

CHAPTER 1

INTRODUCTION

1.1 Background

The World Health Organization (WHO) reported that an estimated 1.3 billion people in the world smokes cigarettes (Bian et al., 2012). Smoking is a very dangerous habit for human and there are so many disadvantages in smoking. It has been proven that cigarette smoking leads to an increase number of mortality however statistically the numbers of people that smoke cigarette are increasing. The government of Indonesia has put in many efforts to increase the awareness of the risk of cigarette smoking as well as to reduce the number of people that smoke cigarette in Indonesia. The harmful effect of cigarette smoking in Indonesia has ultimately burden the economy of the government. One of the examples of the effort put in by the government in Indonesia is by regulating the law that compels every cigarette company to place a warning sign on top of the cigarette box.

There is an adequate amount of child smokers in Indonesia suggesting that cigarette smoking has already started even below the legal age. According to the data from ministry of health in Indonesia it has been shown that there is an increase number of smoker prevalence from 27% of people in Indonesia in 1995, increase to 36,3% people in 2013 (Depkes.go.id, 2018). Furthermore, smoking habit in high school and college student is increasing. According to the data from ministry of health in Indonesia young adults or teenage from age 16-22 the prevalence of smoker is three-fold increased from 7.1% in 1995 to 20.5% in 2014 (Depkes.go.id, 2018).

The substance responsible for cigarette addiction is nicotine, and nicotine is considered to be one of the most dangerous substances in cigarettes. Nicotine is believed to have a negative impact on the neural systems (Picciotto and Corrigan,

2018). Nicotine can also make people change their behavior due to addiction to cigarette smoking but that is just one of the examples on the negative effect on nicotine. Chronic obstructive pulmonary disease (COPD) is considered as a pulmonary and systemic inflammatory disease which is a subject of the hazardous effect of cigarettes smoking (Godtfredsen et al., 2018). Passive cigarette smoking can also directly lead to lung diseases, breast cancer, allergic dermatitis, lung cancer and other diseases (Cao et al., 2015).

Tobacco smoking, which comprises aerosol and gases, has thousands of chemical components including many well characterized toxins and carcinogens (How tobacco smoke causes disease, 2010). Assessment of toxic effects of cigarette smoke in the respiratory tract requires consideration of the complexity of the mixture inhaled and the possibility of synergistic interactions among its many components. These toxin and carcinogens substance can affect lung physiology and can decrease the lung performances. The most common effect to the lung is tissue destruction which represents imbalance between tissue injury and impairment of tissue repair (Rennard et al, 2006).

Ironically there are still some of medical students who are still smoking even though they know more about the consequences of smoking. These are the reasons why the researcher is interested to conduct a study about the profile of the lung test in smoker among medical student in Universitas Airlangga.

1.2 Research Question

1.2.1 How is the lung function test of the smoker among medical students in Universitas Airlangga?

1.3 Research Objective

1.3.1 General Objective

Obtain information of the lung function test in smoker among medical student in Universitas Airlangga.

1.3.2 Specific Objective

1. Giving a questionnaire to determine the inclusion criteria.
2. Measuring the Force expiratory volume, Force volume capacity and Forced Expiratory Flow 25-75%.

1.4 Research Benefit

1.4.1 Theoretical Benefits

The lung function test can inform the respondent about their lung condition so the respondent can aware of their health.

1.4.2 Practical Benefits

1. The result of this study can be used as a social campaign to increase the awareness of smoking and to decrease the number of students who smoke in Faculty of Medicine Universitas Airlangga.
2. Obtain scientific information about the result of lung physiologic test.
3. Obtain scientific information about the dangerous of smoking.