DISSERTATION

THE MATERNAL HEALTH SITUATION IN ODISHA AND RAJASTHAN: A COMPARATIVE ANALYSIS OF STATE REPORTS FROM NATIONAL FAMILY HEALTH SURVEY (NFHS)-4 AND 5

Presented by-
Soumya Priya - 1411
MBA-HM 26

Guided by-
Dr Alok Mathur
Associate Professor

CONTENT

Introduction

Research Question

Objectives

Methodology

Results

Conclusion

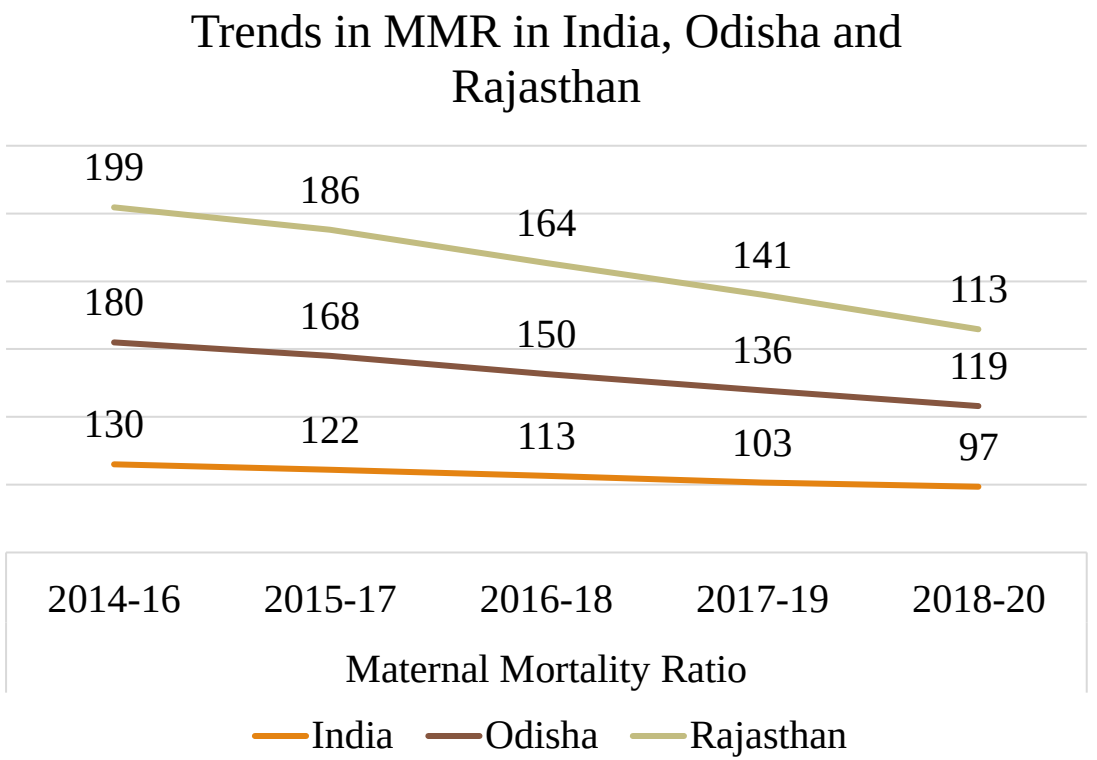
Recommendations

References

INTRODUCTION

- Maternal health is known as women's strength during the antepartum, intrapartum, and postpartum periods
- Globally 99% of maternal death occur due to hemorrhage, sepsis, hypertension, abortions, and obstructed labor, hemorrhage being the major cause. Indirect causes like anemia, malaria, and heart disease have an impact on maternal death rates as well.
- Social determinants for maternal and child mortality include marriage and childbirth at a very young age, less spacing between births, and low literacy level among women, in particular those belonging to the urban poor and rural settings, and socially-disadvantaged groups.
- The risk factors contributing to MMR include existing or pre-pregnancy medical history, age, nutritional status, delivery technique, late referral, lack of proper spacing, preeclampsia, gestational diabetes, ANC examination, occupational status, and lifestyle changes such as smoking.
- The United Nation's SDG 3.1 aims to bring down maternal deaths worldwide to under 70 per 100,000 live births.

- There is a significant decrease in the MMR of India from 1997-1998 which is 398 to the year 2018-2020 is 97 per 10,000 live births.
- NHM has introduced several maternal health initiatives, including Janani Suraksha Yojana (JSY), Janani Shishu Suraksha Karyakram (JSSK), and Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) to reduce maternal mortality.
- ANC package includes a minimum of at least 4 ANCs including early registration and 1st ANC in the first trimester along with physical and abdominal examinations, Hb estimation and urine investigation, 2 doses of T.T Immunization, and consumption of IFA tablets for 100/180 days.



RESEARCH QUESTION

How has the maternal health situation changed in Odisha and Rajasthan between NFHS-4 and NFHS-5?

OBJECTIVES

1. To examine and compare the maternal health indicators in Odisha and Rajasthan based on the NFHS-4 and NFHS-5 state reports.
2. To determine if the performance of maternal health indicators in these states has improved or declined over time.
3. To highlight areas for enhancement in the implementation of maternal health-related activities in both states based on the findings.

METHODOLOGY

Study design: The study used a descriptive analysis of maternal health indicators taken from the NFHS 4 and 5 Datasheet.

Study setting: Odisha and Rajasthan

Sample size: NFHS 4 and NFHS 5 fact sheets of Odisha and Rajasthan

Duration of the study: 70 days from March 1st to May 10th

Data collection method: Secondary data

Data collection and analysis tool: MS Excel

Ethical considerations: Deidentified respondent data from the public domain was used, avoiding the possibility of respondents' personal information being disclosed.

The selected indicators for analysis include:

- Maternal Mortality Ratio (MMR)
- ANC coverage
- Skilled birth attendance (SBA)
- Postnatal care utilization

Data was extracted, compiled, and compared between the two surveys to identify any significant changes in the maternal health situation. The analysis will also explore the contextual factors and determinants associated with the performance of each indicator.

RESULTS

The proportion of women of age 20-24 who got married before the age of 18 has noticed a downfall in both Rajasthan and Odisha between the NFHS-4 and NFHS-5 surveys. In Rajasthan, still, a quarter of women of age 20 to 24 are married below the legal age, whereas in Odisha, less than a quarter of women are married below the legal age, indicating improvement and increased awareness from NFHS 4 to 5. The Total Fertility Rate is a crucial indication of the community's reproductive health.

The TFR in Rajasthan has dipped from 2.4 to 2 representing a major milestone in population stabilization whereas in Odisha, TFR dropped from 2.1 to 1.8

Table 1 Trends of marriage and fertility

State	NFHS-4	NFHS-5
Woman who is between 20 and 24 years old and got married before turning 18 (%)		
Rajasthan	35.4	25.4
Odisha	21.3	20.5
Overall fertility rate (Children for women) (%)		
Rajasthan	2.4	2.0
Odisha	2.1	1.8
women between the ages of 15 and 19 who were already parents or expecting children at the time of the survey (%)		
Rajasthan	6.3	3.7
Odisha	7.6	7.6

RESULTS

According to the data in the table, in Rajasthan, the use of any birth control technique increased from 59.7 percent to 72.3 percent, while in Odisha, the use of any birth control method increased from 57.3 percent to 74.1 percent. In Rajasthan, the use of any contemporary birth control technique grew from 53.5 percent to 62.1 percent, and in Odisha, it increased from 45.4 percent to 48.8 percent.

The overall use of any form of birth control has increased in both states, with Odisha exhibiting a greater increase than Rajasthan. In both states, sterilization of women is the most frequently used procedure, with Rajasthan having a higher use rate than Odisha.

Table 2 Utilization of family planning methods

State	NFHS-4	NFHS-5
Any birth-control method which is not shown separately (%)		
Rajasthan	59.7	72.3
Odisha	57.3	74.1
Any Modern birth-control method which is not shown separately (%)		
Rajasthan	53.5	62.1
Odisha	45.4	48.8
Percentage of women who had undergone Sterilization (%)		
Rajasthan	40.7	42.4
Odisha	28.2	28

RESULTS

Both Rajasthan and Odisha showed a significant downfall in unmet needs from 12.3 percent to 7.6 percent and from 13.6 percent to 7.2 percent respectively. Rajasthan witnessed about a 40 percent decrease in unmet needs, whereas Odisha exceeded Rajasthan by decreasing by roughly half from NFHS 4 to 5.

Table 3 Unmet needs in contraceptive methods

State	NFHS-4	NFHS-5
Overall unmet need for birth control (%)		
Rajasthan	12.3	7.6
Odisha	13.6	7.2

RESULTS

Antenatal checkups of the first trimester have increased in Rajasthan and Odisha by 21 percent and 20 percent from NFHS 4 to NFHS 5 respectively. In Rajasthan, only over half of women received 4 prenatal care visits, despite the fact that 76 percent of women got their antenatal checkup in the first trimester. Given that the percentage of women in Odisha who had at least 4 ANC visits exceeds the proportion of women who have had antenatal check-ups in their first trimester (78.1 and 76.9, respectively), the situation there is better than it is in Rajasthan.

Table 4 – Pregnant women who utilized ANC services

State	NFHS-4	NFHS-5
Pregnant women who had a first-trimester prenatal check-up (%)		
Rajasthan	63.0	76.3
Odisha	64.0	76.9
Pregnant women who received at least four ANC visits (%)		
Rajasthan	38.5	55.3
Odisha	61.9	78.1

RESULTS

In terms of women who had their most recent child vaccinated against neonatal tetanus, Odisha and Rajasthan performed well; more than 90 percent of pregnant women in both states are protected against tetanus. Despite a nearly 6-fold spike in IFA tablet consumption for 180 days, the percentage of anaemic pregnant women in NFHS 4 to 5 continues to rise by 30 percent, which is a cause of concern in Odisha. Rajasthan did not perform well leaving nearly half of the pregnant women anaemic, while the percentage of IFA consumption for 180 days increased 1.4-fold from NFHS 4 to 5. Both states performed very well in the consumption of IFA tablets for 180 days by pregnant women.

Table 5 Mother's protection against new-born tetanus and anaemia status

State	NFHS-4	NFHS-5
Mothers who had their most recent child vaccinated against neonatal tetanus (%)		
Rajasthan	89.7	93.4
Odisha	94.3	95.2
Mothers who have consumed IFA for 180 days or more when they were pregnant (%)		
Rajasthan	6	14.4
Odisha	4.2	34.4
Pregnant women of reproductive age who are anaemic (%)		
Rajasthan	46.6	46.3
Odisha	47.6	61.8

RESULTS

Distribution of MCP cards was successful in Odisha and Rajasthan, reaching nearly 100% in NFHS 5 with increases of 6% and 2%, respectively, from NFHS 4 to 5.

Table 6 MCP card distribution

State	NFHS-4	NFHS-5
MCP card distributed to Pregnant women at the time of ANC registration (%)		
Rajasthan	92.3	98.1
Odisha	97.2	99.4

RESULTS

The percentage of women receiving PNC treatment from any healthcare professional in Rajasthan and Odisha has increased by 34 percent and 21 percent from NFHS 4 to 5. Odisha and Rajasthan are doing well, with over 90% and 85% of pregnant women receiving PNC care, respectively, lowering maternal mortality. Both states fare poorly in terms of providing care to a newborn who is taken to a healthcare facility within 24 hours of birth. When compared to Rajasthan, Odisha is doing better, having increased its provision of newborn care by 50%. However, when assessed separately, just 1.3 percent and 10.5 percent of new babies in Rajasthan and Odisha, respectively, receive care, which is an exceedingly low ratio.

Table 7 Women and new-born receiving PNC

State	NFHS-4	NFHS-5
Women who receive PNC treatment from any healthcare practitioner within two days of giving birth (%)		
Rajasthan	63.7	85.3
Odisha	73.2	88.4
New-borns who are born at home and sent to a health facility within 24 hours of delivery for a check-up (%)		
Rajasthan	1.2	1.3
Odisha	6.9	10.5

RESULTS…

Table 8 Care during the delivery of a pregnant women

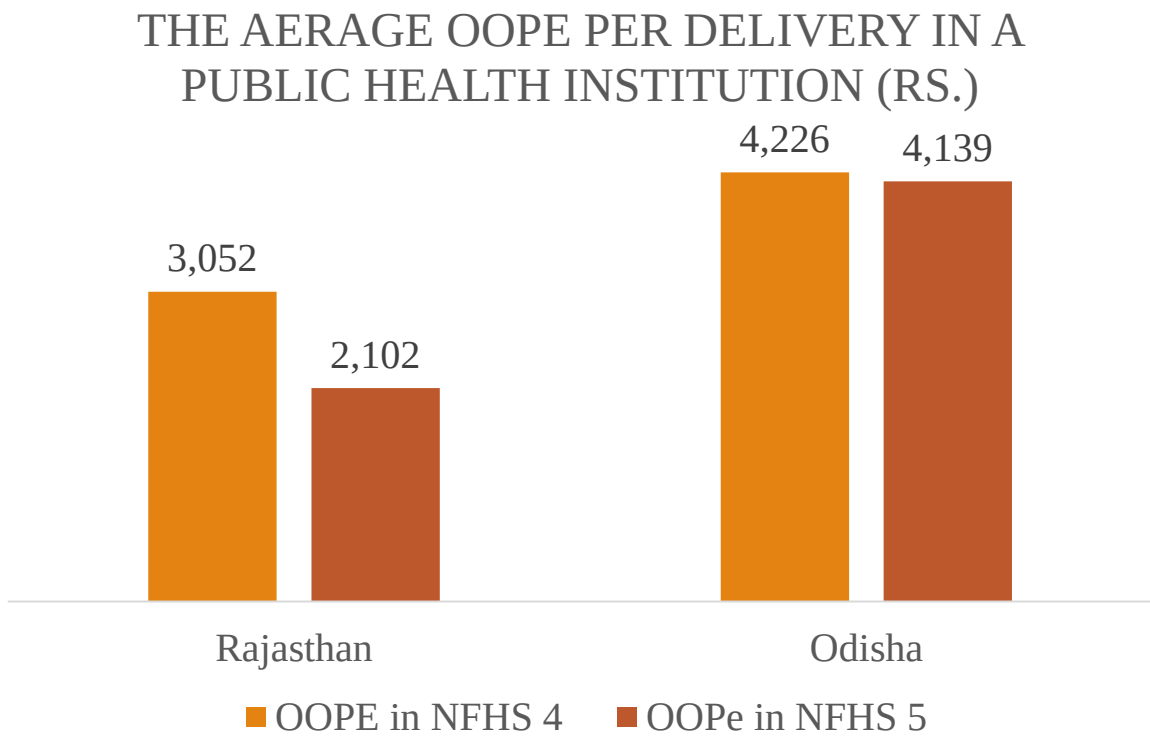
State	NFHS-4	NFHS-5
Institutional deliveries (%)		
Rajasthan	84	94.9
Odisha	85.3	92.2
Institutional births in government facilities (%)		
Rajasthan	63.5	77
Odisha	75.8	78.7
Home births that were carried out by SBA (%)		
Rajasthan	3.2	1.4
Odisha	3.3	1.9
Births that are aided by trained medical personnel (%)		
Rajasthan	86.6	95.6
Odisha	86.5	91.8
Overall deliveries by C-section (%)		
Rajasthan	8.6	10.4
Odisha	13.8	21.6
C-section deliveries in a private setting (%)		
Rajasthan	23.2	26.9
Odisha	53.7	70.7
C-section deliveries in government facilities (%)		
Rajasthan	6.1	7.2
Odisha	11.5	15.3

RESULTS

- The institutional delivery in both Rajasthan and Odisha has accelerated reaching almost 95 percent, as indicated by NFHS-5, in comparison to NFHS-4.
- Home births have been sliced by more than half in Rajasthan, while they have been reduced by nearly half in Odisha from NFHS 4 to 5.
- Almost 95 percent of the deliveries in both states have been aided by SBA resulting in minimizing the complications in delivery.
- Total C-section deliveries have climbed by more than 50 percent in Odisha and by 21 percent in Rajasthan, respectively. Almost three-quarters of C-section births in Odisha are performed in private settings, whereas Rajasthan accounts for only 30 percent, leading to a rise in OOPE in Odisha.
- C-section deliveries in Rajasthan and Odisha are quite low when compared to a private setting which is 7.2 and 15.3 respectively.

RESULTS

According to NFHS-5 figures, Rajasthan fared more fairly than Odisha in providing JSY benefits to pregnant mothers. Rajasthan has much lower OOPE on prenatal and delivery care in public health centers than Odisha, with a 31 percent decrease in OOPE per delivery in a government setting from NFHS 4 to 5. Rajasthan outperformed Odisha by around fifty percent in NFHS 5. Despite the implementation of JSY in Odisha, the OOPE stands at 4,139, which is cause for concern.



CONCLUSION

When compared to NFHS 4 and 5, Rajasthan and Odisha both performed well in terms of maternal health. However, there is still much opportunity for development in several areas. Odisha outperformed Rajasthan in terms of pregnant women obtaining at least four ANC checks, although anaemia rates were higher in Odisha. Despite doing better in terms of the proportion of pregnant women who consume IFA, Odisha scored poorly because of the rise in anaemic pregnant women from NFHS 4 to 5.

It envisions a higher share of institutional deliveries by skilled workers and a reduced number of house deliveries. There is a significant rise in cesarean deliveries in both states but Odisha outnumbered Rajasthan resulting in an increase in OOPE

Some important strategies that play a crucial role in improving maternal health services are health system strengthening, stronger political will, and community mobilization.

RECOMMENDATIONS

- Both states should seek to reduce teen marriages because early marriages may adversely affect both the mother and the newborn, resulting in complications during and after delivery.
- Rajasthan and Odisha need to work to ensure that pregnant women with ANC registration receive a comprehensive ANC package.
- Steps should be taken in reducing anaemia in pregnant women, particularly in Odisha.
- Measures to be taken in improving the mother's postnatal care and care for the newborn child following delivery at home when brought to any medical facility.
- Avoiding unnecessary cesarean section (CS) deliveries can help improve maternal health outcomes.
- Significant steps must be taken to improve the CS deliveries at public health institutions rather than in private institutions in both states, especially in Odisha.

REFERENCES

- Raj P, Gupta N. A Review of the National Family Health Survey Data in Addressing India's Maternal Health Situation. Public Health Rev. 2022;43:1604825.
- Vellakkal S, Fledderjohann J, Basu S, Agrawal S, Ebrahim S, Campbell O, et al. Food Price Spikes Are Associated with Increased Malnutrition among Children in Andhra Pradesh, India. J Nutr. 2015 Aug;145(8):1942-9.
- Vidler M, Ramadurg U, Charantimath U, Katageri G, Karadiguddi C, Sawchuck D, et al. Utilization of maternal health care services and their determinants in Karnataka State, India. Reprod Health. 2016 Jun 8;13 Suppl 1(Suppl 1):37.
- Ali B, Chauhan S. Inequalities in the utilisation of maternal health Care in Rural India: Evidences from National Family Health Survey III & IV. BMC Public Health. 2020 Mar 20;20(1).
- Kumar G, Choudhary TS, Srivastava A, Upadhyay RP, Taneja S, Bahl R, et al. Utilisation, equity and determinants of full antenatal care in India: analysis from the National Family Health Survey 4. BMC Pregnancy and Childbirth. 2019 Sep 5;19(1).
- Ghosh A, Ghosh R. Maternal health care in India: A reflection of 10 years of National Health Mission on the Indian maternal health scenario. Sex Reprod Healthc. 2020 Oct;25:100530.

REFERENCES

- Vellakkal S, Gupta A, Khan Z, Stuckler D, Reeves A, Ebrahim S, et al. Has India's national rural health mission reduced inequities in maternal health services? A pre-post repeated cross-sectional study. Health Policy Plan. 2017 Feb;32(1):79-90.
- Saha R, Paul P. Institutional deliveries in India's nine low performing states: levels, determinants and accessibility. Glob Health Action. 2021 Jan 1;14(1):2001145.
- National Family Health Survey-5 [Internet]. Drishti IAS. Available from: https://www.drishtiias.com/summary-of-important-reports/national-family-health-survey-5-2
- Maternal Mortality Rate (MMR) [Internet]. www.pib.gov.in. Available from: https://www.pib.gov.in/PressReleasePage.aspx?PRID=1697441
- SAMPLE REGISTRATION SYSTEM (SRS)-SPECIAL BULLETIN ON MATERNAL MORTALITY IN INDIA 2018-20 - India [Internet]. Censusindia.gov.in. 2022. Available from: https://censusindia.gov.in/nada/index.php/catalog/44379

Thank you