Terms of Reference

Review of Assisted Reproductive Technology and Surrogacy in the Context of Low Fertility

I. Background: A trend of delayed childbearing in the context of low fertility

People have different and changing sexual and reproductive health (SRH) needs throughout their lives; therefore, policies and services need to address the whole life course – from birth to old age. Evidence has shown that the ideal maternal age for a woman biologically is 22–28 years old, or at least not more than 35 years old, because fecundity or ovarian function peaks with a minimum risk of adverse fertility outcomes before the age of 35 years.[1,2,3] Age of a woman at the first pregnancy and the number of pregnancies in women aged over 35 years are rising across the globe.[4] In recent years, this trend is pronounced in developed countries, but rapidly becoming common in middle income countries. A series of issues have emerged in relation to women's delayed childbearing such as infertility, and adverse maternal and perinatal outcomes, particularly in the context of low fertility.

Decline in total fertility rates is observed in many parts of the world, including the Asia-Pacific region. China's fertility level has continuously declined since the 1990s. The 2010 and 2020 censuses reported TFRs of 1.18 and 1.30, respectively[5, 6] and China's National Bureau of Statistics (NBS) reported 10.62 million annual births in 2021, a sharp decline of 11.5 percent since 2020.[7]

In response to persistent low fertility in China, China's population policy has shifted from the one-child policy to three-child policy in the past decade. The Central Committee of the Communist Party and State Council of China released "The Decision for Improving Fertility

[1] Kelsey TW, Wright P, Nelson SM, Anderson RA, Wallace WHB. A validated model of serum anti-müllerian hormone from conception to menopause. PLoS One 2011; 6: e22024.
[2] Schummers L, Hutcheon JA, Hacker MR, et al. Absolute risks of obstetric outcomes by maternal age at first birth: a population-based cohort. Epidemiology 2018; 29: 379–87.
[3] Wang Y, Qiao J. Trends and social determinants of adolescent marriage and fertility in China. Lancet Glob Health 2020; 8: e873–74.
[4] Balasch J., Gratacós E. Delayed childbearing: Effects on fertility and the outcome of pregnancy. Curr. Opin. Obstet. Gynecol. 2012; 24:187–193.
[5] PCO. Tabulation on the 2010 Population Census of the People's Republic of China. Population Census Office under the State Council and Department of Population Statistics, State Statistics Bureau, People's Republic of China. China Statistics Press, Beijing. 2012 (in Chinese).
[6] PCO. Tabulation on the 2000 Population Census of the People's Republic of China. Population Census Office under the State Council and Department of Population Statistics, State Statistics Bureau, People's Republic of China. China Statistics Press, Beijing. 2002 (in Chinese).
[7] Wang P. China's population size and urbanization increased. 2022. http://www.stats.gov.cn/tjsj/sjjd/202201/t20220118_1826538.html.

Policies to Promote a Long-term Balanced Population Development" (hereinafter referred to as the "Decision") on 26 June 2021. The Decision stipulates that, in order to promote 'long-term balanced population development', China will strengthen its fertility support policies, allow couples to have three children, remove restrictive measures such as the social compensation fee, abolish related punishment stipulations, and roll out active and supportive fertility measures.

With the relaxation of population policies and changes in parenting attitudes and lifestyles among young couples, the trend towards delaying childbearing age is gaining attention in China. According to data obtained from the Hospital Quality Monitoring System, the proportion of women with advanced maternal age (generally defined as pregnancy in women aged 35 years or older) who gave birth in tertiary hospitals increased from 12.54% in 2015 to 17.43% in 2017.[8] Women who opt to delay pregnancy until their late 30s or 40s are at greater risk of infertility and complications during pregnancy.

II. Emerging issues and objectives of the review

The postponement of childbearing can lead to a wide range of adverse social, health, and demographic outcomes for the mother and child. Some studies have suggested an association between advanced maternal age and a wide range of adverse health outcomes. For instance, it carries the risk of infertility, obstetric complications, pregnancy-associated chronic diseases and neonatal health issues.

The prevalence of infertility in high-income countries ranges from 3.5% to 16.7%, whereas in low-income countries it is reported to be between 6.9% and 9.3%.[9] New assisted reproductive technologies (ART) are becoming ever more available, such as in vitro fertilization (IVF), embryo transfer, intra-cytoplasmic sperm injection and surrogacy, but the costs are often high and ethical concerns have also been raised. At the same time, countries have different legal frameworks on ART, particularly on surrogacy. Surrogacy is contentious and poses legal and ethical dilemmas yet is a widely used technology for assisted reproduction. The human rights dimensions of surrogacy are complex, involving the rights of the parents, the child, and the surrogate mother. There is often a power imbalance between the surrogate mother and the intended parents.

In China, infertility has been a neglected health issue for a long time. Data obtained from National Reproductive Health Surveys showed that the prevalence of infertility in China increased from 11.9% in 2007 to 15.5% in 2010.[10] In the 1990s, many infertile couples in

[8] Qiao et al. A Lancet Commission on 70 Years of Women's Reproductive, Maternal, Newborn, Child, and Adolescent Health in China. The Lancet 2021; 397(10293): 2497-2536.
[9] Boivin J, Bunting L, Collins JA, Nygren KG. International estimates of infertility prevalence and treatment-seeking: potential need and demand for infertility medical care. Hum Reprod 2007; 22: 1506–12.
[10] Zhou Z, Zheng D, Wu H, et al. Epidemiology of infertility in China: a population-based study. BJOG 2018; 125: 432–41.

China still had no access to assisted reproductive technology (ART). Since 2001, the Chinese Government has introduced a series of regulations and standards aimed at the standardized management and supervision of ART nationwide, and this action has led to the rapid growth of ART in China since 2001. By the end of 2019, there were 517 assisted reproductive centers and 27 human sperm banks in mainland China. Despite the progress, several challenges remain. For example, the cost of ART is high (an average of ¥30,000 per cycle) and ART is not covered by health insurance, so many couples simply cannot afford it.[11] This indicates an inequality in access to ART among people with different economic resources.

China bans surrogacy. According to Article 3 of the Chinese Administrative Measures on Human Assisted Reproductive Technology, promulgated and implemented in 2001, medical institutions and professionals shall not implement any form of surrogacy. Penalties are clearly written in Article 22, stipulating that any health institution involved in surrogacy would be given an admonition and a fine by the provincial health authorities. But driven by high demands for the practice over the past years, black market surrogacy has been booming in the country. Like many other people from countries where surrogacy is unavailable, some Chinese nationals will go overseas for commercial surrogacy. The desire of many Chinese women to delay childbirth has resulted in increasing interest in egg freezing. In the first case of its kind, in 2022, a Chinese court ruled against an unmarried woman who sued a hospital that refused to freeze her eggs. Many in the country have criticized the ban as discriminatory and sexist for depriving women of their right to have children later in life, as there are no such barriers for single men seeking to freeze their sperm. But some defended the policy's exclusivity, arguing that it helps to prevent the commercialization of egg-selling as well as surrogacy.

Within the context of low total fertility, delayed child bearing and increased infertility, there is a high demand for countries such as China to consider new policies and regulations that respect the rights of all parties involved and prevent any forms of exploitation related with the various forms of ART. In this context, it is important to understand legal frameworks, ethical considerations and debates surrounding these emerging issues. To this end, it is proposed to conduct a review of selected countries including China on legal frameworks, practices that ensure rights of all parties involved in use of ARTs and surrogacy, and practical implications, and analyze most prominent ethical issues and debate on rights among different parties surrounding those emerging issues.

In the absence of global normative standards and guidance on these issues, the objective of the review is to provide a comprehensive knowledge and analysis with recommendations from a human rights based approach to support UNFPA's future

[11] Qiao et al. A Lancet Commission on 70 Years of Women's Reproductive, Maternal, Newborn, Child, and Adolescent Health in China. The Lancet 2021; 397(10293): 2497-2536.

engagement in policy and advocacy on these issues, and inform UNFPA's technical guidance to all key stakeholders, including government, academia, media, and civil society. The review will also identify topics for future research on ART issues.

Scope of work

The study will include the review and analysis of 4-5 selected countries (potentially 2 from Europe and developed countries, 3 from Asia-Pacific, including China) covering the infertility situation, legal frameworks, availability, accessibility and affordability of ARTs for infertility treatment, and ethical and human rights dimensions of ART use.

Specifically, the review will be centered around but not limited to the following aspects:

1. Stigma on women who have no child and social pressure on women to have children.
2. Infertility trends and trends in the use and regulation of ARTs including surrogacy, and SRHR implications.
3. Legal frameworks and country experiences across the different regulatory models that countries are adopting (e.g., prohibit surrogacy, criminalization, inadequate or lack of regulation, discrimination against same sex couples and single persons seeking surrogacy, etc.)
4. Availability, access and affordability of ARTs including surrogacy, both private and public health systems.
5. Human rights debates and principles to guide policy responses to surrogacy.
6. Key obstacles for women to access ARTs to realize their fertility intentions; and good practices and promising experiences have shown positive results to ensure women to realize their fertility intention with ART.

III. Duration and Expected Deliverables

The study will start from 1 November 2022 and be completed no later than 15 December2022. The proposed timeline and expected deliverables are as follows:

- By 6 November 2022: Complete an inception report including proposed main contents of the consultancy report
- By 30 November 2022. Complete the draft report
- By 15 December 2022 -finalize the consultancy report

IV. Required expertise, qualifications and competencies

This research requires experienced expert(s) with expertise and requirement include but are not limited to:

1. Established long-term expertise in SRHR studies, particularly on the area of assisted reproductive technology and surrogacy;
2. Familiarity with international human rights principles and WHO guidelines related with ART;
3. Previous experience of conducting comparative studies on the issue of ART and surrogacy;
4. Familiar with the China's social and cultural background and policies;
5. Ability to work under pressure and deliver high quality products within the given time;
6. Knowledge of UNFPA mandate, especially UNFPA's position and perspectives on emerging SRHR issue is a plus

V. How to apply

Interested international experts need to submit a cover letter expressing his/her interest including relevant experience and expertise required for this assignment, proposed daily consultancy rate together with a CV to Ms. Zhang Tongxin: tongxin@unfpa.org no later than 25 October 2022.