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Factors Associated to Infant Vaccination in Madurese, Indonesia

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ABSTRACT

In Madura, a lot of infants have incomplete immunization status in which one of the areas with low immunization coverage is Burneh sub-district. The coverage of complete basic immunization in Burneh only 64% in 2015. The aim of this study was to analyze factors related to vaccination in Madurese, using cross sectional design. The sample were 97 mothers with babies 0-1 years old in Burneh sub-district. Data were collected using questionnaires, then analyzed using Chi square test. The results showed the correlation between knowledge (p = 0.027), confidence (p = 0.000), attitude (p = 0.003), culture (p = 0.000), access to health care (p = 0.013), family support (p = 0.034), and support of health professionals (p = 0.021) with the basic immunization status. Meanwhile, the support of community leaders (p = 0.054) had no correlation with the basic immunization status.

***Keywords**: Culture, Family support, Immunization, Knowledge, Madurese, Confidence, Attitude, Access to health care*

INTRODUCTION

Immunization is an induction of immunity in infants and children to protect them from various diseases so that they grow up healthy[(1)]. In Madura, many infants did not receive complete basic immunization which was proved by the high cases of diphtheria in Bangkalan, Madura. According to the Regent of Bangkalan, there are three villages in sub-districts of Blega, Tanah Merah and Burneh defined as areas with extraordinary occurrence of diphtheria[(2)]. Head of Public Health Office of Bangkalan explained that according to data compiled by Madura Terkini, the infant mortality rate has risen in 2015 as many as 154 cases. This number is greater than in 2014 with 112 cases[(2)].

According to preliminary study conducted by researchers on March 2016 at the Public Health Office of Bangkalan, the total infant in the Public Health Center (PHC) of Burneh region was 980, while the number of infants who have received complete basic immunization only 627. So there is only 64% infants in Burneh who were completely immunized.

Basic immunization rate in Burneh district from 2012 to 2015 has been uncertainly up and down. In 2012, the coverage of basic immunization was 60.8%. This rate declined into 58.4% in 2013. However, in 2014, the coverage increased to 68.2% which then recurrently declined to 64% in 2015.

Madura is well-known as a society which strictly upholds the cultural norms. Madurese people still believe in the statement or doctrine of the ancestors from antiquity. The people also believe in assumption that the healthy children without any disease should not be brought to health care service to get injection or other treatments. Local health professionals has been actually conducting basic counseling about immunization to mothers who have babies in Burneh district, but somehow the the immunization coverage is still below the target of 100%. Many factors affect the low coverage of immunization in infants. Based on the theory of Green (1991), the behavior of an individual as well as society is affected by three factors: predisposing factor, enabling factor, and reinforcing factor[(3)].

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Based on the problems above, the authors was interested to analyze factors related to basic immunization status of infants in Madurese people.

MATERIALS AND METHOD

The population of this cross sectional were mothers with infants aged 0-1 year old in Burneh. Sample size were 97 people selected using cluster sampling. The study was conducted on July 2016. The independent variables were knowledge, beliefs, attitudes, values and norms (culture), access to health services, family support, health professionals support, and community leaders support, while dependent variable was basic immunization status. Data collected using questionnaire, then the categorical data were presented in the form of frequency table[4] and analyzed using Chi square test.

FINDINGS

Table 1 provides a summary of the results of the correlation analysis between knowledge, beliefs, attitudes, values and norms (culture), access to health services, family support, health professionals support, and community leaders support with basic immunization status.

Table 1. The 8 independent variables and basic immunization status as dependent variable

Independent variables	p-value	Interpretation
Knowledge	0.027	Significant
Belief	0.000	Significant
Attitude	0.003	Significant
Culture	0.000	Significant
Access to health service	0.013	Significant
Family support	0.034	Significant
Health professionals support	0.021	Significant
Community leaders support	0.054	Not significant

Based on the results of hypothesis testing (Table 1) it could be interpreted that there were 7 independent variables that correlate with basic immunization status namely knowledge, beliefs, attitudes, culture, access to health services, family support and health professionals support.

DISCUSSION

According to Green (1991) the behavior of an individual or society about health is determined by the level of knowledge in which the person have. Higher knowledge of mother about the health of the infant, especially for the provision of basic immunization, will influence the mother to visit the place of immunization service[3].

Other studies have explained that knowledge of mothers about immunization is also influenced by the level of education and occupation. Rizani et al (2009) stated that education is a very important factor in determining the behavior of mother because a mother with higher education will affect the knowledge of his family's health in which a lot of information is acquired in school. On the contrary, the mothers who did not working will have more time to gather with their children[5]. Mother's knowledge on the children's health is mostly still at level knowing and has not reached the level of understanding, applying, analyzing, synthesizing and evaluating the materials related to immunization[6]. Furthermore, a person who has fair economic and earnings will likely have a good education and knowledge. However, the study that has been done showed that there are nine women who have a good knowledge about immunization but is not practicing immunization for their infants. According to some respondents, they will understand the benefits of immunization as well, but because of busy work and the obligation of taking care the other children they did not carry their infants to the immunization services.

According to WHO the belief is often obtained from parents or grandparents. A person receives his/her belief based on trust and without evidence[7].

Education level of individual related to the level of understanding and perceptions about health and illness[7]. Someone who is highly educated will better understand and believe when their body is not going well and looking for a modern health service immediately to prevent the occurrence of disease, for example, by immunization. In addition, the number of children also will indirectly affect the mother's belief to immunization. Further, good experience and perceived benefits of immunization from previous child will certainly influence to mother's belief to basic immunization in which this belief will support the mothers to immunize their infants.

However, number of children and mothers' job in domestic work make mothers do not have enough time to bring their babies to the immunization service although the views and belief upon support good benefit from basic immunization in infants support the mother to do it. From this study, there were 25 mothers who have unsupportive belief to the immunization but still provide basic immunizations to their infant. According to Ali (2000) in Rini (2009), observation or information obtained from education, may make changes upon behavior which evolve the occurance of new behavior. All activities performed by mothers in implementing basic immunization to their infant are the results of knowledge and information from their education[8].

Attitude is a form of evaluation or feeling reactions. Attitudes towards an object can be in the form of supportive and unsupportive feeling about an object. Positive attitude can be predisposing factor which causes the mother to bring her infant to be immunized[3].

Based on research by Rizani et al (2009) which stated that people's attitude and behavior is the ability, experience and education[5]. Age and education level illustrate the maturity of an individual to behave and respond to the environment that can affect knowledge, attitude and practice especially in health behavior. Mother's experience with the perceived benefits from previous children also have positive influence to their attitude and will promote mother's behavior to bring their children to health care service in order to receive basic immunization. Furthermore, Rizani et al (2009) stated that mothers' occupation, either who work or does not work, also has relationship with their attitude towards immunization[5]. Working mothers are likely to be more informed of the disease and the benefits of immunization so they will be likely more motivated to immunize their infants.

However, this study showed that there were some women who had negative attitudes about immunization but has been completed immunization for their infants. According Notoatmodjo (2007), an attitude is not automatically realized in an action (over behavior) because to change attitude into habit needs supporting factor or a condition that make it possible, such as facilities and support of other parties[7].

Culture can be regarded as living habits in a community. Interview results by researchers showed that some societies have supportive culture upon immunization, but in practical, they did not bring their infants to the immunization services. It can be caused by the schedule in which they have to work from morning to afternoon and can not bring their infants to PHC. In some cases, the parents tended to spend their money for other daily needs rather than accomodation for immunization.

According to Lawrence Green, the reason for not carrying their children to be immunized is the lack of information about the benefits of immunization or the distance between home and immunization center which is too far[3].

This results correspond with the research of Widiastuti et al (2008) which stated that there was a significant relationship between access to health care services and the basic immunization in infants. The relationship between both variables is also influenced by occupation, income, and number of children[9]. Risnawati (2012) stated that access to health care services for getting immunization is not depend on the family income, because the immunization coverage has been covered by the government both for its budget and the accessible service by the immunization service center[10].

This study found several mothers who have access to health care service with incomplete immunization status in their infants. This phenomenon is exist because these mothers have less education and information about immunization.

According to Feiring and Lewis (1984) in Yasin

(2014), good family support is influenced by several demographic factors including: maturity in relation with mothers' age, mothers' education level and occupation[11]. The knowledge about basic immunization benefits will increase along with the maturity in which the mothers can explain to the family about those benefits so that their support for immunization will be better. The mothers who have higher education are more aware about the importance of completing basic immunization, so that they will obtain support to carry their infants to the health care service. However, the results of this study showed that there were nine mothers who receive good support from their families but the status of basic immunization were incomplete. It was caused by the mother's myriad work and responsibility to care other family members as well as children so that they can not bring their infants to health care service regardless the support.

Based on the theory of Green, the health behavior can also be determined by the availability of facilities, attitudes and behavior of health professionals which will support and strengthen the behavior development[3].

According to the most respondents, support, friendliness, and information obtained from local health professionals are very valuable and have positive impact for them. In several times, health professional along with health caders visited homes for medical examination, particularly the administration of basic immunization in infants and children. So that the mothers who work or who are busy taking care of her family will be stay informed about basic immunizations and can immunize her infant during visitation of the health professional. Although the support of health professional has been sufficient in PHC of Burneh, but there were several mothers who still refused to immunize their infant due to their low education about immunization as well as their business and occupation which makes the mothers did not have any time to provide immunization for their infants.

According Notoatmodjo (2010), Indonesian people is a paternalistic society which usually refers to the behavior of leaders, both formal and informal. The leader is a person who has influence, be honored, and well respected in the society such as public figure and religious leader in which their existence will influence the society[6]. Mostly people actully understand about the benefits of immunization, then the facility is also provided such as PHC and health care service for immunization, but they still hesitate to give immunization to their children because the leaders or public figure also does not join the immunization program for their children.

Based on Green (1991), community and religious leaders become reinforcing factor for the behavior development of an individual or a community. Therefore, the community and religious leaders have crucial role in providing support to people's view and healthy behavior for the surrounding community[3].

CONCLUSION

Based on the results, it can be concluded that knowledge, beliefs, attitudes, culture, access to health services, family support and health professional support were related factors with basic immunization status in infants.

ADDITIONAL INFORMATION

There is no **Conflict of Interest** related to this research.

All **Funds** of this research taken from researchers.

This study already has **Ethical Approval.**

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