

# INTRODUCTION

Everywhere we turn we are urged to take individual responsibility for our health. Yet amid this ruckus we hear very little about the social origins of disease or our responsibility to address the living conditions that impact on our health (Germov, 2002). Sociologically, health and illness issues go beyond the medically influenced everyday common understanding of pathological bodies (disease). Sociologists highlight the complex relationship between health-related issues and society, as well as question the dominance of medical knowledge and practice. A sociological understanding of health and illness considers structural and social factors, rather than simply biological (medical) explanations of these phenomena. Thus illness, as queried above, is not merely a physical experience (bodily malfunction) but is also an inter-subjective experience with far reaching social consequences

Poliomyelitis, a contagious viral disease that once crippled thousands of children annually has almost been eliminated from the world. But still in countries like Afghanistan and Nigeria the virus is at large and causing havoc in a child's life.

The hardy poliovirus lives in the human intestine and is ejected into the environment through excreta, and the virus spreads from person to person through water or food contaminated with faces of infected children. Polio is a contagious viral disease that can strike at any age, but mostly affects children under the age of five, cripples the limbs, and is sometimes fatal.

The poliovirus enters the body via the mouth, multiplies in the throat and gut, enters the blood stream and, unless impeded by antibodies, invades the spinal cord and destroys motor neurons. Most patients have no symptoms, while around five per cent experience fever, sore throat, nausea and vomiting, and one in

every 200 becomes irreversibly paralysed, usually in the legs. Children living in crowded and insanitary conditions without access to clean drinking water are particularly vulnerable to it. High population density and poor sanitation facilities combined, make parts of countries like India, Nigeria perfect breeding grounds for the virus.

The poliovirus can easily be imported into a polio-free country and can spread rapidly amongst populations who are not immunized. Despite the progress achieved since 1988, as long as a single child remains infected with poliovirus, children in all countries are at risk of contracting the disease. The disease so far has been eliminated with those two tiny drops of oral polio vaccine. But there is no cure for polio, it can only be prevented.

Polio has been conquered in many countries of the world and contained in many others; still Polio has not been eradicated globally. As a result children around the world are at risk, both in Polio-free and Polio endemic countries.

## **The Global Polio Eradication Initiative**

The Global Polio Eradication Initiative - a partnership between WHO, UNICEF, Rotary & CDC - was launched to eradicate polio from the world, and at the same time strengthen health infrastructure.

The Initiative has achieved significant progress toward both these goals. Polio is now gone from America and Western Pacific region and showing no trace in Europe. There has been a dramatic decline in cases everywhere in the twenty-five years since the target was set in 1988. Millions of children who would have been paralyzed can still walk. Polio has gone from being a leading cause of disability to a disease that is on the verge of eradication.

At the same time, the polio eradication initiative has achieved lasting benefits that will have an impact on the control of other diseases. Immunisation coverage has improved in countries where polio has been eradicated. Other health interventions such as delivering of vitamin A supplements are now included in polio immunisation campaigns. Millions of volunteers and health workers have been trained and mobilized. A global laboratory network has been created. There now exists a unique global partnership for health. A unique partnership has been built that unites heads of state from polio-endemic countries, different government agencies, private industries, foundations, and celebrities, with organizations like Rotary International, UNICEF, Centre for Disease Control (CDC) and WHO.

The eradication initiative in its final stages now will bring an end to this disease forever and in many ways it represents a new beginning. In that sense, it has raised a platform for strengthening preventive health services and health sector development and health infrastructure necessary for tackling other epidemics.

The economic, peace and health dividends are enormous. The Global Polio Eradication Initiative have established access to children who have never been reached before and reached the conscience of political leaders and heads of state over the world. It has helped mobilize funds for other activities and created a 'culture of disease prevention'.

However, the major challenge today, for the agencies involved is to mobilize funds and political will to finish the job, particularly when the number of cases becomes so small as to seem insignificant. If the eradication initiative stops, the disease will return with a vengeance.

## **Polio Eradication in India**

From the very beginning of the polio eradication initiative worldwide, India has been the world's largest polio-endemic country. Before the introduction of National Immunization Days (NIDs), it was only the routine immunization which would take care of infants against Polio along with immunization for other diseases.

In 1988, India, along with every other country in the world, committed itself to eliminate poliovirus with mass immunization through the Oral Polio Vaccine (OPV). At that time, an estimated 3, 50,000 cases occurred each year, and the virus was actively being spread in 125 countries. Millions of people were devastated by polio as epidemics swept across the world. India alone reported more polio cases than any other country - tens of thousands of cases each year at that time. But since the start of the polio campaign in India, 46 million children have been saved, today, from polio. Significant reduction in the number of polio cases was noticed consequent to the NID strategy (advocated by Rotary) in 1995 and in the following years.

In 2002 again, India faced a setback, 1600 cases were reported which was a major outbreak that originated in western Uttar Pradesh and spread to many other states, most of which had been free of polio for more than a year. The Polio eradication partnership in India, under the leadership of the Government of 80s and 90s when every day as many as 500 polio victims used to be reported.

Unfortunately, this trend got reversed in 2006 due to the alarming increase in the number of cases in western U.P and Bihar, posing the biggest threat to the realization of the goal of a polio free India.

Hundreds of thousands of children were missed in areas where high population density, a very large birth cohort, and poor

sanitation favour poliovirus transmission. While it may be small in global terms, the region - Uttar Pradesh - in India affected by the outbreak is vast and densely populated. There are about 40 million children under 5 years in Uttar Pradesh who need to be vaccinated in each round of the programme, and approx. 500,000 more are born every month.

The extreme poverty in many of these regions and the dismal sanitary conditions of the villages there made the job of the vaccinating teams exceptionally difficult. Despite these hurdles, the WHO and other GPEI partners - Rotary International, UNICEF and the Centers for Disease Control and Prevention - remained optimistic that polio eradication was still possible, and have intensified their efforts over the years since 2006 to reach and vaccinate all children.

Today, the major challenge for the agencies involved is to mobilize funds and political will to finish the job, since the number of cases are so small as to seem insignificant. Further the Polio partnership also needs to sustain the current positive momentum against the dreaded Polio virus.

In India it is a monumental task and requires extraordinary efforts by the governments and partners involved. India's success against the disease so far is historic and its victory over the virus in the coming years is very vital towards achieving the global eradication goal.

Rotary's involvement with Polio eradication began in 1979 with a five-year pledge to immunise six million children in the Philippines from the crippling disease of Poliomyelitis. Within years, the programme grew to include polio immunisation projects in five developing countries. In 1982, Rotary committed to implement most ambitious programme ever to immunise all the world's children against polio by 2005- Rotary's first birth centenary.

Encouraged by Rotary's commitment to this end, the World Health Organisation (WHO) adopted a resolution for the eradication of polio as part of the Expanded Programme on Immunisation (EPI). In 1988, the World Health Assembly resolved to eradicate polio by the turn of the 20th century. Government of India was party to that resolution. World Health Organisation (WHO) also recognised Rotary as the leading non-governmental key private partner on the global team dedicated to polio eradication, other key partners being the Central and State Governments, World Health Organisation, United Nations Childrens Emergency Fund, United States Agency for International Development (USAID), Department For International Development (DFID-UK), DANIDA (Danish Agency) and JICA (Japan).

Rotary International has ever since been providing financial assistance to the national governments of the polio endemic countries for the purchase of oral Polio vaccine and conducting high level advocacy efforts aimed at raising of funds. Besides this Rotary launched its Polio Plus Programme with its branch in every endemic nation to implement and co-ordinate its various field activities having social mobilization and publicity as the prime ones through its vast network of dedicated members/volunteers.

## **Relevance of the Study**

The study "Strategy, Programmes and Performances of Polio Eradication : A Sociological Analysis", will provide an understanding of how the challenges of traditional beliefs relating to an ailment were overcome successfully. It will also highlight the efforts of WHO, UNICEF and Centre for Disease Control in collaboration with Rotary International to eradicate polio from the world.

This piece of work could also assist in bringing about awareness in public to be alert, attentive and effortless in continuously giving the 2 vital drops of oral polio vaccine to their children till they are five years of age.

This study will be able to provide a model to the social workers, the health experts and the general public to fight other dreadful diseases with the same zeal & zest. It is hoped that this study will bear a sociological significance & bring about significant changes in the outlook of the society. It may make people aware of the fact that all obstacles to healthy living can be successfully removed by united efforts.

Above all this study could teach all of us the most important lesson that if a disease can be tackled and wiped out completely by combined efforts of the government, the NGOs, the media & the masses then why not social problems like child marriage, dowry, female infanticide etc. which are equally hazardous like AIDS and other dreadful diseases?

## **Objectives of the Study**

The present study, based on field material and secondary sources of information aims at the following objectives:

- The study will bring to light the facts related to interaction between family as a basic unit of social organization and adoption of a programme initiated at the global level and the statutory agencies.
- The study will reveal the natural responses from the local community towards a programme from outside/external agency.
- The study will also provide us understanding of how the challenges of traditional beliefs relating to an ailment were overcome successfully.
- Further the study will help us to assess the role of mass media in bringing about positive impact towards the desired direction.
- The study will unfold the constraints which the programme had to overcome through systematic intervention.
- The study will also highlight the efforts of WHO, UNICEF and Centre for Disease Control in collaboration with Rotary International to eradicate polio from the world.

It is hoped the above aspects of the study will be able to provide a model with a sociological significance. Further it can be replicated in the management and eradication of similar social problems such as dowry, illiteracy, child-marriage etc. and health issues such as aids, smoking, tobacco chewing etc.



## **Review of Published Literature**

### **The functionalist perspective of health and illness**

The Functionalist Perspective stresses the essential stability and cooperation within modern societies, social events are explained by reference to the functions they perform in enabling continuity within society. Society itself is linked to a biological organism in that the whole is seen to be made up of interconnected & integrated parts; this integration is the result of a general consensus on core values and norms. Through the process of socialization we learn these rules of society which are translated into roles. Thus consensus is apparently achieved through the structuring of human behaviour. Within medical sociology, this approach is essentially concerned with the theme of the 'sick role', and the associated issue of illness behaviour. Talcott Parsons, the leading figure within this sociological tradition, identified illness as a social phenomenon rather than as a purely physical condition.

The state of optimum capacity of an individual for the effective performance of the roles and tasks for which s/he has been socialized.' (Parsons, 1951)

Health within the functionalist perspective thus becomes a prerequisite for the smooth functioning of society. To be sick is to fail in terms of fulfilling one's role in society; illness is thus seen as unmotivated deviance.' The regulation of this sickness/deviance comes about through the mechanism of the 'sick role' concept and the associated 'social control' role of doctors in allowing an individual to take on a sick status.

## **The Marxist Perspective of health and illness**

A key assertion of the Marxist perspective is, that material production is the most fundamental of all human activities – from the production of the most basic of human necessities such as food, shelter and clothing in a subsistence economy into the mass production of commodities in modern capitalist societies. Whether this production takes place within a modern or a subsistence economy, it involves some sort of organization and the use of appropriate tools; this is termed the 'forces of production.' For Marx, it is these forces and relations of production together that constitute the economic base (infrastructure) of society. The superstructure of a society – the political, legal, educational and health systems & so on, are shaped & determined by this economic base.

The orientation of this approach as applied within medical sociology is towards the social origins of disease. Health outcomes for the population are seen as being influenced by the operation of the capitalist economic system at two levels.

First, at the level of the production process itself, health is affected either directly in terms of industrial diseases and injuries, stress-related ill health, or indirectly through the wider effects of the process of commodity production within modern societies. The production processes produce environmental pollution, whilst the process of consuming the commodities themselves have long term health consequences such as eating processed foods, chemical additives, car accidents and so on. Second health is influenced at the level of distribution. Income and wealth are major determinants of people's standard of living – where they live, their access to educational opportunities, their access to health care,

their diet, and their recreational opportunities. All these factors are significant in the social patterning of health.

**Closser (1978)** is of the opinion that radiating a disease – permanently stopping its transmission around the globe is a difficult enterprise. It is difficult in large part because so much of the world lives in conditions of poverty that fan disease transmission. If the entire world had the same access to quality housing, basic sanitation and routine immunization that citizens of the United States enjoy, polio would probably disappear on its own, but when so many people live in crowded and insect permeable housing, without adequate systems for disposing of human waste or ensuring clean water, diseases like polio, measles, and malaria rage on.

**Rogers (1992)** believes that the experience of one of America's most famous polio sufferers, Franklin Delano Roosevelt, did much to transform the public perception of the disease. No longer solely associated with poor immigrants, polio had struck a wealthy young man and created a cripple who nonetheless rose to presidency. Furthermore as a result of Roosevelt's experiences, the public began to perceive water as both cause and cure of the disease. In the 1930s and 1940s the National Foundation for Infantile Paralysis helped to solidify the newly respectable image of the disease and turned polio's treatment and research into a mass-marketing enterprise in which scientists no longer played the determining role.

**Webber (1996)** states that the development of new vaccines has been a tribute to the research and development sector, with the general availability of vaccines against meningitis, pneumococcal infection, rotavirus and human papilloma virus now added to the routine vaccination programmes in many countries. As well as the polio eradication campaign, there is real possibility of eliminating measles as a public health problem.

**Daniel and Robbins (1999)** state that as the twentieth (1999) century dawned, epidemics became the usual pattern of polio in the industrialized countries of the temperate zones, with outbreaks occurring regularly every summer and early fall. The age of the persons afflicted also increased. Polio is a different disease in young children and in adults. In children, it is usually a mild illness, often unrecognized, and infantile paralysis is uncommon among those infected with polio virus. However, this mild infection produces life long immunity against further attacks by the same issues. Polio in adults is more severe, and paralysis occurs much more frequently in this age group.

**Draper (2001)** opines that Polio, or poliomyelitis, has existed since the ancient days of human history. In the Carlsberg Museum in Copenhagen, Denmark, there is a carved stone plaque from the time of the New Kingdom Period of Egypt circa 1300 BC. It shows a man with a withered right leg and a dangling foot. He stands with the help of a cane. It is very likely that the man was a survivor of polio.

He further adds that one of the first recorded cases of polio is that of Sir Walter Scott, the Scottish author of such adventure books as *Waverly* and *Ivanhoe*. As a child, he suffered an attack of fever that lasted for three days. When it ended, he was unable to use his right leg. He had always been active and athletic. He found paralysis unbearable. He struggled against the weakness of his leg and walked long distances outdoors at first dragging and then slowly restrengthening his leg. In time, he regained his health and was even able to run and jump again.

**Peters (2004)** has observed that history of polio is one of tragedy and triumph. At the height of the world epidemics in the first part of the twentieth century the disease infected, crippled and killed thousands. It struck terror into the hearts of parents. Would their

child escape infection or become one of the many who were permanently crippled, forced to wear by braces, use crutches or a wheel chair, or live out the rest of his or her life encased in the breathing apparatus known as iron lung?

**Morris (2004)** is of the opinion that the polio virus is a unique virus. This virus only thrives in humans. It can enter your body by oral pathway, cause a gastro intestinal illness and leave your body with no apparent damage. More people had polio this way and probably never knew it. The other extreme of this virus was its success as the greatcrippler of children. It was also a great killer. This virus could invade a human body and kill in a few days. Death resulted from respiratory failure or from the over whelming viral invasion of the entire central nervous system leading to coma and death. Most of us who experienced polio did so in children and many were left with damages that set us apart from our peers. The most commonly used word to describe this damage was 'crippled'. Many of the large cities had hospitals for crippled children.

**Groner (2005)** states that the volunteer trips by the Rotary help to raise the general public's knowledge of Rotary and the polio eradication effort. Just as valuable as the media coverage are the educational activities team members are involved in when they return home. Many give presentations to schools and other community groups on the benefits of polio eradication. Along with increasing public knowledge of polio eradication, it also enhances Rotary's endeavor to end polio.

**Oshinsky (2005)** believes that over the years, researchers have learned much about this disease. They discovered that everyone harboring polio virus is a carrier, no matter how slight the infection; that the immune system responds by generating antibodies which provide future protection; that there are three distinct antigenic

types of poliovirus. Type I being the most common and virulent; and that immunity to one type does not provide immunity to the others. All of these findings have led to the production of safe and effective polio vaccines.

**Orr (2011)** in her study of epidemics and society states that when its symptoms do begin to appear PPF moves slowly. As time passes, the discomfort grows, and it becomes harder for the sufferer to perform normal daily activities.

She further says that the treatment for PPF involves little more than treating the most disturbing of its symptoms. Exercises are recommended for increasing muscle strength, and medications are given to help control pain and reduce fatigue. Counseling is often provided, since this new condition can bring back memories of a traumatic period in the patient's childhood.

According to **Salgado (2005)** the U.S. took the lead in polio research, especially after Franklin D. Roosevelt was diagnosed with the disease at the age of thirty-nine in 1921. Roosevelt was determined to walk again and with that aim, in 1924 began visiting a dilapidated resort in Warm Springs, Georgia, where the warm mineral water was soothing if not ultimately healing for his paralyzed legs. Warm Springs quickly became a health spa for polio sufferers and within a year FDR was running the place. Soon he had built ramps for easy wheelchair access, invented exercises and treatment procedures to improve mobility and had begun plans to move and remodel buildings and install new water and sewage systems.

**Harshvardhan (2008)** has thrown light on the WHO in its role to eradicate Polio. WHO was aware of the fact though 3,50,000 cases had been reported worldwide in 1988, when the World Health Assembly decided to achieve eradication of polio, most polio cases

were not reported. It was estimated that only about 10 percent of the total number of cases are actually reported every year. In India, for instance, it is a well known fact that there is a social stigma attached to some disease and the families try to keep it a secret.

He also says that to achieve this goal by 2000, WHO established a global partnership involving Rotary International, UNICEF, the US Centers for Disease Control and Prevention, non-governmental organizations, donor governments and ministries of health in polio endemic states. All these agencies not only funded the initiative but also provided technical expertise, advocacy and volunteers.

**Chaturvedi (2008)** says that the WHO has defined polio eradication as 'the interruption of transmission of wild polio viruses in all human communities in the world. Use of the OPU was recommended by WHO for the OPU was recommended by WHO for the expanded programme on Immunisation (EPI) in 1974 and subsequently for GPEI. OPU contains a live attenuated virus that provides immunity to the child and contributes to building 'herd immunity' in the environment. Since the route of transmission is oral faecal, it is believed that the presence of the vaccine virus shed by a child will indirectly immunize those not directly immunized. Inactivated Polio Vaccine (IPV), an injected vaccine, in comparison gives the individual excellent immunity against the disease but does not contribute to 'herd immunity' in communities. Since OPU is administered orally, it fights the virus from the place where it breeds in the human body the gut.

**Thacker (2011)** states that OPU is extremely safe and effective at protecting children against life long polio paralysis. OPU is still and has been the safest and most effective way to protect children from polio. OPU has been the vaccine of choice for over 195 countries that have successfully eradicated polio. It remains the Global Polio

Eradication Initiative's recommended vaccine of choice to finish global eradication. More than 10 billion doses of OPU have been given to more than 2 billion children in the past years. The benefits of OPU far outweigh the extremely low risk of VDPU. OPU has reduced the polio incidence globally and in India by >99%. OPU has prevented polio in over 3.5 million children.

According to **Rogers (2011)** public health which encompasses disease prevention and promotion of physical and mental health, sanitation, personal hygiene, control of infection and organization of health services is fundamental in minimizing the impact of disease in society. From the normal human interactions involved in dealing with the many problems of social life there has emerged a recognition of the importance of community action in the promotion of health and in the prevention & treatment of disease. This is expressed in the concept of public health.

The above mentioned studies undoubtedly hold an important place in the study of communicable diseases and the dreadful disease Polio. However no studies have been so far done on the subject of Strategy, Programmes and Performance of Polio Eradication Campaigns and the combined efforts of WHO, UNICEF, the National and State Governments of various nations of the world, especially in the Indian context and the incredible role of Rotary towards eradicating Polio.

So I think my research might be successful in highlighting the performance of Polio Eradication Campaigns from the sociological point of view. This piece of work could also assist in bringing about awareness in public to be alert, attentive and effortless in continuously giving the 2 vital drops of oral polio vaccine to their children till they are five years of age. This study might be able to provide a model with a sociological significance.



## METHODOLOGY

An empirical study implies the specific stipulation of the problem, the area of study and a well defined methodology. To study any problem, the concepts stated in the problem need to be defined, without devising some ways to translating the concepts into observable events or referents, i.e. without devising some operations that yield data which will serve as satisfactory tangible indicators or referents of the given concept, a researcher cannot proceed. Hence operational definitions of the concepts used have been constructed stated as below:

1. **Healthy:** A state of complete physical mental and social well being and not merely the absence of disease or infirmity.
2. **Communicable Disease:** "It is an illness due to a specific infectious agent or its toxic producer, arising through transmission of that agent or its products from reservoir to susceptible host, either directly, or from an infected person or animal, or individually through the agency of an intermediate host, a vector or the inanimate environment.
3. **Immunity:** It refers to the body's ability to stave off the disease or to fight off infections.
4. **Oral Polio medicine:** It is a live attenuated vaccine, produced by the passage of the virus through non-human cells at a sub-physiological temperature, which produces spontaneous mutations in the viral genomes.

### Area, Universe and Sample

- Area selected for the purpose of study is the rural Jaipur City.

- The Universe of study includes families in which children are born between 1988 and 2012.
- A total sample of 100 families will be obtained on which the study will be conducted.

Since the study area is vast and the work is being conducted single handedly, the sampling method will be found suitable for making estimates about the characteristics of the universe. In the present study purposive sampling will be used. Purposive sampling is characterised by deliberate efforts to obtain representative samples by including typical area or groups in the sample.

The design of this research will be based on 'Descriptive Research'. This type of research describes social situations, social events, social systems, social structures etc. The researcher will observe/ study and then describe the findings.

## **Tools for Data Collection**

Utmost care will be taken while collecting the data during field work so as to maintain objectivity and gather appropriate facts so that the objectives and purposes of the study are met with. The following tools will be used for the purpose of study:

1. **Schedule:** For the purpose of collecting first hand information and facilitating comparison of data, a schedule will be prepared. This schedule will be used for securing the information from the respondents.
2. **Unstructured Interview:** Due to the qualitative nature of study, it is assumed that besides the questions included in the schedule, certain supplementary question will be needed to be asked. It is assumed that by giving the respondents, the freedom to talk would reveal their foci on attentions, attitude

and opinions as they deem it. Hence an unstructured interview will also be conducted on the respondents.

3. **Observation:** To enable the investigator to view and verify personally the condition of the respondents, this technique will be made use of.
4. **Case Study:** As in this research intensive study of the strategy and programmes of polio eradication campaigns will be conducted, case study will prove to be a beneficial technique of data collection.
5. **Content Analysis:** Written communications have increased the importance of print media because it is through writing that people are convinced, motivated and manipulated. This research will include content analysis as a method to collect data through printed material like newspapers, books, magazines, documents and records.
6. **Secondary Sources:** These sources help in providing certain information which may be difficult to obtain otherwise. Besides, these sources also help in supplementing the information acquired through primary sources as well as providing a guideline to the investigator. As such the secondary sources have been used to corroborate the information facts gathered through primary sources as well as to support the views of the researchers.

The collected facts and information will then be assimilated and presented in a systematic form so as to be able to draw the inferences.

## **Limitations of the study**

1. Limitations of time, space and manpower are the most restrictive aspects in an empirical study and this study may also be limited due to these aspects.
2. Being a single researcher the financial aspect may also be limited.
3. The answers of the respondents, as such will have to be taken as true.

# Chapter Scheme

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    - (ii) National
    - (iii) Regional
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## **II. History of Polio Eradication Campaigns**

- (a) Initial Phase
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- } (i) Strategies  
(ii) Programmes

## **III. Review of Published Literature**

## **IV. Methodology**

## **V. Findings and Discussion**

## **VI. Conclusion and Suggestions Bibliography**

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