UTILIZATION OF HEALTH SERVICES AND CONDITION OF REPRODUCTIVE CHILD HEALTH IN MADHYA PRADESH: – A DISTRICT LEVEL ANALYSIS

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Introduction:-

If one goes by the latest human development report of Madhya Pradesh, the state of health in Madhya Pradesh is far from satisfactory. States like Assam, Bihar, Gujarat, Haryana, Karnataka and Kerala have better life expectancy at birth as compared to Madhya Pradesh. Even the state of Bihar which is counted among one of the most backward states in the country, life expectancy at birth for males and females (2001-06) stood at 65.66 years and 64.79 years respectively, much higher than that of Madhya Pradesh. What has been found to be more surprising that while naturally female life expectancy should be more than male life expectancy, it is just the opposite in Madhya Pradesh, pointing towards discriminatory practices against both the girl child and women, leading to higher mortality rate[1]. The Reproductive and Child Health Programme seeks to promote institutional delivery conducted by Skilled Birth Attendants. Promotion of maternal and child health is most important component of the Reproductive and

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[1] Status of Child and Maternal Health in Madhya Pradesh and India:- A Comparative Analysis from NFHS III Report.

Child Health Programme[2]. The Reproductive and Child Health (RCH) interventions that are being implemented by the Government of India (GoI) are expected to provide quality services and achieve multiple objectives. There has been a positive paradigm shift from the method-mix target based activity to client centred, demand driven quality services. The Government of India is making efforts to re-orient the programme and change the attitude of the service providers at the grass-root level, as well as to strengthen the services at the outreach level. In the Northern India, the Reproductive and Child Health facilities are very pure especially in Utter Pradesh, Bihar, Madhya Pradesh and Rajasthan. Madhya Pradesh, only second to Orissa, has highest maternal and infant mortality rate[3]. The reproductive and child health (RCH) quality services package, which is geared towards an improvement in the quality of life having implicit implications for a reduction in infant and maternal mortality.

Statement of Problem:-

The paper is an attempt to examine salient findings of Madhya Pradesh and covered all the districts. The findings of selected indicators of reproductive and child health services and utilisation of health services in Madhya Pradesh are presented in this paper.

Literature Review:-

Since 1997, officially, the RCH approach has been adopted as the national policy of the government of India. The official RCH programmes include the conventional maternal and child

[2] State Programme Implementation plan on Reproductive and Child Health :- Department of Public Health and Family Welfare, Government of Madhya Pradesh, August 2006.

[3] Reproductive and Child Health Project, Rapid Household Survey (Phase I & ii), International Institute for Population Science, 1998-1999.

health services including immunisation of children and contraceptive services to couples, treatment of RTIs and STDs, provision of reproductive health education and services for adolescent boys and girls, screening of women near menopausal age for cervical and uterine cancer and treatment where required. Requirements for contraceptive services were to be based on community needs assessment (CNA) approach wherein all the married couples in the reproductive ages are to be visited every year, their contraceptive services in terms of spacing and limiting of family size to be assessed and the appropriate services to be planned. The targets are to be replaced by "expected goals or requirements" and the service delivery to be planned accordingly. Per capita expenditure on RCH programme is very low in Madhya Pradesh[4].

Infant and child mortality remain among the highest in India. Indeed, the infant mortality rate in Madhya Pradesh is 27 percent higher than the corresponding all-India rate of 68 per 1,000 live births, and the under-five mortality rate is 45 percent higher than the corresponding all-India rate of 95 per 1,000 live births. Further, most children in Madhya Pradesh, irrespective of their background characteristics, have a much higher risk of dying before age one than in the country as a whole. The risk of dying is exceptionally high for children from households with a low standard of living, children from scheduled-caste or scheduled-tribe households, rural children, and for children whose mothers are illiterate. Only children who live in the urban areas of Madhya Pradesh, children whose mothers have completed at least high school, and children who live in households with a high standard of living have a lower risk of dying before reaching the age of one than children in the country as a whole. In Madhya Pradesh, boys have a higher risk of dying than girls only in the first month of life; thereafter, girls face a much higher risk of

[4] Srinivasan, K; Shekhar, Chandra; Arokiasamy, P. (2007): "Reviewing Reproductive and Child Health Programmes in India", Economic and Political Weekly, July 14, 2007.

dying during childhood. Based on a weight-for-height index (the body mass index), more than one-third (38 percent) of women in Madhya Pradesh are undernourished. Nutritional deficiency is particularly serious for women in rural areas and women in disadvantaged socioeconomic groups. Most households in Madhya Pradesh (63 percent) go to private hospitals or clinics or private doctors for treatment when a family member is ill. Only 34 percent normally use the public medical sector. Even among rural or poor households, only about one-third normally use the public medical sector when members become ill[5].

The state Madhya Pradesh has adopted the Reproductive and Child Health Programme (RCH) launched by Government of India (GoI) in 1996-97 in the country to provide quality services in the health sector and achieve multiple objectives. The program has ushered a positive paradigm shift from method oriented, target based services to providing client centered, demand driven quality services. A step further National Rural Health Mission (NRHM, 2005) the latest endeavour of GoI outlines its objective "to promote equity, efficiency, quality and accountability of public health services through community driven approaches, decentralization and improving local governance". Reduction in Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR), and Total Fertility Rate (TFR) along with universal access to public health services such as women and child health, providing water, sanitation and hygiene, immunization, and nutrition services and promoting access to improved healthcare at household level is the principle focus of this programme. Accredited Social Health Activist (ASHA), a community level worker has been identified to provide vital linkages in the health sector. Partnership with NGOs and private sectors also an important feature of the new programme. Health is a function of not only medical

[5] Fact Sheet, Madhya Pradesh, National Family Health Survey, 1998-99.

care but is an integral part of the developmental process of the society. It is not possible to raise the health status and quality of life of the people unless such efforts are integrated with the wider efforts to promote overall well being of the society (Basu, 1992). Compared to the country as a whole, level of education and age at marriage, particularly among women are much lower in Madhya Pradesh. The knowledge and use of family planning methods is low in this state. The nutritional status of women and children is also poor. Within the state the state the socio demographic status of SC and ST population is lower than others in the state. More specifically there is a need to undertake a region specific study of the health of SC and ST women, which will make planning for their welfare more successful[6].

Objective:-

- To study the district wise utilisation of various RCH services like antenatal, natal and post-natal care.
- To examine the immunisation status among children in different district.
- To study the reproductive morbidity in different district.
- To find out the variation in the utilization of health services and reproductive and child health status among the districts.

Data Base:-

- For the state level analysis data is taken from National Family Health Survey-3 (NFHS-3, 2005-06) for the state Madhya Pradesh to highlight the RCH status.

[6] Parchure, Nikhilesh and Basu, Reena (2007): "Differentials in Reproductive and Child Health Status of Underprivileged Population Groups in Madhya Pradesh", Paper Contributed for 'Bhopal Seminar- Contemporary Issues in Population and Health', 17-19 January, 2007, Organised by Shyam Institute, Bhopal.

- For district level comparisons data has been obtained from District Level Household Survey (DLHS-III, 2007-08). DLHS-3 carried out during 2007-08 was designed to collect data at district level on various aspects of health care utilization for Reproductive & Child Health (RCH), accessibility of health facilities, assess the effectiveness of ASHA and JSY in promoting RCH care, to assess health facility capacity and preparedness in terms of infrastructure of DLHS-3. The broad objective of DLHS-3 is to provide RCH outcome indicators at the district level in order to monitor and provide corrective measures to the NRHM. The other important objective being, to assess the contribution of decentralization of primary health care at the district level and below by way of involving village health committees under the Panchayats in implementation of health care programmes.

Methodology:-

- Binary Logistic Regression for dichotomous variables.
- Other quantitative tools & techniques.

Analysis:-

Maternal health care package for antenatal care is the main programme of NRHM to strengthen RCH care. ANC provided by a doctor, an ANM or other health professional comprises of physical checks, checking position and growth of foetus and giving TT injection at periodic intervals during the time of pregnancy. At least three check-ups are expected to complete the course of ANC to safeguard women from pregnancy related complications. Institutional delivery and post-natal care

in a health facility is promoted in NRHM through the Janani Suraksha Yojana (JSY) to avert maternal deaths.

In rural areas, the government delivers reproductive health and other health services through its network of Sub-Centres (SCs), Primary Health Centres (PHCs) and other health facilities. In addition, pregnant women and children can get services from private maternity homes, hospitals, private practitioners, and in some cases non-governmental organisations (NGOs) and trust hospitals. In urban areas, reproductive health services are available mainly through government or municipal hospitals, Urban Health Posts (UHPs), Urban Family Welfare Centres (UFWCs), hospitals and nursing homes operated by NGOs, and private nursing and maternity homes.

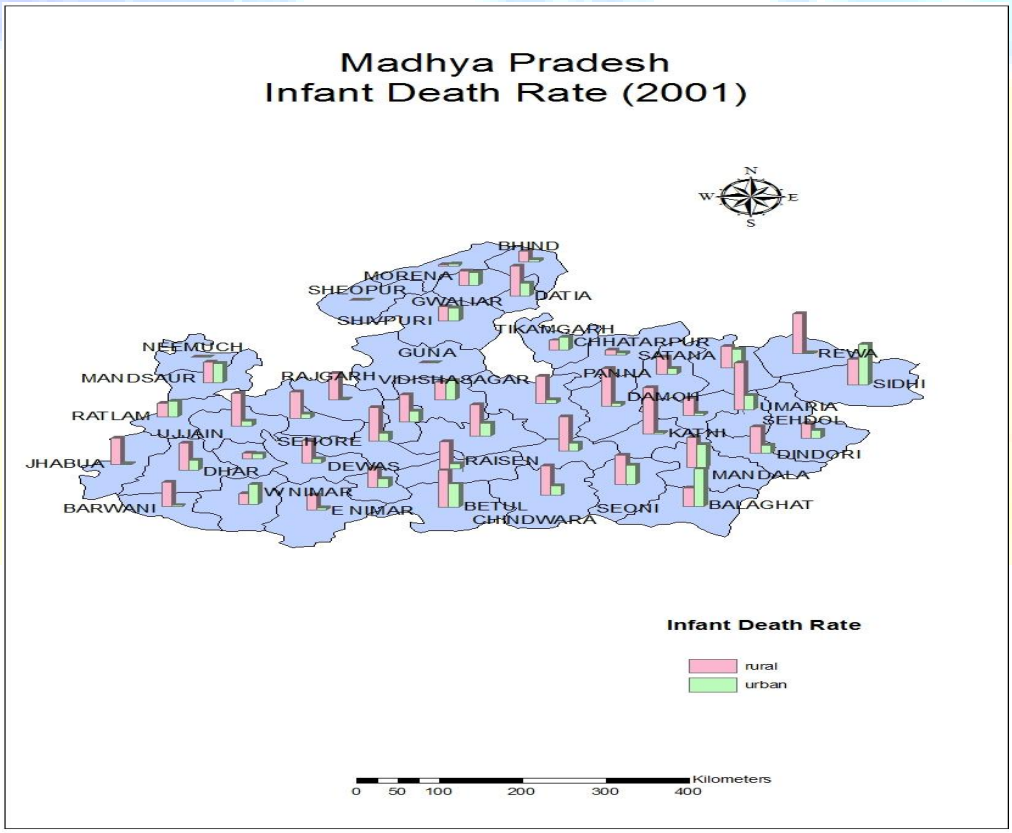


Fig:-1

Antenatal care (ANC): Ideally antenatal-care should monitor pregnancy for signs of complications, detect and treat pre-existing and concurrent problems of pregnancy, and provide and advise counselling on preventive care, diet during pregnancy, delivery care, and postnatal care. The RCH programme recommends that as part of complete ante-natal care, women receive two doses of tetanus toxoid vaccine, adequate amounts of iron and folic acid tablets or syrup to prevent and treat anaemia, and at least three antenatal checkups that include taking of weight, and blood pressure checkups (Ministry of Health and Family Welfare, 1997). All checks and examinations recommended for ANC are not availed by some women who had ANC during pregnancy. Antenatal check-ups are more common among younger women age below 35 years than among older women, and it is more common among those women who had given their first birth.

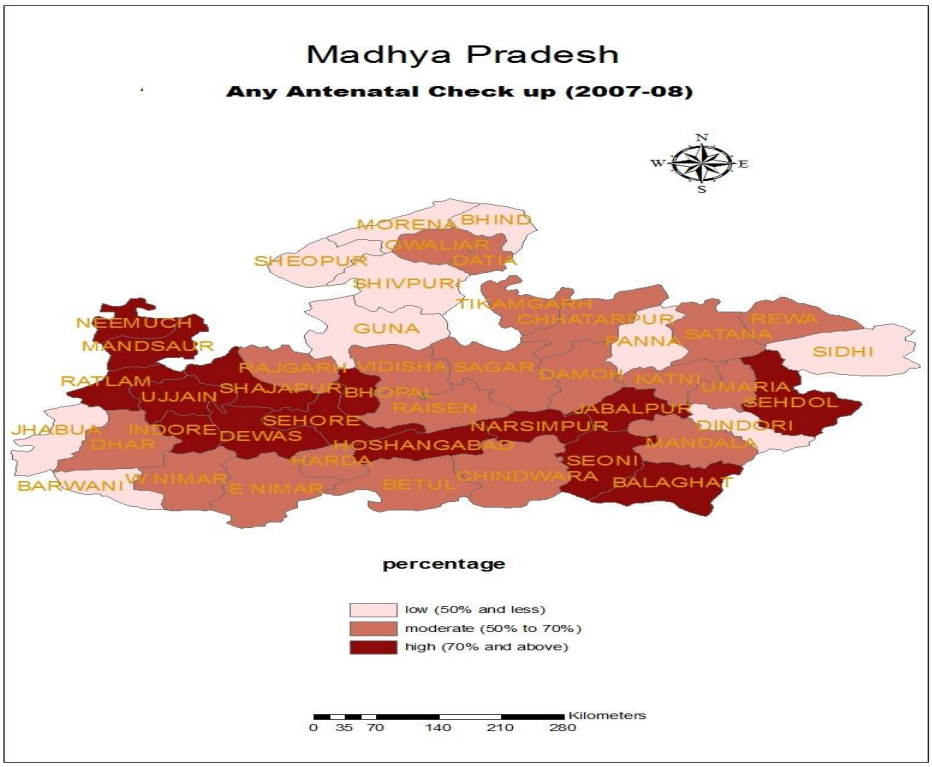


Fig:-2

The proportion of women who received antenatal check-ups from a doctor, increased steadily with the level of education and the standard of living index. Women who either do not take ANC or take an incomplete course of ANC are exposed to the risk of maternal death. In India, the Reproductive and Child Health Programme includes all pregnant women to get registered in the first 12-16 weeks (Ministry of Health and Family Welfare, 1997). Accordingly the first antenatal check-ups should take place at latest during the first trimester of the pregnancy. It also includes the provision of at least three antenatal care visits, of at least one tetanus toxoid injection, and supplementary iron in the form of IFA tablets daily for 100 days. To assess whether the women had received all the care during pregnancy, information was collected regarding number of antenatal visits, timing of the first visit, received tetanus toxoid injection and supplement iron folic acid tablets.

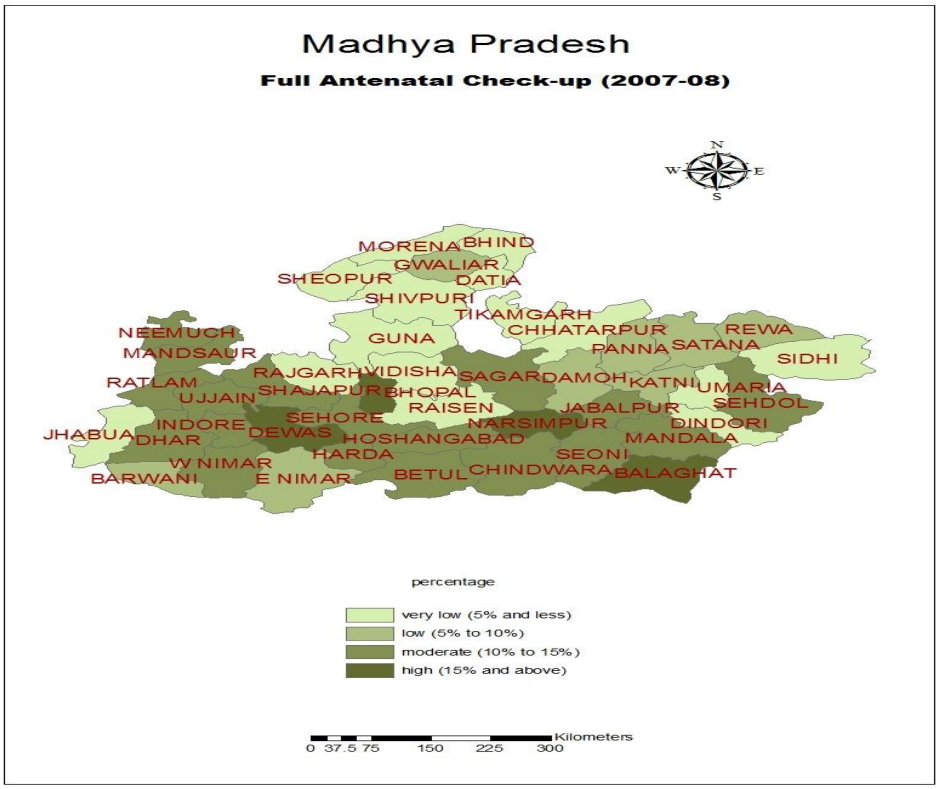


Fig: - 3

The percentage of women who received full antenatal care, (that is, at least three antenatal check-ups, and at least one tetanus toxoid injection and supplementary iron in the form of IFA tablets daily for 100 days as recommended by the RCH programme,) has been presented in Fig:3. Only six percent of women in Madhya Pradesh received full antenatal care. Coverage of full antenatal care is further low for non-literate women, women with higher parity, Hindu and Muslim women, women from scheduled caste and tribe, women with a low standard of living, and women from those villages where health facilities are not available. Full antenatal coverage was also lower in rural areas (4 percent) than in urban areas (13 percent).

Table 1:-Binary Logistic Regression analysis for Child's safe birth with Pre-Natal care in Madhya Pradesh, 2007-08

Under supervision or Attendance (ref. no)	B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
							Lower	Upper
Doctors	.722	.242	8.862	1	.003***	2.058	1.280	3.309
nurse/mid wife	.575	.229	6.305	1	.012**	1.778	1.135	2.786
Other health personal	-.560	1.060	.278	1	.598	.571	.072	4.566
anganwadi/ICDS workers	-.173	.350	.245	1	.621	.841	.423	1.671
DAI/TBA	1.428	1.017	1.973	1	.160	4.171	.569	30.583
Constant	2.557	.189	182.779	1	.000	12.894		

***= high significant, **=moderately significant

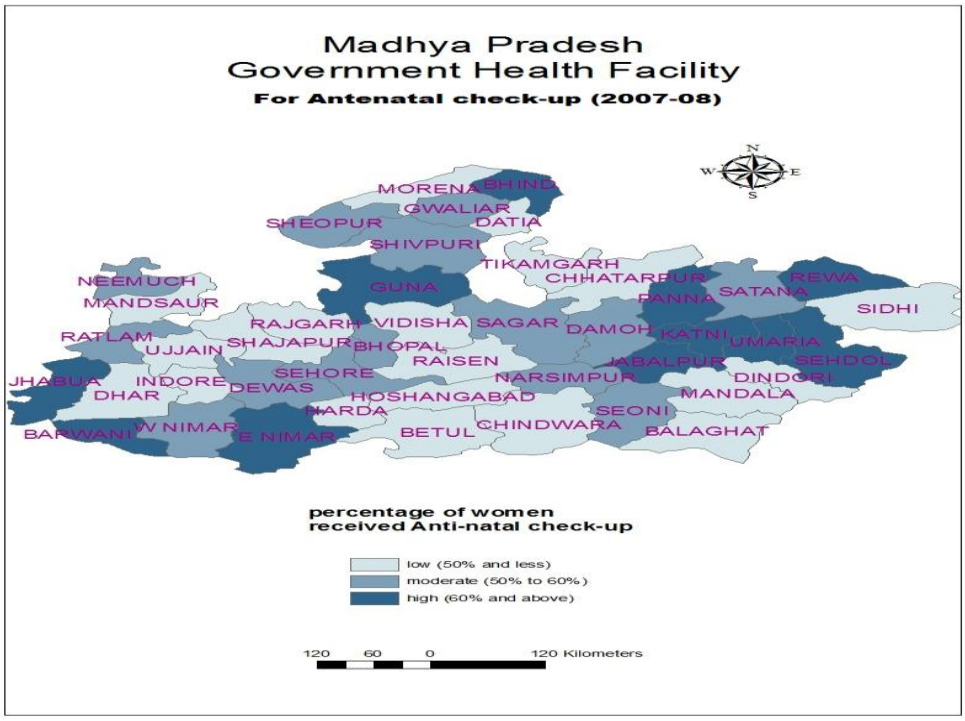
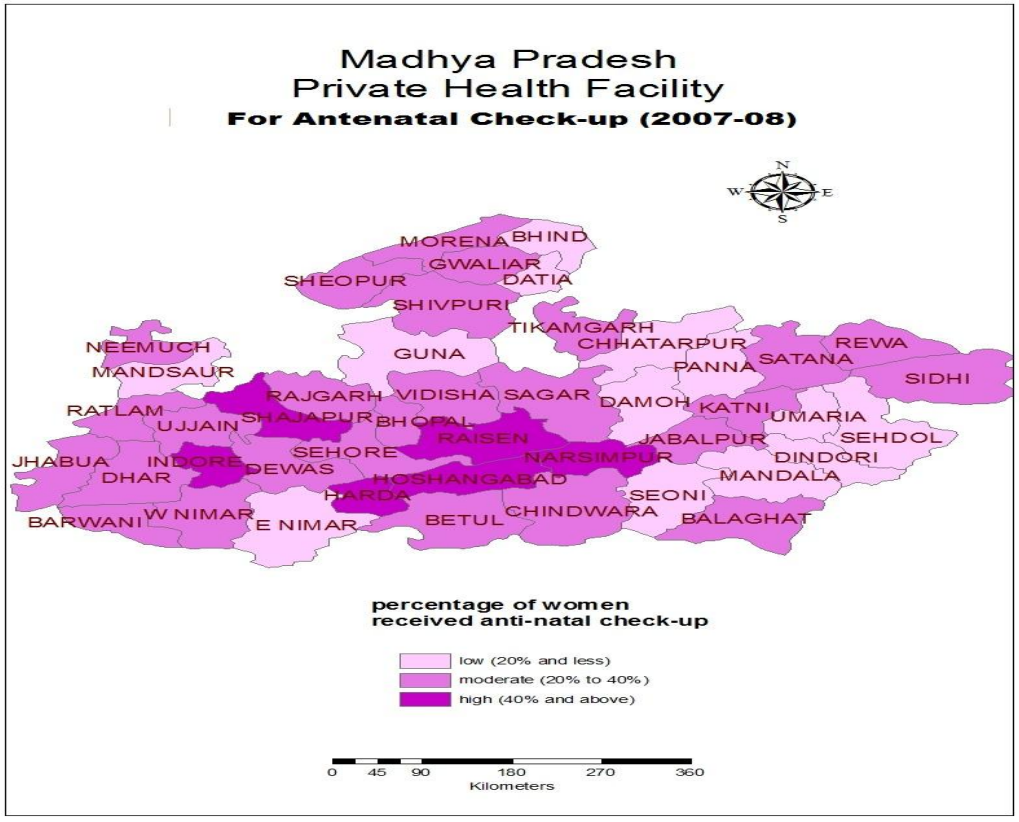


Fig:-4

From table 1, we get to know that in case of doctors attendance during the prenatal period has high significant effect on the safe delivery of the child. That means the child birth is more likely safe when the mother has been taken care under the supervision of doctor when reference period is negative response in that case. In case of mothers who were attended or supervision during prenatal period under nurse or mid-wife, have moderately significant effect of the safe birth of their child. From the table 1, it can be interpreted that safe child birth is more likely happened when mothers were attended or super visioned under mid-wife/nurse during the prenatal period. All other variables like attendance by Anganwari workers, other health personals during prenatal period, having insignificant effect on safe child birth.


Madhya Pradesh
Private Health Facility
For Antenatal Check-up (2007-08)
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BHIND
GWALIAR
SHEOPUR
DATIA
SHIVPURI
TIKAMGARH
CHHATARPUR
REWA
NEEMUCH
GUNA
PANNA
SATANA
MANDSAUR
SIDHI
RAJGARH
VIDISHA
SAGAR
DAMOH
KATNI
RATLAM
UJJAIN
SHAJAPUR
BHOPAL
UMARIA
RAISEN
JABALPUR
SEHDOL
JHABUA
INDORE
SEHORE
NARSIMPUR
DINDORI
DHAR
DEWAS
HOSHANGABAD
MANDLA
HARDA
SEONI
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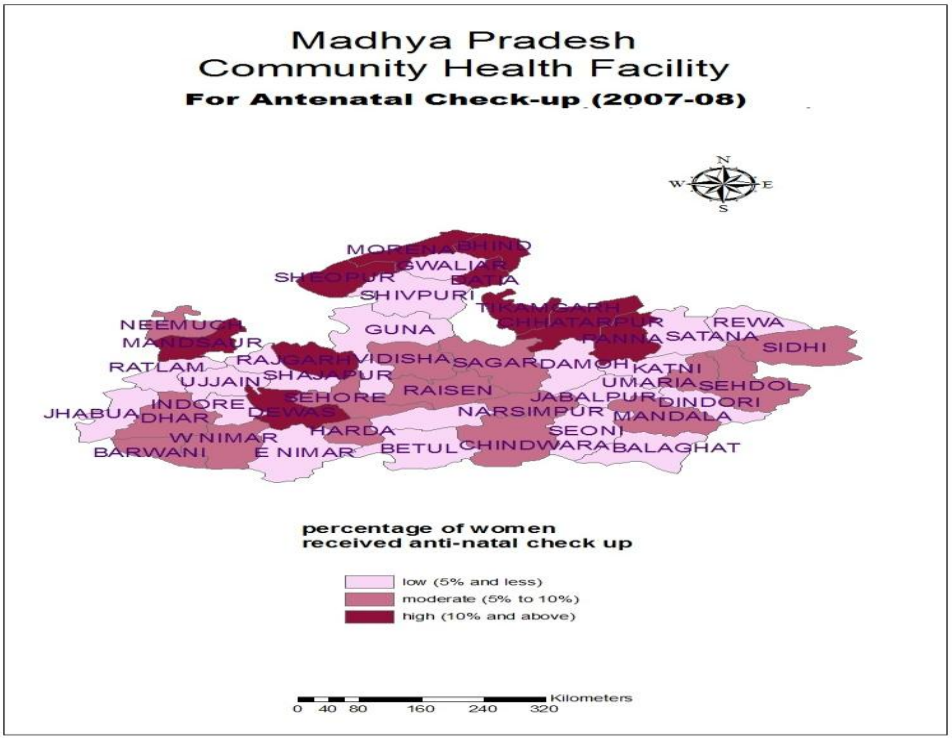
CHINDWARA
BARWANI
E NIMAR
BETUL
BALAGHAT
percentage of women
received anti-natal check-up
low (20% and less)
moderate (20% to 40%)
high (40% and above)
0 45 90 180 270 360
Kilometers

Fig:-5


Madhya Pradesh
Community Health Facility
For Antenatal Check-up (2007-08)
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SHIVPURI
NEEMUCH
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RATLAM
UJJAIN
SHAJAPUR
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UMARIA
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CHINDWARA
BALAGHAT
percentage of women
received anti-natal check up
low (5% and less)
moderate (5% to 10%)
high (10% and above)
0 40 80 160 240 320
Kilometers

Fig:-6

Table 2:- Binary Logistic Regression analysis of safe child birth with place of Antenatal care in Madhya Pradesh, 2007-08

Antenatal care(ref. no)	B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
							Lower	Upper
own home	.401	.406	.975	1	.323	1.494	.674	3.312
other home	18.338	4.019E4	.000	1	1.000	9.209E7	.000	.
parents home	17.967	5.838E3	.000	1	.998	6.354E7	.000	.
govt./municipal hospital	.149	.401	.138	1	.710	1.161	.529	2.546
govt. dispensary	18.156	1.108E4	.000	1	.999	7.671E7	.000	.
UHC/UHP/UFWC	18.207	1.788E4	.000	1	.999	8.076E7	.000	.
CHC/Rural hospital/PHC	.076	.494	.024	1	.877	1.079	.410	2.841
sub-centre	.039	.593	.004	1	.947	1.040	.325	3.325
Anganwari/ICDS centre	-.038	.396	.009	1	.923	.962	.443	2.092
other public centre	-1.766	1.220	2.095	1	.148	.171	.016	1.869
private hospital/maternity home	.839	.411	4.176	1	.041**	2.315	1.035	5.179
Village clinic by ANM	-.799	1.093	.535	1	.464	.450	.053	3.827
NGO/Trust hospital/clinic	18.177	9.620E3	.000	1	.998	7.841E7	.000	.
Constant	2.865	.394	52.878	1	.000	17.543		

**=moderately significant

From the table2, we get to know that private hospital or maternity homes having moderate significant effect on the safe birth of child. That means child birth is more likely possible in private hospitals or maternity homes when antenatal care is taken in private hospitals or maternity centres when reference period is taken as no response on that case.

All other antenatal centres having insignificant effect on safe child birth like own home, other home, govt. hospitals, NGO clinic etc.

Delivery and Delivery Care: An important thrust of RCH programme is to encourage deliveries under proper hygienic conditions under the supervision of a trained health professional if delivery takes place at home and to encourage institutional deliveries.

In Madhya Pradesh, the institutional delivery had increased from 22 percent in DLHS-1 (1998-99) to 28 percent in DLHS-2 (2002-04) to 47 percent in DLHS-3 (2007-08). Compared to delivery in a private health facility, deliveries in a government health facility are more common in most of the districts of Madhya Pradesh.

Institutional deliveries are more common among women who had four or more antenatal check-ups (60 percent) than among those who had fewer antenatal check-ups (22-31 percent).

Institutional deliveries are least prevalent among births to women who did not receive any antenatal check-ups (10 percent). Institutional deliveries, particularly in private health facilities, increase sharply with education and the standard of living.

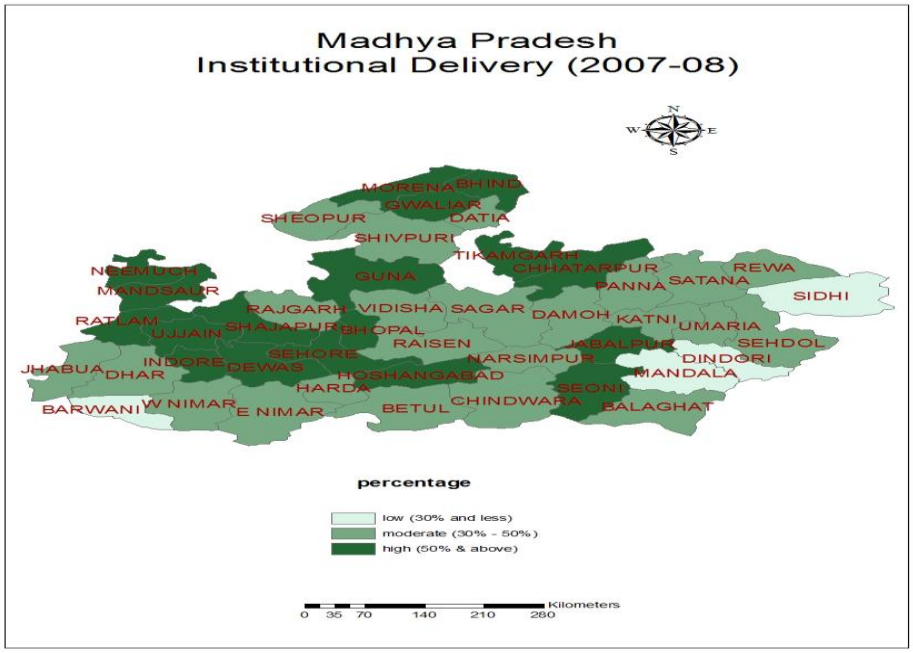


Fig:-7

The percentage of institutional delivery ranges from 13.2 percent in Dindori to 79.7 percent in Indore, and is presented in Fig:-7.

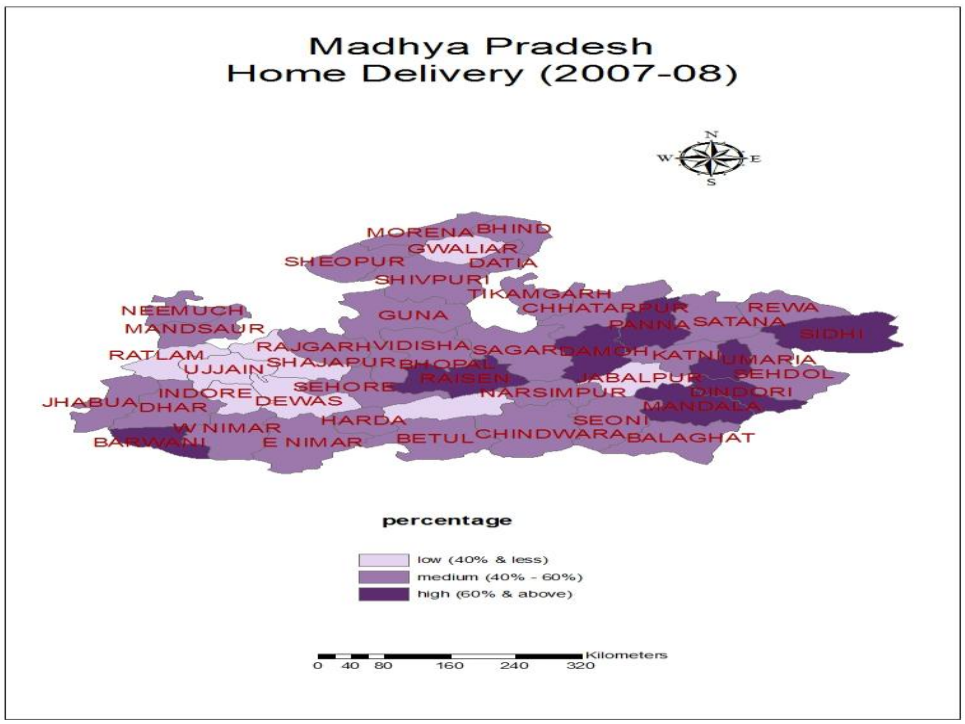


Fig:-8

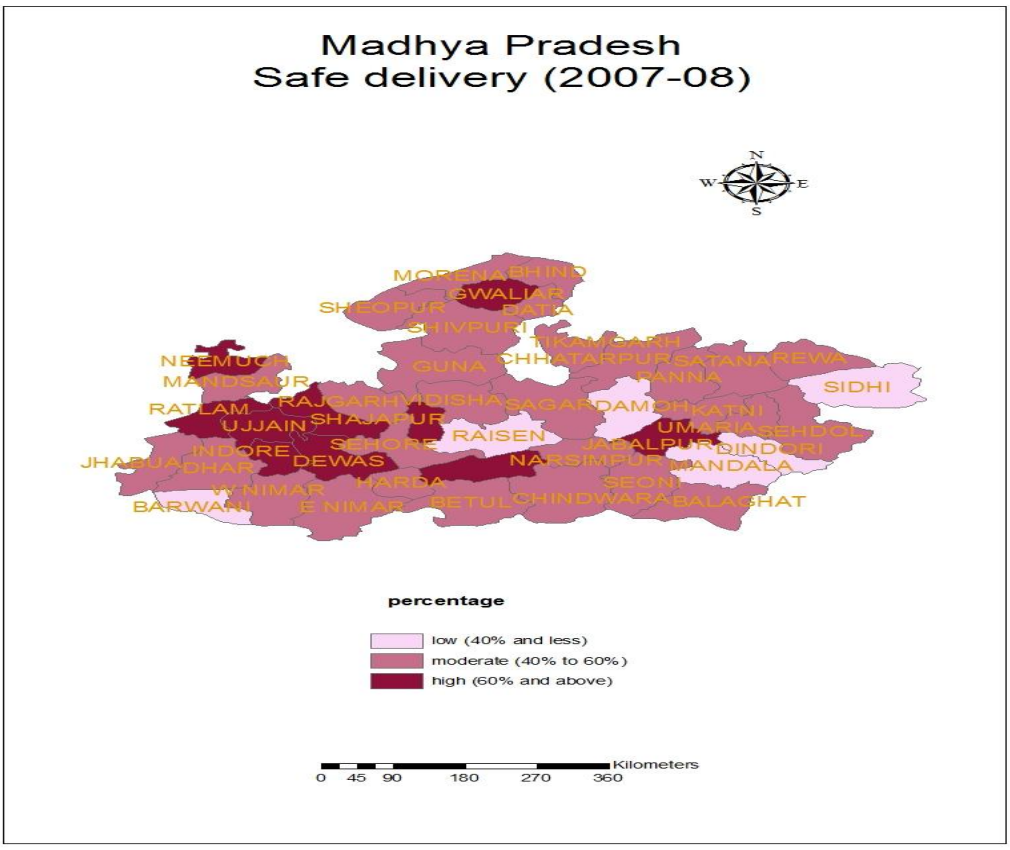


Fig:-9

The percentage of safe delivery is 84.7 percent in Indore and 71.8 percent in Shajapur respectively. In Bhopal, Neemuch, Ratlam, Jabalpur, Hoshangabad, Gwalior, Dewas, and Ujjain, it ranges from 60.8-69.6 percent, in 13 districts safe delivery were more than 50 percent. In 22 districts safe deliveries were less than 50 percent and in Dindori it was 15.6 percent.

Full immunization of children: The vaccination of children against six serious but preventable diseases (tuberculosis, diphtheria, pertusis, tetanus, poliomyelitis, and measles) has been a cornerstone of the child health care system in India. As part of the National Heath Policy, the national immunization programme is being implemented on a priority basis. The government of India has made several efforts to provide free vaccination. The Universal Immunization

Programme was introduced in 1985-86 with the objectives to cover 85 percent of the children against the six killer diseases by 1990. Pulse Polio Immunization Campaign began in 1995 as part of a major national effort to eliminate Polio.

The coverage of full immunization, decreased from DLHS-1 to DLHS-2 (48 percent to 30 percent) but it had increased slightly to 36 percent in DLHS-3. Child health services under the Reproductive and Child Health (RCH) programme include health education to mothers on breast-feeding and services for immunization, Vitamin A supplements and Iron prophylaxis, treatment of diarrhoea and Acute Respiratory Infections (ARIs).

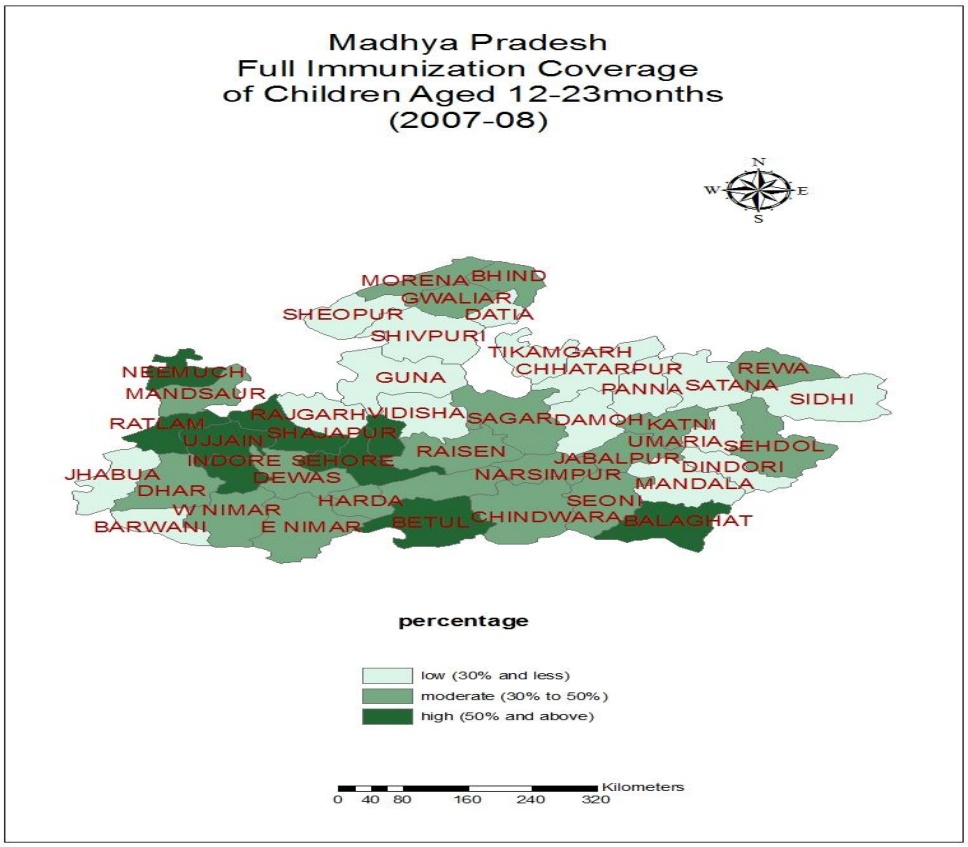


Fig: - 10

The coverage of full immunization of children is below 50 percent in 35 districts out of 45 districts in Madhya Pradesh, and it is more than 70 percent in Indore (70.5 percent) and Balaghat (70.8 percent) districts. As regards the place of immunization, 4.4 and 7.6 percent of children received immunization from a Sub-Centre and Primary Health Centre (PHC) respectively and about 78.8 percent from other government health facility. The key to improvement in full immunization coverage is to monitor drop out at any stage of vaccination before completion of full course of immunization. The differentiation in coverage of the Vaccination is marginal with the sex of the child.

Contraceptive Use: - The new approach to family welfare after the introduction of RCH is target free promotion of contraceptive use among eligible couples, the provision to couples of a choice of contraceptive methods (including condoms, oral pills, IUD and male and female sterilization). The Madhya Pradesh Government in its population policy aims at reaching replacement level fertility in 2011 and thereby achieves population stabilization by providing good quality of RCH services of which family planning service is an integral part.

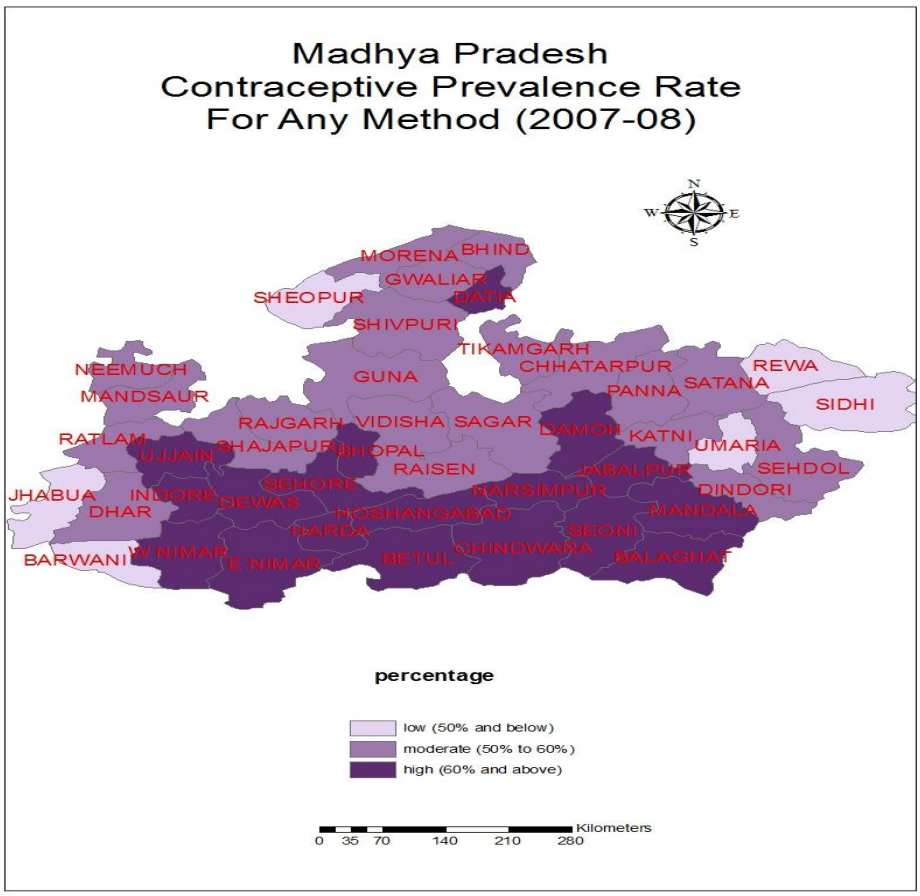
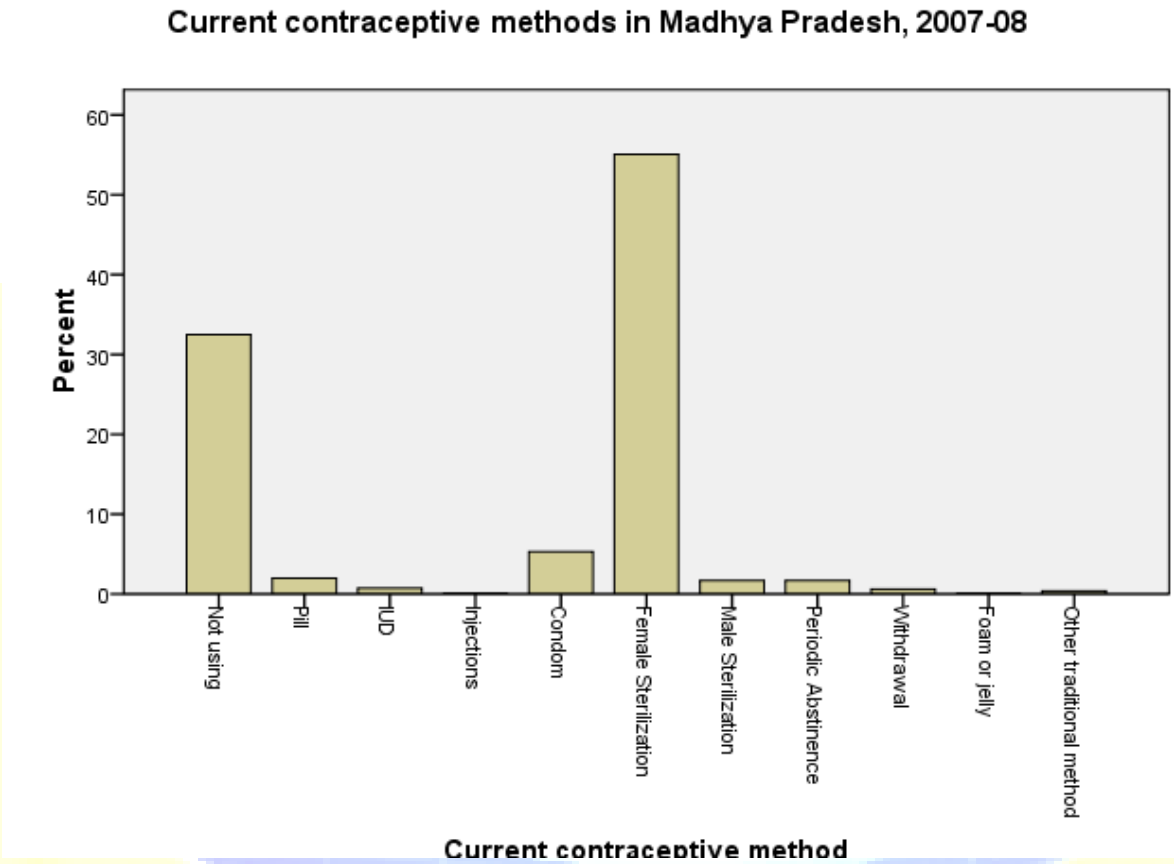
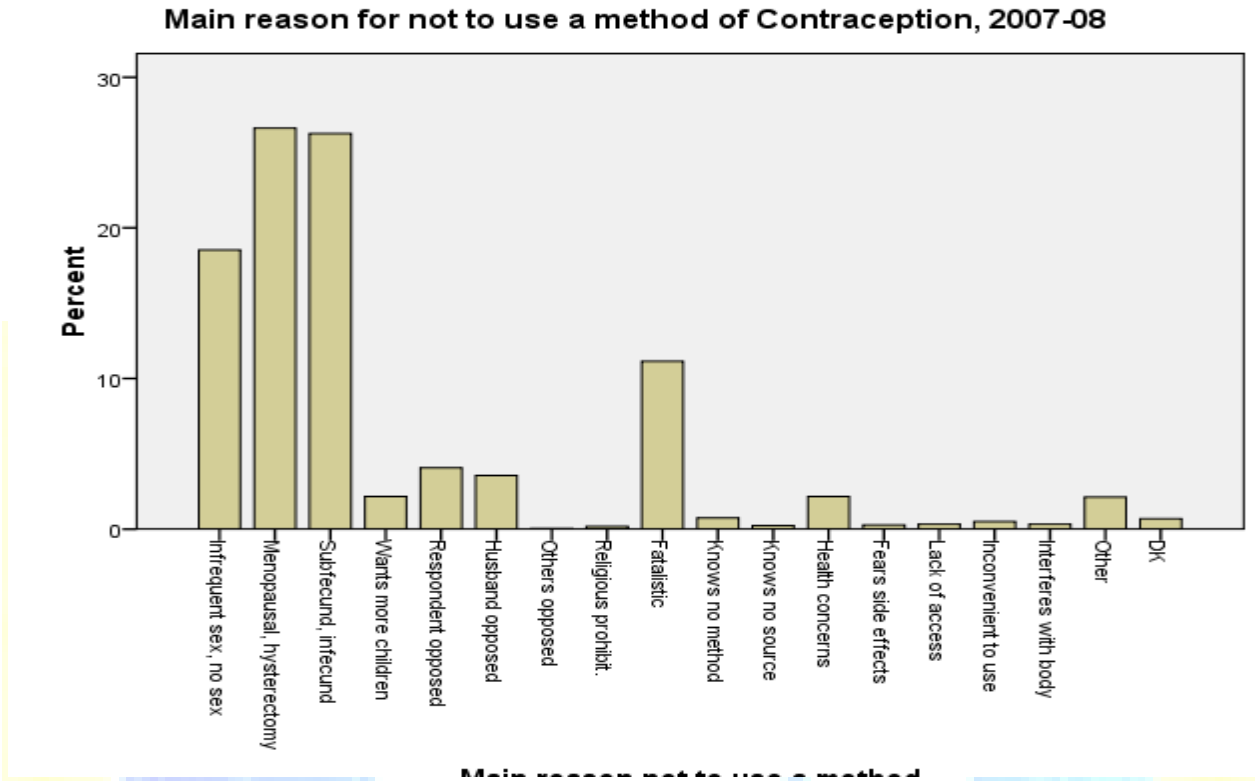


Fig:-11

To achieve population stabilization and promote healthy married life, NRHM promotes contraceptive use on voluntary basis through a comprehensive package of improved accessibility and incentive programme. There is near universal awareness of sterilization for limiting and IUD, Pills and Condom for spacing of children among ever married and currently married women in Madhya Pradesh.



Contraceptive prevalence rate (CPR) for any modern method ranges from 41.1 to 59.6 percent in 31 districts and it is more than 60 percent in Sehore, Harda, Mandla, Indore, Betul, East Nimar, Seoni, Hoshangabad, Ujjain, Jabalpur, Dewas, Narsimhapu, West Nimar, Damoh. The prevalence of female sterilization in the 23 districts, namely Sidhi, Bhopal, Sheopur, Chhatarpur, Shivpuri, Jhabua, Rewa, Rajgarh, Umaria, Morena, Gwalior, Satna, Bhind, Vidisha, Shahdol, Raisen, Guna, Barwani, Neemuch, Sagar, Katni, Panna, Mandsaur are below the state average (47.1 percent).



Reproductive Health and Awareness of RTIs/STIs:- An integrated agenda of NRHM is to promote awareness and knowledge on RTIs/STIs and HIV/AIDS and to make health facilities accessible for checking and treatment seeking to ensure healthy sexual life, free from fatal infection. One of the important components of the Reproductive and Child Health Programme is to have a healthy sexual life without any fear of contracting disease. With this approach the RCH programme places a lot of emphasis on promoting and encouraging healthy sexual behaviour among couples through various Information, Education and Communication (IEC) activities. Health workers are also expected to educate women and men about Reproductive Tract Infections (RTIs) and Sexually Transmitted Infections (STIs) and motivate those people with RTI/STI problems to seek medical help. The DLHS-RCH has

made an attempt to collect information on awareness and prevalence of RTI/STI. Apart from this, information on knowledge of HIV/AIDS, source of information and way of avoiding AIDS were also collected.

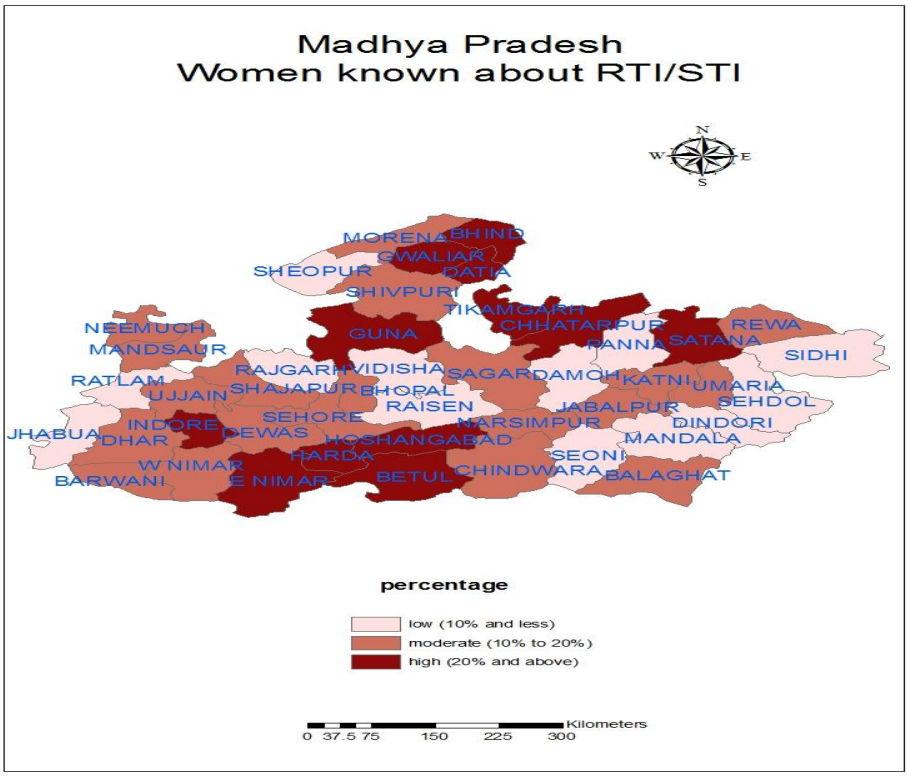


Fig:-12

Adequacy of Health Services for RCH:- Madhya Pradesh is a state characterized by large stretches of remote inaccessible areas, physically scattered settlements, sparsely populated, and difficult and inaccessible terrain. Therefore the health sector must be adequately equipped to provide services in outreach and inaccessible areas. Infrastructure facilities indicates basic support system in the form of a proper and regularly maintained building, with basic facilities like adequate supply of water, overhead tank for water storage, electricity, Operation Theatre (OT), OT for separate gynaecological operations which any institution must have for its smooth functioning.

Table 3:- Binary Logistic Regression of safe child birth with some of the socio-economic indicators in Madhya Pradesh, 2007-08

	B	S.E.	Wald	df	Sig.	Exp(B)
Hindu (ref.)			6.742	5	.241	
Muslim	.539	.355	2.307	1	.129	1.715
Christian	17.831	2.001E4	.000	1	.999	5.547E7
Sikh	18.087	1.201E4	.000	1	.999	7.166E7
Buddhism	-1.897	.899	4.453	1	.035**	.150
Jain	17.779	7.106E3	.000	1	.998	5.266E7
poorest (ref.)			9.833	4	.043	
poor	.002	.184	.000	1	.993	1.002
middle	.682	.286	5.669	1	.017**	1.977
richer	.388	.255	2.310	1	.129	1.474
richest	.720	.336	4.595	1	.032**	2.055
illiterate (ref.)			3.421	5	.635	
incomplete primary	-.296	.282	1.103	1	.294	.744
complete primary	.072	.349	.042	1	.837	1.075
incomplete secondary	.205	.463	.196	1	.658	1.227
complete secondary	.880	.854	1.062	1	.303	2.411
higher	.572	.648	.779	1	.377	1.772
can not read (ref.)			.070	3	.995	
read only part of sentence	.091	.364	.063	1	.802	1.096
read whole part of sentence	.075	.419	.032	1	.858	1.078
no card of language	18.160	2.319E4	.000	1	.999	7.704E7
S.C (ref.)			1.341	3	.719	
S.T	.821	1.156	.505	1	.477	2.273
OBC	.120	.197	.370	1	.543	1.127
Others	-.080	.263	.092	1	.761	.923
caste (ref.)			.522	2	.770	
tribe	-.835	1.155	.522	1	.470	.434
no caste/tribe	15.511	1.469E4	.000	1	.999	5.449E6
girl child (ref. boy child)	-.112	.144	.599	1	.439	.894
Constant	2.220	.200	122.917	1	.000	9.208

**=moderately significant

The table 3 shows all the correlates of safe child birth with all the socio-cultural indicators in Madhya Pradesh in 2007-08. In case of religion, only Buddhism has moderately significant effect on safe child birth with the reference of Hindu. That means in Buddhism, safe child birth is more likely happened. In case of wealth index, with reference to poorest, middle and richest people having more likely safe child birth but the effect is moderately significant. All the other factors are insignificant in case of child birth.

Conclusion:-

Madhya Pradesh is an EAG state with more than half its people having a low standard of living, nearly half the girls marry below 18 years of age that is the legal age. Hardly one third women have safe delivery and child vaccination status has gone down from the previous years. Birth order 3 and above occurred to nearly half the women. Contraceptive use is also not very high in the state. Reproductive morbidity is found high in all segments irrespective of caste. On the other hand infrastructure facilities, staff and supply of essential items is poor. The under-privileged sections are even more deprived of essential health services. Hardly, one-fourth of its people have drinking water and toilet facilities within their premises. The state faces a formidable challenge ahead to reach out to this segment of unserved and underserved population. ASHA services initiated under NRHM can provide a vital linkage at the local level between the community and the health worker. The state is judged by the wellbeing of its people, as reflected in levels of health, nutrition and education and the provisions made for the vulnerable and the disadvantaged. The people of Madhya Pradesh can be its greatest asset if they are provided with a means to lead a healthy and economically productive life.

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