



Challenges to Polio Campaign: A Case Study of Gujar Khan



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Abstract

Pakistan is among the group of four nations in the world which are categorized as endemic because of the prevalence of Polio. In the past few years, Pakistan took some big steps to curb the disease through polio eradication campaigns but it met numerous obstacles. The major objective of this research work was to shed light on the main challenges and associated factors faced by the polio staff directly related to the limited effectiveness of Oral Poliovirus Vaccine (OPV) in the populated and non-populated areas of Tehsil Gujar Khan in District Rawalpindi. Pakistan's approach towards Polio extermination is subjected to the issues in the current system, socio-cultural, and ethical perspective. By enhancing safety, confidentiality, respect, community resilience and autonomy of Polio staff in a society based on ethical values, outcomes of the campaigns can be increased. A descriptive approach was followed. Random sampling method was applied. Questionnaire was used as a tool.

Key Words: Polio, Case Study, Challenges, Eradication Campaign, Polio Staff, Gujar Khan, Rawalpindi, Pakistan

Introduction

Poliomyelitis and infantile paralysis is a very contagious viral disease spreads primarily via the fecal-oral route. It may lead to paralysis which can be temporary or permanent within children's of age of 5 years. Up to date, there is no clinically approved medicine or remedy against Polio . reported. Proper vaccination of children's up to 5 years of age is the most accepted and practiced way of saving them from this disease. (CDC, 2016; [WHO, 2015](#)). The World Health Organization (WHO) launched a three-billion-dollar Global Polio Eradication Initiative (GPEI) in 1988 to stem out this disease. It cannot be hundred percent successful in eradicating Polio but it effectively reduces the total reported cases of polio from three fifty thousand in the year 1999 within 125 countries to a mere two thirty-five in 7 countries as of 2003([Closser et al., 2014](#); [WHO, 2011](#)). One of the widely used polio vaccines worldwide is termed as an oral poliovirus vaccine (OPV). Generally, 2 to 3 doses are effective to immune children to poliovirus but may require 10 or more doses to induce an effective level of the immune response in children living in the areas with minimum water quality, poor sanitation, and hygienic conditions ([WHO, 2015](#)).

In Pakistan, on average spending on healthcare sector amounts for less than 2 % of the Gross National Product (GNP), and up to dated health infrastructure along with the service delivery system is largely lacking in many areas of the country especially remote and inaccessible areas. However, the Global Polio Eradication Initiative's Pakistan program execution is having good financial funding but its overall collective effectiveness finds middle ground due to lack of check and balance in governance, an average and below-average resourced public health delivery system and non-regulated independent private health care setup(Nishtar, 2010).Due to all such factors, Pakistan had also recorded the world's highest polio cases during the years 2014 and 2015 ([Islam, 2015](#); [Khan et al., 2017](#); [Khan and Shahibzada, 2016](#)).

Despite all the odds in the past couple of years, Pakistan has shown remarkable progress regarding the implementation of effective polio eradication approaches and minimizing the spread of poliovirus in the country's hard-hit areas. The Government has poured in significant human and financial inputs to level off with the global eradication objectives (NEAP, 2014). Furthermore, a relatively largerratio of the total budget of polio eradication was invested for vaccines, international technical and scientific support, and partial

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operational costs have been provided.

The polio vaccination campaigns increase the immunity of the most susceptible age group kids in Pakistan who are affecting from a nonstop trend in which around twenty-seven polio staff members have been killed since 2012 during indigenous anti-polio vaccination programs. The official data has shown different factors that has caused. increasing polio-endemic in the country. Among them, major `are cited as Extremism and fragile law and order situation coupled with the refusal of families to administer vaccines to kids. The reason is based on the false propaganda against the vaccine. Militant groups and terrorists mainly in the volatile Federally Administered Tribal Authority (FATA) and North Waziristan areas of Pakistan that shares a porous and un-supervised border with war-torn Afghanistan may have complicated the polio vaccines administration further and put the lives of innocent and susceptible children lives at risk of Polio[Riaz and Rehman, 2013; Bahree, 2012].

Nonetheless, it is very evident that the lack of basic awareness, education, and formal information of the vaccine has also been subjected to unfriendly attitudes, the thoughts and views against the vaccination campaigns. The eradication program needs to be merged in local value systems if it needs to be successful in the polio eradication. In this matter, critical information is originated from religious and cultural norms and values along with a sound and predictive knowledge of the international political scenarios will be very helpful [Murakami, 2014]. This study was carried out for a detailed investigation for understanding the association of emerging polio cases and major prospects and challenges faced by Polio staff involved in its eradication. This study was conducted in Gujar Khan Tehsil of District Rawalpindi, Punjab, Pakistan for the following purposes and the results from this study will be added to the current pool of knowledge related to Polio. The following were the main objectives of this study.

1. To find out the major prospects and challenges faced by the Polio staff in Gujar Khan.
2. Identifying and analyzing various challenges faced by the program.
3. H₁: Lack of coordination among the teams and Supervisors harms the Polio Eradication Campaign.
H₀: Lack of coordination among the teams and Supervisors directly imparts effect on the goals of the Polio Eradication Campaign.
4. H₁: Effects of the maturity and intensity of the Polio Campaign on RI and PHC.
H₀: There are no effects on the maturity and intensity of the Polio Campaign on RI and PHC.

Material and Methods

Demographic location, research design, and sampling Technique

A descriptive research approach was followed in Tehsil Gujar Khan of District Rawalpindi in Pakistan. The random sampling method was employed to select a random sample from each of the selected locations (Union Councils). The pre-tested questionnaire was distributed among the participants (Polio Staff) at places of their common interest throughout the respective union councils. A questionnaire was designed. in local, easy, and understandable language. A total of 50 questionnaires were distributed among the individuals and observing their answers, data was collected and analyzed. A well-studied and factual questionnaire was used for the collection of data from the targeted participants. However, in cases where participants were unable to complete the questionnaire because of the literacy issue, the interviewer-assisted approach was used for data collection. The assessment was based on participants' responses to questions. Moreover, detailed geographic information of the region was gathered to make a hypothesis. The data collectors randomly approached and invited polio workers to participate in the survey.

Eligibility Criteria and Sample size

A sample size of 100 participants was formed. All the individuals were considered eligible for this study who has been working as polio staff. Participants dropped from the research are those who were not willing to be the part of this study.

Data analysis

For data analysis, SPSS 20.00 will be used. Data was completely secured; password protected and could only be accessed by the researchers. Frequencies were calculated for categorical and independent variables and the dependent variable was taken. They were exhibited in frequencies and %ages.

Ethical approval

This work was ethically approved by the research committee of the Department of Anthology, PMAS-AAUR.

Furthermore, the present work was carried out in accordance with the ethical standards where human subjects were used for data extraction. The participation of respondents was voluntary and the respective inputs by them were dealt with a high level of confidentiality and privacy. Participants were properly informed and briefed about the objectives of the study before data collection.

Results

Demographic Characteristics

The information was gathered from two fundamental wellbeing units (BHU): Sui Chaimia and ChangaMaira of Gujar Khan (Fig. 1). Further breakdown of the statistic highlights of the medicinal services laborers is shown in Table 1.

The conveyance of sexual orientation demonstrated that all out were 40 and 65 % were male while 5 % were female human services suppliers. Additionally, 67.5 % were Punjabi while 32.5 were of another ethnicity. Additionally, 57.5 % of wellbeing specialists were of neighborhood 42.5 % were from the close-by towns and towns (Table 1). The data exhibited that the greater part of the prosperity masters was of the age collect 20-30 (52.5%) years while those developed at least 51 addressed only 1 % of the examination test. The examination also appeared larger part (50.5%) of the examination test was remedial masters nearby specialists around 30 %. As seemed in Table 1 that 32.5 % had worked for under 2 years diverged from 20 % females. The results exhibited that male prosperity experts were progressively experienced (worked for more years) than the female prosperity workers.

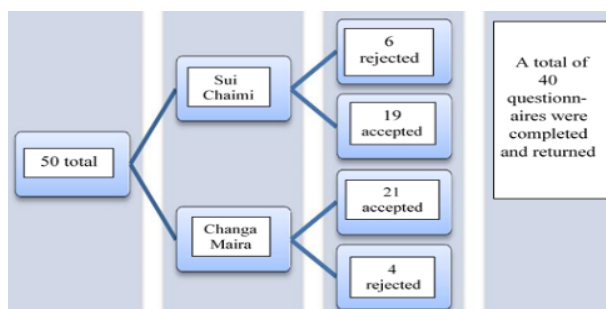


Fig. 1: Distribution of questionnaire to two BHU

Table 1. Demographic Features

Demographic Characteristics	Males n (%)	Females n (%)	Total n (%)
Gender	26(65)	14(35)	40 (100)
Age			
20-30	13(32.5)	8(20)	21(52.5)
31-40	7(17.5)	3(7.5)	10(25)
41-50	4(10)	2(5)	6(15)
Above 50	2(5)	1(2.5)	3(7.5)
Education			
Matric	2(5)	3(7.5)	5(12.5)
F.Sc.	1(2.5)	4(10)	5(12.5)
B.Sc.	13(32.5)	3(7.5)	16(40)
M.Sc.	9(22.5)	2(5)	11(27.5)
M.Phil.	0(0)	2(5)	2(5)
Ph.D.	1(2.5)	0(0)	1(2.5)
Profession			
Doctor	15(37.5)	5(12.5)	20(50)
Nurse	2(5)	10(25)	12(30)
Vaccinator	5(12.5)	1(2.5)	6(15)
Other	2(5)	0(0)	2(5)

Role			
Area In-charge	2(5)	1(2.5)	3(7.5)
District HO	5(12.5)	2(5)	7(17.5)
Deputy District HO	5(12.5)	1(2.5)	6(15)
UC MO	6(15)	3(7.5)	9(22.5)
Team members	6(15)	9(22.5)	15(37.5)
Years of working			
Less than 2	13(32.5)	8(20)	21(52.5)
2-4	9(22.5)	4(10)	13(32.5)
5-7	2(5)	2(5)	4(10)
7 or above	2(5)	0(0)	2(5)
Ethnicity			
Punjabi	16(40)	11(27.5)	27(67.5)
Others	10(25)	3(7.5)	13(32.5)
Residency			
Local	13(32.5)	10(25)	23(57.5)
Near towns	13(32.5)	4(10)	17(42.5)

Findings

Health Workers Opinion Regarding the Importance of Childhood Vaccination (0-5 Yrs Old): After being gotten some information about the significance of six unique antibodies, 47.5 % of wellbeing specialists expressed that the BCG was the most vital immunization contrasted with 22.5 % wellbeing laborers who said that OPV oral polio immunization was most vital as appeared in the table beneath. The information investigation showed that 35 % of wellbeing suppliers said that PCV 10 for pneumonia and meningitis these were least important vaccine. The opinions about the importance of other vaccines are also shown in Table 2.

Table 2. Opinion Regarding the Importance of Childhood Vaccination (0-5 Yrs Old)

Importance of Vaccine	Type of Vaccine n (%)					
	BCG	Influenza	OPV	PCV 10	Penta	Hep
Least important	4(10)	6(15)	6(15)	14(35)	5(12.5)	5(12.5)
Slightly important	6(15)	7(17.5)	5(12.5)	12(30)	6(15)	4(10)
Important	9(22.5)	5(12.5)	4(10)	10(25)	6(15)	6(15)
Fairly Important	13(32.5)	4(10)	5(12.5)	6(15)	5(12.5)	7(17.5)
Most Important	19(47.5)	2(5)	9(22.5)	4(10)	1(2.5)	5(12.5)

Opinions Regarding the Routine Immunization for Polio Eradication: At the point when gotten some information about the way to entryway crusade 57.5 % of the all-out wellbeing specialists were of the view that it ought to be finished. What's more, 62.5 % were of the supposition that crusades ought to be set up to kill polio. Just around 50% of all-out human services laborers knew about the polio immunization status of the offspring of their companions and partners (Table 3)

Table 3. Opinions Regarding the Routine Immunization for Polio Eradication

Opinions about the polio eradication campaign	Yes	No
Door to door campaign	23 (57.5)	17(42.5)
Campaign establishment	25(62.5)	15(37.5)
Do colleagues vaccinate their children?	11(27.5)	9(22.5)
Do friends vaccinate their children?	9(22.5)	8(20)

Opinions About Polio Eradication Campaign: Table 4 showed that 57.5 % of the all-out wellbeing specialists on the two fundamental wellbeing units had worked or where all the while working for the destruction of polio in the battle. The information has appeared on the table beneath. 27.5 % were from Sui Chaimia and 30 % from change Maira. When they were asked that were the battle running viably just 37.5 % of the all-out wellbeing specialists said yes. Suppositions about Polio annihilation was Polio destruction

running successfully on the off chance that they were not suggested inoculate over and again. This is because People were exhausted and our administrations get antagonistic comments.

Table 4. Opinion Regarding Polio Eradication Campaign

Opinion regarding polio eradication campaign	Basic health unit BHU		Total
	Sui Chaimia	Changa Maira	
Worked with the polio vaccination campaign	11(27.5)	12(30)	23(57.5)
Is it running effectively? Yes	7(17.5)	8(20)	15(37.5)

Reasons for Refusal of Polio Vaccination: The most well-known purpose behind the refusal of polio immunization was observed to be the absence of awareness²⁴ (60 %), authorization issues²³ (57.5 %) for inoculation from seniors, and absence of visits from vaccinators²¹ (52.5 %). While around 20 to 27.5 % wellbeing laborers didn't know about the correct conceivable reason. The most vital reasons and their pervasiveness as per the medicinal services laborers have appeared in the dissemination outline beneath. A large portion of the general population was the absence of mindfulness about Polio inoculate they believe that it was just legend or English prescription which misuse our ages. Refusal of Polio is likewise rehashed polio immunized (Table 5)

Reasons Accounts for the Weak Polio Eradication Campaign: The most common reason for the weakness of the polio eradication campaign was found to be the no proper management (57.5 %), lack of equipment and vaccines (57.5 %) for vaccination, and improper supervision (52.5 %). While about 7 to 25 % of health workers were not aware of the exact possible reason as shown in Table 6. The most important reasons and their prevalence according to the health care workers are shown in the distribution chart below.

Table 5. Reasons for Refusal of Polio Vaccination

Reason	Yes	No	Don't Know
Believing it's harmful	18(45)	12(30)	10(25)
Permission issues from the family head	23(57.5)	9(22.5)	8(20)
No visits from vaccinators	21(52.5)	12(30)	7(17.5)
Believing it's unnecessary	19(47.5)	10(25)	11(27.5)
Lack of awareness	24(60)	9(22.5)	7(17.5)

Table 6. Reasons for the Polio Eradication Campaign Being Weak

Reason	Yes	No	Don't Know
Planning issues	19(47.5)	11(27.5)	10(25)
Management not proper	23(57.5)	9(22.5)	8(20)
No proper supervision	21(52.5)	12(30)	7(17.5)
Safety and security issues	18(45)	10(25)	12(30)
Lack of equipment's/vaccines	23(57.5)	9(22.5)	7(17.5)

Hypotheses Results

Correlation Results

Table 7 demonstrates the relationship between needy variable (DV) that is polio destruction program and all the free factors that are security issues, poor routine inoculation, arranging and the executive's issues, and mis-originations about polio immunization programs. The connection between everything the autonomous factors with the DV had noteworthy negative with esteem [- 0.73, - 0.81, - 0.721 and - 0.724]. It demonstrates that the most grounded negative relationship is between poor RI and polio annihilation program the needy variable with the most elevated esteem - 0.810. It is additionally uncovered that every autonomous variable is emphatically related to one another.

Regression Analysis

Regression examination in Table 8 showed all the free factors that are security issues, poor routine inoculation, arranging and the executive's issues and mis-originations about polio immunization programs had a huge negative relationship with the reliant variable that is polio destruction battle with beta qualities (-

0.75, - 0.81, - 0.73 and - 0.72). Furthermore, every one of the factors made a measurably noteworthy commitment to the expectation of the reliant variable that is polio destruction battle with the R^2 esteems (0.555, 0.643, 0.527, and 0.520). This implies right around 50 % in addition to the difference subordinate variable (polio destruction campaign) is clarified by the variety in the free factors. The most elevated R^2 esteem is 0.643 of poor RI which shows that the most grounded reliance relationship is 64 % as clarified in the table underneath.

Table 7. Correlation Analysis

	Security issues	Poor RI	Planning and management issues	Misconceptions about Polio vaccine	Polio Eradication
Security issues	1	0.628**	0.567**	0.576**	-0.732**
Poor RI	0.628**	1	0.670**	0.632**	-0.810**
Planning and management issues	0.567**	0.670**	1	0.800**	-0.721**
Misconceptions about polio vaccine	0.576**	0.632**	0.800**	1	-0.724**
Polio Eradication	-0.732**	-0.810**	-0.721**	-0.724**	1

**Correlation is significant at the 0.01 level (1-tailed)

Table 8. Regression Analyses

Model	R^2	Adjusted R^2	Standardization coefficient (Beta)	t-value	Significance (p-value)
Security issues	0.549	0.555	-0.75	-9.310	0.002
Poor RI	0.643	0.643	-0.81	-11.467	0.004
Planning and management issues	0.527	0.522	-0.73	-9.68	0.000
Misconceptions about polio vaccine	0.520	0.511	-0.721	-9.741	0.001

Dependent variable: Polio Eradication Campaign

Discussion

Absolute 50 surveys were dispersed to the human services laborers of two essential wellbeing units (BHU) of Gujar Khan Tehsil. All out 40 surveys were acknowledged and finished and were returned. The appropriation of sex demonstrated that complete were 40 and 65 % were male while 5 % were female human services suppliers. Likewise, 67.5 % were Punjabi while 32.5 % were of another ethnicity. So also, 57.5 % wellbeing specialists were of neighborhood 42.5 % were from the adjacent towns.. Most of the wellbeing specialists were of the age aggregate 20-30 (52.5%) years while those matured 51 or more spoken to just 1 % of the examination test. The investigation likewise displayed that the dominant part (50.5%) of the examination test were therapeutic specialists alongside medical caretakers around 30 %. The wellbeing laborers expressed that the BCG was the most critical antibody contrasted with 22.5 % wellbeing specialists who said that OPV oral polio immunization was most essential as appeared in the table underneath. One conceivable clarification for this is BCG is the standout amongst the most settled immunizations on the planet and subsequently, it is anything but difficult to name as generally imperative. Another clarification is that it is an inadequately planned inquiry and along these lines, the respondents were indistinct about how to reply (Naeem *et al.*, 2017; Bhootrani and Tahir, 2012).

The information examination displayed that 35 % of wellbeing suppliers said that PCV 10 for pneumonia and meningitis were the slightest essential antibody. The most well-known purpose behind the refusal of polio immunization was observed to be the absence of awareness²⁴ (60 %), consent issues²³ (57.5 %) for inoculation from seniors, and absence of visits from vaccinators²¹ (52.5 %). Amid meeting of one of the administrators of the polio annihilation crusade, he said that they had the strategy of follow up visits in homes where guardians were declining immunization to their kids. He told that amid one of the visits in a remote region a town the dad of the youngster was exceptionally astounded to see him. The dad clarified that before when the kid was debilitated and he had taken him to the doctor's facility then no wellbeing proficient had sufficient energy to meet and check him, however when he denied inoculation him against polio then a specialist has gone to his home to converse with him. He further included this has made him much progressively suspicious concerning the genuine substance of the immunization (Kanwal *et al.*, 2016; Kewet *et al.*, 2014).

At the point when gotten some information about the way to entryway battle, 57.5 % of the all-out wellbeing laborers were of the view that it ought to be finished. What's more, 62.5 % were of the conclusion that battles ought to be built up to destroy polio. Just around 50% of all-out human services specialists knew about the polio immunization status of the offspring of their companions and associates. One reason beneath 50 % was happy with the adequacy of the battle may be that despite everything they catch wind of new instances of poliomyelitis ([Molodecky et al, 2017](#); [Butler, 2003](#)). The relationship examination showed the most grounded negative connection between the poor RI (IV) and the absence of essential medicinal services offices (IV) and the polio destruction program (DV). The relapse investigation additionally reinforces the outcome by giving the most grounded reliance relationship between poor RI and the polio destruction battle ([Owais et al, 2013](#); [Adams, 2000](#)).

Absence of mindfulness and wellbeing and security issues are the most well-known explanations behind the poor battle while strong development and supervision are second and third. This implies the dominant part of the medicinal services experts inoculate their very own youngsters. A clarification for this may be that Pakistan's populace is isolated into financial classes which implies that one scarcely associates with individuals outside one's class. Be that as it may, a minority do know somebody who did not inoculate their kids. Then again respondents work at the greatest open clinics in the most exceedingly awful influenced regions. Qureshi and Shaikh. 2007). Their encounters are in this way applicable. In one of my meetings, a female restorative specialist disclosed that her private driver had not immunized any of his kids against poliomyelitis. It also revealed that suspicious of the fixings in the antibody and was frightened disinfect the kids. He trusted that the antibody was a natural weapon to diminish the measure of Muslims on the planet. There were numerous such stories given by the wellbeing experts. This lack of trust may have a few causes ([Mushtaq et al., 2015](#); Ullah et al., 2016).

Conclusion

The purpose of this study was to observe and analyze the challenges associated with the Polio Campaign conducted in Gujranwala. Finding the main reasons to which attention will be given to get more efficient. positive results from Polio eradication campaigns viz Malnutrition, Ignorance, presence of extremists and militants, Infrastructure shortage, Rumors, Cultural restrictions, Safety and security issues.

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