



AN ANALYTICAL STUDY OF IMPACT OF ADEQUATE MEDICAL
FACILITY CENTERS ON MORTALITY NUMBER (DEATH RATE) OF
CHILDREN OF TRIBAL COMMUNITY IN GONDIA DISTRICT OF
MAHARASHTRA STATE

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Abstract:-

The quality of health in tribal population is considered on various indicators like death rate (mortality number) of pregnant women, death rate (mortality number) of infant, death rate (mortality number) of children, rate of illness etc as well as at the time of study of quality of health, availability of medical facility services also considered, because this medical facility services directly influence the death rate (mortality number) of pregnant women, death rate (mortality number) of infant, death rate (mortality number) of children, rate of illness etc.

“A Tribe is a collection of Families or groups of Families bearing a common name, members of which occupy the same territory, speak the same language and observe certain taboos regarding marriage, profession or occupation and have developed a well assessed system of reciprocity and mutuality of obligations.”

The aim of this research paper is to analyses impact of medical facility centers on death rate of children of tribal community in Gondia district of Maharashtra state.

Keywords: - Tribal population, death rate, mortality number of children, medical facility services, tribal community, adequate.

Introduction:-

The Indian spiritual teacher Shri shri Ravi Shankar has given seven layer definition of health. According to him health means 1. Disease free body, 2. Shaking free breathing, 3. Stress less mind, 4. Limit less intelligence, 5. Fat free memory, 6. Self respect, 7. Grief free soul.

Tribal community can be seen all over the world. In different country they known by various name like Red Indian in America, Aborigine in Australia, Jeepsy in Europe county and In Asian and African countries they know as “Adivasi”. India is second largest in tribal population after Africa continent.

“A Tribe is a collection of Families or groups of Families bearing a common name, members of which occupy the same territory, speak the same language and observe certain taboos regarding marriage, profession or occupation and have developed a well assessed system of reciprocity and mutuality of obligations.”

The quality of health in tribal population is considered on various indicators like death rate (mortality number) of pregnant women, death rate (mortality number) of infant, death rate (mortality number) of children, rate of illness etc as well as at the time of study of quality of health, availability of medical facility services also considered, because this medical facility services directly influence the death rate (mortality number) of pregnant women, death rate (mortality number) of infant, death rate (mortality number) of children, rate of illness etc. so, facts like quantity of availability of medical facility services provided by government, structure of medical facility services, facilities of medicinal training programmes and service provider man force etc. are considered too.

“He who has health, has hope and he who has hope, has everything” This statement is mainly derived from Arabic language. This statement said that man lives on hope and health body is main pillar of hope.

According to Population census of 2011, there was tribal population of 2,14,253 in Gondia district of Maharashtra state. This population size was 16.20 percent of total population of Gondia district of Maharashtras state i.e 13,22,507.

The aim of this research paper is to analyses impact of medical facility centers on death rate of children of tribal community in Gondia district of Maharashtra state.

Objectives of the study:-

1. To study an adequate Medical facility centers for tribal community in Gondia district of Maharashtra state.
2. To study mortality number (death rate) of children of tribal community in Gondia district of Maharashtra state.
3. To study impact of adequate medical facility centers on mortality number (death rate) of children of tribal community in Gondia district of Maharashtra state.

Limitation of the study:-

1. This study is limited to tribal community of Gondia district of Maharashtra state only.
2. This study is limited to data received for Gondia district of Maharashtra state only.
3. This study is limited to geographical area of Gondia district of Maharashtra state only.

Hypothesis of the Study:-

Null Hypothesis 1 (Ho1): - There is no significant number of Medical Facility Centers available for Tribal Population in Gondia District in Maharashtra State.

Null Hypothesis 2 (Ho2): - There is no significant difference between mortality number of Children between India, Maharashtra and Gondia district.

Data Collection:-

For this research, secondary data has been taken into consideration from Maharashtra state Annual Tribal Schemes Report, Tribal Development Department, Maharashtra state, Population Census 2011 Reports, Reports of Health Department Zilha Parishand Gondia Year 2015 etc.

Table No.1:- Number of Medical Facility Centers for Tribal Population in Gondia District in Maharashtra State

Medical Facilities Centre	Medical Facility Centre
Rural Hospital	6
Primary Health Centre	19
Primary Health Sub Centre	106

(Source: - Reports of Health Department Zilha Parishand Gondia Year 2015)

Table No.2:- Mortality Number of Children of tribal population in Gondia

Year	Mortality number of Children In India	Mortality number of Children in Maharashtra	Mortality number of Children of tribal population in Gondia
2009	64	36	38
2010	59	33	39
2011	55	26	30
2012	52	28	27
2013	49	26	7
2014	45	23	9

Medical Facilities Centre	Observed Value for Medical Facility Centre (O)	Expected Value for Medical Facility Centre (E)
Rural Hospital	6	2.67
Primary Health Centre	19	10.71
Primary Health Sub Centre	106	71.41

(Source:-Maharashtra state Annual Tribal Schemes Report, Tribal Development Department, Maharashtra state)

Hypothesis Testing:-

Null Hypothesis (**H₀1**): - There is no significant number of Medical Facility Centers available for Tribal Population in Gondia District in Maharashtra State.

Alternative Hypothesis (**H_a1**): - There is significant number of Medical Facility Centers available for Tribal Population in Gondia District in Maharashtra State.

Application of Chi- Square Test:-

Medical Facilities Centre	Observed Value for Medical Facility Centre (O)	Expected Value for Medical Facility Centre (E)	(O - E)	(O - E) ²	(O - E) ² /E
Rural Hospital	6	2.67	3.33	11.08	4.15
Primary Health Centre	19	10.71	8.29	68.72	6.41
Primary Health Sub Centre	106	71.41	34.59	1196.46	16.75
				Total (x²)	27.32

Calculated(x^2)= 27.32

Degree of Freedom = 2

Level of significance = 5% i.e 0.05

Tabular(x^2)= 5.99

Calculated(x^2) > Tabular(x^2)

Calculated (x^2) value is greater than tabular (x^2) value hence Null hypothesis rejected and alternative hypothesis get accepted i.e. there is significant number of Medical Facility Centers available for Tribal Population in Gondia District in Maharashtra State.

Result:-

It can be said that adequate number of medical facility centers are available to tribal population in Gondia district in Maharashtra state.

Null Hypothesis (**Ho2**): - There is no significant difference between mortality number of Children between India, Maharashtra and Gondia district.

Alternative Hypothesis (**Ha2**): - There is significant difference between mortality number of Children between India, Maharashtra and Gondia district.

Application of Chi- Square Test:-

Mortality Number of Children of tribal population in Gondia

Year	Mortality number of Children In India	Mortality number of Children in Maharashtra	Mortality number of Children of tribal population in Gondia
2009	64	36	38
2010	59	33	39
2011	55	26	30
2012	52	28	27
2013	49	26	7
2014	45	23	9

Year	Mortality number of Children In India (Observed value)	Expected Value for India	Mortality number of Children In Maharashtra (Observed value)	Expected Value for Maharashtra	Mortality number of Children In Gondia district (Observed value)	Expected Value for Gondia District	Total
2009	64	69.21	36	36.74	38	32.04	138
2010	59	65.7	33	34.88	39	30.42	131
2011	55	55.67	26	29.55	30	25.77	111
2012	52	53.67	28	28.49	27	24.85	107
2013	49	41.13	26	21.83	7	19.04	82
2014	45	38.62	23	20.5	9	17.88	77
Total	324		172		150		646

Observed Value for Medical Facility Centre (O)	Expected Value for Medical Facility Centre (E)	(O - E)	(O - E) ²	(O - E) ² /E
64	69.21	-5.21	27.18	0.39
59	65.70	-6.70	44.93	0.68
55	55.67	-0.67	0.45	0.01
52	53.67	-1.67	2.77	0.05
49	41.13	7.87	61.99	1.51
45	38.62	6.38	40.71	1.05
36	36.74	-0.74	0.55	0.02
33	34.88	-1.88	3.53	0.10
26	29.55	-3.55	12.63	0.43
28	28.49	-0.49	0.24	0.01
26	21.83	4.17	17.37	0.80
23	20.50	2.50	6.24	0.30
38	32.04	5.96	35.48	1.11
39	30.42	8.58	73.65	2.42
30	25.77	4.23	17.86	0.69
27	24.85	2.15	4.64	0.19
7	19.04	-12.04	144.97	7.61
9	17.88	-8.88	78.84	4.41
			Total (x²)	21.78

$$\text{Calculated}(x^2) = 21.78$$

$$\text{Degree of Freedom} = 10$$

$$\text{Level of significance} = 5\% \text{ i.e } 0.05$$

$$\text{Tabular}(x^2) = 18.31$$

$$\text{Calculated}(x^2) > \text{Tabular}(x^2)$$

Calculated (x^2) value is greater than tabular (x^2) value hence Null hypothesis rejected and alternative hypothesis get accepted i.e. there is significant difference between mortality number of Children between India, Maharashtra and Gondia district.

Result:-

It can be said that there is low mortality number of children in tribal population of Gondia district in Maharashtra state.

Conclusion:-

After result analysis of hypothesis testing by applying Chi- Square Test and data derived from secondary data source like Maharashtra state Annual Tribal Schemes Report, Tribal Development Department, Maharashtra state and Reports of Health Department Zilha Parishand Gondia Year 2015, it can be concluded that there is a significant impact of adequate medical facility centers on mortality number (death rate) of children of tribal community in Gondia district of Maharashtra state. The reason behind such co relation between medical facility centers and mortality number (death rate) of children of tribal community can be said that there is adequate or more number of medical facility centers are available for treatment or for providing medical facility services to the children of tribal community of Gondia district of Maharashtra state. Observed numbers of Medical facility centers are more than expected number of Medical facility centers in Gondia district of Maharashtra state. Such observed numbers of medical facility centers have increased probability of timely medical facility services or treatment to children of tribal community resulted into the decreasing death rate (mortality number) of children of tribal community in Gondia district of Maharashtra state. This research study enlighten that adequate medical facility centers can decreased mortality number (death rate) of children of tribal community due to timely treatment or medical service, also increase the awareness about various vaccinations for children, precautionary measures taken for child's good health, need of supplementary vitamins for children etc. among the tribal community resulted into low death rate of children.

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