

UNIVERSITI TEKNOLOGI MARA

**URBAN AIR QUALITY AND THE
EFFECTS ON HUMAN HEALTH
IN URBAN REGION
CASE STUDY: SELANGOR STATE,
MALAYSIA**

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ABSTRACT

Various researchers have proven the connection between air quality and human health, especially in respiratory diseases. Yearly, Malaysian is suffering from haze due to trans-boundary pollution from Indonesia and local pollution sources. Urban regions are facing increasing pollution from vehicle emissions, industries and domestic heating sources at a level that exceeds the capacity to disperse and dilute emissions to non-harmful exposure levels. Often, this unfortunate incidence leads to the increase of unhealthy days. Nevertheless, for Selangor, several unhealthy days were recorded, especially during the dry period. Concern on the effects of air pollution rises because Ministry of Health Malaysia stated that diseases of the respiratory system are one of the principal causes of hospitalisation in 2011. However, there is a lack of study on the relationship between air quality and human health in urban regions, especially in Malaysia. Thus, this study aspired to find the relationship between air quality in the urban region of Selangor and human health with the focus on respiratory (air-borne) diseases. Air quality data for this study is obtained from Department of Environment Malaysia, based on the air pollution index of five continuous air quality monitoring stations in Selangor. While the health data were obtained by questionnaire survey and based on self-reported cases by respondents. The correlation test was made to seek the significance relationship between air quality and respiratory. The outcome of the study proves the significance relationship between air quality and respiratory health among respondents. Therefore, necessary suggestions were formulated to improve the air quality in the urban region thus improving the health condition in future.

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CHAPTER ONE

INTRODUCTION

This chapter provides the background and rationale for the study, aim and objectives, scope of research and research questions. Significance of the study and conceptual framework used to conduct the research and a definition of relevant terms were also highlighted in this chapter. It also gives an overview of the thesis structure.

1.1 BACKGROUND OF THE STUDY

The definition of health given by World Health Organization (1946), health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Equally important is environmental health, according to Cunningham, Cunningham and Saigo (2005), environmental health focuses on external factors that cause disease, including elements of the natural, social, cultural, and technological worlds in which human live in.

Factors which are important for the maintenance of a good quality of human life include clean air, a good supply of clean and wholesome water, light, especially sunlight, adequate space for living and recreation, a reasonably equable temperature without extreme changes, a plentiful supply of nutrients free from injurious contamination, access to reasonably quiet and peaceful surroundings in which to take rest, and a congenial relationship with those with whom we come into contact (Rowland & Cooper, 1983).

According to WHO (2016), the lower the levels of air pollution, the better the cardiovascular and respiratory health of the population will be, both long and short term. In referring to Malaysia, according to Malaysia Environmental Quality Report (DOE, 2004), the Department of Environment (DOE) monitors the country's ambient air quality through a network of 51 stations. These monitoring stations are strategically located in both residential and industrial areas to detect any significant change in the air quality which may be harmful to human health and the environment.