



Original Research Article

Poverty and society health status in East Nusa Tenggara-Indonesia

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East Nusa Tenggara is a province in the Republic of Indonesia which was classified as the fourth poorest province according to the Indonesian statistics bureau in 2017. As the poorest province, there are various inequalities and social problems that arise, one of which is the health conditions of the people living below the poverty line. Poverty is seen as an economic inability to meet the basic food and non-food needs, including the fulfillment of healthy living and nutrition intake in the family. Analyzing the state of poverty and public health status in East Nusa Tenggara 2012-2017; in 2012 poverty rate in East Nusa Tenggara was 20.40%, in 2013 it was 20.24%, in 2014 it was 22.61%, in 2015 it was 22.58%, in 2016 it was 22.01%, and in 2017 it was 21.85%. Within the same period, the proportion of the poor to the population at the National level, in 2012 was 11.66%, in 2013 it was 11.47%, in 2014 it was 10.59%, in 2015 it was 11.13%, in 2016 it was 10.76%, and in 2017 it was 10.76%. Poverty affects the low health and nutrition statuses of the community, extending to Life Expectancy Age and Human Development Index (HDI). In 2017, the average Life Expectancy Age population of East Nusa Tenggara was 66.07 years old (compared to the national value 71.06 years), and HDI was 63.73 (compared to the national value of 70.81), and it ranked 32nd out of 34 provinces in Indonesia. Poverty affects the ability to meet basic needs of life, health status, nutrition intake for infant and toddler growth, consequently leading to low quality of life and competitiveness in the various available opportunities in the future.

Key words: Poverty, health status, nutrition status, stunting, society health

INTRODUCTION

Poverty is a complex, multifaceted issue and seemingly perpetuates from time to time. Formulas for significantly handling the issue are yet to be found, nevertheless poverty handling measures have been undertaken purportedly by Nurmayanti (2013). Poverty is deemed as an economic disability in fulfilling basic food and non-food needs which are measured from the side of expenditure. In per capita expenditure, the Central Bureau of Statistics in Indonesia has set the poverty line through the World Bank category, with the lowest expenditure of USD 2 Dollars per day or IDR 25,000 (average exchange rate of USD to IDR for 2012-2017 amounting to USD 1 = IDR 12,500). Per capita

expenditure of USD 2 per day is an accumulation of the average expenditure to obtain food and non-food needs for a day (CBS, 2018). A population with per capita expenditure below the poverty line is categorized as poor; while the food poverty line is calculated from the minimum value of nutrition in the daily food and drink taken to get 2100 kcal per capita. Figure 1 shows the development of the percentage of poverty in East Nusa Tenggara in 2012-2017.

From the figure, the ratio of poor people in East Nusa Tenggara province tends to show gradual increase from the period of 2012-2017. Indonesian statistics of East Nusa Tenggara Province reports that the proportion of poor people in the years 2012, 2013, 2014, 2015, 2016, and 2017

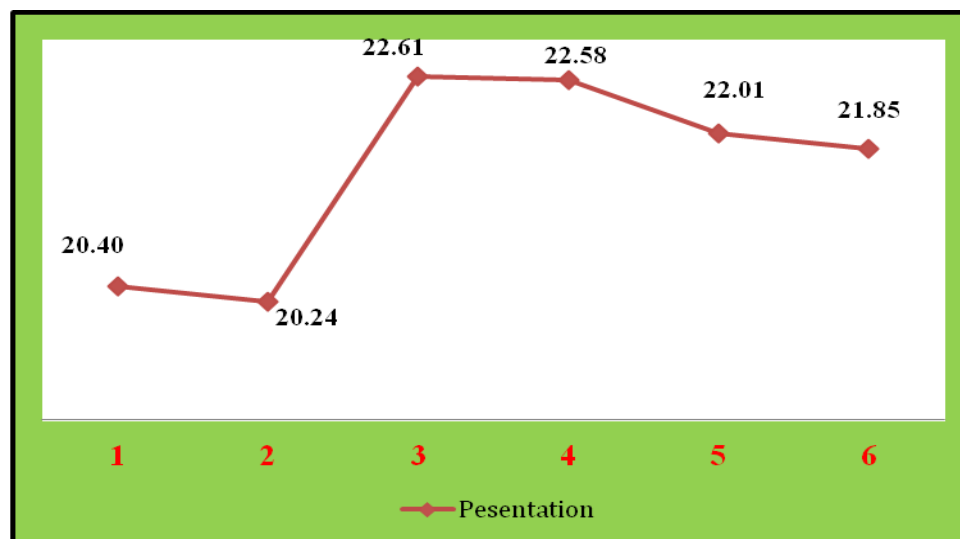


Figure 1: Development of the percentage of poverty in East Nusa Tenggara Province in 2012-2017

Legend: 1=2012; 2=2013; 3=2014; 4=2015; 5=2016; 6=2017

Source: Analysis Result

are 20.40, 20.24, 22.61, 22.58, 22.01, and 21.85%, respectively. In that same period, the national ratio of poor people is given as 11.66, 11.47, 10.59, 11.13, 10.76, and 10.11%, respectively (CBS, 2018).

Ferguson et al. (2017) highlighted the fact that, the life of the poor people has further implication on the individual and/or family lifetime (Ferguson et al., 2017). As highlighted by Sen Gupta et al. (2007), a study from Canada shows the correlation between poverty and infancy readiness to attend formal education. When the children were given the opportunity to attend the available education, it was found that children from poor family showed lower ability in language apprehension, communication skills, and cooperation between children compared to the children from rich and prosperous families.

Poor people are susceptible to various infectious and degenerative diseases. As shown in the infantile health research in Canada, the health degree of children from poor family is significantly lower compared to children from rich and prosperous families (Nurazizah, 2016). In order to improve the societal health degree, the Indonesian government has regulated the policy of free medical care through *Kartu Indonesia Sehat* (Indonesia Health Card) albeit the additional free, such as exempted medical coverage of the Indonesian Bureau of Social Health Insurance (*Badan Penyelenggara Jaminan Sosial Kesehatan di Indonesia*), transportation fee, waiting fee, all of which are still liable to the poor people. Similar conditions are happening in the society of East Nusa Tenggara.

This study aims to explore the poverty profile with the poverty depth and severity index experienced by the people in East Nusa Tenggara between 2012-2017. The deeper and

severe poverty of the community has an impact on the low purchasing power to meet basic needs, including obtaining modern health services.

The results of this study can be used as reference material by; (1) researchers who will explore in more details the causes of poverty in East Nusa Tenggara; (2) policy makers at the provincial, district / city government level to improve the level of community welfare including the strengthening of health service facilities and infrastructure for improving the level of community health in East Nusa Tenggara today and in the future.

ABBREVIATIONS

Germas: Gerakan Meningkatkan Masyarakat Hidup sehat (Movement to Improve the Community's Healthy Life)

BPS : Biro Pusat Statistik (Central Bureau of Statistics)

HDI: Human Development Index

IDR: Indonesian Rupiah

USD : United State Dollar

Bidik Misi: The Name of the Indonesian Government's policy in the field of education to provide educational scholarships to children of the poor.

MATERIALS AND METHODS

A retrospective quantitative research method was used in processing and analyzing the secondary data which is the poverty development in East Nusa Tenggara from 2012 until 2017, published by the Central Bureau of Statistics of East Nusa Tenggara and combined with health profile data

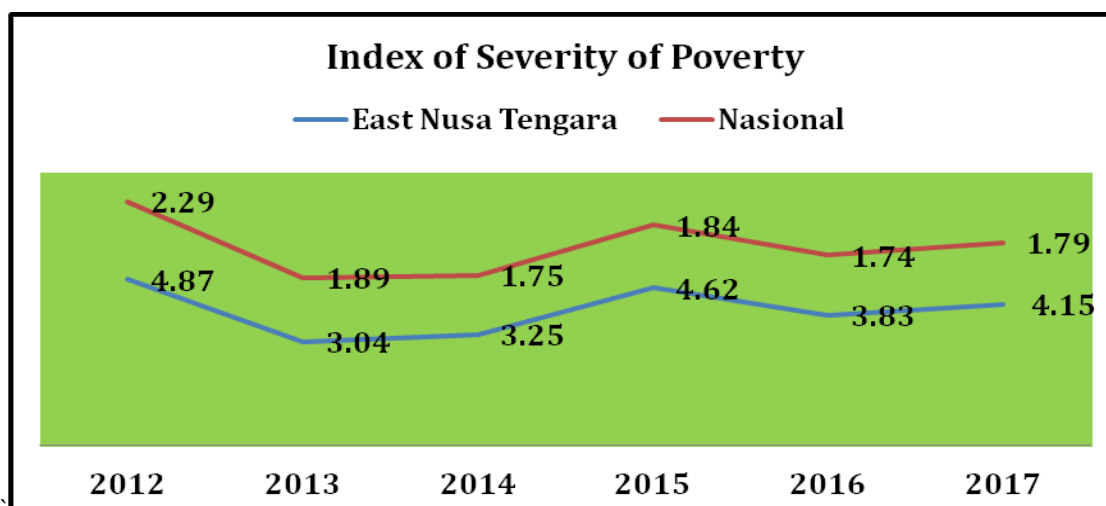


Figure 2: The development of P1 in East Nusa Tenggara Province 2012-2017

Source: Data Analysis of BPS 2012-2017

of 2012 until 2017 which are published by the Health Department of East Nusa Tenggara Province (HO, 2017).

In the literature of quantitative review (quantitative systematic literature review or meta-analysis) the following steps were taken by Hunter and Schmidt (1990): (1) formulation of the problem, namely the poverty map in the province of East Nusa Tenggara, the impact on the degree of public health; (2) Search for literature: data and information about poverty were traced from the publications of the Central Nusa Tenggara Statistics Agency from 2012 to 2017. While the degree of public health was traced from the publications of the Ministry of Health of the Republic of Indonesia from 2012-2017, and other researches related to poverty and public health (Sen Gupta et al. 2007; Nurazizah, 2016); (3) evaluation of data; sorting out quantitative data relevant to poverty and public health. Data here refers to; (1) per capita income; (2) percentage of poor people compared to residents; (3) depth index of poverty; (4) poverty gap index; (5) public health indicators in the form of epidemiological patrons, morbidity, mortality, life expectancy, malnutrition rates, and other relevant data; and (4) Analysis and interpretation: poverty data and community health status were displayed and supported by relevant theories and previous research conducted to interpret the correlation between poverty and the degree of public health in the province of East Nusa Tenggara from 2012-2017.

RESULTS

The Central Bureau of Statistics of East Nusa Tenggara reported the population in East Nusa Tenggara in 2017 to be 5,120,061, with a population growth rate of 1.71% per year. Apart from the high population growth rate, there was

high poverty rate undermining the lives of the people. Also in another report in 2016, the per capita income of East Nusa Tenggara population based on the current price in 2015 averaged IDR 14.928.040 or 0.33% of the national average per capita income of IDR. 45.180.960, which is a veryLow income per capita in East Nusa Tenggara associated with the high proportion of poor population (Chandra, 2017). The poor in East Nusa Tenggara numbered 1,118.620 people or 21.85% of the total population of East Nusa Tenggara. The contribution of the poor in East Nusa Tenggara to the national poverty population in 2017 amounted to 4.35% (the number of poor Indonesians was 25.704.800). The lives of the poor entered into the depths of the valley and the deprivation of poverty was measured by the depth and severity index of poverty.

Poverty Gap Index (P1) is an average expenditure gap measurement of each person in the poverty line. Higher index of P1 shows further expenditure average of the people in the poverty line, and Poverty Severity Index (P2) describes the rate of spreading of the expenditure of the people in the poverty line. Higher P2 index shows higher expense gap between the poor. Consider the figure for P1 and P2 below.

The data presented in Figure 2 clearly shows the P1 comparison between the population of East Nusa Tenggara and the national population in the period from 2012-2017. It can be seen that the Poverty Gap Index of the population of East Nusa Tenggara is seemingly higher than that of Indonesia. This means that the average expenditure of poor people in East Nusa Tenggara is further distant from that of the poor, as shown in the poverty line; whereas, the national average expenditure of the poor shows a lower rate compared to that of East Nusa Tenggara. In other words, the average expenditure of the poor in East Nusa

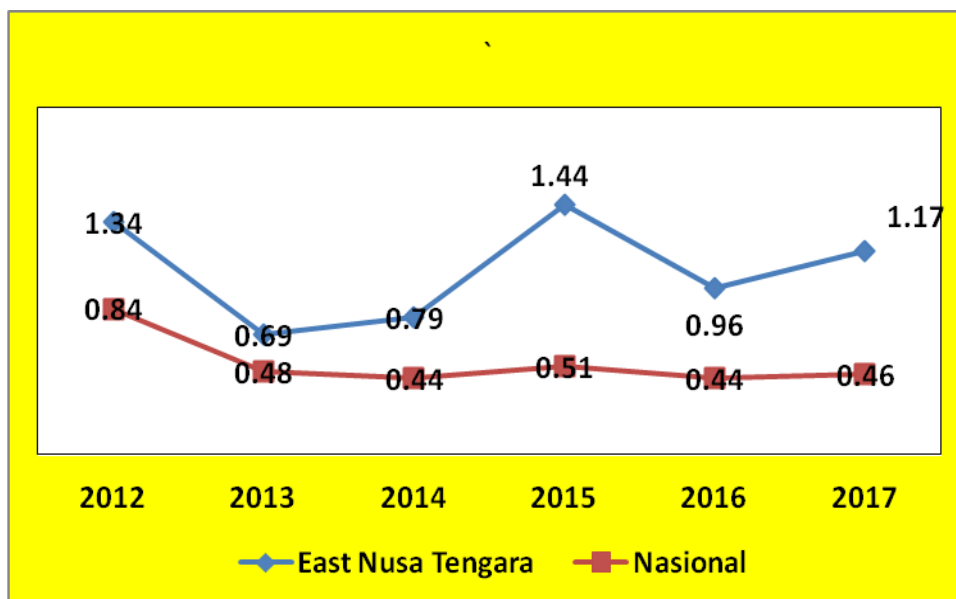


Figure 3: The development of P2 in East Nusa Tenggara Province 2012-2017
 Source: Data Analysis of BPS 2012-2017

Tenggara is significantly inferior to that of the national population of the poor. In Figure 1, the Poverty Gap Index in East Nusa Tenggara in 2012 is 4.87 (compared to a national rate of 2.29), in 2013 it is 3.04 (compared to a national rate of 1.89), in 2014 it is 3.25 (compared to a national rate of 1.75), in 2015 it is 4.62 (compared to a national rate of 1.84), in 2016 it is 3.83 (national rate as 1.74), and in 2017 it is 4.15 (compared to a national rate of 1.79). Poverty Severity Index (P2) in East Nusa Tenggara in the period from 2012-2016 is described in Figure 3 below.

Figure 3 shows the Poverty Severity Index (P2) regarding the spreading expenditure between the poor in East Nusa Tenggara compared to that of the national poor population from 2016 until 2017. Poverty Severity Index shows the comparison result of expenditure gap in the poverty line subtracted from the average expenditure of people below the poverty line and divided by the total population below the poverty line.

This result shows that the gap of the expenditure between the poor in East Nusa Tenggara is higher compared to that of the national poor population from 2012 until 2017. P2 in East Nusa Tenggara from 2012, 2013, 2014, 2015, 2016, and 2017 are as follows 1.34 (0.84 nationally), 0.69 (0.48 nationally), 0.79 (0.44 nationally), 1.44 (0.51 nationally), 0.96 (0.44 nationally), and 1.17 (0.46 nationally), respectively.

DISCUSSION

Poverty influences the demand of healthcare and adequate education system. The average monthly expenditure per capita is 612,500 IDR with the composition of educational

need of 28,787 IDR (4.70%) and healthcare need of 46,918 IDR (7.66%) per capita monthly. One may compare the need of goods and services of 88,200 IDR (14.40%), cultural ritual needs of 35,709 IDR (5.83%), and other needs of 412,886 IDR (67.41%) per capita monthly (HO, 2017).

Low proportion of expenditure per capita in healthcare implies low health degree of the society in East Nusa Tenggara Province. This is shown in the 2015 epidemiological patron breakdown of most disease cases in the society as follows: upper respiratory infection (55.05%), muscular tissue system (10.83%), myalgia (6.95%), skin-related disease (5.33%), arthritis rheumatoid (4.98%), infectious skin disease (4.67%), diarrhea (3.58%), other upper respiratory infection (3.46%), unknown cause of fever (2.98%), and other infectious diseases (2.18%). In birth assistance, out of the 132,856 births recorded, 87,783 (68%) were assisted by health workers and 45,073 births (32%) were assisted by shamans (MHI, 2017a).

In addition, poverty influences the society purchasing power in fulfilling nutritious food needs in the family. Malnutrition rate in 2015 and 2016, which are measures based on weight divided by age on children in East Nusa Tenggara ranging from 0-23 months and 0-59 months, are appalling. From babies of 0-23 months, 5% suffer from poor nutrition, 13.90% suffer from under nutrition, 79.90% experience good nutrition, and 1.20% experience exceptional nutrition. In 2016, similar status of nutrition of babies is shown with 7% suffering from poor nutrition, 18.60% under nutrition, 73.50% good nutrition, and 0.90% exceptional nutrition. The nutrition indicator calculated by the height divided by age is shown as follows: in 2015, the height of children in 0-23 months shows that 13.30% are very short, 18.30% are short, 67.40% are normal, whereas

in 2016, this percentage is shown as 13.30, 18.80, and 67.90%, respectively. The data of the height of babies from 0-59 months shows that 18.30% are very short, 23.90% are short, and 58.80% are normal, whereas in 2016 this value is shown as 15, 23.70, and 61.30%, respectively (MHI, 2017a)..

The nutrition condition shown by the height/age indicator, if continued until productive age, will deprive the people of opportunities in the workforce in the marketplace which requires a minimum height. The impact of more extensive malnutrition, especially on toddlers are: (1) the hindrance of height and mental growth of children; (2) susceptibility to upper respiratory diseases, diarrhea which occurs often; and (3) causing death if handled without intensive care (Rezy, 2017).

The last termination of life is death. The infancy death rate growth in 2014 is 13.50/1000 births, in 2015 is 14/1000 births, and in 2016 is 11/1000 births. Maternal death rate growth in 2014 is 185.60/100,000 births, in 2015 is 169/100,000 births, and in 2016 is 178/100,000 births (HOE,2017);Chandra (2017). The tendency of the current cause of death and potential future cause are the development of non-infectious disease with the changing lifestyle (inadequate nutrition diet, less physical activities, stress, alcohol addiction, smoking, etc).

The result of the low society health degree is shown by live expectancy and human development index. In 2017, average life expectancy in East Nusa Tenggara is 66.07 years (compared to a national life expectancy of 71.06 years), and Human Development Index is 63.73 (compared to a national HDI of 70.81), which places East Nusa Tenggara in the 32nd place of the 34 provinces in Indonesia (CBS, 2018).

Developmental Measures

The poverty rate can be addressed through the Budget Statements which are articulated by the Indonesian president in plenary of Indonesian House of Representatives on August 16th 2016 regarding poverty eradication measures in Indonesia, which are system development and strengthening of basic service, improvement of *Bidik Misi* program effectiveness, social assistance management, also further programs such as the expansion of social security members, citizenship data integration, expansion of conditioned cash assistance through Hopeful Family Program, food assistance, continuance of energy and fertilizer subsidy, social assistance outside the family system, and other social security measure to diminish the poverty rate (MHI, 2017b); (MRTE, 2017).

Health development measures in 2017 are emphasized to: (1) actualize the program of *Gerakan Masyarakat Sehat* (Healthy Society Movement). Healthy Community Movement is a strategic program from the Ministry of Health in Indonesia to increase clean and healthy life behavior from infancy to advanced age (MHRI, 2016); (2) family approach as the pillar of health development; (3)

health budget measures; (4) the implementation of health minimum service standard; (5) the development of healthy village houses; (6) the synergy in developing Food and Medicine Supervision by *Badan Pengawasan Obat dan Makanan* (The Food and Drug Supervisory Agency is an Indonesian government bureau assigned to oversee the distribution of food and medicines throughout Indonesia); (7) the synergy in planned family service in health facilities; and (8) national health security in health service improvement (MHI, 2017b).

Health development measures have shifted the paradigm which beforehand are curative and rehabilitative, and are now headed to promoting and ensuring preventive health measures. The implementation is strengthened by three pillars of health development: healthy paradigm, strengthening of healthcare service and national health security. In the first pillar, the paradigm is implemented through: (1) family approach where activities are undertaken by the health workers, especially in the level of Community Health Center and (2) Healthy Living Society Movement where the activities are not restricted to health workers, but also cross-sectors. The implementation of *GERMAS* is focused on three activities: (1) physical activities; (2) vegetables and fruit consumption; and (3) continuous health check. The undertaking of *GERMAS* must be done by all society, cross-ministry, and cross-sectors between central and regional governments, private sectors, business sectors, civil organizations, also society in general, to contribute together in creating healthier Indonesian society (MHI, 2017b). Hopeful Family Programme (*Program Keluarga Harapan*) contributes to assistance provision such as cash for poor family as the reward for their participation in pioneering in health and education sector (SMRI, 2017). A rather enormous work has been undertaken to increase the guidelines, standards, and training material in handling malnutrition, facilitating breast milk, and also improving micro nutrition substance programs (Rezy, 2017).

Acceleration of stunting prevalence lowering measures are prioritized on stunting handling interventions, which are integrated alongside with *GERMAS*, which supply clean water and sanitation, provide exclusive breast milk, and socializing regarding healthy nutrition consumption. In addition, field health workers such as planned family cadre and Community Health Center workers are provided to give sensitization and education to the society relating to healthy live behavior (Indriyani, 2017).

CONCLUSION

Poverty stultified the society of East Nusa Tenggara Province until date, which translates to lower ability in fulfilling basic life needs in family, consequently leading to low health degree and infant nutrition food consumption. Malnutrition results in low life quality and competitiveness in various provided opportunities. Societal life quality improvement measures in East Nusa Tenggara begins from the family by emphasizing on poverty eradication, health

degree improvement, and nutritional recovery to attain adequate life quality to be able to compete in the current millennium.

Limitations research

This study contains weaknesses because the data and information are further processed based on the publication of Central Bureau of Statistics of East Nusa Tenggara Province, Health Profile of East Nusa Tenggara, Basic Health Research. The validity and accuracy of the research results assumed that the data collection method is really in accordance with the scientific method stages. However, the only nationally recognized data publication institution is the National Bureau of Statistics and the National Health Profile. Thus the analysis and conclusions of this study have a reliable degree of scientific belief.

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Availability of data and materials

Data currently does not have a dedicated subject repository and therefore will not be shared.

Ethics approval and consent to participate

Not applicable

Consent for publication

Not applicable

Conflict of Interests

All authors have no conflict of interest with anyone in the study. We are responsible for that.

Competing of interests

The author and co-authors declare that they require the publication of this article in the Scopus index journal to qualify for an academic upgrading in accordance with the provisions of the research-technology ministry, and higher education in Indonesia.

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