

Drivers and barriers for measles rubella vaccination campaign: A qualitative study

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ABSTRACT

Background: The measles-rubella (MR) vaccination campaign was launched in Kerala on 3rd October 2017 aiming to eliminate MR by 2020. The drive was carried out in schools, community centers, and medical institutions. The initial phase of the MR campaign met with many controversies that affected its coverage. **Objectives:** The objectives of the study were to analyze the drivers and barriers for acceptance of MR vaccination in the field area of a primary health center (PHC), which reported a low coverage (62%) during the initial phase of the campaign. **Methods:** A qualitative study consisting of key informant interviews of parents of vaccinated and unvaccinated children, medical officers of the PHC, Junior Public Health Nurse (JPHN), and Accredited Social Health Activist (ASHA) workers, and the principals of government and private schools where the campaign was conducted was also interviewed. **Results:** The major barrier to acceptance of MR campaign was the anti-vaccination propaganda in social media. The messages falsely linked fertility issues with the vaccine. The purpose of this campaign was not properly understood by the parents. The campaign was implemented within a short span of time resulting in coordination issues between the stakeholders. However, it was observed that religious affiliations played a major role in reducing coverage. The drivers to acceptance of MR vaccination campaign were the team effort of the healthcare providers who constantly motivated parents to vaccinate their children. **Conclusion:** Addressing the anti-vaccination propaganda has become the need of the hour. The inclusion of all stakeholders including religious leaders in the planning and implementation of the campaign is essential for its success.

Keywords: Measles, MR campaign, rubella, vaccination coverage, qualitative study

Introduction

The measles-rubella (MR) vaccination campaign is one of the world's largest vaccination campaigns ever. The campaign was launched in India to vaccinate more than 35 million children in the age group of 9 months to 15 years with one dose of MR vaccine. The aim of the campaign was to rapidly build-up immunity for both MR in the community therefore requiring 100% coverage.^[1] The first phase of the campaign was expected to accelerate the country's efforts to eliminate measles. The campaign also marked the introduction of rubella vaccine in India's childhood immunization program to address congenital

rubella syndrome, which causes birth defects in nearly 40, 000 children every year. The current campaign was the first in the series to cover a total of 410 million children across the country over the next 2 years. Because India accounts for 37% of burden global measles death the success of vaccination will have a tremendous effect on the word figures.^[2]

The MR vaccination campaign was launched in Kerala on 3rd October 2017 as the second phase of the National immunization program aiming to eliminate MR by 2020. The drive was carried out in schools, community centers, and medical institutions.^[3] The initial phase of the campaign met with many controversies that affected its coverage. It was observed that an urban slum in the field area of Kakkanadu primary health center (PMC) in Ernakulam district was reporting a low

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coverage during the initial phase of the campaign. Therefore, to understand the reasons behind the low coverage and to put forward appropriate recommendations for local health system, we carried out this study to analyze the drivers and barriers for acceptance of MR vaccination in the field area of Kakkanadu PHC.

Methods

This qualitative study was carried out in November 2017, immediately following the initial round of MR vaccination campaign after obtaining the institutional ethical committee clearance. It was observed that certain parts of Ernakulam district had very low coverage, and it was found to be least in the catchment area of PHC Kakkanad accounting to only 69.59% compared to other areas that had attained 98% to 100% coverage in the initial phase itself. This study area was majorly composed of people belonging to religious minority group mostly having a closed knit traditional family structure. It was also interesting to note that the routine immunization coverage rate of this area was 98%, and the uptake for the MR campaign was found to be lagging behind. All these factors further impelled us to carry out this study in this particular geographical area.

Purposive sampling of the participants was carried out with the help of the ASHA who helped us to identify parents of MR vaccinated and unvaccinated children. Both parents were interviewed individually after obtaining informed verbal consent. The vaccination status of these children was also cross-checked with the PHC reports. Other than the parents, the principals of the local public and private schools where the campaign was held were also included in the study along with the medical officer, Junior Health Inspector (JHI), and ASHA. The data were collected till saturation was reached. Each of these selected participants was interviewed using an interview guide consisting of a list of pre-determined open-ended questions from extensive formative research. Probing questions were also asked to explore in depth further. After obtaining informed verbal consent, the interviews were audio recorded and conducted in the local language, Malayalam. Each interview lasted for 30 to 45 min, and it was transcribed verbatim and translated into English.

The transcripts were then coded manually to identify emerging themes and sub-themes that were further categorized into different categories. It was then verified independently by another researcher to increase the validity of the findings. The discrepancies that evolved were resolved through discussion till consensus was reached between the researchers. Comparisons between and within the vaccinated and non-vaccinated groups were made, and particular comments that supported or contradicted the main themes were noted. These triangulation methods enabled to increase the validity and reliability of the study.

Results

Parents of five vaccinated and five unvaccinated children were interviewed. The age of the participants ranged from 20 to 32 with a mean and a standard deviation of 24.7 ± 4.3 . Among the parents interviewed, the mothers had an education up to higher secondary or less and all of them were homemakers, and the fathers were educated up to high school or less. Majority of them were occupied in skilled jobs like garage workers, cobblers, etc., Among the parents who were interviewed, all of them were Muslims by religion except for one couple who had not vaccinated their child was Hindu. Seven of them had two children, whereas the rest had four, three, and one child each.

Perceptions of parents regarding routine immunization and MR campaign

All parents who participated in the study believed that routine immunization against the seven preventable diseases were necessary and had fully immunized their children up to age. However, they were quite apprehensive about its long-term effects.

Acceptance to pulse polio campaign was much higher than the MR campaign. A sense of ownership prevailed among the parents probably because of the fact that pulse polio program has been conducted over the years with effective information, education, and communication (IEC) campaigns. With regard to the MR campaign, parents were very apprehensive and viewed this campaign with suspicion. A sense of saturation and community fatigue toward the plethora of immunization campaigns had settled in among the members of the community, as reported by a parent of an unvaccinated child:

“First it was Polio and now it is MR...will this never end?”

Drivers for MR vaccination campaign

Among the many drivers for the MR campaign, the one which was found to be really effective was the peer pressure created among the parents. Three parents confessed that they were initially hesitant to vaccinate, but when they saw their peers vaccinate, they too followed. As one parent of a vaccinated child stated:

“I enquired whether children of affluent families took and then I decided to vaccinate my child. If it's good for their child then it must be good for mine too”

Mothers were the first to be convinced about MR vaccine, and they then convinced their husbands to change their decisions. However, in male-dominated families, peer pressure did not make a difference. The school principals, medical officers, and ASHAs also reiterated the fact the families belonging to the minority had a male dominance in decision-making, and the pleas made by the mothers fell on deaf ears.

Another factor that was least expected to be a driver in this campaign was the venue where it was conducted. Vaccination in schools created pressure among the principals and teachers because they wanted their schools to achieve 100% vaccination coverage. Additional reinforcements in the form of sending notes to parents and repeated announcements were made. These efforts by the school authorities did influence the decisions of some parents. As reported by one of the parent who stated that:

“I was initially hesitant to vaccinate my child. Since the campaign is being conducted in the school and my child is in class X, I fear that it may affect my child’s education in the future.”

The efforts put by the field staff especially the ASHA was a driver for the campaign. The parents as well as the JHI pointed out that ASHA repeatedly motivated parents of unvaccinated children to vaccinate them. Because these ASHA workers were representative members of the community, the parents accepted them easily.

The mere fear of the consequences of not being vaccinated was also a major driver for the campaign. This was admitted not only by the parents but also by the medical officer, JHI, and ASHA worker and was used as bait by the health workers in the field to increase the coverage.

Barriers for MR vaccination campaign

The conduct of the MR campaign in the schools was found to have a dual impact on the campaign, both as a driver and barrier. Parents were apprehensive about giving injections at the school setting because of safety reasons. Some unwilling parents took their children to the nearest government hospitals to do so.

One of the other barriers of the campaign was the lack of awareness regarding the vaccine and the rationale for administering it in a campaign mode. This was evident among all parents including those who had vaccinated their children. None of them seemed to have understood the purpose of vaccinating their children against MR, and neither did they make any effort to find out why it was given. The ultimate goal of elimination of these two diseases remained unknown to all parents and school authorities.

Making the existing situation worse was the use of different immunization schedules by the government agencies and the private sector. The private hospitals in Kerala follow the immunization schedules recommended by the Indian Association of Pediatrics (IAP), which routinely prescribes Measles Mumps Rubella (MMR) at 9th and 15th months of age. Because a vast majority of families rely on the private sector, they had already immunized their children with it, and they did not feel the necessity to vaccinate again during the campaign.

The study observed that there were a group of parents who were quite skeptical about vaccination and had not yet made up their mind. They were in no hurry to make a decision as one such parent stated:

“If the vaccine can be taken between 9 months to 15 years then why hurry? We will do it later”

The wide age range from 9 months to 15 years was identified to be a major deterrent for the vaccination coverage.

Another obstacle for the campaign was the deficiencies in the planning and implementation of IEC activities that had to be carried before the launch of the MR campaign. All parents felt that there was not enough priming done prior to the campaign regarding its need and importance. The parents felt that the idea of the campaign sprouted out all too quickly giving them neither opportunity nor time for sharing their apprehensions and clarifying their doubts. Hence, they felt that it was being imposed on them.

When questions regarding the deficiencies in the planning and implementation of IEC activities were directed at the healthcare workers, they stated that they too were given short notice and the campaign was implemented hastily. It resulted in the ultimate aim of the campaign being ignored. As stated by the medical officer:

I feel that the aim of MR campaign, that is “Eradication”, was not properly communicated to the people.

Another unique barrier identified was the need for written informed consent from parents. As stated by a medical officer:

“The aim is full coverage, so what is the relevance of taking consent? When the consent was specifically asked for, it created suspicion among the people”

According to the doctor, this campaign was carried out in public interest, and its aim was to achieve full coverage. If that was the case, he personally felt that there was no need for individual written consent from all parents because it created suspicion among them. However, the school authorities felt that this individual written consent was necessary because it would save them from the blame game if anything was to go wrong. As stated by the principal:

“I think, taking consent from parents is necessary for us because it will prevent complaints in future”

The lack of proper IEC created a lot of apprehensions and fears in the minds of the parents. They became suspicious and the emphasis on the girl child further worsened the situation. One parent even stated that:

“The posters regarding MR vaccination specifies so many adverse effects of the vaccination. If that’s the case, then why take it?” and “What is the need for a special vaccination now, that to especially for girls”

Although all parents had these thoughts, only some of them were brave enough to openly voice it. It was evident that all parents belonging to this minority group were concerned about the fact

that the emphasis on the girl child was owing to the hidden agenda of population reduction. As one parent stated:

I think our government has decided to “reduce the population.” That is why they are especially considering the girls.

The health professionals too reported that this minority group strongly believed that the government was planning and plotting against them. They felt that they were using the campaign as a scheme to affect their fertility and growth rate as stated by the medical officer:

People have a fear that there is a “depopulation agenda” behind the vaccination

All these false allegations were spread through social media, which is very far-reaching and highly impactful.

“We are among the minority religion. In WhatsApp we read this vaccination is dangerous especially for us” (parent)

Multiple video clips were propagated through social media by the anti-vaccination lobby, which became instant hits and became viral among these minority groups. These messages were being propagated by learned, respected, and influential people in the community such as doctors, spiritual leaders, etc. Most of them fully believed these messages blindly, whereas some questioned it, and others remained in a state of confusion not being able to come to a decision. As a parent stated:

“We don’t feel that the messages are 100% correct. But we don’t feel that they are completely wrong also.”

The delay from the part of the government and the healthcare professionals in addressing these anti-vaccination propogandas worsened the situations because it created suspicion in the minds of the people, further questioning the genuinity of the intentions behind the campaign. The healthcare professionals reported that by the time the government addressed these issues it had become too late.

Discussion

The study was able to highlight the difference in the perceptions that parents had toward routine immunization and supplementary immunization campaigns. All parents were convinced about routine immunization; however, they had mixed reactions regarding supplementary immunizations. The pulse polio campaign has now become a part of their lives, while the MR campaign would need more time and efforts to gain acceptability. MacDonald *et al.* in their review stated that “Vaccine hesitancy is complex and context specific, varying across time, place, and vaccines. It is said to be influenced by factors such as complacency, convenience, and confidence.”^[4] The vaccine hesitancy toward the MR campaign could be probably owing to community fatigue that could have set in as a result of too

many national programs being subsequently implemented one after the other. Jarrett C *et al.* stated that this complex issue of vaccine hesitancy requires multipronged strategies to address it.^[5]

Our study identified social networks to be the main driver for the campaign. The peer group effect among mothers and the efforts by the ASHA played a vital role in increasing the coverage. Brunson *et al.* ranked spouses to be the most important influencers in a social network, whereas health care providers were ranked second along with other non-medical individuals. She further goes on to state that there is a need to influence people that parents might discuss their vaccination decisions with.^[6] This is what was found to be missing in our campaign because IEC efforts were directed only toward parents with children in the age group of 9 months to 15 years.

The selection of schools as the site for the campaign revealed to be both a driver and a barrier. However, on further exploration, the school venue emerged as a driver than a barrier in our study. Vaccination at school premises was found to be convenient for some parents because they did not have to take time off from their work to go to the hospital. At the same time, emotional support for the children was provided by their teachers and peers.^[7] This was found to be similar to the findings of Paterson *et al.* The committee on Vaccination and Immunization of UK recommends offering influenza vaccine to children at schools because the vaccine coverage was found to be higher than in hospitals. However, if school-based vaccination needs to be expanded in the future, it needs to be further explored and the perspectives of students need to be researched upon.^[8]

The WHO guide on immunization activities suggests the conduct of knowledge, attitudes, beliefs, and practices (KABP) surveys in the community before the implementation of Supplementary Immunization Activities (SIA), for the development of the communication messages.^[9] However, this was not carried before the campaign resulting in the development of technically incompetent IEC materials which in turn led to further misconceptions and poor coverage. This finding was similar to results of a study done by Brendan *et al.*^[10]

Because the campaign laid more emphasis on the girl child, the anti-vaccination lobby skillfully popularized that the government had a depopulation agenda that targeted the Muslim community. Social media, a double-edged sword, played a vital role in the rapid spread of these messages.^[11] The condition worsened by the delayed response from the side of the public health administration. However, Sulaiman *et al.* in his article has clearly stated that there is no evidence suggesting the use of vaccines for depopulation of Muslims in the world. It also goes on to explain that the rate of growth continued to be the same in Muslim countries.^[12]

The limitations of the study are that the study covered only a limited area where the minorities lived resulting in the

findings to be context specific and may not be applicable in all situations.

Conclusion

To conclude, family medicine specialists play a key role in increasing the immunization coverage by communicating the goal of elimination to the beneficiaries. However, there is a long way to go before eliminating MR for which many barriers need to be crossed. A thorough knowledge of the socio-cultural contexts in which these vaccination campaigns are being implemented will make the path a lot easier and will also aid in the faster achievement of our goal of eliminating MR from the face of the world.

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Conflicts of interest

There are no conflicts of interest.

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