International Journal in Management and Social Science
Volume 13 Issue 06, June 2025 ISSN: 2321-1784 Impact Factor: 8.088
Journal Homepage: http://ijmr.net.in, Email: irjmss@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal

Reproductive Fertility of Women in Ledo Tea Garden, Tinsukia District

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Abstract

Women's fertility (GFR) in Assam has been declining across the decades from 82.8 in 2011 to 69.8 in 2020. The women of the Tea Garden of Assam have also been speculated to be experiencing a drastic change in their level of fertility over the recent decades. A number of socioeconomic factors, healthcare access provided by the management authority, and cultural and traditional factors have been blamed for such a change in fertility trends. This study reflects on the fertility transition of Tea Garden women, examining the key factors affecting the reproductive behaviour and decision-making process. It also evaluates the role of access to healthcare and initiatives taken by Tea Garden management and the government in controlling fertility levels.

Keywords: Fertility, Tea Garden Women.

1. Introduction:

Demographically, fertility refers tothe production of children, and the ability to reproduce is termed fecundity (Franck, 2017). Fertility rate is the term used to describe the number of offspring born to a woman in her lifetime. Fertility can also be defined as the number of children born, whereas infertility is the inability to reproduce without any medical intervention.Bongaarts (1978) described four factors, such as marriage, contraception, lactation and induced abortion, differences which are the key proximate causes of fertility. Fertility is highly influenced by a woman's marriage age because when childbearing is permitted within marriage.

The association of fertility with some socio-economic determinants has been a major focus. Various scholars have established the influence of education on fertility. (Kaur, 2000; Dreze& Murthi, 2001; Mubarak & Mahanta, 2014). Wife's education, per capita family income, the place of work of the husband, infant and child mortality and the effect of ideal family size are usually recognized as the proximate determinants of fertility.

In Assam, Tea gardens have been found to be densely populated and have been witnessing an increased fertility rate, thereby causing an increase in the population of the state at a rapid pace. The state has 803 numbers of Tea gardens of different categories as of now and the population of Tea Garden workers is approximately seven million (20 of Assam's total population). Goswami (2013) has stated that the population of the garden and the ex-garden workers' population, together, comprise about 30 lakh i.e., 11.28 percent of the state population in the year 2013. The underlying cause of the Tea garden workers' population growth being higher in Assam has been ascribed to the higher fertility rate that is higher.

In Assam, overall, the Birth Rate and the Death Rate have fallen from 22.8 to 20.8 and from 8.0 to 6.2, respectively, between 2011 - 2020. Once again, the Infant Mortality rate of the state has also decreased from 55 in 2011 to 36 in 2020. Therefore, the tea gardens in Assam would have witnessed similar events as well. To what degree these Birth Rate (CBR, GFR, TFR), Death Rate and Infant Mortality Rate declined is something that requires a complete assessment through a Case study.

1.1. About Tea Garden Women:

Among the tea garden community, the lifestyle is slightly different than others because of the integration of the tea culture and tea preparation work into their daily life. The tea garden workforce is divided into two categories: permanent workers who are employed full-time and paid daily, and temporary workers who work seasonally. Seasonal workers are hired in the plucking season (Sarkar, B. C. 2017).Women tea Garden labourers receive a monthly wage of Rs. 3000 to 6000, which is insufficient to cover their daily living expenses, hence they work overtime (Jumi et al. 2021 & Sharma & Bhuyan, 2016, & Gogoi and Radha, 2023).

Women tea garden workers are closely tied to their work in the garden, even with low wages, because they are bonded to it. Another reason is that household heads generally have a positive view of working women, as they often work in a family-like environment (Sarkar, S., 2022). Bhuyan, H. (2024) opines that the educational condition of the community is not satisfactory at all. Not only for the women but also among the entire tea labour community, the educational condition is very poor. They are deprived of basic educational facilities. Women and girls are the worst sufferers in this field. A woman, working in the Tea Garden, bears the responsibility of both domestic work and the Tea Garden.They often suffer from abuse and insecurity in both places (Mitra, 2021).

The health status of tea garden women workers is poor due to nutritional deficiencies, infectious diseases, and other physical and psychological health problems. Factors such as smoking, alcohol consumption, poor quality of life, inadequate housing, and unhygienic practices contribute to their vulnerability to various diseases, with malnutrition being a common issue (Bhuyan, H. 2024). These factors cause a higher infant mortality rate, and such a higher infant mortality rate in the Tea Gardens leads to higher fertility. Most women consume alcohol to relieve sadness and desperation, which negatively impacts their health. They frequently suffer from diseases such as skin ulcers, malaria, skin rashes, infections from pesticide exposure, prolonged sun exposure, lengthy tasks, and poor working posture (Gogoi & Radha 2023). Factors such as malnutrition, alcohol consumption, poor quality of life and unhygienic practices are the most common phenomena of tea garden lives that highly contribute to their high fertility. As such, with

a view to examining the fertility pattern of Tea Garden women in the state, an in-depth study is essential.

1.2 About the Study Area-

Ledo Tea Company Ltd was formed on 19 April 1983 especially to take over Ledo Tea Estate in Assam from Duncan's Agro Industries Ltd. It is located in the highly productive tea belt of Upper Assam, in the Tinsukia district, close to Ledo town. There are 907 male and 883 female employees employed in the Tea Garden.

2.Objectives of the Study:

- To analyse the changing fertility patterns of Ledo Tea Estate in Tinsukia district of Assam.
- Fertility transition amongst the Tea Garden women of the 15-49 age group.

3. Method of Study:

Both Primary and Secondary data have been gathered for the fulfilment of this research study. Out of 883 female employees aged 15 – 49, 45 women from this tea garden have been interviewed using specially designed questionnaires. In the questionnaire, fertility-related information is gathered from the respondents as well as from their mothers in order to identify the fertility difference between the two generations.

4. Results:

Table-1

No of children at different age groups of the respondent and the respondent's mother

	No of Children given birth by the Respondent				No of Children given birth by the Respondent's Mother			
No of Children given birth / Age Groups	0	1	2	3	0	1	2	3
15-24 years	23.90%	23.90%	52.20%	0.00%	10.90%	4.30%	56.50%	26.10%
25-34 years	36.90%	34.80%	21.70%	6.50%	28.30%	15.20%	34.80%	21.70%
35-49 years	98%	0	2.20%	0	87%	4.30%	4.30%	4.30%

4.1 Generational Differences in Fertility:

Previous Generation (Respondents' Mothers): Women in this group tend to have more children at younger ages. For example, in the 15-24 age group, over 82% had 2 or 3 children, indicating earlier and higher fertility. This pattern continues into 25-34 years, where about 56% had 2 or more children.

Current Generation (Respondents): Fertility appears lower and more delayed. In 15-24 years, no one had 3 children, and the distribution is more even across 0-2 children (with 52% having 2). In the age group 25-34 years, 72% had 0 or 1 child, and only 28% had 2 or more, suggesting a trend toward fewer children overall.This could reflect societal changes like increased education, career focus, access to contraception, or economic factors leading to delayed family formation in the current generation.

4.2.Age Group Trends:

15-24 Years: High childlessness in respondents (24%) vs. mothers (11%), but both groups have a peak at 2 children. Mothers had a notable share with 3 children (26%), which is absent in the respondents.

25-34 Years: Childlessness increases for respondents (37% vs. 28% for mothers). Respondents are more likely to have exactly 1 child (35%), while mothers are spread more toward 2-3 children.

35-49 Years:**Respondent's Mother**: Overwhelmingly childless (87.1%), with small equal proportions (4.3 each) for 1, 2, or 3 children. This could indicate that most mothers in this older group either completed childbearing earlier or remained childless.

Respondent: Even higher childlessness (97.8%), with only 2.2 % having 2 children and none having 1 or 3. This suggests very low fertility or delayed/absent childbearing among older respondents.

4.2. Age at marriage **Table-2**

Age at Marriage of the two generations

Age groups at the time of marriage	% of the Respondents	% of theRespondents' Mothers
15-24	87.00%	95.70%
25-34	13.00%	4.30%
35-49	Nil	Nil
Total	100%	100%

Generational Shift: The data shows a shift in marriage age between generations. While 95.7% of mothers married young (15-24), only 87% of respondents did so, and a higher proportion of the

respondents (13% vs. 4.4%) married in the 25-34 age range. This suggests that respondents are marrying later than their mothers.

Early Marriage Dominance: For both groups, the vast majority of marriages occurred in the 15-24 age group, indicating that early marriage is the norm in this population, though slightly less so for the respondents.

No Late Marriages: The absence of marriages in the 35-49 age group for both mothers and respondents suggests that late marriages are either rare or not captured in this dataset.

4.2 Total No of Children in the family

Table- 3

No of Children given birth

% of Respondent	% of Respondents' Mother	Total No of children given birth
6.5	8.7	1
47.8	17.4	2
34.8	10.9	3
8.7	28.6	4
2.2	34.4	More than 4

Generational Shift to Smaller Families:

The data reveals a clear trend toward smaller family sizes in the respondent generation**. For mothers**, larger families dominate: 63% had 4 or more children (28.6% with 4 + 34.4% with more than 4). In contrast, **respondents** overwhelmingly prefer or have 2-3 children (82.6% combined), with only 10.9% having 4 or more. This suggests influences like economic factors, education, access to family planning, or changing social norms leading to reduced fertility.

Peak Family Sizes:

Mothers peak at more than 4 children (34.4%), followed by 4 children (28.6%), indicating norms of larger families in the older generation. Respondents peak at 2 children (47.8%), followed by 3 (34.8%), aligning with global trends toward "replacement-level" or smaller families.

Low Single-Child Families:

Both generations have low percentages for 1 child (under 9%), possibly reflecting cultural preferences for at least 2 children.

Connection to Previous Tables:

Linking to the earlier data on age at marriage (where respondents marry later) and number of children by age groups (where respondents show higher childlessness and fewer children overall), this table reinforces a pattern of delayed life events and reduced total fertility. For example, later marriages may contribute to fewer total children.

5. Conclusion:

The study shows a clear generational shift from early marriage and large families (in mothers) to later marriage and smaller families (in respondents). Respondents marry later, delay childbirth, and mostly limit families to two or three children, unlike their mothers, who often had four or more. This reflects changing social norms, education, and economic factors shaping fertility behaviour.

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