

The interactions of ethical notions and moral values of immediate stakeholders of immunisation services in two Indian states: a qualitative study

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ABSTRACT

Objectives: This study examines the existing norms regarding immunisation within the communities and the ethical notions that govern the actions of different health professionals and their collective synergistic or conflicting effects on the governance of the programme.

Design: We used descriptive and analytical qualitative methods as it suited the research question.

Setting: The data were collected from areas under 16 primary health centres in Kerala and Tamil Nadu identified through a three-step sampling process.

Participants: This involved in-depth interviews with stakeholders including providers, beneficiaries and other stakeholders, focus group discussions with mothers of under-five children and participant and non-participant observations of vaccination-related activities.

Results: Unlike most other ethical analyses that look at the ethics of vaccination policies, the interactions of normative principles and notions are analysed in this article. Moral obligation of parents towards their children, beneficence of healthcare providers and the utilitarian aspirations of the state are the key normative principles involved. Our analysis points to the interplay of both synergy and conflict in ethical notions and moral values in the context of immunisation services. Paternalistic interventions like special immunisation campaigns against polio and Japanese encephalitis are a case in point: they generate conflict at the normative level and create mistrust.

Conclusions: Analysis of vaccination policies and programmes needs to go beyond factors that assess monetary benefits or herd immunity. Understanding the interactions of normative notions that shape the social organisation of the providers and the users of vaccination is important in creating a sustainable environment for the programme.

BACKGROUND

Normative principles, explicit and implicit, operate within a social system and guide the delivery of public health interventions such

ARTICLE SUMMARY

Article focus

- Ethical analysis includes not only ethical rationale but also the exploration of interactions of ethical and moral notions.
- The article examines the interactions of ethical notions of the health professionals and moral values governing parental actions and their collective effect on governance of childhood immunisation programmes.
- The study hypothesises that the vaccination policies and programmes that do not take into consideration the need for equilibrium of normative notions that motivate the actions of immediate stakeholders can be detrimental to its implementation.

Key messages

- Analysis of vaccination policies and programmes needs to go beyond factors that assess monetary benefits or public safety.
- The interactions at the normative level play a significant role in sustaining the acceptability and compliance to vaccinations at the community level. The moral obligation of parents towards their children, beneficence of healthcare providers and the utilitarian aspirations of the state are the key normative principles involved in immunisation.
- Overly aggressive vaccination programmes based on utilitarian notions can conflict with other dominant normative notions that motivate the actions of healthcare providers and parents.

Strength and limitations of this study

- An analysis of interactions at the normative level of the providers and the users of vaccination gives new insights for developing sustainable vaccination programmes.
- Generalisability of findings to other contexts where the immunisation programme faces challenges, including resistance, should be verified through further studies.

as vaccination. They influence not just policy decisions and programme implementation, but they also shape the decision making of

medical practitioners and community behaviours.^{1 2} For an intervention like immunisation, it is important to understand how the ethical principles that influence policies or behaviours of health professionals interact with the moral values that operate at the level of parents whose decisions ultimately facilitate paediatric vaccinations. This understanding is expected to provide valuable information for designing policies and programmes related to immunisation.

Most ethical deliberations on public health revolve around providing a framework for capturing the appropriateness of measures used in interventions and policies.³⁻⁶ The ethical deliberations in vaccination have highlighted the utilitarian orientation of public health professionals against the healthcare worker's value of client beneficence.⁷⁻⁹ This paper examines the interactions of the ethical notions of the health professionals and the moral values governing parental actions and their collective effect on governance of the paediatric immunisation programmes. This analysis is part of a larger study to understand relatively recent decreasing immunisation coverage in two states of India, Kerala and Tamil Nadu, which have otherwise reached a fairly high level of coverage compared to most of the states in the past (figure 1).¹⁰

In this paper, we use this concept of 'ethical notions' instead of ethical principles as we refer to values that are acquired collectively from an understanding of what is right and wrong based on the healthcare and public health practitioner's professional training and the professional code of ethics that is adopted for practice by health professionals. Moral values are the norms defined and accepted by a larger section of the society. Both ethical notions and moral values are normative principles that guide the decision making of immediate stakeholders.

In India, vaccines have been widely used since the early 1900s and several collective vaccination programmes were periodically introduced nationally and regionally as part of various disease control programmes. The Expanded Programme of Immunisation was started in 1978, though it was limited mainly to urban areas. The Universal Immunisation Programme (UIP) against basic vaccine preventable diseases was introduced in the

year 1985 with a mandate to progressively cover the entire country. The programme is implemented through the government's three-tier health institutions with the active support of a vast network of field workers. The private healthcare providers also complement the immunisation programme. Even after two decades of implementation, the progress of the UIP has not been very encouraging in most parts of the country. Although UIP has contributed to improvement in ensuring the availability of vaccines and maintenance of cold chain requirement, the system is considered to be failing to deliver in many states in terms of coverage.

The states of Kerala and Tamil Nadu have a tradition of state intervention in health which ensures an adequate basic administrative system for implementing immunisation programmes. The state of Kerala is known for its remarkable health achievements in the public health discourse. Public investment in health has been traditionally high compared to many other states.¹¹⁻¹² Similarly, the improvement in population health status of Tamil Nadu in recent decades has been attributed to increased public expenditure in health and a relatively well-functioning public health administrative system.¹³⁻¹⁵ The increased presence of private sector in healthcare is indicative of the acceptability of private providers in both the states.^{14 16}

Another important factor to be considered in the context of immunisation is the influence of reduction in fertility rates in both states. With the decreasing family size, children have assumed a special place in these societies and the child-centredness of these societies has been noted.^{17 18} Immunisation programmes in these two states have recently faced new challenges. Media reports of sporadic and organised forms of resistance against immunisation exist. Special vaccination programmes for polio eradication and targeted campaign against Japanese encephalitis have been the special focus of widespread resistance against immunisation in Kerala.^{19 20} Polio eradication campaigns included additional doses of oral polio vaccines given to all children under 5 years of age on at least two occasions every year. The vaccination campaign against Japanese encephalitis in the previous year had targeted schoolchildren in Alappuzha district. These programmes are organised by the government public health machinery with significant political commitment and resources. There are extensive planning and preparations for the execution of the programme, which involve a number of government departments other than the health department. The dates of the programme are announced well in advance in the review meetings and special instructions are issued to all peripheral institutions. Local-level health department staff hold several rounds of planning meetings with other government departments, local self-government officials, local non-governmental organisations and schools well ahead of the programme in order to identify and access potential non-compliers with regard to the special immunisation drive.

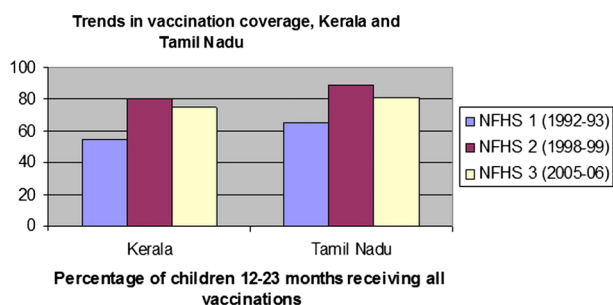


Figure 1 Immunisation coverage in Kerala and Tamil Nadu.

The state of Kerala has seen organised forms of resistance spearheaded by some practitioners of alternate systems of medicine including homoeopaths and naturopaths especially in the northern districts. In the state of Tamil Nadu, a false propaganda of death of a child aired through a news channel in the previous year's special vaccination drive against polio had caused widespread anguish among parents and resulted in violence in some locations. Deaths related to immunisation have been reported in both states in the recent past with an associated negative image, sometimes leading to a temporary stoppage of the programme.²¹

METHODS

The study employed a descriptive and analytical qualitative method for data collection as it suited the research question. This included a review of the relevant literature and documents as well as a field-based study of implementation of the immunisation programme. The field study employed a range of qualitative methods and specific comments on each of the methods are detailed in [table 1](#). These included multisite participant and non-participant observations, focus group discussions (FGDs) and interviews.

Sampling of study areas

A three-step sampling process was used to select 16 primary health centre (PHC) areas as study sites for maximum variability of regions with successful implementation of immunisation programmes in terms of coverage. Each PHC covers a population of about 30 000. On the basis of immunisation coverage, the districts in each state were categorised into three groups and two districts in each state were selected randomly, one from a better performing category (Alappuzha in Kerala and Dindigul in Tamil Nadu with an immunisation coverage of 90.2% and 87.5%, respectively) and another from a poorly performing category (Kozhikode in Kerala with 65% and Theni in Tamil Nadu with 72.1%). The immunisation coverage was assessed based

on a percentage of fully immunised children in the 12–23 month age group as per the District Level Health Service survey.²² Average population in a district in Kerala and Tamil Nadu was 2 384 834 and 2 254 342, respectively. In each of these four districts, one better performing block and one poorly performing block (one block consists of 100 000 people) in terms of immunisation service coverage were identified with the help of district-level managers. In each block, two PHCs were identified for detailed study. One PHC in the block was selected based on an assessment of difficult geographic terrain and significant presence of poor and marginalised communities, and the second one randomly. One private facility used for immunisation services within each of the eight study blocks was selected randomly for observation of the immunisation services and interviewing the practitioners.

Data collection

Non-participant observations focused on immunisation sessions at health facilities, outreach immunisation sessions and review meetings of field staff in charge of the immunisation programme. All participant observations were made at the time when the researcher made house visits along with the health field staff or community health worker for mobilising beneficiaries for the upcoming immunisation session. During each of the visits, the researcher was introduced to households as a public health researcher and was involved in motivating and educating the families on childhood vaccinations. In most of the households visited, the initial communication related to vaccination was provided by the field staff or community health worker and the researcher was asked to clarify it further. In this process, the researcher had to shift between the role of an expert and researcher. All observations were made by JV. At the time of the observation rough notes were made, and at the end of the day, a full record was prepared by appropriately commenting on each of these activities as per the observation.

Table 1 Methods of data collection used in Kerala and Tamil Nadu, 2009–2010

	Data collection methods	Number	Remarks
Observations	Non-participant observations with checklist	20	Observations gathered insights into cultural meanings and interpretations related to provider and beneficiary behaviours and the settings
	Participant observations with checklist	10	
Interviews	In-depth interviews using guidelines	38	It provided an understanding of the values, views and interests of stakeholders.
	Key informant interviews with experts	15	
FGDs using FGD guidelines	FGDs with mothers who had children below 5 years of age	12	The aim of FGDs was to understand opinions and attitudes towards the immunisation programme and to elicit the underlying factors through the collective reflection of participants
	FGDs with female field staff of PHCs	Three in Kerala and two in Tamil Nadu	

The respondents of in-depth interviews were immunisation service providers from the public and private sectors, those who facilitate vaccination like community health workers and those who opposed vaccination, all from the study areas. They were identified using the snowball method whereby, at the end of an interview, the respondent's suggestion was asked about other important stakeholders for identifying the next respondent. Key informants were identified based on their expertise of immunisation service as a past or present state or district-level immunisation programme implementer or researcher in either or both of the states. Two of them were primarily researchers of immunisation services with expertise on the functioning of immunisation services in these two states.

FGDs with mothers were held in anganwadi centres (government-run free preschool and nutrition centre) belonging to the study areas. The number of participants in the FGDs varied from 7 to 10. The mothers included in the FGDs had children below 5 years of age who attended the anganwadi centre. They were identified and invited to participate by the teacher of an anganwadi centre. FGDs involving female field staff of the study PHCs were held in the PHC building after the weekly immunisation session. Leading questions were asked of the respondents of the interviews and participants of FGDs and they were encouraged to narrate their responses in detail. Clarifications were sought on specific points emerging from their narratives. All the interviews and FGDs were conducted in the local languages and recorded with the permission of the respondents.

Data collection was undertaken over 6 months during late 2009 and 2010 by JV who has oral communication skills in both languages. The additional help of a person familiar with the FGD process was taken in organising FGDs and for note-taking in Tamil Nadu. Only five FGDs with the female field staff of PHC could be organised as the staff found it inconvenient to sit in groups after the immunisation session. The recordings were simultaneously transcribed and translated into English by the JV within a few days of the interview. JV and VRK decided on the required number of in-depth interviews and FGDs by periodically assessing the saturation of the information by reviewing the transcripts.

Data management and analysis

The template approach, which is described as one of the four approaches to qualitative analysis by Crabtree and Miller,²³ was used for data analysis. This method uses a template or analytical guide that derives from a theory or research tradition. As the analysis had to reconcile varying perceptions of different stakeholders across the same set of issues, the template approach, otherwise called deductive coding, was used. Sufficient attention was paid to negative case analysis during data collection and analysis for validation. Weft QDA, a software for qualitative data analysis, was used for arranging

the text according to codes and managing the codes in the interpretive phase. The quotes of the study are included in the results as illustrations of themes emerging from the analysis of the data.

The study protocol was reviewed for ethical and technical clearance by the Institutional Review Board, where the JV was affiliated as a research student. Many parents approached JV during data collection for his opinion on the need for vaccination of their children. As suggested by the Institutional Review Board, the researcher had taken the initiative to clarify the vaccination-related doubts of parents who were interacted with and also reassured the need for vaccination. Official permission for data collection was taken from state-level health officials as well as from district-level officials, and participation in the study was made voluntary by ensuring informed consent from all participants.

RESULTS

The ethical analysis using the qualitative data shows that there are implicit ethical notions and moral values involved in the delivery of immunisation services. Identifying them makes it possible for use to understand the varying rationales involved in decision making regarding immunisation of children.

Utilitarian 'notions' of public health authorities

Strong utilitarian notions prevail among the government public health authorities at the state and district levels and guide the vaccination programmes. This considers the best ultimate outcome for the society. It supports mandating vaccinations for all.

Vaccination should be mandatory. What is wrong with it? After all it is for the benefit of the society. If some do not agree, all of us will be affected

A district official (male), Theni

The utilitarian focus runs through all levels of the government's health department and shapes the way the institutional mechanisms are structured for functioning. Its explicit outcome is the 'thrust on coverage' which is translated as targets for staff. The staff of the government public health service department placed at different levels of the hierarchy are expected to ensure coverage. This is evaluated against the targets fixed in the beginning of the programme. The transactions at the departmental monthly review meetings at various levels reveal how targets and their assessments form key activities in such programme reviews.

There are very strict (annual) targets ... By September if we did not reach 50 to 60%, we will be made to stand in the review meetings and explain. Excuses will not be of any help

Fieldworker (female), Alappuzha district, Kerala

The overwhelming emphasis on coverage results in the use of coercive means to achieve targets. It restricts the options for refusal to undergo immunisation or for postponement of immunisation available to beneficiaries. This is especially so with the special vaccination campaigns introduced for the control or elimination of diseases such as Japanese encephalitis or polio. In Alappuzha district which had a targeted immunisation campaign against Japanese encephalitis, focusing school students in the previous year had openly debated the issue of consent of parents.

We were told (by the district authorities) that the consent of parents was not required. Truly speaking there is no need for consent of parents. But schools were objecting. Teachers were not willing. They said “if we give, parents will question us. But, if we wait for the consent of parents, nothing would happen”. Taking parents’ consent is a wrong strategy

A fieldworker (female), Alappuzha

Similar feelings have been expressed by a district-level officer (male) who was in charge of the special immunisation campaign against Japanese encephalitis in Alappuzha district.

This is a state programme, no need to take consent of parents, if we take consent of parents, nothing is going to happen, programme will be a failure

A district-level official (male), Alappuzha

Most of the public health workers who participated in FGDs believed that parental consent was a wrong strategy especially for special vaccination programmes. Even those who supported parental consent for vaccination wanted it for avoiding conflict and for the smooth running of the programme.

For many health department officials of the immunisation programme, targets are imperative to state-led governance of a public function. The emphasis on coverage is also applied to various levels of hierarchy in the department. *If district coverage is less, DMO (district-level health authority) will be questioned at the state meeting and he will in turn raise it in the district meeting, then it goes down to each level*—observed a district-level officer (male) from Kozhikode district.

In the FGDs, field staff described how any delay in vaccination among children is attributed to ‘lack in strictness’ in implementation. The utilitarian orientation is visible in the extensive planning and preparations for the execution of the special vaccination programme, such as vaccination programmes against Japanese encephalitis and polio, which involves coordination across various government departments. The dates of the programme are announced well in advance in the review meetings and special instructions are issued to institutions at all levels. Public health department staff hold several rounds of planning meetings with other government departments, local self-government officials,

local non-governmental organisations and schools well ahead of the programme in order to estimate and identify beneficiaries and access potential non-compliers with regard to the special immunisation drive.

The special immunisation day is followed up with mop-up rounds where volunteers and vaccinators make house-to-house visits to vaccinate dropouts. These preparations contribute to creating a sense of urgency. An expert on immunisation policy and implementation described it using the following words:

Polio campaign is like a war. Logistics and tactics are adapted like in a war. The word strategy, the word logistics or tactics are all taken from war. Logistics are about how armaments and supplies are reached the battlefield, tactics is about how you fight in a locality, it is more about how you design your war tactics

The utilitarian approach of the public health authorities results in making the vaccination programmes coercive and such efforts throw up conflicts with the caregivers of children. For example, a targeted campaign against Japanese encephalitis in Alappuzha district, Kerala was resisted by the school authorities as the public health workers sought to abrogate the need for parental consent. Some schools called a meeting of office bearers of the parent teachers association (PTA) and the PTA decision was taken as consent. Some other schools sent a note to parents through children asking for their approval.

People saw this as a test dose. They thought government is experimenting on their children. JE vaccination was used for the first time; they had doubts ... Many had raised a lot of questions to us; why this vaccine; why only on us?

Medical officer (male), Alappuzha district

Even when special campaigns receive a high priority from the public health department, resistance from beneficiaries is found to be widespread in Kerala. *‘my child was given all vaccine injections when she was small. Even my 15-year-old daughter was given all injections. We did not understand why they were giving it again in the school. My husband said no when she told us about this. My daughter did not go to school on that day.’*, explained a parent who refused a school-based vaccination programme against Japanese encephalitis. In resistant areas, attempts to reach out to unvaccinated children through house-to-house vaccination drives occasionally result in heated arguments between health workers and family members. Most field workers from Kerala who participated in the study shared their experiences of similar incidents.

Beneficence to patients

The ethical principle of beneficence that marks the immunisation function is also part of the professional relationship of healthcare delivery. Within the professional relationship, the expectation is that the caregiver

will act in the best interests of the patients. This notion is visible in the thrust received for vaccination against mumps, measles and rubella (MMR vaccine). This vaccine does not form part of the UIP in the study states, but doctors, both in the public and private sectors, recommend it to children. Many older children in Alappuzha district in Kerala and both the study districts in Tamil Nadu had been prescribed MMR vaccines by doctors in the public and private sectors. While many practitioners prescribe MMR vaccine in the interest of their clients, the state public health authorities delayed its introduction in the routine schedule mainly due to cost considerations.

Beneficiaries' expectations from caregivers are also rooted in the belief that health workers act in the interest of their patients. This has been an accepted notion in society which submits itself to the decision of the caregiver to a large extent. Most mothers who were part of the FGDs agreed that the doctors would act in the best interests of their children, even though some have raised doubts about the potential conflict of interest arising out of financial incentives to doctors.

Parents even accept the paternalistic behaviour by medical caregivers as they see this as an exercise of beneficence. This is reflected in their tolerance of rebukes from medical care providers for not holding the infant the right way or for delays in approaching the system for vaccinating their wards.

If a mother comes late for vaccination by two or three months and if we question her, I am sure she would definitely cry. This happens in my clinic.

A paediatrician (male), Theni

Here, paternalism takes the form of a belief among the caregivers that clients should accept decisions made in their best interests by caregivers. Therefore, negotiations and discussions with parents on the choice of vaccines and vaccination decisions are perceived as unnecessary in clinical settings. Often, the only verbal exchanges are a set of prevaccination inquiries and post-vaccination instructions.

Several private medical practitioners across Kerala opposed the repeated rounds of polio campaign and advised their clients against vaccination as they thought it unnecessary for children in Kerala. For them, repeated doses of oral polio vaccines can only enhance herd immunity and not individual immunity, which was already covered under the UIP. Most of the private practitioners interviewed as part of the study in Kerala raised doubts about the rationale of repeated doses of oral polio vaccine to children.

We are often approached by parents whenever a vaccine campaign is announced. Patients always ask their own doctors. If they are not sure of vaccination, they will advise against it.

A paediatrician (male) working in a private hospital in Kozhikode

The state public authorities have failed to engage or convince them. Many parents who did not vaccinate their children during special campaigns, but had taken the routine vaccination, trace their decision to a doctor who advised against it. However, it should be noted that all the private medical practitioners from Tamil Nadu who were interviewed supported the special campaign for polio. Many of them referred to the decision taken in a meeting of the professional association of paediatricians in the state which supported the polio vaccination campaign.

Moral value of parental obligation

Parents' moral obligation towards their children plays another major role in guiding the immunisation programme and contributes to its sustainability. This value comes out of the parent's feeling that immunisation is their duty towards children.

With small family norm people are ready to take vaccinations against even lesser known diseases. Yes vaccination is seen as norm; just like the need for good nutrition a 'good' is also attached to vaccination

An expert (male), Tamil Nadu

It is widespread in societies which have a good coverage of immunisation. In such areas, vaccines have become a societal norm making it difficult for parents to avoid it. The FGDs with mothers held in areas of high vaccination coverage reiterated that in an environment where all parents vaccinated their children, it was difficult to be a deviant. Healthcare workers use this factor to ensure compliance to vaccination schedules and tend to chide parents saying that parents would be held responsible for their lapses (by their children when they grow older).

People are not seeing disease as they were seeing before. Their fear has now gone. They are still taking it because everybody else is taking it

A district-level supervisor (male), Theni

They have no fear of diseases. Most people think it is their duty towards their children. Many mothers are in their 20s. As a child, many of them had not received these vaccines. Some of them are daily wage workers, but want to bring up their children in the best possible way. Whatever they missed in their childhood they want to give to their children. They think vaccines are important. They have already made up their mind that vaccination is a must

An expert (male), Tamil Nadu

Vaccination is one of the first things that people do as parents for the well-being of their children. Some parents were apologetic that they used government facilities for vaccinations as these are seen as inferior to those offered in private facilities. Acceptance of vaccination as a social norm has been an important driving factor for sustaining the immunisation coverage when

the incidence of diseases gradually declines. This also partially explains the high acceptability of optional vaccines.

For some people, if they take the child to a private hospital for immunisation, they have a feeling that they have done something great for their child. Even poor are taking injections costing Rs. 500 and more. They have no problem in spending

Community health worker (female), Alappuzha

It is important to consider the perception of parents who did not vaccinate their children in the context of widespread propaganda against vaccination programmes in Kozhikode district. Contradictory information on vaccines and the vaccination programme left many parents in a dilemma. The efforts by the field workers to convince the mothers of unvaccinated children only led them into more confusion. One of the mothers interviewed who did not fully vaccinate her child as per the schedule explains

But the problem is that nobody here is too keen about injections. It is difficult for me to take initiative; I have lot of difficulty which you should understand. I am an educated lady; I have studied up to degree. I am in favour of this. But if I decide alone and take the child for vaccination and after that if the child develops even a cold, all blame will be on me. They will say this was because of the vaccines and I did not listen to them. Last time, after I had taken the child for vaccination, child had developed fever in the night. Then my husband's family members started scolding me saying I had caused this to the child who was otherwise healthy. After that I did not take the child (for vaccination).

DISCUSSION

Explicit and implicit values and norms are critical to the implementation of paediatric immunisation programmes as they influence the institutionalisation of programmes. The interactions of values and norms play a significant role in sustaining the acceptability and compliance to vaccinations at the community level.

In regions with good immunisation coverage, the programme has been sustained because of the confluence of several ethical notions involved. This has been possible because the values that influence the actions of parents and the ethical notions of professionals involved in immunisation find a common ground in immunisation-related decisions. Parents' motivation is driven by the fact that vaccination is seen as a routine and parental obligation towards their children. This consideration is important as it ensures the public health department's utilitarian goal of adequate protection against vaccine preventable diseases. The other studies which analysed the prevalent values that motivate parents to comply with paediatric vaccination have also highlighted this fact.² Steefland *et al* have noted how vital it is for parents to retain a positive

perception of the vaccination process if the immunisation programmes need to succeed.²⁴

The role played by general acceptance of the small family norm in Tamil Nadu and Kerala has an influence over the values of parental obligation towards their children.^{17 18} This has facilitated the state's entry into the domain of family decision making. The state's goal of universal immunisation has benefited in contexts where state interventions are accepted by parents.

Another important notion that plays a role in sustaining immunisation in regions with good immunisation coverage is beneficence, which is attributed to the healthcare providers. An explicit recognition of beneficence by healthcare workers can have a synergetic effect with values of parental obligation. The government sector in both the study states has acted differently to tap into the importance of parents' expectation of beneficence from caregivers. Tamil Nadu had made it mandatory for doctors to see each child before vaccination. The decision was taken as a confidence-building measure immediately following an incident of deaths of children after immunisation, which created widespread anguish and derailed the programme.

Ethical notions and moral values can also run into conflict with each other. The ethical principles operate differently in the policy-making process and in service delivery or at the household level. Interventions with a strong utilitarian focus have the potential to undermine parental obligation. In other words, state-led interventions in immunisations are accepted as long as they do not overshadow parental values of welfare for their children. The state's utilitarian intentions are accepted only when the voluntary nature of the universal programme is ensured. A paternalistic state and public health driven compulsion for vaccinations have the potential to undermine the value of parental obligations, which is one of the driving forces behind paediatric vaccination. '*...may be because when it is forced, they may think it is for the others benefit not for their benefit*'—commented one of the experts on the widespread resistance against special campaign in Kerala.

Many medical practitioners also advised their beneficiaries against repeated intake of oral polio vaccine as the global polio eradication goal did not appeal to them beyond the benefits of their clients. This perspective is important in understanding their support for routine immunisation and general indifference to special campaigns. Such an attitude of medical professionals to the immunisation programme has also been noted by other authors.^{25 26}

As the incidence of vaccine preventable diseases declines, it is difficult for the state to motivate individual parents to attain a utilitarian public health goal. This is evident in the way beneficiaries are motivated by the field health workers for special campaigns where the health message is invariably directed at personal benefit. They avoid discussing the objective of global polio eradication with beneficiaries. The public health officials try

to tackle the widespread resistance against immunisation by raising the issue of possible return of vaccine preventable diseases. As the fear of diseases no longer explains the acceptability of vaccinations in these societies, it proves to be a weak strategy.

CONCLUSION

The arguments in this paper are different from the other criticisms of the campaign approach in immunisation for its single-disease focus or its contribution to weakening health systems in the developing world.^{27–28} We emphasise on the need for public health actions to take into consideration the manner in which societies organise themselves to manage public affairs. Ethical analysis is one such aspect that enables us to understand the decision-making process surrounding public health interventions. This analysis should include an exploration of the ethical rationale and the interplay with multiple moral notions.

Immunisation policy decisions need to go beyond the simple rationales of life saved or monetary benefits due to vaccinations²⁹ to enhance vaccine acceptability in societies where resistance to the programmes is developing. We also advocate analysis that transcends mere 'risk perception' to assess household behaviour related to paediatric vaccination.^{30–33} Our analysis identified that the role of the norm 'vaccination as a parental obligation' cannot be ignored especially in societies with high coverage and low incidents of vaccine preventable diseases.

Exploration of the operation of the ethical notions and moral values involved enables us to understand the decision-making process surrounding a public health intervention such as immunisation. However, this analysis does not claim that confluence or conflicts of ethical notions and moral values alone explain the resistance or acceptance against collective vaccination programmes. The study also does not explain why most parents accepted vaccination even when some of the parents opposed. We argue that the ethical notions which are professionally created and sustained often result in judgements about how others should conduct themselves and contribute to the complexity of vaccination programmes. The moral values and ethical notions operate not only in the decisions of the governors of the public health interventions but also in that of those who are governed. The study emphasises on the need for public health governance to take into consideration the nature of all the interactions, including those at the normative level at which societies organise themselves. Recognising these values and notions and their interactions with each other should be a key strategy of public health programme planners and implementers. The role played by informal interactions at the level of households or at the clinical settings cannot be ignored. This offers considerable challenges to state-led governance of public health functions.

Contributors JV and VRK conceived the idea and design of the study. JV was involved in acquisition of data and JV, VRK and MR were responsible for data analysis and interpretation of data. The initial drafting of the article and subsequent revisions were undertaken by JV, VRK and MR. All authors read and approved the final manuscript.

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Ethics approval Institutional Review Board of Sree Chitra Tirunal Institute for Medical Science and Technology.

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Data sharing statement Extra data can be accessed via the Dryad data repository at <http://datadryad.org/> with the doi:10.5061/dryad.f8g0m.

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