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Immunization's Seeking Behavior for Children: Gender and Geographical Perspectives

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Abstract

Immunization to protect children from preventable diseases provided free in Indonesia. Nevertheless, the coverage of completed immunization was hardly be achieved. A qualitative study through Rapid Assessment was conducted in 2011 to in-depthly understand the information related the services utilization from gender and geographical perspective. Three specified areas of isles, country's border and remoteness were selected based on the reason of prejudicial circumstances such as ethnicity, distance, and infrastructure limitation.

The study found, knowledge of immunization among parents was very weak. Mothers knew immunization, but not comprehend of the function, names and the diseases that can be prevented. Conversely, fathers had better insight, but, in-case of mother unable to bring along the children to the immunization venue, father felt ashame to go and would rather to delay the immunization until the month later.

Geographical such as isles, border, and remoteness became potentially enabling factor of immunization's incompleteness. Similarly, distance brings about immunization delayed in addition to climate change, such as high wave, wind and current.

Mother's seeking behavior for immunization was not influenced by socio-economic due to free services. The relative differences between the have and don't have was the former ask more frequent of the schedule, while the later would stay calm and indeed don't care. Cultural background, friends and relatives influences were neither encourage nor discourage people to immunize at the right time.

In conclusion, fathers involvements in seeking for immunization was almost none. Geography brought no difference effect on child's immunization. This study recommends, fathers need to be empowered through socialization and transferring information, to enhance the community demand in child's immunization.

Keywords: Children; Immunization; Genders disparity; Geographical perspectives; Remote areas

Introduction

Vaccination has an important point to prevent children from immunizable diseases. Improvements in immunization coverage and access of services will help ensure that all children are protected. Ideally, immunization has to be completed when children entering their first birthday. However, there were lots of constraints for children to get fully immunizad. According to Morbidity and Mortality Weekly Report, implementing the DPT3 indicator, it was estimated that 70% children had incompleted vaccination in 2013 [1]. Gobally, about 17% or 22,4 million children were left behind DPT3 vaccination [2].

Riskesdas 2013 showed that only 59% of children age 12-23 months had completed the basic immunization program, though this proportion has already been improved which was 53.8% and 41.6% in 2010 and 2007 [3]. The utilization of health services is depending upon the availability of the health facility, access, as well as socio-cultural and economic determinants of the community. In Indonesia, immunization services is provided free, equitable and wholistic to children of underfive-year old through the primary health care programme. *Puskesmas* or health center, as the lowest level of the health care system is oblige to maintain the immunization targets and coverage of its catchment area. *Posyandu* or integrated health post that is belonging to the community is nationally recognized as the place where the immunization is usually delivered by the midwives. Though the services were well organized, there were disparities on access to immunization services, related to socio-economic and urban-rural condition [4]. Hence, Unicef stated that there still millions of children have not yet protected by immunizable diseases [5].

The national coverage of basic completed immunization in 2007 was low (46.2%) with a wide gap of 73.9% (Bali) and 17.3% (West Sulawesi) provinces, though there was some increase to become 52.8% [6]. It is fair to say that, the target of Universal Child Immunization or UCI has not been achieved in 2010. Prejudicial circumstances have been developed as whether there is pocket of the problems, or a matter of size of the area which is very large? Yet, there has no more specific information on how and why does this happened?

Genders as a construct of socio-cultural differentiate roles of male and female on the daily life. Gender's roles are productive – reproductive – social manner; meanwhile, the basic-female roles are menstruation, giving birth, breast feeding and menopause. Child caring as well as immunization seeking behavior is a domestic role of which not only belongs to mother or woman, but also men [7]. Culturally in Indonesia, this role is upmost belongs to mothers, so that genders disparity could become a great contributor to the unsuccessful business of immunization's target achievement.

In Indonesia, where culture is strongly related in any activities of live, the role of parents is important towards child health. It is very rarely can we see a father would have come to bring his child to the

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health post "*posyandu*". Men have dominant in public role, and women in the domestic role such as cooking, washing, taking care of children, etc. Ann Oakley who opposed the Feminist radical libertarian theory said that motherhood biologist is a myth; She supported the concept of where a child need only an adult who can taking care of. In addition, the cultural construct a mother is considered abnormal when she can't run her role as a biological mother, or when the role of mother replaced by the father [8].

Based on that reason, a study related to parent's seeking behavior to immunization services is conducted to understand the root of the problems. Gender, cultural and geographical perspective became the focus of this study to understand the utilization and constraint of the services. In addition, information related to services' provider or *Puskesmas* was complement to consider the adjustment of policy recommendation after study.

Methods and Materials

Design of the study is a qualitative, implementing Rapid Assessment Procedure through Focus Group Discussions of mothers or fathers of the under-five year old children. The purpose of the FGDs was to find out the information related immunization's seeking behavior directly from the beneficiary of the community.

The study area was selected purposively based upon the criteria remoteness (District of Pandeglang, Banten Province), isles (Belitung District of Bangka-Belitung Province), and country border (edge of Malaysia, Nunukan District, East Kalimantan). Two health centers were selected purposively in each district to further find out the outreach community in delivering the vaccination program. The criteria for the health centers to be selected was the cut-off point of Universal Child Immunization coverage defined greater or equal to 90% as better (≥ 90%), and less than 90% (<90%) as lower.

In depth interview technic was used to gather the information from the key information that is the immunization's man or program's manager. This interview was done intensely in the purpose of validation as well as triangulation information. In depth interview was also conducted to the head of the health center in order to understand the implementation of the immunization programs from the provider's point of view.

Study informants were either mother or father of children who were immunized at the last month of immunization's activity. There were a group of mother and another group of father in each health center that were flock at *Posyandus* in each study areas. So, the total of six FGDs groups all together in this study. Other criteria was also implemented for the group discussion namely immunization category (complete and incompleteness of immunization status) of children. Finally, data analysis was conducted through matrix and content analysis.

The study protocol was reviewed and approved by the Ethical Commission, National Institute of Health Research and Development, Ministry of Health Republic of Indonesia. Administrative permit to undertake the study was obtained from the Ministry of Internal Affairs and authority of each district under study. Inform consent was obtained from participant prior to the interviews.

Results

General description of the study areas

District of Belitung composed of about 15 isles. The health centers (HC) that have been selected in this district located in two separated isle that is Membalong HC at the Belitung isle and Selat Nasik HC at the Selat Nasik isle. The two *Posyandus* at the Membalong HC located in differ isle of Belitung and Seliuk; meanwhile the other two *Posyandus* of Selat Nasik HC located at Selat Nasik.

The country border area of this study located at Sebatik isle of Nunukan District. This isle belongs to Indonesia, but city of Tawau Sarawak region, is the country border of Malaysia only six miles in distance by ocean. Sebatik community has a unique characteristic that is migration from Java, Sulawesi and Nusa Tenggara. They communicate in mixed languages Bahasa and Malay as well as mixed currency of Indonesian Rupiah and Malaysian Ringgit. Most of the food and logistics available in the market come illegally from Malaysia which cost cheaper compare to the district capital of Nunukan. This study was located at Setabu and Aji Kuning health centers, where the each of the *Posyandus* located nearby.

For the remote area criteria, Pandeglang District located at the west part island of Java. Although the location is still in land with Jakarta, the capital of the country, the condition, infrastructure and health facility was far behind, even compared to the other two study areas. The health center in this location called Mandalawangi, located at the hilly area, and Patia, located in between two rivers.

The geographic characteristic of the study areas were totally difference, but, the general infrastructure was relatively similar. Electricity was still unstable in remote area, somehow not available in the isle area.

In Belitung, the main public tansportation is boat, but it is not as a commuter line instead, mainly for private business. Culturally, neighbourhood and mankind was very closed related, the in-need will always adjust their departure to the boat owner's time. At the border country of Nunukan which co-incidently located in an isle called Pulau Sebatik, type of public transportation is rental vehicle. Rental were mainly used to accommodate the job seekers who are coming overland; but in case of needed the community could just catch them up with relatively expensive cost of Rp. 10,000 for the closest distance. Considering quite exspensive costs of the public transportation, most of the time people are on foot or riding motorcycle for transportation. The physical geography of Pandeglang as a remote district were totally different. The contour of Mandalawangi is hilly with a sharp broken road, and Patia is like a triangle delta in between two rivers which frequently flooding during the rainy season. The broken road was either holes of a big stone leading to the center of the village.

Vaccine mobilization differs among the area under study. At the Belitung District, vaccines were well managed; it was dropped by the District's Health Office to the health center. During the vaccination, vaccines were carried directly by the midwive or the other health worker using vaccine carrier filled with proper ice boxes. Since there has been a good relationship among the health workers and the boat's owner, there were almost no problems related to vaccine's quality in the field. On the contrary, at Nunukan district, the health centers have to pick the vaccines up. Unfortunately, the time schedule has hardly been fixed due to the problems of delayed vaccine procurement. In the district of Pandeglang, the health center is hardly to be accessed and the vaccines management even worse. The wavy road, no public transportation, problem of electricity and improper use of generator, made some of the vaccines kept in the fridge of the midwive's private house. Thus, some children were immunized at the midwive's private practised, though they have to pay. They considered that it cost cheaper to pay for the midwive than to pay for the 'ojek' or rental motorcycle for the free vaccination services.

Gender perspective

Gender in this study refers to socially constructed roles, behaviours, activities and attributes that a given society considers appropriate for men and women. Sex refers to the biological and physiological characteristics that define men and women, boys and girls. The role of gender and sex disparities in immunization coverage has been subject to much debate in recent years with terminology often used interchangeably.

In Indonesia, immunization seeking behavior is gender's related issues. As Patriarchy custom and traditional pattern of child caring is under the responsibility of mother, conversely to father as an income generator. The community participation in child's immunization was mother's task. The role of father was only driving the mother and children to the *Posyandu* or health center for those who live quite in distance. In the case of mother unable to bring the child, for example she got sick; father would rather to delayed his child's immunization until the month later, due to ashamed feeling. The father's group informan insisted that immunization is mother's task, it is not the father's.

Informan's education amongs the study area was relatively low. Most of the subjects' education was basic or primary schooling. Knowledge related to immunization among the area of the study was relatively the same, as quoted below:

"..vaccination is to get immunizable... for children...to prevent diseases; to cure morbili" (Fathers, Mandalawangi)

"...for a child to get healthy...immunizable...and as antibiotics for children to prevent diseases" (mothers, Mandalawangi)

Mothers knew better about types of the vaccines

"Polio…BCG…DPT..Hepatitis..Morbili.." (mothers, Mandalawangi).

The mean of tradition and culture are very important to maintain the health state of children. Some tradition, believes and taboos have negative impacts though it is not directly to children. Mothers would only be given boiled or baked food without seasoning during the puerperium period by the reason to get better soon. Mothers are prohibited to eat coral fish for the breast-feeding not to become stinky, not to eat egg for the baby would have a good skin. In addition, mothers neither drink too much nor eat tamarind to prevent getting a big breast or uncomfort stomach.

Geographical perspective

Geographical aspects related to immunization were gathered in order to understand the constraints and opportunity of the community access for vaccination. All of the health centers in Indonesia provided vaccination for free. Sometimes, small contribution were collected in Belitung, to provide extra feeding for attending children, but it was not existed in Mandalawangi.

" vaccination is free of charge... indeed, not any contribution is needed. Yet, even it is given free, not all children are coming for it because mother don't want the child get fever after...imagine...should mother have to pay... ". (FGD mothers, Mandalawangi)

Free service was not guarantee the child attending the vaccination. Problems happened when the un-immunized target are those who are at a high risk and living in hardly achieveable areas. Nonetheless, the health worker's stationed in the village would bring positively benefit impact to the community. In Belitung, every village has a midwife; when the children were not attending the vaccination services, the midwife escorted by cadre would come along the child's house to do vaccination. Quite differ to Belitung, in Sebatik, especially during the rainy season due to the swampy and slipery road, mother would rather do not immunize their children. Meanwhile in Pandeglang, the utilization of the immunization was not so successfull due to the doubt of the side-effect after the injection. Ref...

" ..occasionally the vaccines were delayed to be transported due to the high wave " (fathers, Belitung)

"..some of the inhabitant in Seliuk isle are the job seekers... they come over the harvesting season, and they gone after.., so that the children were lost to followed up" (Head of health center, Belitung)

Cultural and tradition were the enabling factors influence the community behavior in seeking the immunization services; in this study it is represented by ethnic characteristic. Ethnic of *Melayu* as a majority either in Belitung or Nunukan brings along their opened type tradition in the community. The encouragements of the older, other or grandma have a great impact for mothers to immunized their children; such as to remind mother to follow the immunization scheduled. In conversely, the *Sunda-Banten's* community at the remote area, discourage their grand children to be immunized for the reason that the child might caught fever after (read: side effect). Hence, the grandma would say their story that kid's mother never given immunization in the past, but was kept healthy.

Discussion

Geographical characteristic of the area under study was totally different, but in general, problems and infrastructures faced by the community health center were relatively the same. Access to health centers was constrained by the unavailability of the public transportation. Vaccine has to be carried by the midwive and transported to the immunisation venue or *Posyandu* at the date of the vaccination. Unfortunately, for the isles areas this become a problem as the climate hardly be predictable. As a result, the immunisation is plausible to be delayed or uncompleted. Small isle of Gesik at Selat Nasik in Belitung has to have a special intervention as this area hardly be reached when there is wind and strong current. Electricity is another constraints that should be able to be intervened. Similarly to the Selat Nasik that has no electricity, Patia as the remote has unstable one. Irregular on-off electricity may destruct the vaccine quality, especially the health center located in the broken read and quite far from the village center.

Geographical variability in access of care and immunization is relate to cultural and socio-economic perspective. In the developed countries and golbal community, several key cultural perspectives on vaccination stem from 1) individual right and public health isssues; 2) religion stand points and vaccine objections; 3) suspicion and mistrust of vaccines [9].

Electricity was the main problem to keep the vaccine quality. The on-off condition during the day almost happened in all study location. Hence, there is a village in a hard area of a small isle without electricity and could not be covered during the high wave, raining or a strong wind. Technically, the Ministry of Health has provided electric-generator, unfortunately, the operational was constrained by the fuel prices, distance, as well as the road condition. Miss-opportunity of vaccination is highly related to geographical constraint. In addition, socio-economic inequalities was similarly associated with vaccine coverage as showed by study in Brazil ; migrants from non-urban areas and children from low income families were at risk for delayed their immunization to Some studies [10]. A systematic review in India

showed the rich-poor gaps were widely significantly inequal towards the immunization completneness. Infants with low literacy mothers and insufficient empowerment of women had lower access to immunization [11].

Child caring supposed to be the responsibility of both father and mother. Women theoretically has a reproductive function, but in terms of child caring, the function should not be automatic [7]. This study found, there was gender's disparity in child's immunization seeking behavior. Fathers as the head of the households felt ashamed to bring the child into the *Posyandu* was really irrelevant. The health state of the children should become the responsibility of the parents, not only mother. The role of father only to get money to live is not enough and bias by culture [8]. Study in Rural Nigerian children showed, parents were objection or disagreement to immunize their children with regard to immunization safety. Distance and queeing at the health care facility were among other the common reasons for immunization incompleteness [12]. Ashamed feeling of father in this study to bring the child's to the immunization venue was unreasonable, but more about ego-centric. This could challenge the health workers in order to achieve the target of Universal Child Immunization. In addition, the impact of not immunizing could bring a wider effect such as unwanted disease outbreak. It is not a matter of routinity, but, most importantly is the child protection of preventable diseases.

The presence of inequality was not only bias by gender either mother as child's taker or father as a job's seekers. As was found in our study, fathers have ashamed feeling to bring the child to the immunization venue traditionally is unusual. This looks very common in Asian countries, as shown by a study in India that genders, religions and cast potentially have negative implication for children health care [13]. Better strategies in targetting the basic needs and improving demand of the community could increase the immunization coverage. On other reference said that Improvements in vaccination coverage may be obtained through father's and communitie's involvement in vaccination initiatives. The transformative power of men's involvement through innovative programming can help to address power inequalities resulting from gender biased [14].

Generally, knowledge is basically depending upon one's education. The higher the education of people, the easier they understood of the term or meaning of immunization. Low mother's education was leading to the limitation of the understanding of meaning and function of immunization. Though mother can told more type of vaccination it was merely like a 'song'; easy to remember, but mean nothing. Some studies have showed that there was direct influence of education towards utilization of health care facilities [15]. In addition, level of education, occupation, income and expenditure as well as mother's participation on social organization were influenced mothers' behavior to seeking immunization for their children. A study in Ethiopia showed, literate mothers were 2.8 times had significantly completed their child's immunization. In addition, children in urban area were three times more likely to have completed immunization status [16]. On the other hand, study in Arabia showed that although parents had a good knowledge and attitude in some aspects of immunization, gaps in less education and rural residents are still existing [17].

The side-effect of immunization such as fever was the main enabling factor mothers were not utilizing the immunization services. Hence, discourage from the older member of the family to do not immunize the child were still existing. According to McCarty and Maine, Most of the time a myth brings about a negative impact and against health aspects [18]. There should be lesson learned for the community to slowly change the disadvantages traditions/believes and taboos into benefitted health believe model. This issue supposed to be given big attention by the local health providers, health workers and other stake holders, such as community leaders, religion's leader. Socialization of information and explanation still need to be well disseminated through the utilization of available channeling, such as radios and other media, or through the mosque leaders. Most importantly would be how to provoke the communities in changing healthy life style to be demanding on vaccination. As a result, the prevention will not only prevent their own children but the general population. Rumors that mixed up the community awareness in accordance with the black campaign of using lard for the vaccine, or, Jewish conspiracy associated with international Zionism should be clarified [19].

Our findings were consistent with a study in Thailand mentioning that the older's generation has a strong-reinforcing factor towards mother's behavior for child's immunization [20]. Influence from others such as cadres, midwives, community leaders and hence neighbors were strongly evidence in this study area. At the remote area, the immunization week, which implemented in every six months was usually announced by the village principle through the loud-speaker.

Conclusion

Gender's inequality existed in immunization seeking behaviors for children in three difference geographic criterias of remote, isles and border's of Indonesian country. However, geography perspective has no difference effect as each criterias has similar problem alike electricity, transportation as well as wind and current in the isles. The policy implication of these findings were leading to the gender's issue. Empowering father in seeking health and immunization for his children is important to enhance demand for healthy child. In addition, power to prevent vaccine safety should be provided in the remote areas using solar type of generator.

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