To Study the Impact of Parents Education on Religion Wise Response to Polio Eradication Programme: A Sociological Study With Reference to Aligarh District in Uttarpradesh

Author's Details: [1] **Dr. Abhimanyu Kumar,** Assistant Professor, Govt. P.G. College, Ranikhet, Almora(U.K.) [2]**Dr. Krishna Agrawal,** Associate Prof. Sociology, SVCollege, Aligarh,U.P.

Abstract

This research paper is made to examine the views of the people of modern India for awareness with regard to polio eradication Programme. Empirical research method is used in this study. The present research is carried on the basis on primary and secondary data. This data has been from the obtained from respondents having Socio-economic status of the parents living in the rural urban areas of parents education on religion wise response. The research data is collected by preparing a schedule through stratified sampling method. An interview schedule was prepared and was applied to 600 respondents in which 300 belonged to urban areas and rest 300 respondents belonged to rural areas. The area of the sample is District Aligarh of Uttar Pradesh state of India

Keywords: Polio, parents, socio –economic status, area, respondents

Introduction: - Polio, short for Poliomyelitis, is a viral disease that can damage the nervous system and cause paralysis.

- ❖ The Poliovirus enters the body through the mouth, usually from hands contaminated with the stool of an infected person.
- ❖ Polio is preventable by immunization.
- ❖ Since Polio immunization has become widespread in the United States, cases of Polio are rare. However, Polio remains a problem in many parts of the word.

Since Polio immunization has become widespread in the United States, cases of Polio are rare. However, Polio remains a problem in many parts of the world. Before availability of Polio immunization, Polio was common worldwide. However, with strong immunization programs and efforts to rid the world of, Polio circulation of Polioviruses is limited to a decreasing number of countries. The greatest risk is now in the Indian subcontinent and, to a lesser extent, in West and Central Africa (Nirupam S) [1].

The Poliovirus lives in the throat and intestinal tract of infected persons. The virus enters the body through the mouth, usually from hands contaminated with the stool of an infected person. Objects, such as eating utensils, can also spread the virus. Food and water are not through to play a major role in the spread of Polio. The Poliovirus attacks the nerve cells that control muscle movements. Many people infected with the virus have few or no symptoms. Others have short-term symptoms, such as headache, tiredness, fever, stiff neck and back, and muscle pain.Polio is most common in infants and young children, but complications occur most often in older persons. Complications include paralysis, most commonly of the legs. Paralysis of the muscles that control breathing and swallowing can be fatal (Anderson, R.)[2].

Two types of Polio vaccine are available: oral Polio vaccine (OPV) and inactivated Polio vaccine (IPV). OPV is made with a live but weakened virus. OPV protects vaccinated persons directly. OPV also protects other susceptible persons who are indirectly "vaccinated" as the vaccine virus spreads in the community. Because of wide use of OPV, no cases of paralytic Polio caused by naturally circulating Poliovirus have been reported in the United States since 1979. IPV is given by injection. It protects vaccinated persons as well as OPV, but it is not believed to be as effective as OPV in preventing the spread of Poliovirus among non-vaccinated persons. However, IPV is not known to cause Polio disease (Mathew JL, Babbar H.)[3]

There is no treatment for Polio. A Polio patient must receive expert medical care especially in the beginning of the illness. The Polio Eradication Programme was started in Aligarh District in 1995. There were two phase of this program i.e. one in January and one in December from 1995 to 1999. In year 2000 there were

three phases and three mono programmes, in year 2001 there were four phases and four mono programs and in year 2002 till October there were three phases and three mono programs of this programme. As per the record of the CMO, Aligarh there were 22 (17 from rural and 5 from urban), 29 (19 from rural and 10 from urban), 1 (only from rural areas) polio case comes into light in year 1998, 1999 and 2000 respectively.

A study was undertaken on 500 children under the age of 5 years belonging to a low income group. All were attending the pediatrics outpatient department of a large teaching hospital in New Delhi, India. Only 25% were found to have received complete primary immunization as per the National Immunization Schedule (bacille Calmette- Guerin at birth, three doses of diphtheria, pertussis and tetanus and oral poliovirus vaccine at 6, 10 and 14 weeks and measles vaccine at 9 months). The major reasons for non-immunization of the children were: migration to a native village (26.4%); domestic problems (9.6%); the immunization centre was located too far from their home (9.6%); and the child was unwell when the vaccination was due (9%). Twelve percent of mothers could not give any reason for non-immunization. In addition to the migration of children to rural areas, the other significant finding was an indirect effect of intensive OPV administration as part of polio eradication initiative. The lack of awareness and fear of side effects constituted a small minority of reasons for non-immunization. (Mathew J.)[4].

Two hundred and ten female and two hundred and ten male children aged 1-2 years were identified using 30 cluster random sampling technique in the Nagar Palika of Sitapur. The immunization status was determined to assess differences, if any, in the coverage in accordance with the sex of the child. Except for measles, a significantly higher vaccination coverage was observed for male children as compard to females for every vaccine, this being 65.2 and 60.9%, respectively for DPT III and OPV for males as compared to 51.9 and 49.5%, respectively for girls. The dropout rates for DPT and OPV were also found to be higher (p greater than 0.05) in female children. However, no difference was observed in the reasons for non-immunization between the female and male children. (Nirupam S)[5].

The study conducted by Angelillo IF, Ricciardi G, Rossi P, Pantisano P, Langiano E, Pavia M., evaluates knowledge, attitudes, and behavior of mothers regarding the immunization of 841 infants who attended public kindergarten in Cassino and Crotone, Italy, Overall, 57.8% of mothers were aware about all four mandatory vaccinatons for infants (poliomyelitis, tetanus, diphtheria, hepatitis B). The results of a multiple logistic regression analysis showed that this knowledge was significantly greater among mothers with a higher education level and among those who were older at the time of the child's birth. Respondents' attitudes towards the utility of vaccinations for preventing infectious diseases were very favourable. Almost all children (94.4%) were vaccinated with all three doses of diphtheria-tetanus (DT), oral poliovirus vaccine (OPV), and hepatitis B. The proportion of children vaccinated who received all three doses of OPV, DT or diphtheria-tetanus-pertussis (DTP), and hepatitis B vaccines within 1 month of becoming age-eligible ranged from 56.6% for the third dose of hepatitis B to 95.7% for the first dose of OPV. Results of the regression analysis performed on the responses of mothers who had adhered to the schedule for all mandatory vaccinations indicated that birth order significantly predicted vaccination non-adherence, since children who had adhered to the schedule for all mandatory vaccinations indicated that birth order significantly predicted vaccination non-adherence, since children who had at least one older sibling in the household were significantly less likely to be age-appropriately vaccinated. The coverage for the optional vaccines was only 22.5% and 31% for measles-mumps-rubella and for all three doses against pertussis, respectively. Education programmes promoting paediatric immunization, accessibility, and follow-up should be targeted to the entire population (Aneshensel, C.S)[6].

A survey was conducted at an Integrated Child Development Services (ICDS) Scheme project in North Calcutta among 656 mothers having children less than 3 years of age to assess their perception and practice regarding pulse polio immunization (PPI). It was revealed that 91.8% of under 3-years children received PPI on 9-12-1995 and 94.4% on 20-1-1996. Major reasons for not accepting the services on those two days included 'mothers unaware' (22%), 'child too small' (30.5%), etc. Major source of first information was television

(TV)/radio (57.2%) followed by anganwadi workers (AWWs) (33.8%). However, majority of the mothers were finally motivated for PPI by AWWs (58.8%) followed by the role of TV/radio (34.1%). Although 70.7% mothers knew the name of the vaccine correctly, only 3.5% mothers could tell the exact purpose of its administration. Most mothers (73%) opined that 2 drops of oral polio vaccine (OPV) was administered to their children and only 14.6% hoped that the Government in future will conduct such programmes. The average waiting time of mothers at immunization centres was found to be 7.2 minutes. (Sengupta B, Sinha)[7].

To identify the reasons for non-immunization/postponing immunization, parents of 615 poliomyelitis (APM) children and 908 children attending the Outpatient Department (OPD) for other ailments were interviewed. A total of 165 (26.9%), 185 (30.1%) and 264 (43%) among APM and 645 (71%), 183 (20.2%) and 80 (8.8%) among OPD children were immunized, partially immunized and unimmunized, respectively. Forty two percent and 21% among parents of APM and OPD children, respectively in the unimmunized group were unaware of the need for immunization. The other reasons are minor illnesses, lack of interest, fear of side reaction, non-availability of vaccine or vaccinator. The decision to withhold immunization was mostly by parents when the child had some minor illnesses, mostly respiratory infections. It is recommended to educate the health personnel-clinicians and para-clinical workers by seminar and training and the public through mass media and group contact on the need for the completion of the immunizations. (Devivanayagam N) [8]

India is contributing large number of total world's polio cases. The present study was carried out with the objective to assess the knowledge of the parents regarding pulse polio and their perception towards pulse polio and other immunization. The study revealed that children of all age groups participated in PPI though the coverage was low in 37-48 and 49-60 month age group. In all 30.5% children of respondents could not get OPV in the previous year and they came for the first time to the PPI centre. A significant finding of the study was the status of children regarding other immunization, as 59.5% of the respondents were not immunizing their children for other vaccines. In the present study, 73.2% of the respondents could tell correctly about pulse polio. Predominant source of information about pulse polio was found to be electronic media (55.8%) followed by health workers (20.9%). Only 8.4% respondents opined that distance of PPI centre was far away from their residence. (Rasania SK, Sachdev TR.)[9].

Objective under study
To study the effect of educated parents' response and their religion wise difference of opinion towards polio eradication programme.

Null Hypothesis (Ho)
That there is significant difference in response of religion wise educated as well as non educated parents to Polio eradication Programme.

Alternate Hypothesis (H₁)
That there is no significant difference in response of religion wise educated as well as non educated parents to Polio eradication Programme

Research Methodology
A systematic methodology is an important step to any research because it directly influences the validity of the research findings. This precisely describes the methodology tools and instruments adopted in conducting the research.

Area of Under Study
Aligarh district is a part of the Central Ganga Plain of the state covering of 5498 sq. Km. and lies between North latitudes 27° 28 and 28° 10 and East longitudes 77° 29 and 78 ° 36 with the total population of 4,32,37,60 as per 2001 census (density: 786 person/sq.Km.). The district is bounded by impossible for the investigator to carry out his or her research. Programme for the entire population. So the usual procedure was adopted which

was adopted which was to select a sample from the population to be studied and to carry out the research on the sample.

Sample under Study

A sample of 600 respondents was taken in which 300 belonged to urban areas and rest 300 respondents belonged to rural areas. Again 300 respondents of urban area were equally divided into 150 Hindus and 150 Muslim parents. In the same way, 300 respondents of the rural area were equally divided into 150 Hindus and 150 Muslim parents.

Collection of Data

The Hindi version of the scales was used as per the convenience of the respondents. Each subject was given an interview schedule, individually for a limited time and was asked to fill it under the strict supervision of the researcher.

Statistical Analysis of Data

The collected data were classified and tabulated in accordance with the objectives to drive the meaningful and relevant inferences. The data were analyzed by using statistical techniques like frequency; percentage; mean and $\Box\Box^\Box$ (chi-square) test (Abhimanyu Kumar& Anshu Taunk) [10].

Table:-1 Number of reported cases of acute flaccid paralysis and number of confirmed poliomyelitis cases in India2002-2003

Location/Years	No.AFE cases		Non polio AFP cases		%persons with AFP with adequate specimens		No. laboratory confirmed wild poliovirus cases	
	2002	**2003**	**2002**	**2003**	**2002**	**2003**	**2002**	**2003**
India	9705	8539	187	190	82	81	1600	225
Uttar Pradesh	3515	2027	272	247	79	78	1242	88
Western U.P	1557	770	301	254	75	75	626	74
Eastern U.P.	1958	1257	257	244	82	79	616	14
Bihar	874	828	194	205	76	70	121	18

As   of February28,2004, Per 100000 population aged<15Years

Table.2 **Significance of Difference between response of educated and illiterate's parents to polio eradication programme.**

Education	Responses					
	No Response	Low Response	Average Response	High Response	Very high Response	Total
Illiterate	9	116	156	50	00	331
High School	00	17	71	67	1	156
Intermediate	00	3	18	18	00	39
Graduate & P.G.	00	1	22	14	00	37
Other	00	2	23	12	00	37
Total	9	199	290	161	1	600

(df=4)

χ^{*2} $=$ 98.613 χ^2_t $=$ 9.488

$\chi^{*2} > \chi^2_t$ at 5% level of significance

Where χ^{*2} $=$ Calculated value

χ^2_t $=$ Tabulated value

It can be seen that χ^{*2} (calculated) value has come to be 98.613 but χ^2_t (tabulated) value to be 9.488 since here calculated value in greater than to tabulated value ($\chi^{*2} > \chi^2_t$) which is significance at 5% level of confidence therefore null hypothesis is rejected.

Given table shows number of responses related with education in which we have taken interview of illiterate parent's matriculation, intermediate and under graduate as well as postgraduate. In a row we have categories five number of response as earlier discussion illiterate person have no response number of them is equal to 9, while number of low responses is equal to 116, in average responses it is 156, while in high responses it is 50 as well as in very high responses it is equal to zero the total value of them is equal to 331.

The matriculations are zero in number of no response 17 in low responses 71, in average response 67, in high response, while only 1 very high response the total number of matriculation all the responses is equal to 156 while intermediates are number of low response equal to 3, the number of average responses and high responses are Same 18 while the number of very equal to zero. Now the total of all the response is 39, now the number of low responses relative with higher education, the number of no responses is equal to zero, low response is 1. Average response is 22, high response is 14. Very high response is equal to zero, while the value of total number is equal to 37. Finally others have no responses equal to zero, low responses are 2, and average responses are 23, high responses are 12 while very high responses are zero, the total value of them 37.

Now if we total them by column the number of no responses is 9, the number of low responses is 199, the number of average responses 290, while high responses are 161 while in very high responses it is 1 but the total value of column as well as in the row is equal to 600.

The analysis of given table average responses have superior power which in equal to 290.

Table 3.Significance of difference between response of Hindu and Muslim parents to PEP.

Religion	Responses					
	No Response	Low Response	Average Response	High Response	Very high Response	Total
Hindu	**00**	**28**	**144**	**127**	**1**	**300**
Muslim	**9**	**111**	**146**	**34**	**00**	**300**
Total	9	139	290	161	1	600

(df.4)

χ^{*2} $=$ 113.295 χ^2_t $=$ 9.488

$\chi^{*2} > \chi^2_t$ at 5% level of significance

Where χ^{*2} $=$ Calculated value

χ^2_t $=$ Tabulated value

It can be seen that $\chi*^2$ (calculated) value has come out to be 113.295 but χ^2_t (tabulated) value to be 9.488 since here calculated value is greater than to tabulated value $(\chi*^2 > \chi^2_t)$ which is significance at 5% level of confidence therefore null hypothesis is rejected..

Interpretation of the table shows significance based on primary data we have observed mainly this table religion in which the findings are relative with Hindus as well as Muslims parents. The religion is responded by the interview schedule method mainly based on interviews and surveys responses are categories among five columns, number of responses, low responses, average response, high responses and very high responses. In Hindu religion the number of no response is zero, the number of low response 28, the number of average response 184, the number of high response 127 and in case of very high response is equal to 1 now the number of responses have observed also in case of Muslims religion the number of no response is 9, in case of low response 111, while in case of average response 146, as well as in case of high responses 34 and in case of very high response is zero. By the closed observation, we have noted that the number of no response in case of Hindu religion- related with Hindus is also lesser than Muslims religion (28<111). In case of average- response the religion with relative Hindu lesser than Muslim religion (144<146) as well as a in case high response number of responses relative with Hindu religion is greater than Muslim religion i.e. (127>34) while in case of very high response is the number of response relative with Muslim religion perfectly inelastic it means, zero while in case of Hindu parents is equal to 1. By analysis, the table number of responses is noted more in case of Hindu parents compare than Muslim parents. Although a number of responses have different value is a different religion of we calculated value are row is the same is both Hindu and Muslim religion, but if we calculate the value by column Hindu as well as Muslim parents, while in case of Muslim religion 9, it's both value total is 9. In case of low response 28 related Hindu religion 111, related Muslim religion is total value 139, in case of average response number of response related with Hindu religion its value 290, in case of high response the number of response related with Hindu 127, while 34 related Muslim religion the total value 161, finally in case of very high response the number of response related with Hindu religion equal to 1, while is case of Muslim religion to equal to zero, its total value equal to 1 as the results of the given table of observation we have known that either calculate to value is a row or in a column is total is same (600).

Conclusion:-By the analysis of primary data collected to check religion wise response of educated and non educated parents towards to polio eradication programme in district Aligarh of India. By applying chi-square test to data collected in table 2 and table 3 the calculated value in both the tables is greater than tabulated value at 5% level of confidence which meant that null hypothesis is rejected. This means that this no significant difference in response of religion wise educated and non educated parents to polio eradication programme

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