized services uniformly across its extensive population.

3) Urbanization and population distribution

China: 1.4 billion people live there and are governed centrally.

- Population density (2020): 150 people per km^2 [19]
- Maternal mortality (2020): 2,800 [19]

Singapore: 5.7 million people live there, and the government is centralized and quite effective.

- Population density (2020): 7,919 people per km^2 [19]
- Maternal mortality (2020): 3 [19]

Underlying cause: China's significant rural population faces challenges in accessing high-quality postpartum care, while Singapore's highly urbanized population benefits from more uniformly distributed healthcare services.

6 Recommendations

6.1 Analysis of Findings in Relation to Existing Literature

Singapore's comprehensive postnatal care policies, such as six weeks of paid maternity leave and a home visit program [7], have significantly reduced maternal mortality and postnatal depression. This is consistent with the findings of [10], which confirms the effectiveness of policy intervention. Policy reforms in China in recent years, such as piloting medical insurance from urban areas and establishing health care centres, have also achieved positive results, but they still face the challenge of uneven implementation. The "zuo yue zi" tradition is present in both countries, but it is practised in different ways. Singapore has successfully combined traditional and modern medical advice [11]. China's experience in this regard may have implications for other countries with multicultural backgrounds.

6.2 Policy Suggestions for China

- (1) Lessen care quality differences between urban and rural areas.
- (2) Stricter rules for "zuo yue zi" centres.
- (3) Expand hospital postpartum rehabilitation programs and encourage health insurance reimbursement.
- (4) Strengthen the importance of postpartum rehabilitation for pregnant women and their families and its impact on infants.

6.3 Areas where Singapore can Refine its Approach

- (1) Increase the length of maternity leave.
- (2) Make postpartum care services more affordable.
- (3) Increase coverage for people who are not citizens or long-term residents.
- (4) Strengthen the way that evidence-based care and conventional methods are integrated.

6.4 Implications for Other Countries

Holistic Postpartum Care Frameworks: Create comprehensive afterbirth care systems that seamlessly blend time-honoured customs with scientifically validated contemporary practices, ensuring adaptability across diverse cultural landscapes. **Strategic Health-Economic Integration:** Position maternal wellness infrastructure investment as a cornerstone in broader economic growth strategies, recognizing its pivotal role in societal development. **Adaptive Policy Architecture:** Construct malleable postpartum healthcare guidelines capable of accommodating the varied needs of heterogeneous populations within a unified health management structure.

7 Conclusion

This study compares postnatal health policies in China and Singapore, examining how policy, culture, and economics influence postpartum health outcomes. Using mixed methods, it explores integrating traditional practices with modern medicine and the impact of healthcare systems on care access. Findings show Singapore excels in preventing maternal mortality and depression, while China needs to address urban-rural gaps and mental health support. The study emphasizes culturally sensitive policies and suggests future research on digital technology, climate change impacts, and broader cross-country comparisons in East and Southeast Asia.

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