

**KNOWLEDGE AND PERCEPTION
OF YOUTH ABOUT
POLIOMYELITIS IN SINDH**

Research Report March 2020

Prepared by Legal Right Forum (LRF)

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LIST OF ABBREVIATIONS

AEFI Adverse Event Following Immunization

IEC Information, Education and Communication

LRF Legal Right Forum

CSOs Community Support Organizations

VPD Vaccine Preventable Disease

WHO World Health Organization

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EXECUTIVE SUMMARY

Poliomyelitis (polio) is a highly infectious viral disease that largely affects children under 5 years of age. The virus is transmitted by person-to-person spread mainly through the faecal-oral route or, less frequently, by a common vehicle (e.g. contaminated water or food) and multiplies in the intestine, from where it can invade the nervous system and cause paralysis (World Health Organization, 2020). Pakistan still struggling to eradicate polio from country. Youth can play an important role to maximize the efforts of polio eradication from the country.

In this context, a study was conducted to assess the knowledge and attitude regarding polio disease among youth enrolled in various college and universities of Sindh. Data was collected in the four large districts/cities of Sindh and from public and private college and universities using a self-administered questionnaire.

The findings of the study revealed that youth had varied knowledge about cause, prevention and life-long consequences of polio disease. Majority of the youth mentioned that the government should increase awareness about the polio disease and in this regard, youth can also be engaged. Majority of the youth showed willingness to become ambassador, if provided role in the activities to eradicate polio from the country.

The study concluded that knowledge regarding poliomyelitis among youth needs to be enhanced with the appropriate health education sessions and campaigns.

INTRODUCTION:

Poliomyelitis is one of the highly infectious and contagious diseases which spread from person to person and cause deadly illness in children¹. Pakistan Afghanistan and Nigeria are the only three countries where polio is still present ². Despite of extensive polio eradication program which has been started since 1994, Pakistan still facing major challenges to deal with this disease.

As long as the virus continues to circulate in Pakistan, no child in Pakistan is completely safe from contracting the polio virus. This is why it is the shared responsibility of all Pakistanis to ensure that all vulnerable children under the age of five are vaccinated against this deadly disease in every door-to-door campaign and increase awareness about polio vaccine and its importance. In 1988, when the Global Polio Eradication Initiative began, polio paralyzed more than 1000 children worldwide every day. Since then, global incidence of polio has declined by 99%, and more than 2.5 billion children have been immunized against polio³.

In 2019 136 WPV cases and 18 cVDPV2 cases have been reported in Pakistan⁴. This shows despite of all the efforts Polio is still the biggest threat to the region. Moreover, Global polio eradication efforts are very much dependent on Pakistan's capacity to address the wide range of obstacles to immunization, including religious, political and socioeconomic barriers, inconsistencies in vaccine coverage, a weak health infrastructure and conflict in polio-endemic regions of the country

Therefore a multi-sectoral approach involving education ministries, religious authorities, youth and women is crucial. Being the largest population age group Youth education is an established factor in ensuring positive health outcomes among country. Studies have demonstrated that women and youth can play a vital role in shaping health seeking behaviours of the family, community and nations.

¹ <https://www.who.int/news-room/facts-in-pictures/detail/polio-eradication>

² <https://www.endpolio.com.pk/>

³ <http://polioeradication.org/>

⁴ <https://www.unicef.org/pakistan/polio>

OBJECTIVES:

The primary objective of this study was to know the knowledge and attitude regarding polio disease among youth enrolled and studying in college and universities of Sindh.

METHODOLOGY:

Study design: quantitative research-a cross-sectional survey was conducted

Study Sites:

The study participants were from the following cities/districts of Sindh:

1. Jacobabad
2. Sukkur
3. Karachi
4. Jamshoro

Besides the youth awareness sessions were also held in the following educational institutions and data was collected from these institutions

1. Sindh University, Jamshoro
2. Hamdard University Karachi,
3. Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST), Karachi.
4. Degree Collage, Hyderabad
5. Government Girls Degree Collage, Tando Jam

Study participants: Youth (age 18-29 years) living in Sindh

Sampling: The respondents were selected on random basis within the selected group/community.

Data collection:

As proposed, to know knowledge and perception of youth on Polio disease, data was collected during the course of Youth Policy Orientation/Awareness sessions held at the project/study sites.

A structured questionnaire was developed to collect the data. The questionnaire was pre-tested on a group of youth in Karachi and based on the feedback, the questionnaire was revised and finalized.

In order to have holistic and all-inclusive results, youth from diverse areas and sections of society were engaged including male/female, urban, rural, students, workers, state actors, Community Support Organizations (CSOs), persons with disabilities, transgender, etc.

During the Youth Policy Orientation/Awareness sessions, the questionnaire was distributed by a research team member to the students in the colleges and universities, after taking verbal consent. A trained project team member explained the questions in the beginning of the survey and was present throughout in case the study participants need any clarification. The respondents were not allowed to ask questions or to consult other people. At the end, all the filled questionnaire forms were gathered from the participants.

Study Duration: Data was collected during the months of February-March 2020

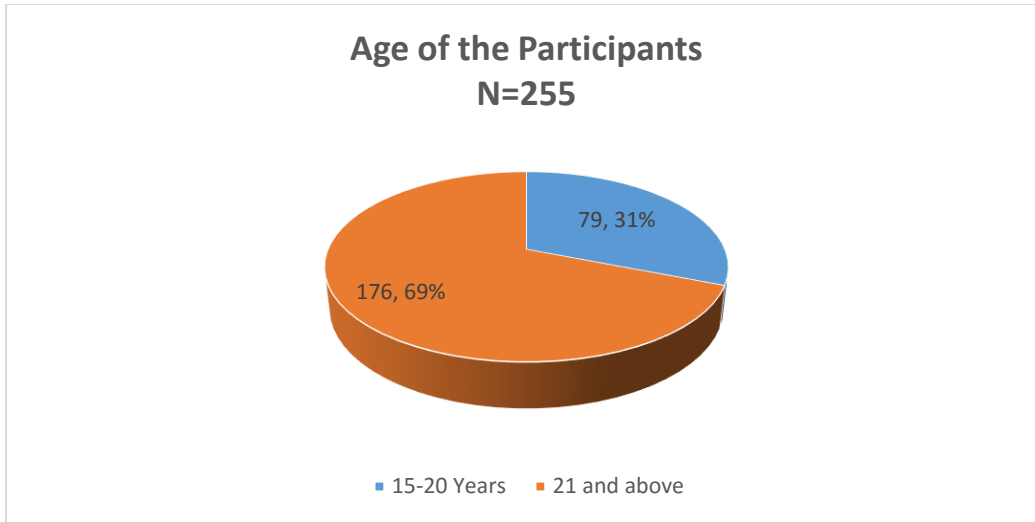
Ethical Approval: Ethical approval was obtained from the Institutional Review Board of SZABIST University, Karachi.

Data Analysis: Data was entered and analyzed using SPSS software version 21. Frequency distribution was run for all variables.

RESULTS: PERSONAL CHARACTERISTICS OF RESPONDENTS:

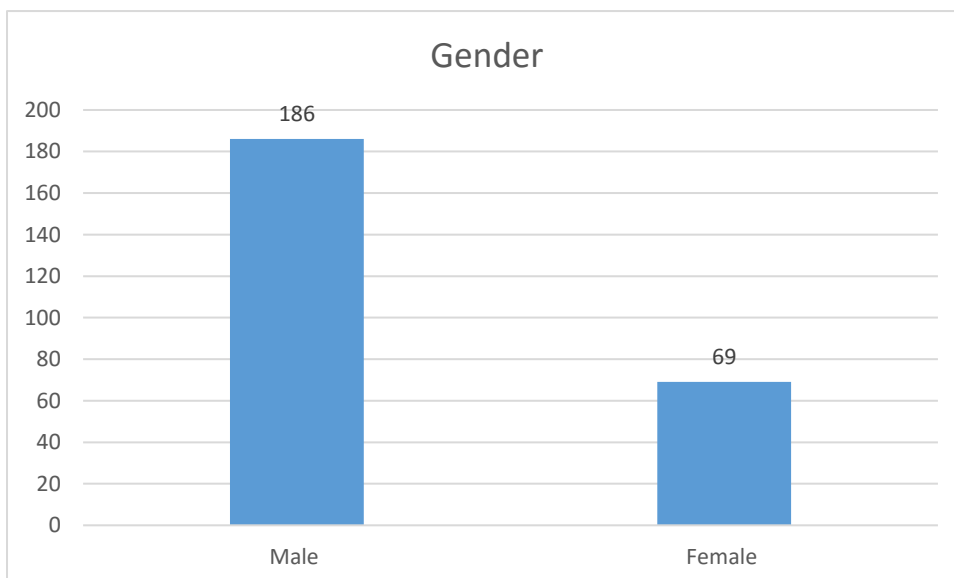
A total 255 youth participated in the survey. As shown in the figure 1, majority (176) of the respondents were age 21 and above years of age. More than a quarter (31%) of the participants were 15-20 years of age.

Figure 1: Age of the study participants



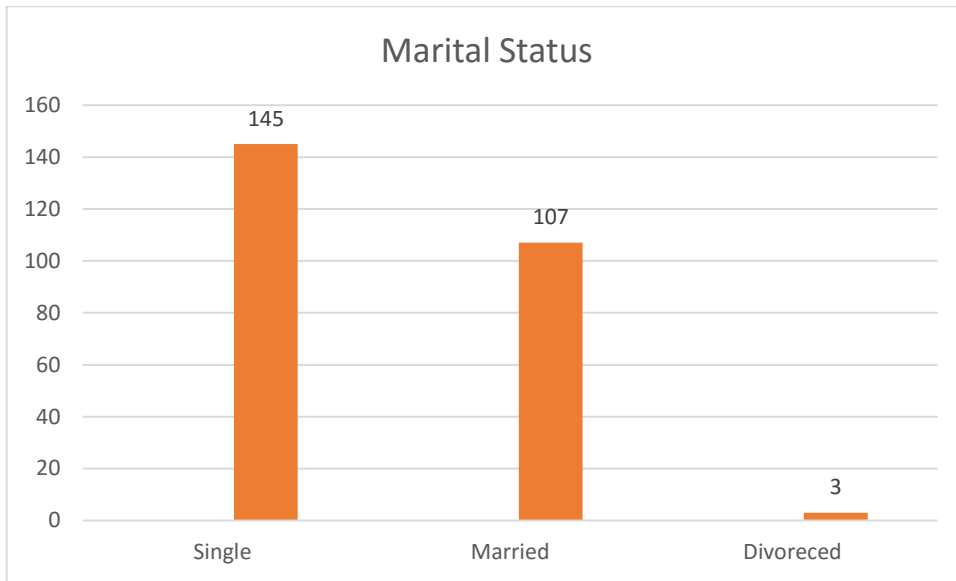
As shown in figure below about three fourth (73%) of the respondents were male while rest were female.

Figure 2: Gender of the study participants



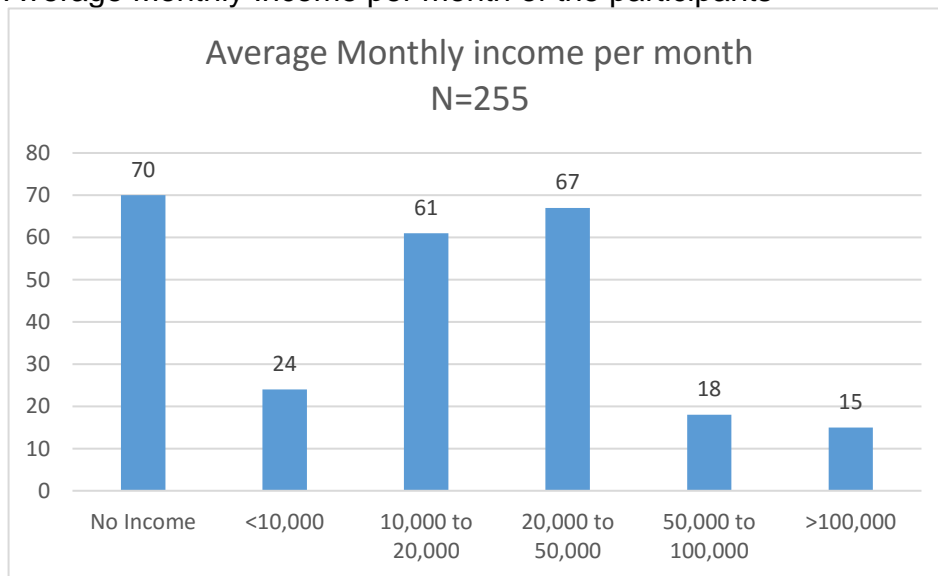
Majority (57%) of the study participants were married and while rest (43%)

Figure 3: Marital status of the study participants



When asked about average monthly income, about a quarter of the respondents had no income source and did not mention this information. A few of them had less than Pak Rs. 10,000 income per month, while rest had income Pak Rs. 20,000 and above.

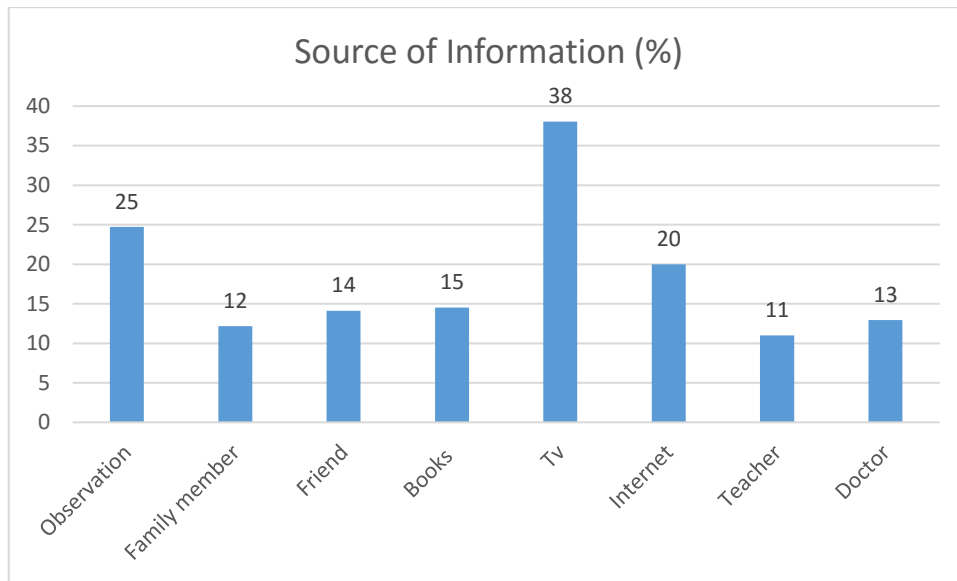
Figure 4: Average Monthly Income per month of the participants



Knowledge and Perception about Polio disease:

Majority of the respondents (89%) were aware about polio disease. Only a few (5%) respondents were not aware of polio disease while (5%) were unsure about it. Majority (38%) had received awareness from TV followed by 20% who had gained knowledge about polio disease from internet.

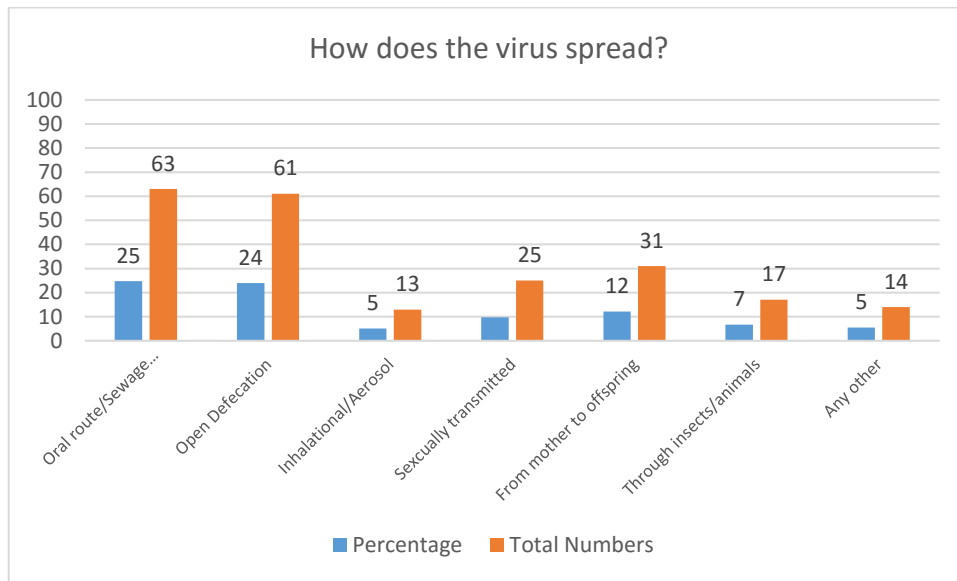
Figure 5: Source of information



25% had gained awareness through observation, 14% respondents had acquired knowledge about this disease from friends, 13% were informed by doctors, 12% were informed by family members. 11 % had acquired information through teachers while 15% had acquired information about polio by reading books.

Majority (80%) respondents perceived polio as a serious disease. According to a quarter (25%) of the respondents, polio virus was spreading due to oral/route/sewerage contamination, as per 24% it was spreading through open defecation while according to 12% it was spreading from mothers to children.

Figure 6: Knowledge regarding mode of transmission of polio virus



Some (10%) respondents also informed that the virus was sexually transmitted. According to a few (7%) it was spreading through insects while as per 5% respondents each, polio virus was spreading through inhalation or other sources. Majority of the respondents (67%) also knew polio as infantile paralysis while a few (11%) were not sure about it. On the other hand, only 44% respondents had knowledge about its presenting symptoms. 68% respondents informed that polio caused muscle weakness and paralysis while 11% were not sure about it. Similarly, 38% respondents were aware about respiratory swab to be taken for investigation when suspecting polio and prompt isolation of patients with polio to avoid contamination. A large number (25%) were not sure about it.

With regards to transmission of disease, 36% respondents informed that a person was considered as polio contagious after s/he showed symptoms, 21% respondents considered a person as contagious 7-10 days before the onset of disease while 17% respondents considered so 7-10 days after the onset of disease.

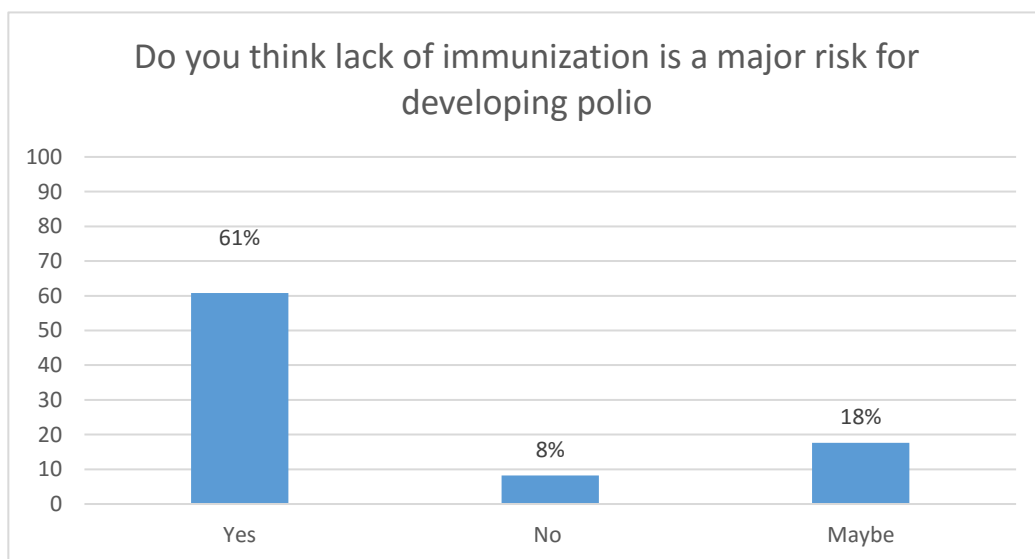
Majority (61%) respondents considered lack of immunization as a risk factor for the transmission of disease. On the other hand, 53% respondents considered traveling to a place with polio outbreak, as a risk factor for developing polio while 11% were not sure about it. 50% respondents considered polio as a fetal disease while one forth (24%) were not sure about it.

Half (49%) of the respondents, poliomyelitis is a curable disease while majority (69%) also knew that it can be preventable. About 20% respondents were not sure about its cure while 13% were not aware about its prevention.

Majority (85%) respondents informed that polio could be prevented through polio vaccines/drops. According to 12% respondents polio could be prevented through proper nutrition while as per 9% respondents, polio could be prevented through nutrition while as per 69% respondents opined that every child should receive polio vaccination while 8% were not sure about it. 5% respondents also opined that keeping distance from an infected person could prevent polio disease/spread.

As far as post-polio syndrome is concerned, only 25% respondents knew that it was a complication of Polio in which symptoms might appear after 30 years or more. 36% respondents were not sure about it. Similarly, 49% respondents had knowledge about multiple doses of Polio vaccines required to reach the same level of immunity in some conditions like malnutrition and poor sanitary conditions. On the other hand, 19% respondents were not sure about it.

Figure 7: Lack of immunization as a risk factor of polio



With regards to safety of oral polio vaccines, 59% respondents expressed satisfaction while 16% were not sure about it. As far as eradication of polio through vaccines is concerned, only 55% respondents replied in affirmation. A number of 18% respondents were not sure about it. Similarly, 29% mothers followed by 25% fathers and 8% siblings showed reluctance to use polio vaccination/drops.

The reasons for unvaccinated children were lack of awareness (33%), refusals (28%) children being absent (18%), houses not visited (15%) and social stigma (7%). When asked about the reasons behind refusals, majority of the respondents (26%) considered community leaders as the major reason behind polio refusal cases. The other reasons for refusals included 'Word of mouth' (22%), religious leaders (17%), radio/TV (16%) and complications (11%).

When asked about measures to be taken to eradicate misconceptions about polio vaccination, 36% respondents informed that community mobilization should be done while 26% informed that radio/TV should be engaged to remove community misconception about polio.

Figure 8: Reason of unvaccinated children

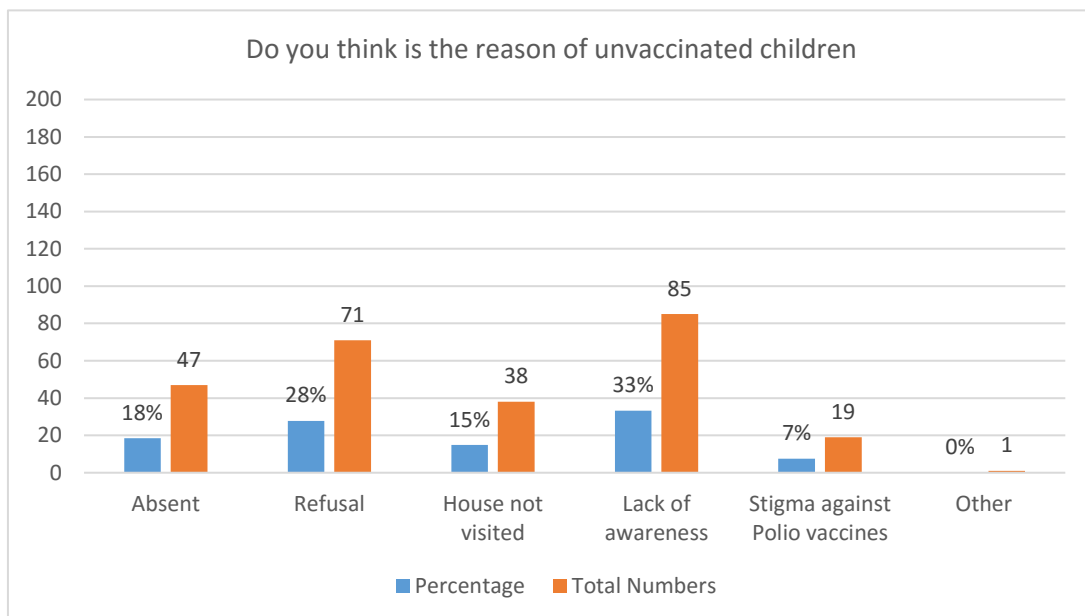
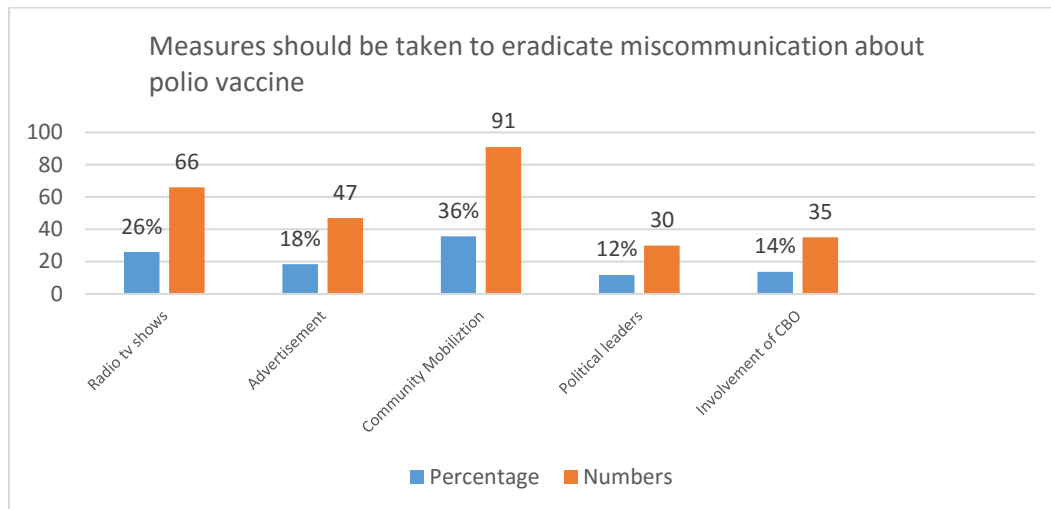


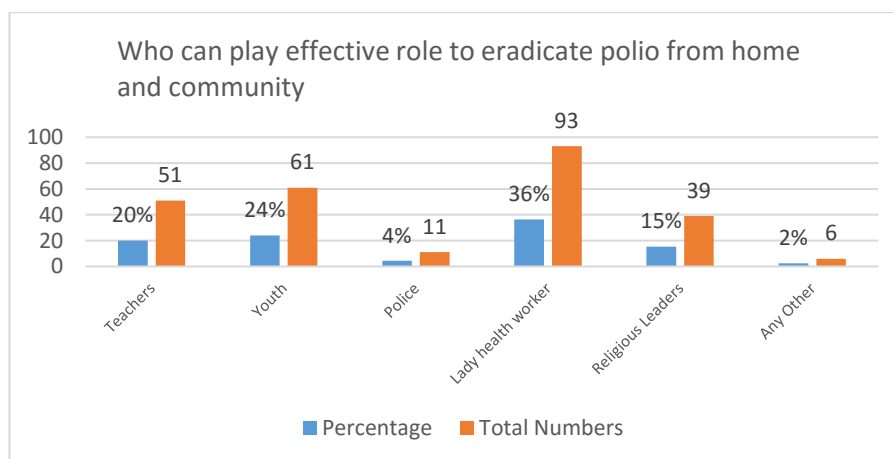
Figure 9: Measures to eradicate miscommunication about polio vaccine



A number of 18% respondents also informed that advertisements should be launched for the purpose. According to 14% respondents involvement of CBOs while as per 12% respondents political leaders can be used to eradicate polio.

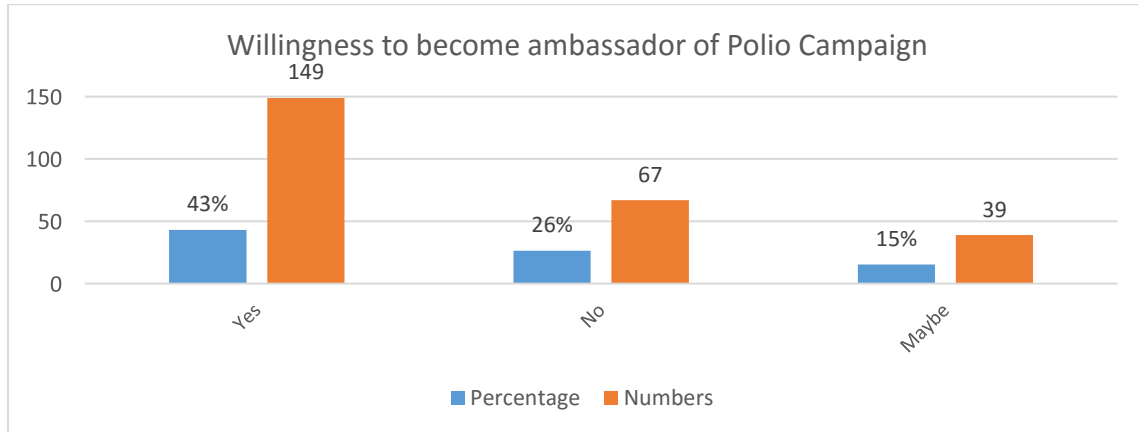
According to respondents, lady health workers (36 %), youth (24%), teachers (20%), religious leaders (15%) and police (4%) can play an effective role in polio eradication.

Figure 10: Role of various stakeholder in eradication of polio



A number of 43% respondents also informed that they wanted to become an ambassador for polio campaigns while 15% were unsure about it.

Figure 11: Willingness to become polio ambassador



CONCLUSION:

Awareness in youth about the disease of polio and its causes, seriousness and being infantile paralysis is up to the mark. However, awareness about symptoms, investigation, isolation of patient to avoid contamination and cure is low.

Majority of the respondents link polio with lack of immunization and they think that all children should receive polio vaccination. This is quite encouraging. Almost half of the respondents are also well versed with polio as a preventable disease through polio vaccines/drops. However, surprisingly, only a little of them believe that polio vaccines can eradicate polio. This shows difference in their knowledge and attitude.

With regards to awareness about post- polio syndrome, polio being a fetal disease, multiple doses and safety of oral vaccines, it exists only in half of the respondents. Mothers are considered as the main reluctant persons to use vaccines/drops while reasons for unvaccinated children and refusals emerge mainly as lack of awareness and religious beliefs. This shows a way to specifically focus on religious leaders during social mobilization.

A significant number of respondents is not sure about multiple aspects i.e. polio as a serious disease/infantile paralysis, its symptoms, investigation, prevention, cure, precautionary measures, lack of vaccination as one of the causes of polio, importance of vaccination, post-polio syndrome, requirement of multiple doses and vaccine safety. They can learn faster and learn better during social mobilization.

LHWs, youth TV/Radio, internet, community mobilization and involvement of CBOs emerge as the important components of behavior change. These should be made a part of all BCC campaigns.

RECOMMENDATIONS:

The following recommendations are made based on findings and conclusions: -

1. All social mobilization sessions should specifically focus on raising awareness about the symptoms of poliomyelitis and its investigation, cure and pre-cautionary measures.
2. The awareness-raising sessions should also adequately cover vaccine safety, side-effects, side effect management, requirement of multiple doses and post-polio syndrome.
3. Religious leaders, teachers and village influential persons have low threat perception about VPDs. They should be made an integral part of all behavior change communication activities.
4. Joint mobilization sessions should be organized for mothers, fathers and mothers-in-law to win family acceptance in one go. Women empowerment should also be focused to pave way for enhanced women participation in domestic decision -making regarding immunization.
5. The respondents, who are not sure about multiple aspects of poliomyelitis, should be focused more and focused first as it would be easier to win their acceptance with enhanced knowledge.
6. Vigorous follow up of vaccinated children and AEFI should be done to improve coverage.
7. Communication strategy should adequately be implemented and IEC material in local language and with pictorial messages should be used, displayed and distributed.
8. The recommended media should be used for behavior change.

Questionnaire

Annexures A

**Knowledge and perception of Polio Meletus among youth in Sindh,
Pakistan.**

Biodata

1. Name/ Ref no. _____
2. Age: _____
3. Gender: Male Female
4. Address: _____
5. Level of Education: _____
6. Income:
 - A. <10,000
 - B. 10,000-20,000
 - C. 20,000-50,000
 - D. 50,000-100,000
 - E. >100,000
7. Marital status: Single/Married
8. Experience with a polio patient: Yes/No

Knowledge and perception about the disease

- 1. Do you know about Polio?**
 - A. Yes
 - B. No
 - C. Maybe

- 2. Source of information?**
 - A. Family member
 - B. Friend
 - C. Books
 - D. TV
 - E. Internet
 - F. Teacher
 - G. Doctor
 - H. Hakeem
 - I. Others (Please specify): _____

- 3. Do you think Polio is a very serious disease?**
 - A. Yes
 - B. No
 - C. Maybe

- 4. How does the virus spread?**
 - A. Oral route/Sewage contamination
 - B. Inhalational/ Aerosol
 - C. Sexually transmitted
 - D. From mother to offspring
 - E. Through insects/animals

- 5. Did you know polio is called Infantile Paralysis because it mostly affects children of less than 5 years of age?**
- A. Yes
 - B. No
 - C. Maybe
- 6. Do you think most people present with symptoms?**
- A. Yes
 - B. No
 - C. Maybe
- 7. Do you think Polio causes muscle weakness and paralysis?**
- A. Yes
 - B. No
 - C. Maybe
- 8. Do you think a respiratory swab should be taken for investigation when suspecting polio?**
- A. Yes
 - B. No
 - C. Maybe
- 9. Do you think patients with polio should be isolated promptly to avoid contamination?**
- A. Yes
 - B. No
 - C. Maybe
- 10. How long is a person Polio contagious?**
- A. 7-10 days before onset of disease
 - B. 7-10 days after the onset of disease
 - C. When he/she shows symptoms
 - D. Not Sure
- 11. Do you think lack of immunization is a major risk for developing polio?**
- A. Yes
 - B. No
 - C. Maybe
- 12. Do you think traveling to places where there has been a polio outbreak is a risk factor for children?**
- A. Yes
 - B. No
 - C. Maybe
- 13. Do you think there is a cure for Poliomyelitis?**

- A. Yes
- B. No
- C. Maybe

14. Can polio be prevented?

- A. Yes
- B. No
- C. Maybe

15. How can Polio be prevented?

- A. Polio Vaccines
- B. Polio drops
- C. Proper nutrition
- D. Proper sanitation
- E. Distance from an infected person
- F. Others

16. Do you think every child should receive Polio vaccination?

- A. Yes
- B. No
- C. Maybe

17. Do you know post-polio Syndrome is a complication of Polio in which symptoms may appear after 30 years or more?

- A. Yes
- B. No
- C. Maybe

18. Do you think polio can be fetal?

- A. Yes
- B. No
- C. Maybe

19. Do you think multiple doses of Polio vaccines are required reach the same level of immunity in some conditions, for e.g. when the child is malnourished/ with poor sanitary conditions?

- A. Yes
- B. No
- C. Maybe

20. Do you think oral polio vaccines are safe to eradicate polio?

- A. Yes
- B. No
- C. Maybe

21. Do you think Polio Vaccines can eradicate Polio?

- A. Yes

- B. No
- C. Maybe

22. Who do you feel shows more reluctance to the use polio vaccines/ drops?

- A. Mother
- B. Father
- C. Siblings
- D. Grandparents/ elders of the family
- E. Others: if so state _____

23. What do you think is the reason of unvaccinated children?

- A. Absent
- B. Refusal
- C. House not Visited
- D. Lack of awareness
- E. Stigma against Polio vaccines
- F. Other: If so, please state

24. What do you feel is the reason of refusal of polio drops?

- A. Religious beliefs
- B. Sick Child
- C. Decision-maker not present at the time
- D. Doesn't find it necessary
- E. Think it is harmful
- F. No response

25. How do you think the misinformation/propaganda spread among the community about polio vaccine?

- A. Radio/ Television
- B. Community leaders/ influencers
- C. Religious leaders
- D. Word of mouth
- E. Cases of complications
- F. Others: If so, please state: _____

26. What measures should be taken to eradicate miscommunication about the vaccine?

- A. Radio/TV shows
- B. Advertisement
- C. Community Mobilization
- D. Political leaders
- E. Involvement of CBO
- F. If others, please state: _____

27. Who do you think play affective role to eradicate polio from home and community?
