

CHAPTER 1

INTRODUCTION

1.1. Background

The current COVID-19 global pandemic was declared a pandemic by the World Health Organization (WHO) on March 11 of the year 2020 (WHO, 2020). One book defines pandemics as large-scale outbreaks of infectious diseases that can greatly increase morbidity and mortality over a wide geographic area and cause significant economic, social, and political disruption (Madhav et al, 2017). The same book also suggests that the likelihood of pandemics happening has increased over the past century due to increased global travel and integration, urbanization, changes in land use, and greater exploitation of the natural environment.

On the event of a pandemic, the ripple effect of its impact can be further divided into several categories, including health impacts, economic impacts, and social and political impacts. The direct health impact of pandemics can be catastrophic. For instance, the Black Death led to the death of 30-50 percent of the European population (DeWitte et al, 2014). More recently, according to the WHO Global Health Observatory data, the HIV/AIDS pandemic has killed more than 35 million people since 1981 (Madhav et al, 2017). Beyond the direct impact of a pandemic itself, the indirect impacts of a pandemic often become a problem themselves. As the efforts of overcoming the pandemic become increasingly more intense, resources allocated for this effort must be taken from somewhere else. This may lead to a decrease in routine, yet important, care and services, potentially leading to the rise of routinely dealt

with problems. During the 2014 West Africa Ebola epidemic, the lack of routine care for Malaria, HIV/AIDS, and tuberculosis led to an estimated 10,600 additional deaths in Guinea, Liberia, and Sierra Leone (Parpia et al, 2016). Another study suggests that there was a statistically significant increase in deaths due to acute myocardial infarction and stroke during the 2009 influenza pandemic (Rubinson, 2013).

According to a study done regarding the financial impacts of previous SARS outbreaks, pandemics can cause acute, short-term fiscal shocks as well as longer-term damage to economic growth (Achon et al, 2005). The early-phase public health efforts to limit the outbreak such as tracing contacts, implementing quarantines, and other actions creates a significant cost and weighs heavily in human resources. As the number of infections grows, so does the need for facilities and consumables such as medical supplies, personal protective equipment, and drugs (Herstein et al, 2016). The World Bank in 2014 stated that the amount of tax revenues and government income are reduced as response costs surged, economic activity slowed, and quarantines and curfews were put in place (World Bank, 2014). Furthermore, the World Bank also stated that relative to the indirect damage to economic activity and growth, the direct fiscal impact of pandemics generally is small. Labour force reductions due to sickness and mortality as well as fear of becoming ill affects the economic growth negatively (World Bank, n.d). A chain reaction then happens leading to the closure of places of employment, disruption of transportation, and the reduction of trade both nationally and internationally. When countries around the world experience these economic effects simultaneously, the World Bank economic simulations suggests that this could

reduce the world Gross Domestic Product (GDP) by roughly 5 percent, according to Burns and other in 2006 (Burns et al, 2006).

In response to preparing and mitigating the effects of pandemics, many efforts and response interventions are put into place. These efforts often require the close coordination between the government, public, and private sectors (Madhav et al, 2017). An example of such effort would be the widespread closure of schools across a country. Another example would be the management of quarantines, which requires every part of the community to be a part of; starting from the individual level, up to the government level, and involving every sector between them. Production of precautionary measures such as vaccine development as a means to reduce the spread of the disease also requires close coordination between the government and vaccine producers (Madhav et al, 2017).

In the past, vaccines have proved to be a successful method of preventing the spread of diseases that eventually lead to the eradication of smallpox and polio (WHO, n.d). Although vaccines have been used to provide protection against numerous diseases since its first discovery in 1796, vaccine acceptance rates have varied throughout the years; particularly during the current COVID-19 vaccines. A study done throughout 2020 and 2021 in 23 countries showed that by June of 2021, 75.2% of the study's respondents have received their first dose of vaccines. This was an improvement compared to data of June 2020, where 71.5% of the respondents agreed to receive the vaccine once it becomes available and is proven to be safe (Lazarus et al, 2022). A study done in the United States studied the relationship that sociodemographic factors have towards vaccine acceptance. Of all the

sociodemographic factors that were studied, age, ethnicity, and education significantly influenced COVID-19 vaccine acceptance (Mondal et al, 2021). Another study done in Oslo also indicates that age, lower education, and lower household income were prone to vaccine hesitancy (Steinmetz, 2022). However, a multi-country cross-sectional study exploring sociodemographic factors and vaccine acceptance in 17 countries found that sociodemographic factors played a lesser role in vaccine acceptance compared to other factors such as knowledge regarding the COVID-19 vaccines (de Figueiredo et al., 2017).

Indonesia as a diverse island nation consists of cultures and customs that are very different from one another. The Indonesian archipelago consists of 16,771 islands as of 2020 (KKP, n.d), consisting of 34 provinces, hundreds of cities and towns, each with their own regional language and way of life. The Indonesia ministry of education listed a total of 718 regional language (Kemendikbud, n.d) spread over 300 distinct tribes and ethnicities. Due to this great variety, the Indonesia population boasts a great amount of different social and demographical factors that must be taken into account when studying vaccine acceptance amongst the general population. Java being the most populated region of the country accounts for 151.6 million souls of the total 270.2 million living in Indonesia in the year 2020 (BPS, 2020), and amongst those 151.6 million living in Java, not every one of them are of equal standings in terms of age, education, living conditions, religious belief, health status, and economic conditions (BPS, 2020). This variety of sociodemographic factors is the reason that different groups in the population of Java has different opinions and approach regarding the COVID-19 vaccines.

Knowing well that the Indonesian general population is constantly exposed to various information regarding the vaccines from different sources that may or not be accountable, it is important to understand which factors contribute to their final decision whether to receive or not to receive the COVID-19 vaccines. One study done titled “COVID-19 vaccine acceptance and its socio-demographic and emotional determinants: a multi-country cross-sectional study” explores the impact of different sociodemographic factors and its impact on vaccine acceptance in 17 countries (de Figueiredo et al., 2017). The study showed that different sociodemographic factors in different countries produce a wide variety of vaccine acceptance, for instance, a higher education level in the US, France, Argentina, and Saudi Arabia is associated with a higher vaccine acceptance rate, whereas in the Democratic Republic of Congo, vaccine acceptance rate is higher in those with a lower education. Understanding which factors play a major role in the view of the adult population in Java towards the vaccines is important in order to understand the reasons of why some groups of Java’s general adult population choose to not receive the vaccine (de Figueiredo et al., 2017).

1.2. Research Questions

1. Do sociodemographic factors affect a person’s decision to receive the COVID-19 vaccine in Java?
2. What is the main factor that deters a person from receiving the COVID-19 vaccine?
3. What is the main source of information regarding the COVID-19 vaccine that the general adult population in Java receives from?

1.3. Aim of Research

1.3.1. General Aim

The general aim of this research is to understand the effects of sociodemographic factors and vaccine acceptance amongst the adult population in Java.

1.3.2. Specific Aim

1. To understand which sociodemographic factors, play a major role in affecting a person's decision to receive the COVID-19 vaccine in Java.
2. To understand the main factor that deters a person from receiving the COVID-19 vaccine.
3. To know the main source of COVID-19 vaccine information that the general adult population in Java uses.

1.4. Benefit of Research

1.4.1. Theoretical Benefit

Understanding which factors play a major role in vaccine acceptance will give insight to the government on how to improve education and awareness regarding the COVID-19 vaccine amongst different groups of the general adult population in Java.

1.4.2. Practical Benefit

Understanding which factors play a major role in vaccine acceptance may lead to different courses of action that may be taken in order to increase COVID-19 vaccine acceptance in the general adult population in Java.