Effect of Age, Occupation, and Income of Mother toward Measles-Rubella (MR) Immunization in Medan City

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ABSTRACT

Measles-rubella (MR) disease can have a devastating effect on the health of Indonesian children, and is a disease that cannot be treated. MR immunization coverage in Medan City only reaches 52.57 percent of the national target of 95 percent, this shows that the target MR immunization coverage in Medan City has not yet been achieved. Mothers have a role in their child's immunization needs and mother's participation greatly determines the success of child immunization coverage, especially MR immunization. The purpose of this study was to analyze the effect of age, occupation, and income of mother toward measles-rubella (MR) immunization in Medan City. This type of research is quantitative with cross sectional design. The population is all mothers who have children aged 9 months to 5 years who live in the working area of the Sukaramai community health center (Puskesmas) and Matsum City. The number of samples was determined by the Slovin formula as many as 109 mothers and the samples were determined by proportional sampling. Collecting data through distributing questionnaires. Data were analyzed using multivariate analysis of multiple logistic regression forms at the 95 percent significance limit. The results showed that age, occupation, and income of mother toward MR immunization in Medan for children aged 9 months to 5 years in Medan City with each pvalue<0.05. It is recommended that mothers who have children under five try to increase participation in immunization, especially MR. For health services to further improve the socialization of MR immunization, MR disease to the public.

INTRODUCTION

Health is one of the elements of welfare that must be realized according to the ideals of the Indonesian people. Anything that causes health problems to the people of Indonesia will cause losses to the state, and every effort to increase the public's health status means investment in development. The Indonesian state has guaranteed its citizens to be given immunizations through the provisions of Law (UU) number 36 of 2009 concerning health and Regulation of the Minister of Health of the Republic of Indonesia number 12 of 2017 concerning the implementation of immunization which aims to prevent the occurrence of infectious diseases such as measles-rubella (MR).

Measles-rubella (MR) disease can have a devastating effect on the health of Indonesian children, and is a disease that cannot be treated. Treatment given to sufferers is only supportive. However, both of these diseases can be prevented through immunization (Direktorat Jenderal Pencegahan dan Pengendalian Penyakit Kementerian Kesehatan, 2017). Immunization can reduce the death rate from measles and rubella virus infection. In 2000, more than 562,000 children per year died worldwide due to complications from rubella measles. Through various efforts, one of which is the provision of measles immunization, deaths from this disease have

decreased to 115,000 per year in 2014 (Kementerian Kesehatan, 2018). The rubella immunization program has been shown to contribute to the prevention of rubella outbreaks in China (Chang et al., 2015).

The spread of rubella measles in Indonesia from 2010 to 2015, an estimated 23,164 cases of measles and 30,463 cases of rubella. It is estimated that the number of cases is still lower than the actual number in the field, considering that there are still many cases that are not reported, especially from private health services and the completeness of surveillance reports is still low. North Sumatra is one of the 18 provinces that experienced an increase in cases in the last three years, namely between 0-250 cases (Pusat Data dan Informasi Kementerian Kesehatan, 2018).

The results of the research stated that the coverage of National MR immunization phases 1 and 2 reached 87.80 percent of the target of 95 percent. Yogyakarta Special Region Province is in the top position for advanced measles immunization coverage, in this case MR immunization, while North Sumatra Province is in the bottom three, which is less than 40 percent (Kementerian Kesehatan, 2018). According to the report on the results of the implementation of the MR catch-up campaign for the Medan City Health Office in 2018, MR immunization coverage in Medan City only reached 52.57 percent of the national target, namely 95 percent, this shows that the target MR immunization coverage in Medan City has not yet been achieved. still said to be low and far from expectations. When viewed from 39 community health centers (Puskesmas) in Medan City, Puskesmas Glugur Kota is the only Puskesmas in Medan City where MR immunization coverage has almost reached the target of 92.03 percent, followed by Puskesmas Medan Sunggal 82.78 percent, Lalang Village Health Center 82.73 percent, the rest results from MR immunization coverage between 30 to 80 percent, while the two health centers with coverage below 20 percent, namely Puskesmas Kota Matsum only 18.60 percent, and Puskesmas Sukaramai which only reached 16.94 percent.

Shrivastava et al. (2017) suggest that what determines the success of MR vaccination in India is the active participation of stakeholders, including parents, community leaders, teachers and health workers. Logullo et al. (2008) in his research in Brazil said that the factors that influence are socio-economic characteristics and opinions, feelings, knowledge about vaccines, and communication channels.

Mothers have a role in the immunization needs of their children, mother characteristics (age, occupation and income) are the most important things in making choices. This is reinforced by the research of Prabandari et al. (2018) which states that factors related to maternal acceptance of MR immunization are age, education, work status, knowledge, perceived vulnerability, perceived severity, perceived benefits, perceived barriers, family support and environmental support in Sukoharjo Regency. The higher the education, the better in determining the place for health services, and vice versa with low education, it does not pay attention to the health service center, especially in immunizing the baby properly. Similar to Yuliani research (2019), there is a relationship between age, education, and maternal income with MR immunization coverage at Keradenan Puskesmas, Bogor Regency.

The mother's perceived need for the importance of MR immunization in preventing a disease will make the mother participate in the implementation of these activities. This is in line with Puspitasari research (2015) in Bantul Regency that the factors of mother's age, mother's education, mother's working status, distance to posyandu, level of knowledge, and the needs felt by mothers are factors that greatly influence maternal participation.

The purpose of this study was to analyze the effect of age, occupation, and

income of mother toward measles-rubella (MR) immunization in Medan City.

RESEARCH METHODS

This type of research is quantitative with cross sectional design. The cross sectional approach is a study conducted by observing or observing data at once. This means that research subjects are observed only once and measurements are made of the character status or subject variables at the time of examination (Notoatmodjo, 2010).

The population is all mothers who have children aged 9 months to 5 years who live in the working area of the Sukaramai community health center (Puskesmas) and Matsum City. The number of samples was determined by the Slovin formula as many as 109 mothers and the samples were determined by proportional sampling. Collecting data through distributing questionnaires.

Data were analyzed using multivariate analysis of multiple logistic regression forms at the 95 percent significance limit.

RESULT

Multivariate Analysis

Multivariate analysis in this study uses multiple logistic regression tests, which is a mathematical model approach to analyze the effect of several independent variables on the dichotomous or binary categorical dependent variable. The variables included in the logistic regression prediction model were those that had a p value<0.25 in their bivariate analysis. Based on the bivariate analysis, it is known that the independent variables (age, occupation, and income) all have a p value<0.25.

Based on Table 1, the results showed that age, occupation, and income of mother toward MR immunization in Medan for children aged 9 months to 5 years in Medan City with each p value<0.05.

The age variable obtained the regression coefficient value (B)=1.842; p=0.001 with the value of Exp (B)=6.309.

This means that mothers with late adulthood, aged 36-45 years, have a chance of 6.309 times greater participation in giving MR immunization to children aged 9 months to 5 years in Medan City compared to mothers with early adulthood, namely 17-35 years old.

The occupation variable obtained the regression coefficient value (B)=1.371; p=0.018 with the value of Exp (B)=3.938. This means that mothers who work, are 3.938 times more likely to participate in giving MR immunization to children aged 9 months to 5 years in Medandas compared to mothers who do not work.

The income variable obtained the regression coefficient value (B)=1.160; p value=0.037 and the value of the exp (B) =3.191. This means that mothers with an income >UMR, which is above or equal to Rp2,969,824,- are likely to be 3.191 times more likely to participate in giving MR immunization to children aged 9 months to 5 years in Medan City compared to mothers with income <UMR which is below or the same with Rp2,969,824,-.

Table 1. Effect of Age, Occupation, and Income of Mother toward Measles-Rubella (MR) Immunization Children Aged 9 Months to 5 Years in Medan City

Variabel	B	Wald	df	Sig.	Exp (B)
Age	1.842	10.358	1	0.001	6.309
Occupation	1.371	5.556	1	0.018	3.938
Income	1.160	4.333	1	0.037	3.191
Constant	-2.582	13.203	1	0.000	0.076

CONCLUSION AND SUGGESTION

The results showed that age, occupation, and income of mother toward MR immunization in Medan for children aged 9 months to 5 years in Medan City with each p value<0.05.

It is recommended that mothers who have children under five try to increase participation in immunization, especially MR. For health services to further improve the socialization of MR immunization, MR disease to the public.

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