

Maternal Health Situation in Assam and Rajasthan: A comparative analysis of State National Family Health Survey 4 (2015-2016), India

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Introduction

- Globally, about 303,000 women die from complications related to pregnancy.
- India accounts for 1/3rd of the worlds maternal deaths (WHO).
- National Health Mission launched safe motherhood intervention called Janani Suraksha Yojana (JSY) on 12 April 2005.
- Assam and Rajasthan in high mortality ratio states due to several reasons.
- Women in these states also lack decision-making ability.

Study Objective

Primary objective: To assess the utilization of antenatal care services and compare them between Assam and Rajasthan.

Secondary objective: To determine the factors associated with the utilization of antenatal care services.

Research Questions

- What is the utilization of antenatal care services in the states of Assam and Rajasthan?
- What are the differences in the utilization of antenatal services in the states of Assam and Rajasthan?
- What are the factors associated with antenatal care service utilization?

Literature Review

- Utilization of ANC services is very important as it influences the well-being of the mother as well as her children. [\[1\]](#)
- Educational attainment by women and household wealth status were found to be the most significant predictors of maternal health care utilization in India. [\[2\]](#), [\[3\]](#)
- Though a good number of women delivered their babies at a health facility, still most of them did not avail the minimum requirement of four antenatal visits. [\[4\]](#)
- Immunization of pregnant women with tetanus toxoid was the single most effective intervention against neonatal tetanus independent of other interventions. [\[5\]](#)

Cont...

- In India, iron deficiency is one of the most common cause of anaemia which leads to many maternal health complications. [\[6\]](#)
- To prevent very high prevalence of anaemia in pregnancy, there is a need for mandatory regular supply of IFA tablets to pregnant women from 4th month onwards till 3-6 months post-partum along with correction of other nutritional deficiencies and timely intervention for reducing the burden of related diseases. [\[7\]](#)

Methodology

- **Data Source:** Birth recode file of Assam and Rajasthan from the DHS dataset of India.
- **Study Design:** Secondary cross-sectional design.
- **Sampling plan:** Stratified two-stage sampling design. First stage, clusters selected using probability proportional to cluster size. In second stage, 22 households from each cluster were selected with an equal opportunity systematic selection from the household listing.
- **Target population:** The last pregnancy of the women who had given birth in the past five years from the date of interview.

Measures

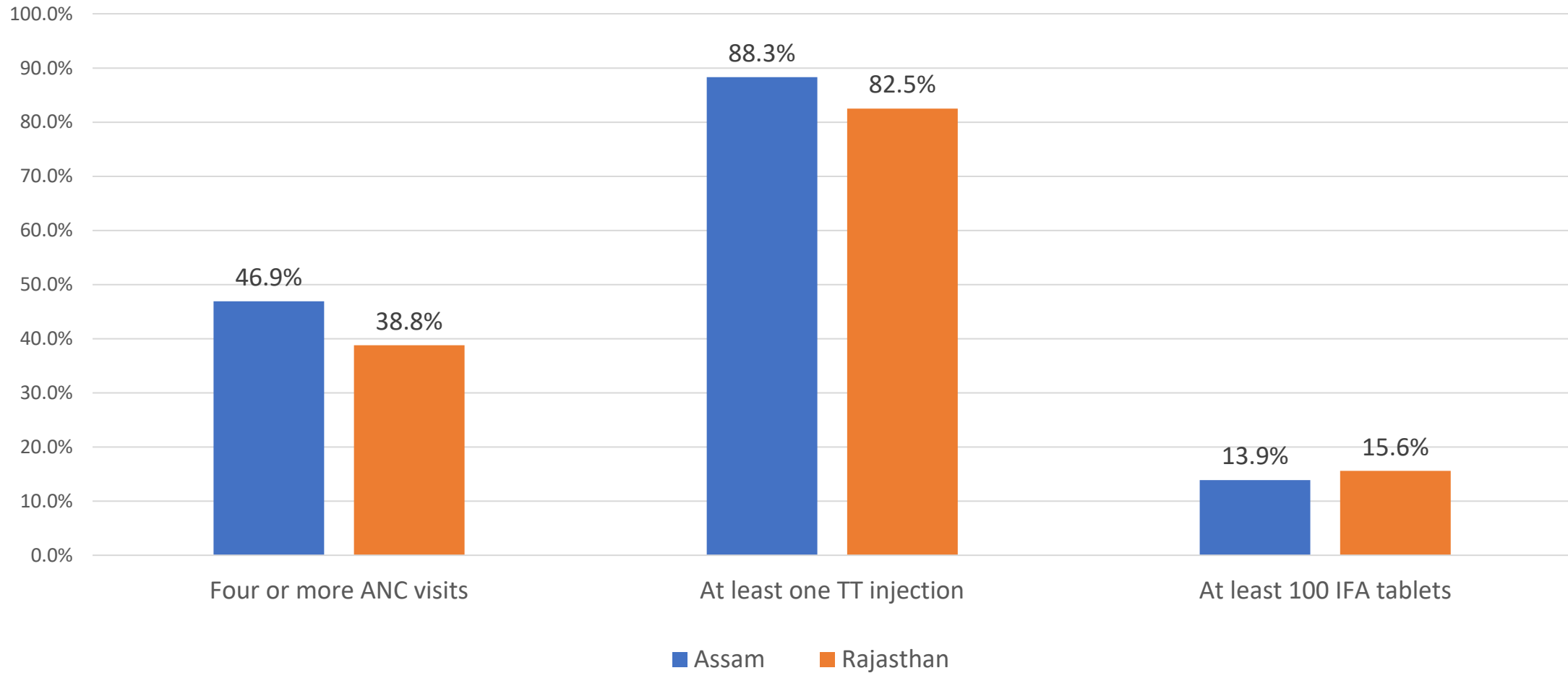
Dependent Variables	Independent Variables
Four or more ANC visits	Women's age
At least one TT injection	Women's educational attainment
Consumed at least 100 IFA tablets	Women's religion
	Type of residence
	Wealth quintile
	Number of months when pregnancy registered
	Getting permission to visit health facility
	Difficulty to reach health facility due to distance

Cont...

- **Analytical strategy:** Linear regression to estimate the relationship between dependent and independent factors.
- **Ethical Consideration:** NFHS 4 approved by International Institute for Population Sciences (IIPS). Data collection procedure approved by ICF Macro, USA.

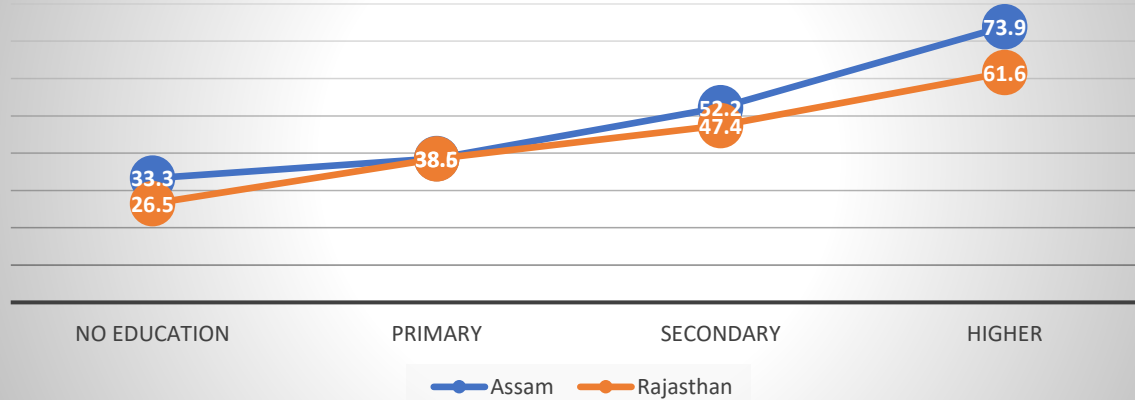
Results

Assam Vs. Rajasthan

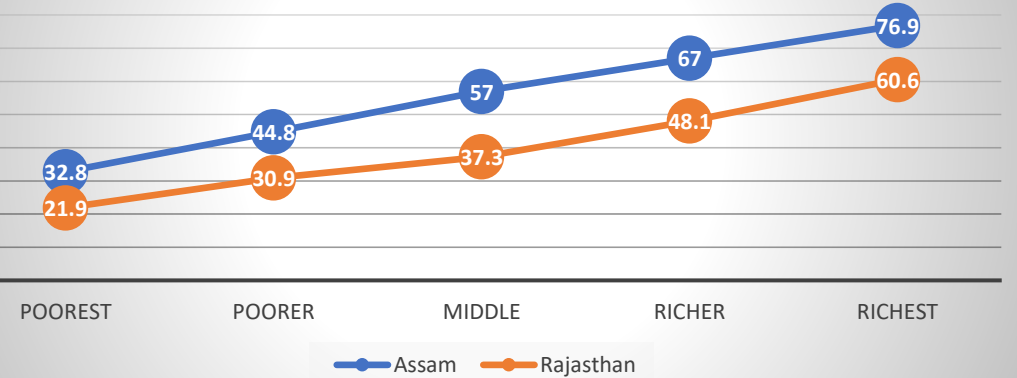


Four of more ANC

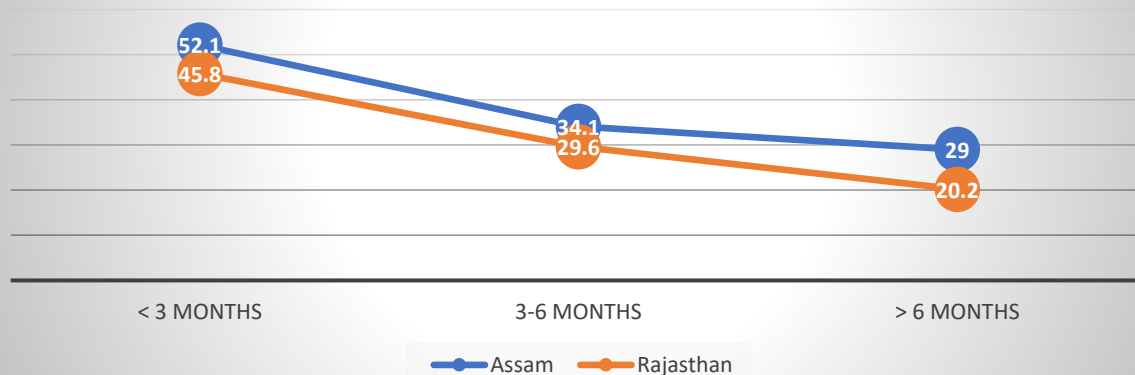
Women's Education



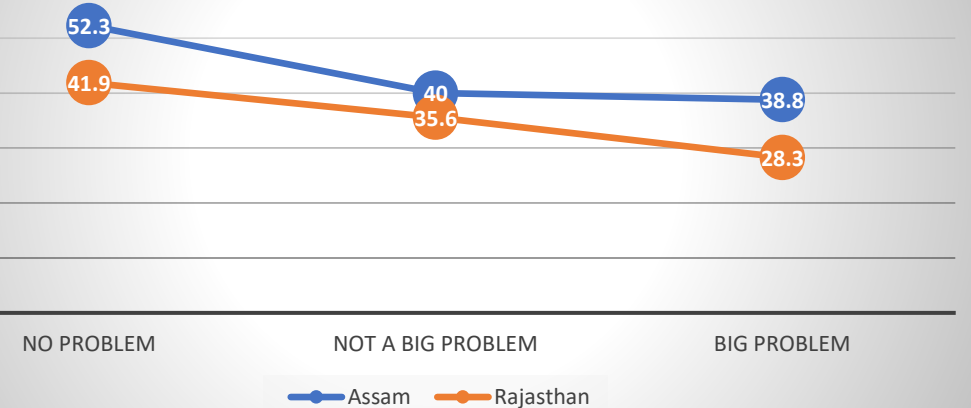
Wealth Quintile



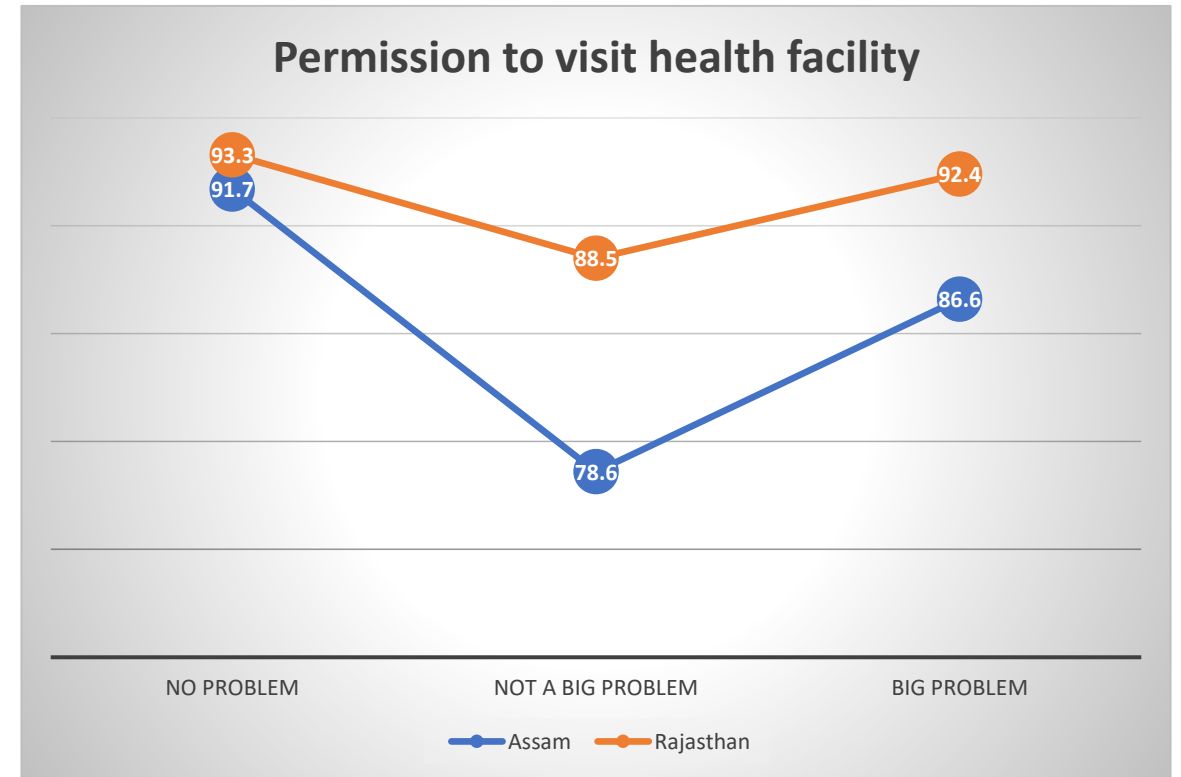
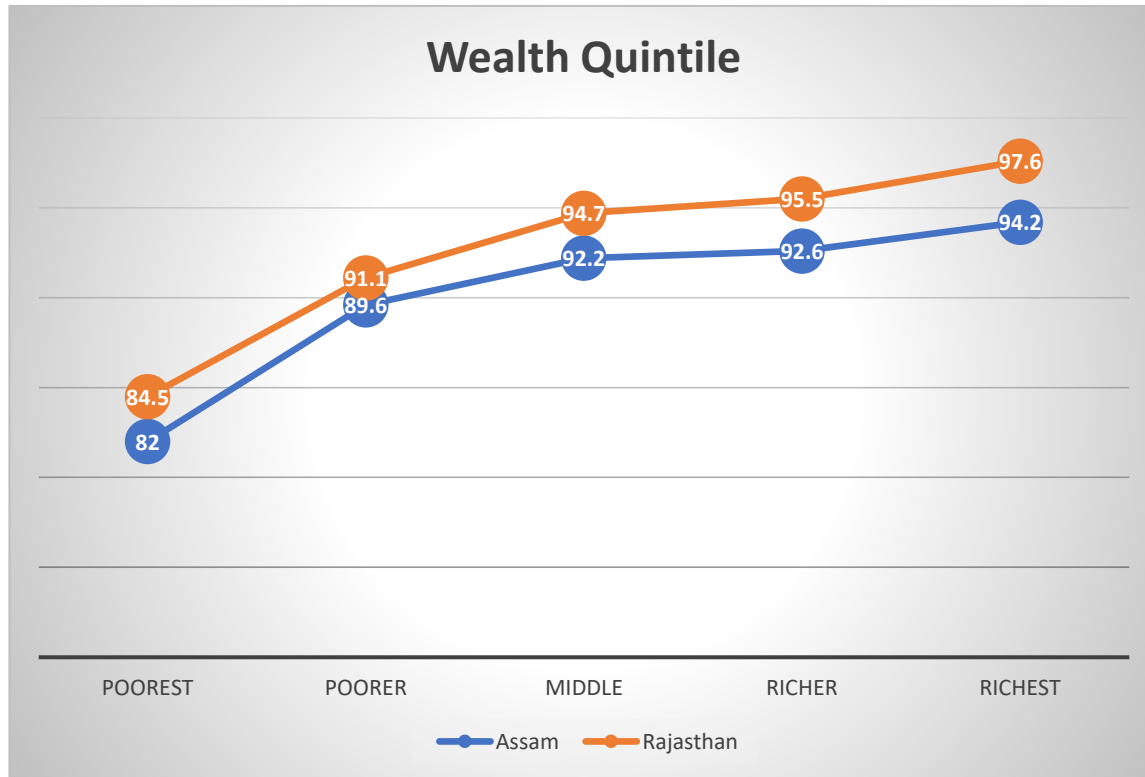
Number of months pregnant when pregnancy registered



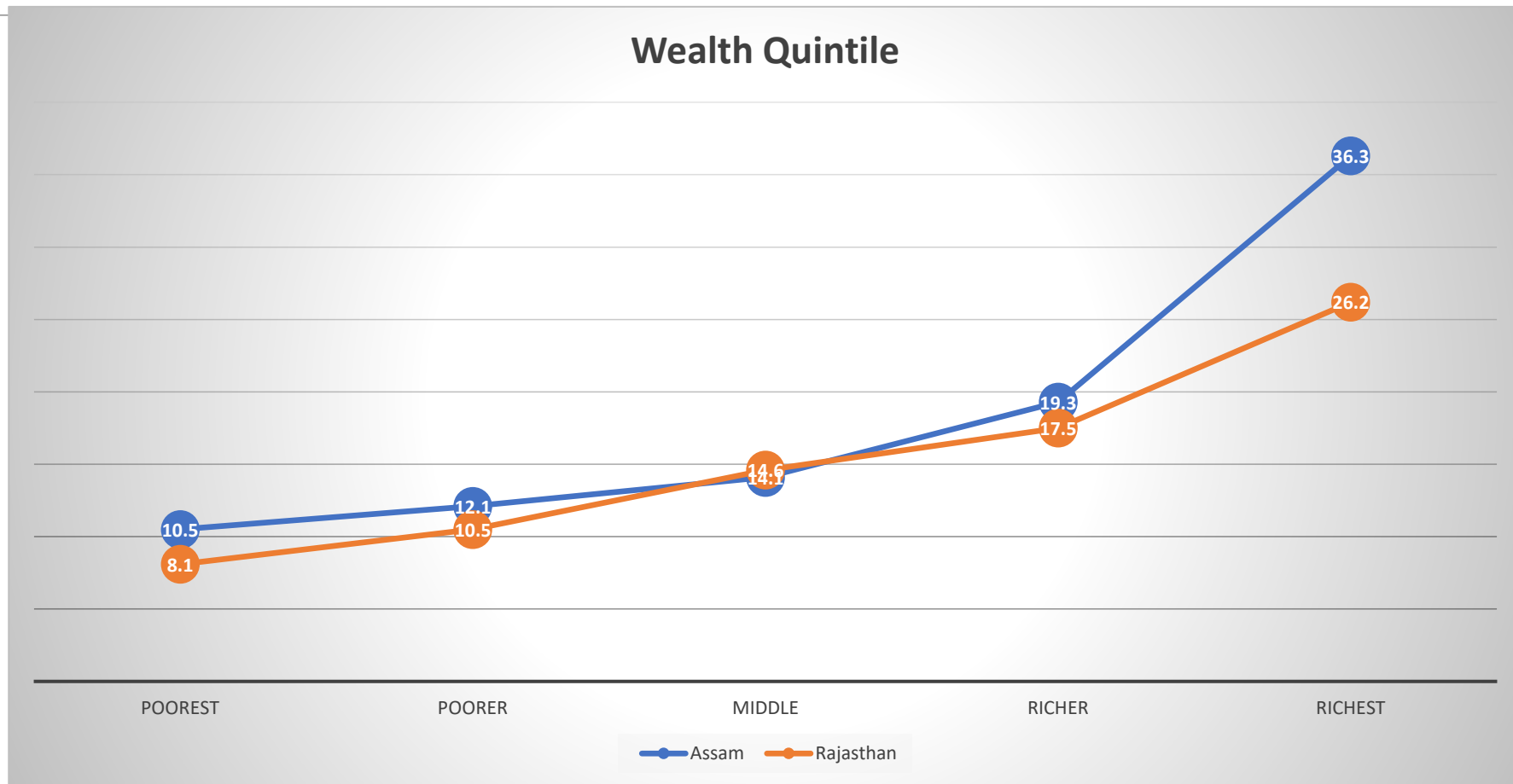
Getting permission to visit health facility



At least one TT injection



Consumed at least 100 IFA tablets



State specific significant factors

Assam	Rajasthan
Four or more ANC	
1. Women's Religion	1. Type of Residence
2. Distance to health facility	
At least one TT injection	
1. Women's Religion	1. Wealth Quintile
2. Educational Attainment	
Intake of at least 100 IFA tablets	
1. Religion	1. Educational Attainment
	2. Distance to health facility

Discussion

- Inadequate utilization of antenatal care services.
- Age of women not a significant predictor for ANC services.
- Economic status of the women's household a significant predictor.
- Religion is a significant predictor in the state of Assam.
- Women's education is very crucial for the improvement of utilization of ANC services.
- Women with early pregnancy registration availed the services more as compared to their counterparts.
- Consumption of IFA tablets is very low in both the states.

Cont...

- Getting permission to visit health facility plays an important role in availing ANC services.
- Utilization of services is more in the state of Assam as compared to Rajasthan, however, the MMR of Assam is poor than Rajasthan. Hence, further studies required to find the cause.

Conclusion

- ANC service utilization is determined by various socio-economic as well as demographic factors in the states to Assam and Rajasthan to some extent.
- Strategies need to focus extensively on reducing barriers and incorporating measures that effectively increases the women's education level.
- Women belonging to poor households need to be informed about the maternity benefits and schemes that are made available by the government for them.
- The current government interventions should strengthen their efforts and there is a need to be more inclusive to reduce discrepancies in service utilization across different social and religious groups.

Cont...

- Implementing interventions at community level along with the district level can prove to be a critical step in increasing the ANC service utilization.
- Empowering the women towards proper knowledge regarding their health and helping them in decision-making.
- Development in health infrastructure at the rural level.

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Thank you