

## Polio Eradication Media Campaign in Pakistan: KAP Analysis in Punjab

Irem Sultana\*

Rao Shahid Mahmood Khan†

Malik Adnan‡

### Abstract

*The aim of this research is to go through the effects of media health campaigns on knowledge, attitude and practices regarding the disease of Polio in province Punjab. The data was collected from 500 respondents from 35 districts of Punjab. The quantitative findings of the study proved that media, particularly TV is the main source of health information in both urban and rural areas. The practice ratio is lesser as compared to the knowledge and attitude change. Many people shared knowledge with others but up to some extent and family and friends were preferred to share the knowledge with. Income and educational qualification of the respondents seem to have no effect of media health campaigns on knowledge, attitude and practice. Campaigns seemed to impart only knowledge but not bringing much change into attitude and practice.*

**Key Words:** Polio, Health, Media, Awareness, Punjab

**JEL Classification:**

### Introduction

The human body concern about hygiene, output, food, safety and relaxation against the diseases, is a very important component for keeping yourself healthy. Health problems mean a life without its usefulness but also its enjoyments and happiness fade away.

Health can't be maintained by having pills regularly, not also from having few checkups of health. These health problems can be only solved by health education as it gives a scientific approach to the people.

The literature says in general that the “KAP” talks about the Knowledge, Practice and Attitude of a community. The KAP study's main purpose is to go through the changes developed in the community. KAP study teaches the community about specific things and tells that exactly how much people know about it and how they behave and how they feel about it.

Every country wants to be a healthy society, but it needs a positive attitude toward the health of every individual. Media in Pakistan reach to thousands of peoples. Media

\*Assistant Professor, Department of Mass Communication, Government College University, Faisalabad, Punjab, Pakistan.

†Assistant Professor, Department of Media Studies, The Islamia University of Bahawalpur, Punjab, Pakistan.

‡Assistant Professor, Department of Media Studies, The Islamia University of Bahawalpur, Punjab, Pakistan. Email: [dr.adnan@iub.edu.pk](mailto:dr.adnan@iub.edu.pk)

should be accessed by the people as it is used to communicate with them and inform them health messages; the audience will be educating as well as entertain. This research study is an attempt to check the awareness in people about the health campaigns run through media and their approach and run through the level of targeted spectators concerning Polio.

## **Polio**

“Poliomyelitis also called polio, or infantile paralysis is a highly infectious viral disease that may attack the central nervous system and is characterized by symptoms that range from a mild non-paralytic infection to total paralysis in a matter of hours. Poliomyelitis was first described in 1789, although it likely dates back many centuries prior to that time. Outbreaks occurred in Europe and the United States beginning in the early 19th century.

For the next hundred years, outbreaks became a regular summer and fall event in northern regions. As time passed, the number of cases and people crippled by the infection rose. By 1952, more than 21,000 people in the United States were paralyzed after a bout of Poliomyelitis. The manufacture and widespread use of several vaccines beginning in the 1950s drastically reduced the number of cases of Poliomyelitis. In the United States, the last reported case of Polio acquired from a wild-type (original form of a naturally occurring) virus was in 1979” (*Medical Encyclopedia, answers.com*).

Global Eradication Campaign was launched in 1988 as there were 350,000 cases caused by poliovirus as in more than 125 countries due to paralytic disease. Till 2003, Only 784 cases were reported in six countries in total (*Aylward et al. 2005*).

## **Pakistan’s Scenario Regarding Polio**

Pakistan is one of only 2 remaining countries in the world with ongoing wild poliovirus transmission, along with Afghanistan. WHO, with UNICEF and other key partners of the Global Polio Eradication Initiative, supports the Government of Pakistan in polio eradication efforts to ensure that Pakistan achieves polio-free status?

In the last few years, there are media campaigns working on various purposes. Resolutions were made in the World Health Assembly in 1994 and set an aim to eliminate the threat of Poliomyelitis before the 2001 year-end. But Pakistan has come a long way in its struggle to eradicate Polio. In the early 1990s, the annual incidence of Polio was estimated at more than 20 000 cases a year. Since its initiation in 1994, the national polio eradication programme has made major strides in reaching children with immunization in all parts of the country. The current polio epidemiology remains promising. By observing this resolution in mind, WHO of South Asian Region in 1994 hurried up the work for polio eradication. Vaccination for Polio was in progress in 1994 at a huge scale, and they are still going on. The main objective for the campaign was to eliminate the Poliomyelitis before the end of the year 2000. 1147 (22%) were the number of cases in 1997 from all over the world, but unfortunately, all of them were from Pakistan. In 1998, 418 cases came out from Pakistan in which province of Sindh had the most 219 cases, which are 70% of the total cases and from these cases in Sindh, Karachi has 69 cases which are 16% of the total cases of Polio. The number of cases has declined from 306 in 2014 to 54 in 2015, 20 in 2016, 8 in 2017, and 12 in 2018. However, in 2019 the Programme witnessed a significant spread of the virus and reported 147 polio cases

across all provinces. So far in 2020, 82 cases have been reported; from Punjab 14, Sindh 22, Khyber Pakhtunkhwa 22 and Baluchistan 24.

## **Budget Allocations for Health Campaigns in Pakistan**

In 1994, It was the first time when polio vaccination campaigns were launched on a huge scale through the national health budget of Pakistan, for Polio vaccination budget was allocated in the year 2004. Beginning from 2004 to 2008, Polio was prioritized, and 2.1% of the budget was allocated for this disease, these funds were efficiently used for spreading health education by campaigns through media platforms. Budget for 50 Million Rupees was allocated for health campaigns from the year 2004-2005 to increase the awareness about the Polio, but there were 7 million reductions in the budget for the year from 2005-2006. The amount allocated in the budget for the year 2006-2007 was again increased to Rupees 50 Million, but in the upcoming years there was an increase in the budget, 5 million increase for the year 2007-2008 and then again there was an increase for 10 million Rupees for the year 2008-2009 for Media Health Campaigns regarding Polio

## **Literature Review**

Kincaid, D.L et al. (1989) clarified that the effective communication of health would help to educated people and spread awareness about health problems plus also about their solutions, give them motivation and skill which are essential for decreasing these dangers. Communication with people about health will also be raising the demand for health services and unsuitable services for health demand will be reduced.

Public plans can be persuaded to the population by health communications, to assist leading to principles and course of action, it will make delivery of public health to the masses easily and health care services better, and it gives a start to the social standards of healthy and good quality life.

According to them, day by day, the connection of both two different fields health and communication is getting stronger, and communication is very important to tell masses how to improve their and their family health. (pp. 1-35)

Backer, T.E. et al. (1992) observed that from having health communication, there is a positive impact on public health and in numerous fields, there is an avoid in diseases. Development is also one of them as people-to-people relationships and group communications in medical situations through the preparation of health lawyers and patients in good abilities of communication. When both parties are skilled in communication, so it helps in better two-way relationships.

Another part is the learning campaigns in which health message are spread for the transformation of the social environment to appreciate able health changes, build wakefulness. Campaigns are generally called as health drives as it is then easy to approach the masses through it and instructions printed message to deliver the health messages. Many health campaigns have used marketing methods which are easy to approach masses.

Shaikh, Omair., Inam, Safdar., & Kazmi, Anjum. (2003) Keeping the strategies adopted from Ziauddin Medical University (ZMU) recommended that the sharing of information from people to people and community to community should be done for campaigns to defeat Polio and encourage its vaccination. The language barrier can be

overcome if the training is given to a student from 13 to 15 years of ages in school as they can also access and cover the difficult areas. Door to door vaccination will be easy as it decreases the manpower, and there will be effective coverage by the students. Injections made by Pakistan for children under 1 year are not meeting the demand of international standards. The main cause for this is the cultural barriers which are set before as a woman can't leave her house without the permission of her husband. There should also be a close look at the cases which are suspected of Polio.

## **Objectives of the Study**

1. To narrate the history of Polio.
2. To check people exposure for the health campaigns spreading through media.
3. To check the targeted audience accuracy level of knowledge.
4. To explore change in public about their attitude regarding the media health campaigns
5. To know how much the audience is practising the health campaigns on media regarding Polio.
6. To discover the difference between the health campaigns run through media or via individual sources to check their recognition and viewpoint.

## **Hypotheses**

- H-1: Use of television is more in women's as a mean of information about health regarding diseases under study.
- H-2: Information sources other than media are used more often in rural areas, and they are more effective in spreading Health information.
- H-3: Media is a more accurate source of knowledge and practice.
- H-4: The knowledge, attitude and practice (KAP) are approached to the public by Health campaigns, and it depends on targeted audience economic status.
- H-5: The KAP depends on the qualification level of the audience

## **Theoretical Framework**

Effectiveness of research depends on how and which strategies and theories are favorable for the given situation.

“Just as no single behavioral theory explains and predicts all human behavior, no communication theory explains and predicts all communication outcomes. Some view this as fragmentation in understanding the role of communication in human affairs.” (Public Health Encyclopedia 2009, answer.com)

In the following, different theories are discussed that are prospective candidates to be a theoretical framework for this study; these are:

### **Diffusion of Innovative Theory:**

This theory explains how social changes come. (Everett, Roger, 1962) it also tells about the change in knowledge, attitude and practice (KAP) in a community concerning awareness regarding disease understudy Polio. Moreover, there is a process diffusion in which innovations are communicated through different media channel among the social society, so this study looks into the health campaigns done through media to check the changes made by these communications. This study also looks into the new ways of

curing and ways of preventing this disease. Media health campaigns are done in an urban and rural area of Province Punjab. Diffusion mainly works on innovation, communication channels and the social system.

## **Health Belief Model**

Becker (1974) described that there was development made in the 1950s in HBM from a set of members of public psychologists as they were working for public health in the field, they also explained health services are not used by some people such as screening. The model is still used commonly. The four main components are abstracted:

### **Perceived Susceptibility**

Assessment of how much chances are there of getting that condition.

### **Perceived Severity**

Assessment of all the things that how complicated conditions can come and knowledge about their treatments and what consequences can come after that.

### **Effectiveness**

That pleasing to the shielding behavior will have positive impacts. Motivating the people will lead to taking an action which will transform the activities, so if the protective measures are taken, then it will prevent the condition.

### **Cost**

In Cost, there is the interference of barriers and losses with the change in well-being performance. The combination of perceived effectiveness and perceived costs constitute the notion of outcome expectation.

## **Methodology**

Due to the quantitative research method, the researchers collected data through a well-developed questionnaire comprising 40 questions. For convenient sampling, 700 respondents were picked up. In Punjab's 35 districts were selected in which rural and urban areas are added, this study was limited to males and females only, and respondents from age 18 to 57 were selected. There were 700 questionnaires in total, and it was distributed in the way that from 20 questionnaires were allotted to each district, and in both urban and rural area, 10 females and 10 male respondents were selected. Out of 700 questionnaires, 516 were received; the response rate was around 74%. Of these 516 questionnaires 16 were not properly filled in, these were rejected & only 500 questionnaires were selected for further analysis. The data were analyzed using SPSS to ensure impartiality in the findings of the study.

## **Data Analysis and Interpretation**

*When the data get feed through SPSS, it gets cleaned, so it is ready for analysis. Data were analyzed on the statistics of descriptive and inferential. Where the ever statistical test is required chi-square and t-tests are used*

**Table 1.** Awareness about Polio (n=500)

Level of Knowledge regarding Polio	n	%	$\chi^2$
Awareness regarding Polio			220.45***
Yes	416	83.2	
No	0	0	
To some extent	84	16.8	
<b>Source of information</b>			105.8***
Traditional Media/ inter net	364	72.8	
Other than Media Sources	130	26.0	
No response	6	1.2	
<b>Media type</b>			547.29***
Newspaper	84	23.1	
Broad Cast radio	25	6.9	
Television	242	66.5	
Internet sources	4	1.1	
Bill Boards /Banners /Sign Boardsetc	9	2.5	

\*\*\* $p < .001$

It illustrates that a huge number of respondents know about the disease of Polio; they consist of 416 candidates, and it has 83.2% of the total respondents. A respondent who knows to some extent about the disease polio is 84 in number. 364 respondents got the awareness about the Polio through the media campaigns; it is 72.8% of the total respondents while other 26% of the respondents got the knowledge about the disease from the other means and there are only six respondents who didn't answer to the question

Media, as a source of awareness spreading, is divided into five parts. Mostly, the effective method was the digital media as 242 respondents got information through the TV, and they are the largest percentage, which is 66.5% of the total respondents. Then, Newspaper was used effectively, and it gave results that 84 respondents are 23.1% of the total respondents who got information through the Newspaper. 25 of the candidates said that they got the information regarding Polio through the radio and it is only 6.9% of the total respondents. Only four got information through the internet, and the respondents who got information through banners etc. are only 9, and they are only 2.5% of the total respondents.

Majority of the respondents who have knowledge about the Polio disease are from Punjab, and they are 83.2% of the total respondents.

**Table 2.** Accuracy of knowledge Media user respondents

Statement	Yes		No		Don't Know	
	n	%	n	%	n	%
<b>Type of disease</b>						
Polio is Adult's disease	58	15.9	282	77.5	24	6.6
Polio is children's disease	348	95.6	13	3.6	3	0.8
A fatal disease	106	29.1	189	51.9	69	19.0
Polio is curable disease	89	24.5	165	45.3	110	30.2
Polio can be prevented	265	72.8	45	12.4	54	14.8
<b>Precautionary measures</b>						

Statement	Yes		No		Don't Know	
	n	%	n	%	n	%
Drops are given	362	99.5	0	0	2	0.5
Injected	59	16.2	234	64.3	71	19.5
Precautions are told	104	28.6	155	42.6	105	28.8
Any other	0	0	351	96.4	13	3.6

The table tells us that when it was asked to the respondents that the Polio is children's disease and 348 of them answered 'yes' which is 95.6% of the total respondents. 13 respondents said "No" as they had the wrong answer and there were only 3 respondents who said that they didn't know about the disease. Is polio an adult's disease? 15.9% of the total respondents said "yes" that is incorrect information. Respondents with good health knowledge said "No", and they were 282 in number while the respondents who didn't know about the answer were only 24 respondents. 106 respondents think that Polio is a life-taking disease, but 189 respondents think that Polio is not a dangerous disease while there were still 69 respondents who didn't know about it. 265 of the respondents think that the Polio can be defeated, but 45 respondents disagree with the others, and still, there are 54 respondents who have zero knowledge about it; Table 5 also reveals shocking results that majority of the respondents think that Polio can't be cured as they have 165 respondents. On the other hand, there are only 89 respondents think that it can be cured while 110 of the other respondents didn't know about it.

After successful media campaigns, it tells that 99.5% respondents which consist 362 in number have correct knowledge that Polio drops can cure this disease while still 2 of the respondents didn't know about the disease.

**Table 3.** Awareness about Polio from other Sources Except for Media

Types of Sources	n	%	$\chi^2(2)$
Health Workers/teams	93	68.9	89.554***
Relatives /Neighbors/friends	28	20.7	
Other Source	9	6.7	

\*\*\* $p < .001$

The table tells that the candidates have three other sources of information if they are not using the Media. Health Workers have played a vital role in the information spreading as 93 respondents tell that they received knowledge from them. There are 28 candidates who told that they got information from their neighbors, friends and relatives, and there are only nine candidates who got information from other sources.

Mostly the information is floated through the health workers as if they have not got the knowledge from the Media.

**Table 4.** Attitude towards Polio before Exposure to Media Health Campaign (n=494)

Attitude	Media		Other Sources		Total		$\chi^2(2)$
	n	%	n	%	n	%	
Negative	134	36.8	43	33.07	177	35.8	2.783
Positive	56	15.4	14	10.76	70	14.2	



Attitude	Media		Other Sources		Total		X <sup>2</sup> (2)
	n	%	n	%	n	%	
Neutral	174	47.8	73	56.17	247	50.0	
Total	364	100.0	130	100.00	494	100.0	

Note: 6 respondents are in no response category.

Table 4 tells about the attitude of the respondents before the Media Health Campaigns. 364 candidates got the information through the Media Health Campaigns, and the 174 respondents have an unbiased angle of view toward polio treatment, but 134 candidates have the negative mindset for the treatment of the disease Polio while there are still 56 respondents who have a positive attitude to the treatment of Polio.

Chi-square test was conducted to test whether the source of media is associated with categories of attitudes. The value of  $\chi^2(2, N=494) = 2.783$  is not significant at  $\alpha = .05$ .

**Table 5.** Attitude Change after Exposure to Media’s Polio Eradication Campaigns (n=494)

Responses	Media		Other Sources		Total		X <sup>2</sup> (2)
	n	%	N	%	n	%	
Yes	191	52.5	49	37.7	240	48.6	14.559***
No	6	1.6	8	6.2	14	2.8	
To some extent	167	45.9	73	56.1	240	48.6	
Total	364	100.0	130	100.0	494	100.0	

\*\*\* $p < .001$

The table demonstrates and compares the change of attitude among media and non-media users. Media was the source of information for 364 respondents. 52.5% of these respondents admitted changing in their attitude towards Polio191 after health awareness campaigns, while 45.9% of them agreed to have some change in attitude. 1.6% of these conceded that there was no impact on the health awareness campaigns on their attitude.

130 of the respondents received their information from non-media sources. 49 (37.7%) claimed to have had a positive change in their attitude. 73 (56.1%) agreed to have some sort of the positive change in their attitude. However, 8 (6.2%) of the respondents didn’t agree to have been impacted by the health awareness campaign. The value of  $\chi^2(2, N=494) = 14.559$  was very highly significant at  $\alpha = .001$ .

**Table 6.** Practices Regarding Polio Vaccination (n=494)

Responses	Media		Other Sources		Total		X <sup>2</sup> (1)
	N	%	N	%	n	%	
Yes	302	83.0	100	77.0	402	81.4	97.3***
No	62	17.0	30	23.0	92	18.6	
Total	364	100.0	130	100.0	494	100.0	

\*\*\* $P < .001$



The table demonstrates the practice regarding polio vaccination. When asked upon, 302 (83%) of the people who interacted with media made sure that their children get Polio vaccination drops. However, 62(17%) of the respondents did not do it.

According to this table, 100 (77%) of the people who did not get informed through media took polio vaccination drops. However, 30 (23%) of the respondents did not take the vaccination for their family.

Chi-square test was used to compare the practice of both media-using respondents and non-media using respondents regarding Polio vaccination drops. The value of  $\chi^2(1, N=494) = 97.3$  is highly significant at  $\alpha = .001$ .

**Table 7.** Sharing of Information Regarding Polio with others (n=494)

Responses	Media		Other Sources		Total		$\chi^2(2)$
	n	%	n	%	n	%	
Yes	152	41.7	43	33.1	195	39.5	14.15***
No	36	10.0	20	22.3	65	13.1	
To Some extent	176	48.3	58	44.6	234	47.4	
Total	364	100.0	130	100.0	494	100.0	

\*\*\* $P < .001$

The table shows that 152 (41.7%) of the respondents who got their information through the media did share it with others. However, 176 (48.3%) shared their information with others, and 36 (10%) did not share their information with any other people.

Among the people who did not use media as their source of information, 43 (33.1%) shared their awareness with others, 58 (44.6%) shared their awareness with their awareness to an extent. However, 20 (22.3%) of respondents did not share any awareness with others.

## Conclusion

This study is done to find the change of KAP in the audience of Punjab Province and their attitude toward the Polio disease. If the society which has been targeted had a motivated attitude and have vast knowledge and understanding about these diseases, proper precautions and vaccination can be taken, which will prevent the disease. But this is not the case, so this study was undertaken.

The data reflected that the major source of information of the rural & urban target audience regarding diseases of the study was mass media. We compared that on which disease the respondents could get more information from the media, they told that they get the same equal amount of knowledge about Polio from the awareness campaigns. Many of them shared that they have a neutral opinion on the treatment of the Polio.

Results from the table show that many of the respondents who have the information about the disease from the media by health awareness have changed their opinion about the Polio, and they have started practising it. Mostly, the information collected from the respondents says that the most information they got is from media for all the 3 diseases in the Province Punjab. Then, the Newspaper was the second most effective source for

spreading health campaigns. Then, Radio was the least effective method to spread education about health to the masses.

Media was mostly used as a source of health campaigns, and users also used it for acquiring information regarding health. Television was used by both males and females, but there was a difference between the males and females as the female using TV percentage was more than the males while getting information from the Newspaper there was a lot fewer females were using the Newspaper as a source.

This first hypothesis is proved that majority of people from Province Punjab (Both rural and urban areas) used media to find information regarding health.

The second hypothesis is also correct that there are more females using TV rather than males.

According to the findings, there was no association of income level with KAP of the public about diseases under study. So, H-5 seems to be disproved.

There was no association of qualification with KAP of respondents. Hence the above Hypothesis seems to be disapproved.

The hypothesis again disproved, as both in rural & urban areas media was the main source of health information.

There is not a big difference between male and female understanding. The campaigns have a positive effect on all of the population. A huge number of people got their children vaccinated after the education they got from the health campaigns. Many of them also shared their knowledge with the people around them. They also shared this information with their family members.

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