

TRANSFORMING RURAL HEALTH CARE: EVIDENCES FROM NRHM IN MEGHALAYA

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ABSTRACT

Following ICPD recommendations, the government of India started the process of reorienting the family planning and MCH programme into a new programme called the Reproductive and Child Health Programme (RCH). The programme was officially launched in 1997. The programme integrates all interventions of fertility regulation, maternal and child health with reproductive health of both men and women. The National Population Policy was also announced in the year 2000 with the immediate objective to address the unmet needs for contraception, health care infrastructure, health personnel and to provide integrated service delivery for basic reproductive and child health care. The NPP 2000 provides a policy framework for advancing goals and prioritising strategies to meet the reproductive and child health needs of the people of India and to achieve net replacement levels (Total Fertility Rate) by 2010. In this paper an attempt has been made to explore the maternity and health status of tribal women in Meghalaya after implementation of NRHM and to study the health infrastructure facilities in terms of NRHM mission and the services utilised by the tribal women.

Keywords: ICPD, RCH, NPP, National Rural Health Mission

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INTRODUCTION

India especially rural India is unique in itself. Most of the people of India live in rural areas and are caught by multitudes of problem. Of them health problem poses an immediate challenge. Successive governments have failed to ensure and implement health policy and programmes in a comprehensive and holistic manner in rural areas. There has been significant extension in health infrastructures in urban areas. The achievements in the field of health appears significant, yet it must be stressed that survival rates in India are comparable even today only to the poorest nations of sub-saharan Africa. Of 25 million children born in India every year, nearly 2 million die before reaching the age of one, and most of these deaths are avoidable. Many are disabled or blinded by polio, vitamin A deficiency and malnutrition. Tuberculosis, a preventable and curable disease, still claims 5 lakh lives each year, specially those who are in conditions of acute poverty and deprivation. Waterborne and water related diseases like diarrhoea, typhoid, cholera and infectious hepatitis account for 80 percent of India's health problems, and every fourth person dying of such diseases is an Indian. Every third person in the world suffering from leprosy is an Indian. Even thousands die of medically preventable and curable diseases. This reflects the extent of degradation of our public health services.

Government and private sector studies estimate the sector is growing by 30% annually and could net up to US\$2 billion by 2012. But that doesn't really help Indian residents without means. WHO figures indicate that nearly 1.8 million people develop tuberculosis each year in India, and of those, 800 000 contract an infectious form of the disease. About 330 000 die annually. The Journal of the Association of Physicians of India dubbed the country "the diabetes capital of the world," after noting that 41 million Indians have the disease and "every fifth diabetic in the world is an Indian." The journal also noted in an editorial that 20 million Indians are "either obese or abdominally obese with children being the prime targets." The other challenges are oropharyngeal, cervical or breast cancer, as well as problems like "cataract, iodine deficiency disorder, arsenic contamination in water, anemia, malnutrition and other non-communicable conditions."

The poor performance of the Indian Public Health System is widely acknowledged. Analysts have attributed this failure to a number of factors, which include almost all the components that make a system functional, i.e. infrastructure, human resources, logistics, and participation of the community. However, some attribute this failure primarily to low and declining public investment in healthcare and secondarily to structural and managerial

weaknesses in the system. After groping with the challenges for decades, the planners have come up with a comprehensive mission-oriented approach to revamp the rural healthcare delivery system, which was aptly named as National Rural Health Mission (NRHM). The mission was launched on 12 April, 2005 and was to be completed in a time frame of seven years.

The goals of NRHM are: Reduction in Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR), Universal access to public health services such as Women's health, child health, water, sanitation & hygiene, immunization, and nutrition, prevention and control of communicable and non-communicable diseases, including locally endemic diseases, access to integrated comprehensive primary healthcare, population stabilisation, gender and demographic balance, revitalisation of local health traditions, mainstreaming AYUSH and promotion of healthy life styles.

The aims of NRHM was to provide accessible, affordable, accountable, effective and reliable primary health care, especially to poor and vulnerable sections of the population. It also aims at bridging the gap in Rural Health Care through creation of a cadre of Accredited Social Health Activists (ASHA) and improved hospital care, decentralisation of programme to district level to improve intra and inter-sectoral convergence and effective utilisation of resources. The NRHM further aims to provide overarching umbrella to the existing programmes of Health and Family Welfare including RCH-II, Malaria, Blindness, Iodine Deficiency, Filariasis, Kala Azar, T.B., Leprosy and Integrated Disease Surveillance.

Therefore, in the present study "Transforming Rural Health Care: Evidence from NRHM in Meghalaya" an attempt has been made to explore the maternity and health status of tribal women after implementation of NRHM and to study the health infrastructure facilities in terms of NRHM mission and the services utilised by the tribal women.

RESEARCH DESIGN

The Universe of the study was West Khasi Hills District of Meghalaya. Keeping in view the purpose and implication of the study, the researcher has adopted "Survey Studies based on Descriptive cum Explorative Research Method" and selected only one block from West Khasi Hills District through Random sampling Procedure. 360 rural households from Nongstoin block was chosen through random sampling procedure from 12 villages selecting 30 women respondents from each village. From each household, one female respondent (age group 15-45) was interviewed using purposive sampling method.

The study was based on both primary and secondary data. Interview schedule was used for data collection. Apart from interview schedule, observation and discussion methods were also used. For the purpose of analysing the data, the researcher used percentage technique for interpreting of data.

RESULTS AND DISCUSSION:

This part of the study has been devoted for the purpose of analysis and interpretation of data according to the objectives of the study.

Table-1.0: Health Problem of mother in the last 1 year

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	188	52.22
2.	No	172	47.92
Total		360	100

If yes, then the problem was:

Sl. No.	Diseases	Yes	Percentage (%)
1.	Diarrhoea	162	45 %
2.	Fever with malaria	134	37.22 %
3.	Intestinal worm	42	11.66 %
4.	Anaemia	118	32.77 %
5.	Jaundice	22	6.11 %
6.	Tuberculosis	4	1.11 %
7.	Respiratory problem	24	6.66 %
8.	Scabies	60	16.66 %
9.	HIV infection	-	-
10.	Pregnancy related diseases	154	42.77 %
11.	Do not know the diseases	190	52.77 %
12.	Other complications	72	20 %

(Table 1.0 shows multiple responses)

As regard to health problem by the mother in the last one year, it has been found from the data that 188 respondents constituting 52.22 % of the sample were having health problems in the last 1 year, whereas 172 respondents constituting 47.92 % of the sample were not having health problems in the last 1 year. With regard to types of diseases, it has been found from the data that 162 respondents constituting 45% of the sample suffered from diarrhea or dysentery, 134 respondents constituting 37.22 % suffered from fever with malaria, 42 respondents constituting 11.66 % of the sample were found with intestinal worms, 118 people constituting 32.77 % of the sample were found to be anemic in the last 1 year , 22 respondents constituting 6.11 % of the sample were found positive with respect to jaundice, 4 respondents constituting 1.11 % of the sample were suffering from T.B. (Tuberculosis), 24 respondents constituting 6.66 % of the sample were having respiratory problems . Again 60 respondents constituting 16.66 % of the sample were found suffering from scabies . As the data revealed 360 respondents constituting 100 % of the sample were found negative in case of HIV infection, 154 respondents constituting 42.77 % of the sample were having pregnancy related diseases. Again 190 respondents constituting 52.77 % of the sample were having no knowledge about diseases they were suffering from, and 72 respondents constituting 20 % of the sample were having other complications.

Table-1.1: Knowledge about the free services available at government hospitals

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	70	19.44
2.	No	290	80.56
Total		360	100

As regard to knowledge about the free services available at government hospitals, it has been found from the data that 70 respondents constituting 19.44 % of the sample were found aware of the fact that various medical (curative and preventive) services are available free of cost at the government hospital, whereas 290 respondents constituting 80.56 % of the sample were ignorant of the above said free services at the government hospitals.

Table-1.2: Availing free facilities

Sl. No.	Facilities	Yes	Percentage (%)	No	Percentage (%)
1.	Antenatal care	70	19.44	290	80.56
2.	Physical check up	62	17.22	298	82.77
3.	Blood & urine test	4	1.11	356	98.88
4.	Tetanus injection	28	7.77	332	92.22
5.	Iron folic Acid tabs	32	8.88	328	91.11
6.	Delivery service	68	18.88	292	81.12
7.	Group Education/Pre-test counseling	30	8.33	330	91.00
8.	Administration of Nevirafine	68	18.88	292	81.12
9.	Delivery service at hospital	30	8.33	330	91.67

(The table shows multiple responses)

As regard to availing free medical facilities, it was found from the data that 70 respondents constituting 19.44 % of the sample had availed antenatal care services ,62 respondents constituting 17.22 % of the sample availed physical check up service, 4 respondents constituting 1.11 % of the sample availed the services for blood and urine tests, 28 respondents constituting 7.77 % of the sample got vaccination against tetanus, 32 respondents constituting 8.88% of the sample received free iron folic acid, 68 respondents constituting 18.88 % of the sample availed free delivery services at Government Hospitals, 30 respondents constituting 8.33 % of the sample received services related to group education and pretest in counseling about HIV, 360 respondents constituting 100% of the sample were found ignorant of the fact that testing of HIV infection is mentioned confidentially to the persons, whereas 38 respondents constituting 10.55% of the sample were administered doses of nevirafine during delivery .

Table-1.3: Awareness on spacing of child birth

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	82	22.77
2.	No	278	77.22
Total		360	100

As regards to spacing of child birth, it has been found from the data that 82 respondents constituting 22.77 % of the sample were aware of the benefits of spacing of child birth. The data reveal that most of the tribal women were not acquainted with the benefits of spacing of child birth. The fact is attributed to the religion which makes them believe that a child is the god's gift. .

Table 1.4: Difficulties if any faced during pregnancy

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	154	42.77
2.	No	206	52.23
Total		360	100

As regards to difficulties during pregnancy period , it was found from the data that 154 respondents constituting 42.77 % of the sample faced difficulties during their pregnancy period but only 20 percent of the tribal women availed the antenatal care and nearly 17 percent availed the facilities of physical check up during their pregnancy period.

Table -1.5: Visit of the ANM / LHV / FIW during pregnancy

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	70	19.44
2.	No	290	80.56
Total		360	100

As regards to visit of the ANM/LHV/FIW during pregnancy of the respondents, it was found from the sample that 70 respondents constituting 19.44 % of the sample were visited by the above said Health workers, whereas 290 respondents constituting 80.56 % of the sample were not visited by the health workers.

Table -1.6: Iron Folic Acid tablets intake during pregnancy

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	70	19.44
2.	No	290	80.56
Total		360	100

As regards to IFA tablets intake during pregnancy by the respondents, it was found from the data that 70 respondents constituting 19.44 % of the sample took IFA tablets during pregnancy, whereas 290 respondents constituting 80.56 % of the sample did not take IFA tablets during pregnancy as they felt that .

Table 1.7: Tetanus Toxoid immunization during pregnancy

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	70	19.44
2.	No	290	80.56
Total		360	100

As regard to T.T. immunization during pregnancy, it was found from the data that 70 respondents constituting 19.44 % of the sample were given T.T. immunization during pregnancy, whereas 290 respondents constituting 80.56 % of the sample were not given T.T. immunization during their pregnancies.

Table -1.8: Consulting a doctor during delivery

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	76	21.11
2.	No	284	78.88
Total		360	100

As regard to consulting a doctor during delivery, it was found from the data that 76 respondents constituting 21.11 % of the sample consulted the doctors during delivery, whereas 284 respondents constituting 78.88 % of the sample did not consult doctors during delivery.

Table-1.9: Visit of ANM / LHV / HW (Female) during or after delivery

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	70	19.44
2.	No	290	80.56
Total		360	100

As regards to visit of ANM/LHV/HW (Female) during or after delivery, it was found from the data that 70 respondents constituting 19.44 % of the sample were visited by ANM/LHV/HW (Female) during or after after delivery of the child, whereas 290 respondents

constituting 80.56 % of the sample were not visited by the above said health workers during or after after delivery.

Table 2.0: Contraceptive used for family planning

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	18	5
2.	No	332	92.22
3.	No Response	10	2.78
Total		360	100

As regards to contraceptive used for family planning, it has been found from the data that 18 respondents constituting 5 % of the sample used contraceptives for family planning whereas 332 respondents constituting 92.22 % of the sample did not use any contraceptives and 10 respondents constituting 2.78 % of the sample remained silent on the issue.

Table 2.1: Free availability of medicines

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	90	25
2.	No	270	75
Total		360	100

As regard to free availability of medicines, it has been found from the data that 90 respondents constituting 25 % of the sample were benefited with free medicines, whereas 270 respondents constituting 75 % of the sample were far from getting the benefits of free medicines from the health centers as the health centers were not equipped with the requisite medicines.

Table -2.2: Preference to go for treatment

Sl. No.	Health Workers	No. of respondents	Percentage (%)
1.	Government Doctors	174	48.33
2.	Private Doctors	96	26.66
3.	Traditional Healers	84	23.33
4.	Chemists	6	1.66
5.	ICDS/AWC/Health Worker	0	0.00
6.	Others	0	0.00
Total		360	100

As regards to preference to go for treatment, it has been found from the data that 174 respondents constituting 48.33 % of the total sample preferred to go for treatment to the government doctors, 96 respondents constituting 26.66 % of the sample prefer to go for treatment to the private doctors, 84 respondents constituting 23.33 % of the sample preferred to go for treatment to the traditional healers, 6 respondents constituting 1.66% of the sample preferred to go for treatment to chemists, whereas no respondents seem to prefer to go for treatment to other health workers like ICDS and AWC health workers.

Table-2.3: Creation of positive Impact of health activist (ASHA) at the household level

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	136	37.77 %
2.	No	224	62.22 %
	Total	360	100

As regard to the creation of positive impact of health activist (ASHA) at the household level of the respondents, it has been found from the data that 136 respondents constituting 37.77 % of the sample were having positive impact upon their health status by the services of the accredited social health activist (ASHA) at their household level, whereas 224 respondents constituting 62.22 % of the sample did not receive any services thereby indicating no positive impact of accredited social health activist (ASHA) upon them at their household levels.

Table 2.4: Availability of trained community health workers at the village / locality

Sl. No.	Health Workers	Availability	Percentage (%)	Services (utilized)	Percentage (%)
1.	DOTS workers	Yes (90)	25	Yes (90)	25
2.	Aganwadi workers	Yes (190)	52.77	Yes (190)	52.77
3.	Trained Dias	Yes (90)	25	Yes (90)	25
4.	ANM/LHV's	Yes (70)	19.44	Yes (70)	19.44
5.	ASHA	Yes (136)	37.77	Yes (136)	37.77
	Total		100		100

As regard to availability of trained community health workers at the village/locality, it was from the data that 90 respondents constituting 25% of the sample said that DOTS workers were available and they have utilized their services, 190 respondents constituting 52.77% of

the sample said about the availability and utilisation of the services of anganwadi workers, 90 respondents constituting 25% of the sample said that they have availed the services of ANM/LHVs, and 136 respondents constituting 37.77 % of the sample received and utilised the services of ASHA.

Table-2.5: Getting or availing the following services at the village since 2005-10

Sl. No.	Options	No. of respondents			
		Yes	Percentage	No	Percentage
1.	Immunization at Community Level	330	91.69	30	8.33
2.	Antenatal check up for mother	70	19.44	290	80.56
3.	Post natal check up for mother	70	19.44	290	80.56
4.	Supplementary nutrition	190	52.77	170	47.23
5.	Free supply of medicines	90	25	270	75
6.	Referral service and transport at CHC/PHC Level	-	-	360	100
7.	Generic drugs for common ailment	8	2.22	352	97.77

As regard to provision for immunization at the community level, It has been found from the data that 330 respondents constituting 91.67 % of the sample were of the opinion that they have availed immunization at the community level. As regards to antenatal check up for mothers, it has been found from the data that 70 respondents constituting 19.44 % of the sample availed antenatal care services. As regard to post natal check up, it has been found from the data that 70 constituting 19.44% of the sample had avail post natal care services and 290 respondents constituting 80.56% of the sample did not avail post natal care services. As regard to supplementary nutrition, it has been found from the data that 190 respondents constituting 52.77% of the sample received supplementary nutrition for their children from anganwadi centres.res.

Regarding free supply of medicines, it has been found from the data that 90 respondents constituting 25 % of the sample benefited from free medicines, whereas 270 respondents constituting 75 % of the sample did not received free medicines for their ailments.

In context of referral services and transport communication at PHC/CHC level, it has been found from the data that no respondents from this sample have availed the said facilities as yet and hence the total number of respondents not yet availed the above said facilities were 360 constituting 100 % of the sample.

Table-2.6 Service received through mobile medicinal unit at the Village/locality

Sl. No.	Options	No. of respondents	Percentage (%)
1.	Yes	-	-
2.	No	360	100
Total		360	100

As regard to the services received through mobile medicinal unit at the village/locality, it was found that 360 respondents constituting 100 % of the sample did not receive any service through mobile medicinal unit at the village / locality levels.

Table -2.7: Registered Medical Practitioner (R.M.P) at the village/locality

Sl. No.	Options	No. of Villages	Percentage (%)
1.	Yes	-	-
2.	No	12	100
Total		12	100

As regard to the Registered Medical Practitioner (R.M.P) at the village/locality of the respondents, it has been found from the data that all 12 villages constituting 100 % of the sample were not having Registered Medical Practitioner (R.M.P) at village / locality level.

MAIN FINDINGS

The main findings of the study are:-

- It was found that majority of the mothers were suffering from one ailment or the other. In the last one year, 52.22 percent of the mothers suffered from some sickness. Specifically the most prevalent diseases are anemia, intestinal worm (complain of stomach ache), malaria fever, diarrhea, scabies, and pregnancy related diseases.
- With respect to availing of free facilities, 19 percent of the mothers availed free antenatal checkup, 17 percent availed free physical check up, 1.11 percent availed free blood and urine test, 7.77 percent took Tetanus injections, 8.88 percent took iron Folic tablets, 11 percent availed free delivery services in the centers and 8 percent in the hospitals, and only 8 percent went for free counseling services.
- The delivery rate at hospitals/ centers is only 19 percent. Again only 19 percent of the mother knows that free services are available at government hospitals.

- Only 22.77 percent of the mothers are aware of the benefits of spacing their child birth.
- It was found from the data that 64 percent of the respondents faced difficulties in pregnancy and child birth where as nearly 36 percent of the respondents did not face any difficulty during pregnancy and child birth. It may be attributed to the fact that only 20 percent of the respondents availed antenatal checkup facilities available in the centers or the hospitals.
- Only 15 percent respondents said that ANM/LHV/FIW visited their house when they were pregnant.
- As regards to intake of Iron folic acid tablets during pregnancy only 9 percent took it and this is the reason why most of the mothers are anemic.
- Again, nearly 8 percent of the respondents took Tetanus Toxoid during their pregnancy.
- With regard to visit of ANM/LHV/HW after the delivery of the child, it was found that they visited only to 15 percent of the households.
- Only 12.77 percent of the respondents are in favour of family planning. None of the respondents use any contraceptive for family planning.
- With respect to the impact of accredited social health activist (ASHA) at the household levels, it was found that nearly about 38 percent of the sample households have been covered by the ASHA workers.

RECOMMENDATIONS AND SUGGESTIONS

It is clear from the findings that poor women health and infrastructure is a very serious problem in rural areas which affects the rural tribal population. Fighting with the problem requires serious efforts and the government has a very important role to play in this regard. The study led to the following recommendations for the government.

- ❖ There is a deficit of staff across the board, specialist doctors, male multipurpose workers, and laboratory technicians. A lot more work is to be done in order to improve the quality of healthcare, through multi-skilling and multitasking, by the care providers.
- ❖ The area that lags behind most significantly is the health management information system and the IDSP program. In spite of the supply of computers and availability of internet links, data management and information flow to and from the peripheral levels is still very poor. This is also a matter of concern.

- ❖ Employing locally recruited paramedics and health workers is the only sustainable answer to providing healthcare in rural India.
- ❖ In India there is a chronic shortage of doctors in rural areas. Practicing in a rural area is seen as very unprofitable in comparison to working in urban medical centres. Even if we could attract qualified doctors, their families would refuse to accompany them as conditions are so primitive. Reduced hours of electricity, erratic water supply and limited educational facilities for their children are some of the reasons given for refusing rural service. So efforts should be made in this regard.
- ❖ National Rural Health Mission (NRHM) is one of the popular programmes of government of India. But due to unforeseen factors and forces, the programme, sometimes faces problems for proper implementation and execution. So efforts should be made to make this programme more successful.
- ❖ Efforts should be made to improve the Institutional Framework and Infrastructure Improvement of NRHM
- ❖ Lack of trained and skillful human resources in health sector is one of the main hurdles in the path of NRHM so efforts should be made in this regard.
- ❖ The future of the mission appears promising. Political will, hard work, and professional managerial approach will help cross the hurdles and accomplish the mission.

CONCLUSION

National Rural Health Mission, in its endeavour to improve the healthcare delivery system in rural India may be considered as a paradigm shift in the way healthcare delivery is to be executed. Almost all states have taken up the task of quantitative and qualitative improvement in the healthcare delivery infrastructure from the grass root, from the Sub Health Centre level to the District Hospital. However, the feel good features of NRHM end here. Accomplishing the goals of the mission have still a long way to go and more innovations are required to meet the challenges, which several states are facing in making it a success.

BIBLIOGRAPHY:

- [1] Bhatnagar, G.S (1978), "Community Response to Health: A Study Conducted in Patiala Village in Punjab," Paper Presented at the 14th All India Sociological Conference, Jabalpur University, Jabalpur.

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- [2] Chandra, P (1957), "Concept of Disease and Therapeutic Practices among the Hill Saoras," Orissa.
- [3] Dutta, P.C.,(1995), "Rural Health Service in India," Primary Health Centre, Central Health Education Bureau; D.G.H.S. Ministry of Health; Government of India.
- [4] Green, L.W. and Kreuter, M.W (1999), "Health Promotion Planning: An Educational and Ecological Approach," 3rd edition. Mountain view CA: Mayfield.
- [5] Gobalan, C. (1971),"Nutritional Atlas of India," ICMR, New Delhi.
- [6] Gulati, S.C and Rama Patnaik (1996), "Women's Status and Reproductive Health Rights," New Delhi, Har- Anand Publication.
- [7] Kakar, D.N.(1972), "People's Perception of Illness and their use of Medical Services in Rural Punjab," Seminar on Behaviour Research in Health and Medical Care.
- [8] Mann. B.S. (1968)," Family Planning among the Tribal's," in Family Planning News.
- [9] Mathur, Indhu.,(1987), "Rural Medical Care in Changed Setting," A Paper Presented in the Seminar on Teaching and Research in Medical Sociology Vol-IV New Delhi Vikash Publishing Pvt. Ltd.
- [10] Govt of India, (2001), "Report of the Health Survey and Planning Committee," Government of India, New Delhi, Ministry of Health.
- [11] Govt. Of India, (2005-2012),"Report on National Rural Health Mission".
- [12] Saxena, D.N.(1990), "Family Building ,Fertility and Family Welfare among two Tribal Community of UP," Demography of Tribal Development, PP.249-269.
- [13] Swain.S,S.C .Jena and P .Singh(1990), "Morbidity Status of the Kondha Tribes of Phulbani (Orissa)," Cultural and Environmental Dimensions on Health, Inter-India Publications , New Delhi.
- [14] Sandhyavani, B.V. (2008), "Health Problem of Rural Women," Kurukshetra: A Journal on Rural Development, Ministry of Rural Development, New Delhi.
- [15] Sukla, Divya.(2008), "Rural Women and Their Nutritional Health," Kurukshetra: A Journal on Rural Development, Ministry of Rural Development, New Delhi.
- [16] Takulia, H.S.(1969), "Rural Health Problems and Preparation of Physicians," Background Paper, UGC Sponsored Seminar on Teaching of Social Science in Medical College, New Delhi.
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