

# Open Defecation and Poverty in Palembang City

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**Abstract.** Open defecation is an act of people defecating in fields, forests, bushes, rivers, beaches, or other open areas and allowing them to spread to contaminate the environment. Poverty is a factor causing the high percentage of open defecation. This study aims to describe open defecation and poverty in the city of Palembang. This research method uses a descriptive approach using secondary data sourced from the Palembang City Health Office and the Central Statistics Agency for 2020–2021. The results of the analysis show that open defecation in 2020 is 41.12%. In 2021, open defecation will increase to 42.9%, or as many as 46 urban villages from 107 urban villages. Meanwhile, poverty in 2020 was 10.9%, increasing to 11.34% in 2021. The high percentage of open defecation is due to the fact that there are still many slum areas and pockets of poverty in Palembang City.

**Keyword:** Open Defecation, Poverty, Palembang City

## 1. Introduction

A high level of health must be supported by good health and sanitation facilities. However, the development of the sanitation sector in Indonesia repeatedly faces obstacles due to the lack of community income. The low income of the community contributes to the low public awareness of the development of the health sector. The low income of the community encourages them to prioritize basic needs, while the need to build health facilities is seen as less important [1].

Open defecation is an act of defecating in fields, forests, bushes, rivers, beaches, or other open areas and allowing it to spread to contaminate the environment [2]. Open defecation is one of the various environmental pollution problems that need to be prioritized. Environmental pollution, one of which is environmental management itself, does not meet healthy requirements, such as latrine management, so that it can affect human health. A clean and healthy environment is an environment that is coveted by humans and can be beneficial for improving healthy living. Poverty has a relationship with the ownership of proper sanitation and causes of open defecation. According to WHO, proper sanitation means a latrine that has a sewage system and does not pollute the environment. In general, the poor do not have access to basic sanitation, or in other words, defecate in the open or in rivers and drainage channels [3].

The large number of built sanitation facilities that are not used or even damaged due to the inability of the community to maintain them should be a concern for the government so that the government begins to think about the importance of the sustainability of a program with an approach that is truly targeted and provides significant changes, especially in changing

open defecation behavior. Based on the problems above, the aim of this research is to research the development of open defecation and poverty in the city of Palembang.

## 2. Method

This research was conducted using the descriptive method. Descriptive research aims to explain, summarize various conditions and various situations under study. The descriptive analysis method in this study was carried out to find out the general description of the development of open defecation and poverty in the city of Palembang and its surroundings in the period 2020 to 2021, and to describe phenomena related to the problems being studied.

Open poverty data is secondary data obtained from the Central Statistics Agency. The open defecation data is secondary data obtained from the Palembang City Health Office. Data analysis is presented in the form of descriptive statistics with percentage and average tables.

## 3. Result and Discussion

Palembang City, as one of the cities in Indonesia, is the capital of South Sumatra Province. It is also the second largest city on Sumatra Island after Medan City. In 2019, Palembang City, with an area of 400.61 km<sup>2</sup>, was inhabited by more than 1.66 million people. The development of open defecation that occurred in Palembang City in 2020–2021 showed an increase, which can be seen in table 1.

**Table 1.** The Percentage of Open Defecation in Palembang City

Sanitation Access	2020		2021	
	Number of Village	Percentage	Number of Village	Percentage
Open Defecation	44	41,12%	46	42,99%
Open Defecation Free	63	58,88%	61	57,01%

Source: Health Office of Palembang City, 2022

Open defecation in 2020 is 41.12%, or occurs in 44 urban villages. In 2021, open defecation will increase to 42.99%, or occur in 46 urban villages out of 107 urban villages in Palembang City.

The high percentage of open defecation in Palembang is due to the fact that there are still many slum areas and pockets of poverty, one of which is Kelurahan 7 Ulu Palembang, which has 25 families who do not use healthy latrines. The individual act of defecating in the river, contributed against river pollution [4]. The things that underlie people who do not have latrines are low socio-economic conditions, limited land, and attitudes that lead to people's living habits of always throwing their waste anywhere [5]. Conditions like this generally occur in rural communities, slum areas, and where there is a lack of clean water sources [6]. The large number of built sanitation facilities that are not used or even damaged due to the inability of the community to maintain them should be a concern for the government so that the government begins to think about the importance of the sustainability of a program with an approach that is truly targeted and provides significant changes, especially in changing open defecation behavior.

Indirectly, community behavior regarding open defecation and latrine ownership is influenced by education level [7]. Open defecation, education, and poverty are highly correlated with each other. The percentage of households that perform open defecation tends to be made up of poor people with secondary education [8]. Low education has a greater risk of not having a latrine compared to higher education [9].

This condition generally occurs in rural communities and slum areas. Low incomes risk not having a latrine compared to high incomes. A person's economic status will also determine the availability of the necessary facilities for certain activities, so that this socioeconomic status will affect changes in behavior [10][11]. Economic factors are a measure of the level of welfare in a society. Because the economy is a determining indicator of community behavior in meeting daily needs, including the use of family latrines [12].

Meanwhile, the development of poverty, the average length of schooling, and the open unemployment rate in Palembang City in 2020–2021 can be seen in table 2.

**Table 2.** Data of Poverty, Open Unemployment Rate, Average Length of Schooling, GRDP Kap and Gini Ratio of Palembang City

Year	Poverty	Open Unemployment Rate	Average Length of Schooling	GRDP Kap	Gini Ratio
2020	10,89%	9,86%	10,53	62.293,38	0,35%
2021	11,34%	10,11%	10,75	63.612,21	0,35%

Source: BPS, 2022

Poverty in Palembang City has increased from 10.89% in 2020 to 11.34% in 2021. Likewise, the open unemployment rate has increased from 9.86% to 10.11%. The average length of schooling shows that the majority of the population of Palembang City has a junior high school education. Kap's GDP is expected to increase slightly to 63,612.21 and the Gini ratio remains at 0.35%.

One of the several characteristics of poverty is low education. Education as a determinant of poverty affects family per capita consumption and poverty significantly and positively [13]. Investment in human resources is important to increase competitiveness [14] and education is the basis for poverty alleviation and economic growth [15]. Education is a bridge to the future of a nation because education involves character development and the defense of one's identity in a nation. A person is required to have the highest education in order to get a job. Having a high education will get you a high salary in order to meet the needs of life [16]. On the other hand, research in India shows that education does not play an important role in poverty because many poor Indians are increasingly gaining access to education but are still and are likely to be in a disadvantaged socio-economic position [17].

Another reason for the relatively high level of poverty is the high open unemployment rate. Unemployment will have the effect of reducing people's income, and it will reduce the level of prosperity that has been achieved [18]. The lower the level of prosperity will lead to poverty [19]. The movement of poverty follows unemployment, meaning that when the unemployment rate increases, the poverty rate automatically increases [20]. One of the factors causing poverty in poor households is the lack of job opportunities or unemployment, and the lack of willingness to work [21].

In addition to unemployment, income levels and per capita income are elements that determine the prosperity of a society. Community income reaches its maximum if the condition of the full use of labor can be realized [22]. Per capita income is obtained from income in a certain year divided by the total population of a country in that year. If the

community has a high income or salary, then the community can meet its needs and save for future costs. If the income of the community decreases, it will be difficult for the community to meet its daily needs.

The condition of the people who are called poor can be known based on the ability of income to meet living standards because per capita income has a negative and significant effect on poverty [22][23]. Based on this condition, a community is called poor if it has a much lower income than the average income, so that it does not have many opportunities to prosper itself [24].

Poverty is also closely related to income inequality [25]. Income inequality is an important factor in understanding the severity of poverty and its impact on poverty alleviation policies [26]. One way to measure income inequality is the Gini Ratio, or Gini Coefficient. The Gini ratio is based on the Lorenz curve, which is a cumulative expenditure curve that compares the distribution of a certain variable (e.g., income) with a uniform distribution that represents the cumulative percentage of the population.

People's demand for environmental quality is significantly affected by income distribution. Greater income equality results in lower levels of environmental degradation. The higher the income gap, the worse the environmental degradation [27]. When income inequality is high, the poor tend to overexploit natural resources because they see it as their last resort to survive.

#### 4. Conclusion

The development of open defecation and poverty in Palembang City in 2020–2021 can be concluded as follows, namely that the development of open defecation has increased from 41.12% to 42.99%. Meanwhile, the incidence of poverty also increased from 10.89% to 11.34%. The behavior of the community towards defecating is the most important part of environmental sanitation because if it is carried out without fulfilling the sanitation requirements, it will cause pollution of soil, air, and sources of clean water supply. It is suggested that further research can examine the relationship between open defecation and poverty.

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