

Total Fertility Rate [UPSC Notes]

The Total Fertility Rate (TFR) is a term often seen in the daily news. Its measurement is important to understand how a country is faring in its population control measures, and also for a better trend projection of the population. In this article, you can read and understand what exactly is meant by the Total Fertility Rate (TFR) of a country. This is an important topic for the [UPSC IAS exam](#).

Total Fertility Rate Meaning

The total fertility rate is the average number of children that a woman will have during her lifetime. It is measured in terms of children per woman.

- It's calculated by adding up all of the age-specific fertility rates over five-year intervals.
- Below-replacement fertility is defined as a combination of fertility and mortality rates that results in a negative population growth rate and, as a result, a shrinking population.
- TFR is regarded as one of the most useful fertility indicators.
- The TFR is usually simply described as the average number of children per woman which makes it an intuitive measure of fertility.

Check the below table for related terms:

[Infant Mortality & Replacement Rate in Fertility Rate](#)

[Maternal Mortality Rate](#)

Total Fertility Rate Formula

The TFR is calculated by adding up all the age-specific fertility rates, multiplying this sum by five (the width of the age-group interval), and then dividing by 1,000.

$$\text{TFR} = (\text{Sum of ASFR} \times 5) / 1,000$$

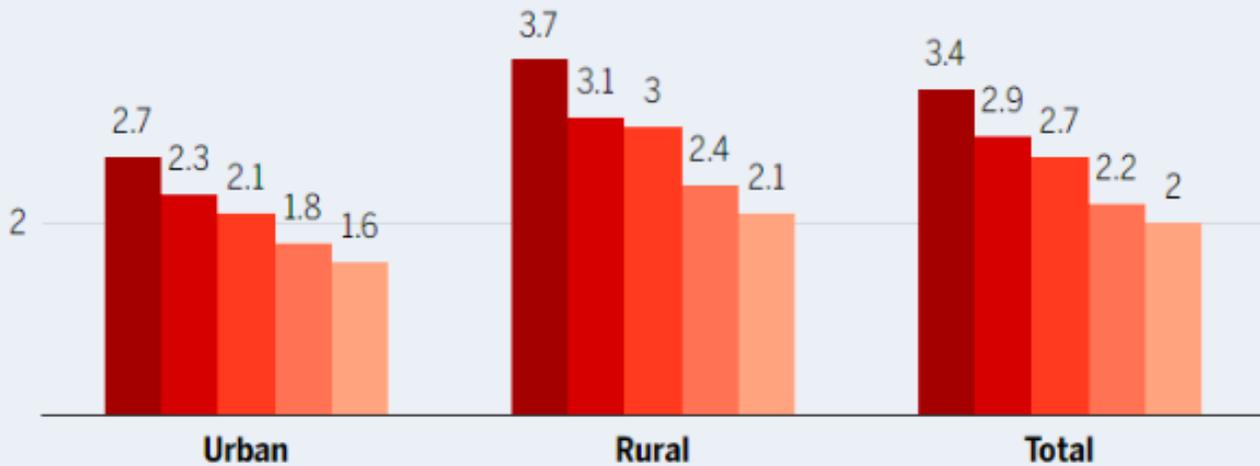
National Family Health Survey (NFHS-5) on Total Fertility Rate

- Overall fertility in the NFHS 5 survey fell below the replacement level of two children per woman, down from 2.2 in the previous survey.
- The overall fertility rate is two children per woman, down from 2.2 in 2015-16.
- The fertility rate is currently below the replacement level of 2.1 children per woman.

Know more about the [National Family Health Survey 5](#)

Downward trend in fertility rate

■ NFHS-1 ■ NFHS-2 ■ NFHS-3 ■ NFHS-4 ■ NFHS-5



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Source: National Family Health Survey (NFHS-5)

Image source: Times of India

Trends in Decline of TFR

In India, the TFR has steadily decreased over time.

- The TFR decreased from 3.4 to 2.0 children between 1992-93 and 2019-21.
- In rural areas, the TFR has dropped from 3.7 children in 1992-93 to 2.1 children in 2019-21.
- Women in urban areas had fewer children, dropping from 2.7 children in 1992-93 to 1.6 children in 2019-21.
- The fertility rate peaks at the age of 20-24 in all NFHS editions, regardless of where you live, and then gradually declines.

a) TFR in Rural Areas:

- The total fertility rate in rural areas has declined from 3.7 children per woman in 1992-93 to 2.1 children in 2019-21.
- The corresponding decline among women in urban areas was from 2.7 children in 1992-93 to 1.6 children in 2019-21.

- As per the NFHS-5, women in rural areas have higher fertility, on average, than women in urban areas (TFR of 2.1 versus 1.6 children).
- In almost all states, urban women had a lower fertility rate than rural women over time, though this gap has been closing.

b) State Wise Assessment of TFR:

- As per NFHS-5, thirty-one states and Union Territories, including all states in the south, west, and north regions, have fertility below the replacement level of 2.1 children per woman.
- Bihar and Meghalaya have the highest fertility rates in the country.
- Sikkim and Andaman and Nicobar Islands have the lowest.

c) Impact of Schooling on Fertility Rate:

- According to the NFHS 5 report, the number of children per woman decreased as women's education levels increased.
- Women without a high school diploma have an average of 2.8 children, compared to 1.8 for women with a high school diploma.

Median age at first birth by schooling

Among women age 25-49



Source: National Family Health Survey (NFHS-5)

Image source: Times of India

d) Impact of Household Wealth on TFR:

- The NFHS-5 report has found that women in the lowest wealth quintile have an average of 1.0 more children than women in the highest wealth quintile, and economic betterment organically leads to lower fertility rates.

Reasons for Decline in TFR

The decrease in fertility is due to a number of factors, including improved contraception and government health and family welfare programmes.

- However, education for girls and efforts to improve overall health and nutrition are important factors.
- Higher education, increased mobility, later marriage, financially independent women, and overall prosperity all contribute to the TFR falling.

Concerns with the reducing TFR:

- Policymakers and planners should be concerned about both high TFR and TFR below replacement levels. Lower fertility levels are both a cause and a consequence of social and economic changes.
- Fertility decreases as a result of education and development. The aged population grows and the labour force shrinks when a population does not reproduce enough to replace one generation of humans with the next. This could have a negative impact on the economy.
- As a result, countries such as Japan and Germany have considered incentivizing increased fertility and encouraging immigration.

Recommendations for Policymakers:

- **Focus on Girl Education:** The government should prioritise educating girls across the board, as education improves a family's overall well-being. Education increases young people's awareness and well-being, which helps them avoid early marriages and pregnancies. Also read: [Beti Bachao Beti Padhao](#)
- **Decentralisation of Policies:** Decentralised policies can be implemented on a priority basis in states like Bihar, Meghalaya, Uttar Pradesh, and Jharkhand, which require special attention to reduce fertility levels.
- **Availability of Resources:** Task shifting and equipping primary health care workers with the resources they need to run a long-term, results-oriented campaign to help spread the word about family planning and the advantages of having a smaller family.

- **Increased Investment:** India must invest heavily in human capital, health, and education to ensure a healthy and productive population that can contribute to the country's national and global achievements.
 - **Family Planning and Medical Cost Reduction:** Adults must be educated about family planning and reproductive health, and they must be encouraged to use these methods. As the population ages and productivity declines, the government must devise policies to address rising medical costs.
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