

## HEALTH CARE MEDIA CAMPAIGNS IN PAKISTAN: KNOWLEDGE, ATTITUDE AND PRACTICES OF MOTHERS REGARDING POLIO IMMUNIZATION

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i> Received: 13 Jul 2019 Revised: 05 Nov 2019 Accepted: 12 Feb 2020 Available Online: 05 Jun 2020</p> <hr/> <p><i>Keywords:</i> Media, Campaigns, Polio, Immunization, Mothers, Knowledge</p> <hr/> <p><i>JEL Classification:</i> L82, O15</p>	<p>Pakistan is faced by a number of health care challenges and battle against polio is still continued. Media can play an effective role through health care campaigns in creating awareness and educating the masses about the perilous and life threatening consequences of diseases, polio in particular. The efficacy of such campaigns is based on widespread mass media outreach. The study aims to identify the media that was the most effective in educating the mothers regarding the infectious disease polio and its immunization in Lahore, Pakistan. It also aims to find out the impact of media on the socio-demographic variables of the respondents. As many as 200 mothers residing in Lahore were surveyed to measure their knowledge, attitudes and practices towards polio immunization. The results of the study show that television channels were the most effective source of information about polio campaigns and immunization as compared to other sources of mass media. The study also determined that literate mothers from urban areas were more vigilant as compared to others with low literacy rate. Moreover, younger mothers had poor knowledge about polio immunization as compared to elderly mothers. Therefore, it is concluded that print, electronic, digital, social, outdoor media and interpersonal communication channels should join hands in hands to eradicate polio and make Pakistan a polio-free country.</p>

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### 1. INTRODUCTION

Pakistan is a developing country faced by a number of challenges related to health care issues of children. It has not achieved a polio-free status so far after decades of fighting against the malicious disease due to a number of socio-economic issues. Pakistan is among the few countries where the disease still prevails, other being Afghanistan and some African countries (Reiter, 2019). Health care campaigns especially that of Polio eradication have been launched by various governments in the past and these proved to be successful in parts of the country, however, the war against polio still goes on. Mass media plays a vital role in development of the country. The basic function of mass media is to inform, guide and educate the masses on domestic, national and international issues. In this regard, the role of mass media is significant in creating awareness regarding diseases, such as, dengue, malaria, cancer, hepatitis, polio, etc. and the campaigns run by media in this regard prove to be very effective. Pakistan has a wide landscape in terms of media, where each can contribute to control and eradicate the diseases from Pakistan. Electronic media, comprising different radio and T.V. channels, while print media, consisting of newspapers and magazines battles against the diseases. Social media is also vibrant due to its scope, robustness and interactivity. Polio is caused by poliovirus (Hamborsky et al., 2016), which confines the movement and develops muscle weakness. The disease often results in inability to move resulting in paralysis and in worst conditions may lead to death (Poliomyelitis, 2019). In most of the polio cases, the symptoms are not developed and thus, the disease cannot be detected earlier, while in some cases, minor symptoms start to appear.

World Health Organization (WHO) is determined to eradicate the disease from the face of the earth and has launched widespread awareness campaigns, real-time surveillance and vaccination for immunization. The first Polio Eradication Program was launched in 1994 in Pakistan and since then, the combat against the infectious disease is continued. Pakistan is faced by different socio-economic challenges. Inadequate and poor healthcare facilities for an ever escalating population with low literacy rate and stereotype attitude towards vaccination campaigns continues to be the major hindrance against eradication of the disease from Pakistan. It has managed to limit the widespread of the disease; however, the scale zero has still not been achieved. The need of the hour is to evaluate the role of mass media in creating awareness among the masses about the necessity of polio vaccination for the children under the age of 5

years clearing their misconceptions in this regard. Therefore, it is the social responsibility of mass media having access to a wide section of society to create awareness regarding polio and its life threatening effects in order to nip the evil in the bud. The study aims at exploring role of mass media in creating awareness through health care campaigns regarding Polio Immunization, its knowledge, attitude and practices among mothers in Pakistan.

### 1.1 Objectives of the Study

- To find out the effective source of mass media vis-à-vis health care campaigns for knowledge/ information regarding polio immunization among the mothers of Pakistan
- To explore the impact of health care media campaigns on the socio-demographic variables of the mothers in Pakistan

### 1.2 Hypotheses

**H<sub>1</sub>:** *Health care campaigns by television channels are more effective for knowledge/information among mothers of Pakistan regarding polio immunization as compared to other communication sources.*

**H<sub>2</sub>:** *It is more likely that education and background would be significantly contributing towards improved knowledge about polio and its immunization.*

**H<sub>3</sub>:** *It is more likely that the knowledge about polio and its immunization among higher age groups of mothers would be significantly greater as compared to lower age groups.*

## 2. LITERATURE REVIEW

Review of the relevant literature provides the understanding of the area under study, here are a few studies presented below relating to media, polio and immunization campaigns. Hanan, et al., (2019), in a study investigated the effectiveness of awareness campaigns on HIV/AIDS Prevention, Polio Vaccination, Breast Cancer and Family Planning by media to create the behaviour change of the target audience in different cities of Pakistan. The survey findings showed that Media campaigns regarding behaviour change for polio vaccination were more successful, among other campaigns, which was 28%, whereas the behaviour change for family planning and HIV/AIDS was 20%, behaviour change for breast cancer was very low 4% due to lack of media awareness campaigns. Level of motivation in behaviour change for polio vaccination was considered important factor and television was considered more effective medium in behaviour change instead of print media. Tahir (2018) analyzed the role of electronic media in eradication of polio in Pakistan. The results revealed that the television was more influential than radio in polio vaccination. Children from households who had television and radio received more polio vaccine doses than kids from houses who had no television and radio. Houses who had television, had higher number of polio vaccinated kids, vaccination days on cards and vaccination reported by their mothers than those houses who had no television. Electronic media, television, and radio, has a significant role in polio vaccination and can play vibrant role in polio eradication in Pakistan. Gautum (2018) concluded in a study that Mass media, particularly television, was the foremost capable and compelling medium of mass communication and a really imperative device for forming the Indian society. Most of the respondents claimed, they had been observing notices relating to social issues on television channels. It was also uncovered that the level of cooperation of individuals in polio eradication was exceptionally tall, i.e., 96 percent respondents detailed that they went to the polio booth after observing the polio notice on television channels, which was pushed by celebrities like Amitabh Bachchan, Shahrukh Khan, Jaya Bachchan, Sachin. Television played a great role in polio awareness.

Anil (2017) and his colleagues attempted to assess the part of Social Media (SM) instruments within the polio prevention in an Indian setting, employing a half breed Delphi-DEMATEL approach. The examination gathered criteria into two sets, i.e., cause and impact. The results appeared that mindfulness of social cause and government utilization of assets drop into the cause bunch; these components are basic since both specifically influence the remaining criteria. These results can offer assistance to government and businesses to utilize SM for open well-being observation. Suleiman (2010) conducted a study in northern Nigeria to find out the level of campaign acknowledgment and to compare the impacts of mass media and interpersonal communication sources in Zaria local government zone. Discoveries uncover close positions between campaign acknowledgment and resistance within the local government zone, hence, advance affirming the troubles still confronted in polio destruction campaign within the locale. This ponder too demonstrates higher execution of Interpersonal than Mass Media sources in affecting campaign acknowledgment and resistance within the neighborhood communities. Contact with companions and relations resulted in greater community acceptance in northern Nigeria.

Obregon, et al., (2009) inspected the communication efforts to eradicate polio in two Asian countries India and Pakistan from 2007 to 2008. The results showed that epidemiological, social, and behavioural data guide

communication strategies have contributed in increasing the levels of polio immunity among underserved and hard-to-reach populations. Along with ensuring individual and community-level demand, overcoming gender barriers and resistance to vaccination, and reaching out to the poorest populations have contributed a lot in decreasing the level of polio in both countries. Adding that 68% of respondents who were exposed to polio advertisements on television, take their children to the booth for vaccination. Although many efforts and planned actions have been taken but there are still challenges in the way of polio eradication faced by both countries like social-cultural, religious and political contexts that are deeply rooted and there is no vaccine that can remove it and gender-based decision making. These challenges demand a highly effective communication strategy for polio eradication. Nadeem (2016) stated that the Global Polio Eradication Initiative (GPEI) has visibly minimized the global incidences of polio. It was, however, observed that polio still remains an endemic in Pakistan. Natural disasters, terrorism, misconceptions, funding restraints, politics, and inadequate infrastructure are the issues faced by Pakistan, which result in the hindrance of GPEI's aims. There is a need to make effective use of the GPEI funds to make Pakistan polio-free country as there is a risk of outbreak if it is not eradicated completely.

Hussain, et al., (2016) conducted a study regarding the issues and challenges faced by Pakistan in eradication of polio. Ever since the initiation of GPEI in 1988, worldwide occurrence of polio was observed to fall by 99%. Now, the spread is limited to three countries which include Pakistan too. In 2014, a sharp increase in cases of polio was recorded. The factors, which affect the eradication of polio from Pakistan are poverty, illiteracy, and difficulty in contacting the immunization and community health services. Along with these obstacles, Pakistan offers a difficult geography, which causes a poor public health delivery. Khan and Kanwal (2015) concluded that unsuccessful annihilation of polio in Pakistan is due to religious militancy. FATA has been the core of polio in Pakistan, which also put the global eradication of polio at risk. Despite of running many campaigns to combat polio and foreign funding, state had not been successful in eradicating this grave issue completely. The study was, hence, also directed towards the perception of religious scholars regarding vaccination for polio. Apart from the religious militancy, it was observed that mistrust regarding the vaccinators and conspiracy theories against vaccination for polio were also the major factors which hindered the annihilation of polio.

Closser, et al., (2014) investigated and measured the impact of polio vaccination campaign in South Asia and Africa. The results of the study indicated that the marginalized communities were less likely to share knowledge about polio and its immunization and their importance. They recommended the mobilization by allocating the resources for primary health care by educating the people to adopt healthy practices, hygiene promotions and hand washing surveillances against different diseases. Murakami, et al., (2014) shared the results of their focus group study of the mothers in Swat Valley, Khyber Pakhtunkhwa, with children less than five years revealed that mothers were more likely to be agreeing towards vaccinating their children but due to their males' decision making they were compelled to do accordingly. It was also found that they were more concerned towards their children health and seemed more convinced while they appeared for interview of a pre-constructed questionnaire. Fetene and Sherani (2013) argued that despite of the fact that the world is near to a global eradication of polio, Pakistan still carries this virus and is a constant threat to the GPEI's aim of polio-free world. They suggested that to achieve a successful Polio campaign, increasing the number of campaign monitoring, security planning, micro planning, and the reception of timely feedback of campaigns prove to be useful.

Obute and Arulogun (2013) concluded that parents needed to be educated regarding the immunization process and there was a need to dismiss the negative rumors. Khowaja, et al., (2012) conducted a research on the parental perception regarding polio and not participating in the immunization activities. Parents were asked to fill out a pre-arranged questionnaire to evaluate their knowledge in case of polio. Also, 30 Pashtun parents, who refused participation in vaccinating their children, were interviewed. It was found that 41% of the parents had never even heard of polio, 13% did not partake in SIA, and 21.6% told that they were not contacted by vaccinators. The reasons cited by the Pashtuns for not administering polio vaccine were lack of faith in vaccination of polio, fear of infertility, cynicism regarding the vaccination program, and fright that the vaccine might have religiously forbidden ingredients.

### **3. METHODOLOGY**

The basic aim of the study was to explore the role of health care media campaigns in creating awareness regarding polio immunization among the mothers of Lahore. Survey method was employed in the study. Survey questionnaire was used as tool for data collection. The population of the study was women (mothers) of Lahore, Pakistan. Random sampling technique was applied to collect data from the population. Sample size was 200; only mothers were selected for the study because they are considered as the most concerned and responsible for person giving polio vaccination to their children. Before the collection of data finally, pre-testing was performed and questionnaire was edited in light of the finding. Data was collected by using survey questionnaire and interview was conducted with illiterate ones. The

respondents were informed about the nature and objectives of the study and they were assured about the confidentiality of their responses. Statistical test Analysis of Variance (ANOVA) was applied to test the hypotheses.

#### 4. ANALYSIS AND RESULTS

**Table 1.** Socio-Demographic features of Mothers in Lahore, Pakistan

Variables	Number	Percentage
<b>Age Group</b>	-	-
18-30 years	39	20 %
31-40 years	88	44 %
41-50 years	28	14 %
51-60 years	24	12 %
More than 60 years	21	10 %
<b>Employment Status</b>	-	-
Employed	90	45 %
Unemployed	110	55 %
<b>Educational Qualification</b>	-	-
Illiterate	23	12 %
Primary or Matriculation	78	39 %
Intermediate	38	19 %
Graduate	37	18 %
Postgraduate or higher	24	12 %
<b>No. of Children</b>	-	-
No children	21	11 %
1-2	81	41 %
3-5	84	42 %
6 or more	14	7 %
<b>Background</b>	-	-
Urban	105	53 %
Rural	95	47 %

*N=200*

The above table shows the demographic detail of the selected sample of mothers regarding the polio vaccination and immunization. The data depicts that out of 200 mothers, 20% were aged between 18-30 years, 44% were between 31-40, 14% from 41-50, 12% from 51-60 years while only 10% were from the age group of more than 60 years. Regarding the employment status, 45% were employed while 55% were unemployed. With regards to educational qualification of the selected mothers, 12% were illiterate, 39% were having primary to matriculation qualification, and 18% were graduate while only 12% were having postgraduate degrees. Similarly, with regard to number of children, 11% were having no children, 41% had children between 1-2, and 42% responded that they have 3-5 children while 7% had more than 6 children. From the total sample of the mothers 53% belonged to urban areas while 47% were from rural background.

**Table 2.** Knowledge of Polio and its Immunization among Mothers

Questions (Awareness of polio)	Correct (%)	Incorrect (%)
Is polio a viral/infectious disease?	103 (52%)	97 (48%)
Can polio have a lifelong paralysis effect on children aged less than 5 years?	160 (80%)	40 (20%)
Do the children affected by polio virus show the signs of disease?	43 (22%)	157 (78%)
Is polio due to absence of immunization?	144 (72%)	56 (28%)
Can the children get infection of polio if they travel to polio affected areas?	12 (8%)	188 (92%)
Can polio be caused due to contaminated food and water?	113 (56%)	87(44%)
Can polio be cured?	117 (58%)	83 (42%)
Should the children infected by Polio be separated from healthy children to avoid transmission of polio?	13 (6%)	187 (94%)
Is the polio vaccination only way out of polio disease?	140 (70%)	60 (30%)
Should polio drops be given to children during minor diseases such as fever, cough, etc.?	156 (78%)	44 (22%)
Is polio life threatening?	140 (70%)	60 (30%)

*N=200*

The table above represents the knowledge of mothers regarding polio disease and its immunization. The knowledge score has been measured in correct and incorrect score against each statement given in the table. It can be seen from the data that about 48% mothers responded that polio is not caused by a virus. Similarly, 78% mothers also indicated that in polio cases symptoms are developed while only 22% score correctly against this statement. Even 92% responded that if children travel to affected region, they cannot get polio. Similarly, regarding the contaminated food and water causing polio, 44% denied it. Regarding the polio treatment, keeping the polio infected isolated majority (94%) revealed incorrect knowledge. On the overall situation, it can be safely concluded that most of mothers had poor knowledge about the disease and its immunization.

**Table 3.** Cross tabulation of Knowledge of Polio and its Immunization with Demographics of the Mothers

Variables	Good	Poor	N	P-Value
<b>Age Group</b>	-	-	-	
18-30 years	25 (64%)	14 (36%)	39	
31-40 years	33 (38%)	55 (62%)	88	
41-50 years	8 (29%)	20 (71%)	28	
51-60 years	16 (67%)	8 (33%)	24	
More than 60 years	18 (78%)	3 (12%)	21	*P-value <0.05
<b>Employment Status</b>	-	-	-	
Employed	55 (61%)	35 (39%)	90	*P-value <0.05
Unemployed	64 (58%)	46 (42%)	110	
<b>Education</b>	-	-	-	
Illiterate	4 (8%)	19 (82%)	23	
Primary/Matriculation	56 (72%)	22 (28%)	78	
Intermediate	31 (82%)	7 (18%)	38	*P-value <0.05
Graduate	36 (97%)	1 (3%)	37	* P-value <0.05
Postgraduate or higher	24 (100%)	0 (0%)	24	
<b>No. of Children</b>	-	-	-	
Have No children	18 (86%)	3 (14%)	21	
1-2	69 (85%)	12 (15%)	81	
3-5	78 (93%)	6 (7%)	84	
6 or more	12 (86%)	2 (14%)	14	* P-value >0.05
<b>Background</b>	-	-	-	
Urban	88 (84%)	17 (16%)	105	* P-value >0.05
Rural	74 (78%)	21 (22%)	95	

The table above shows the results regarding the knowledge score among the mothers with regard to polio disease and its immunization. The data indicates that the young mothers and the mothers above 40 years and more were having significant more knowledge as compared to others. The statistical application of ANOVA also indicated the significant difference of knowledge among different age groups of mothers. Similarly, the mothers who were working in different fields were more likely to have good knowledge as compared to mothers who do not work. Education variable was another dominant and contributing variable towards knowledge about polio and its immunization. The application of ANOVA with all educational levels among mothers clearly indicates the significant difference of knowledge among mothers as presented in the table. The mothers with higher educational level were having more knowledge about the disease. Even it was observed that mothers having more children were also had good knowledge about polio. The mothers from rural areas had less knowledge as compared to mothers belonging to urban areas.

**Table 4.** Sources of knowledge about Polio and its Immunization among Mothers

Source/Channel	Frequency	Percentage
Radio Channels	3	2 %
Television Channels	88	44 %
Posters/Pamphlets	10	6 %
Friends/Relatives	15	7 %
Internet	27	13 %
Newspapers	7	3 %
Seminars/Conferences	2	1 %
Medical Experts/Hospitals	48	24 %

N=200



The above table shows the sources of knowledge among mothers with regard to polio and its immunization. The data indicates that television channels were the dominant effective source of information regarding knowledge about polio and immunization. 88 (44%) of the respondents/mothers shared that they have obtained polio knowledge through television channels. Similarly, after television channels, medical experts/hospitals (24%) were the leading source of information among mothers. 13% respondents shared internet as their source of information regarding polio and immunization knowledge. While the rest of the sources like radio channels, posters, pamphlets and seminars were not effective source of knowledge among mothers.

## 5. DISCUSSION AND ANALYSIS

The research study aimed to find out efficacy of health care media campaigns and investigate the knowledge, attitudes and practices of mothers regarding polio vaccination in Lahore, Pakistan. Total 200 mothers were selected as study's sample to measure their responses against the knowledge points about the disease and its immunization. Simple random sampling technique was applied to draw the sample from the population in Lahore, Pakistan. Since the launching of Polio Eradication Program in Pakistan in 1994, Pakistan has taken significant steps forward to combat this disease. But due to low literary rate, limited access to health care facilities it was a bit challenging to overcome this issue. Surveillance research studies and baseline surveys are evident that Pakistan has successfully managed the disease prevalence but even after taking giant steps, decline of polio is not achieved. Now, Pakistan is ranked in one of the three countries of the world including Afghanistan and Nigeria, where this disease still prevails. Therefore, it should be the shared responsibility of every citizen to help avoid the vulnerability of the children and to ensure vaccination of all children aged below 6 years. A massive campaign on mainstream media is headed by the Government of Pakistan to vaccinate the children less than 5 years for complete eradication of polio. Even then, there are a few people in the different provinces of the country still refusing the polio vaccination. It is because of their misconception and poor knowledge about the disease and its immunization.

In the current study, the researchers surveyed 200 mothers residing in Lahore to explore effectiveness of health care media campaigns and measure their knowledge, attitudes and practices towards polio vaccination. The mothers belonging to different socio-economic backgrounds were interviewed by a pre-constructed questionnaire. The findings of this study revealed that age group, education level, background, number of children and employment status of the mothers were the leading demographic variables determining the knowledge level and attitudes towards the disease. It was hypothesized that mothers of higher age would have more and comprehensive knowledge about the disease prevention, symptoms and immunization. The statistical application of ANOVA supported the hypothesis and it was found that with the growing age groups polio knowledge increased among the mothers. It could be easily concluded that their experience and exposure led them towards improved knowledge about the polio immunization. Similarly, the mothers with higher educational level were significantly having greater knowledge about the symptoms and disease immunization. The living status of the mothers and employment status was also having positive relationship between knowledge, attitude and practices. The working mothers had positive attitudes towards polio immunization as compared to house mothers. The mothers living in the urban areas also had good knowledge as compared to mothers living in the remote areas. Regarding the effective source of information and knowledge about polio and immunization television channels were the primary source followed by internet, health experts and other interpersonal communication channels. The result was also endorsed by the study findings of (Tahir, 2018) and (Hanan, et al., 2019). The most important at this stage, the findings revealed this notion that all the knowledge they possess about polio and its immunization is due to television channels. Television plays a key role in our lives. All households have television sets. Therefore, television channels are mostly watched by the mothers and they get the maximum knowledge about polio through it. Apart from the current findings of the study, mainstream media could be effective in disseminating the public service messages but other interpersonal channels could not be denied as an effective source of counseling and raising awareness about polio. Medical experts and hospitals are also source of information and guidance for the mothers regarding polio immunization and vaccination schedules. Educated mothers are using internet frequently. Digital media is also imparting knowledge and information to mothers on polio.

### 5.1 Conclusion

It can be concluded that there is a dire need of creating awareness to clarify the prevailing misconceptions about Polio immunization among the masses. As far as health care campaigns by various media are concerned, Television channels emerged as more effective source than the others. In view of the results of this study, it is recommended that mass media should play an effective role in creating awareness and educating the masses, mothers in particular, about the perilous and life threatening consequences of polio. Also, it is highly recommended to conduct further research about those who are refusing to vaccinate their children and explore the reasons for not allowing their children to be vaccinated. Mass media and other interpersonal communication channels should come forward to target such people

in order to remove their misconceptions about polio immunization to make Pakistan a polio-free country. Print media, television channels, digital media, social media, outdoor media and interpersonal communication channels i.e., medical experts, opinion leaders should also join hands to eradicate the menace of polio from Pakistan.

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