

UNIVERSITI TEKNOLOGI MARA



**COMPARING RESIDENTS PERCEIVED HEALTH STATUS IN
RELATION TO AIR POLLUTANT INDEX (API):
CASE STUDY FOR SHAH ALAM AND PUTRAJAYA**

NOR HAZLINA BINTI MOHAMMAD

MASTER OF SCIENCE (APPLIED STATISTICS)

FACULTY OF COMPUTER AND MATHEMATICAL SCIENCES

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Dissertation submitted in partial fulfillment of the requirements for the degree of

Master of Science (Applied Statistics)

Faculty of Computer and Mathematical Sciences

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Candidate's Declaration

I declare that the works in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as reference work. This project has not been submitted to any other academic institution or non-academic institution for any other degree or qualification.

In the event that my project be found violate the conditions mentioned above, I voluntarily waive the right of conferment of my degree and agree be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

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ABSTRACT

Most studies on air pollution are focused on forecasting Air Pollutant Index (API) and yet there seems to be no studies that conducted in Malaysia that is focused on Health-Related Quality of Life (HRQoL). This study has been conducted to investigate the HRQoL in two cities in Selangor, Shah Alam and Putrajaya with different air pollution index. The study utilised the SF36v2 questionnaire which elicits data on HRQoL domains measured using eight domains (Physical Functioning, Role-Physical, Bodily Pain, General Health, Vitality, Social Functioning, Role-Emotional and Mental Health). The initial study of this research was to determine air pollution trends between years 2000 to 2011. Then, this study not only compared the air pollutant index (API) but also it compared the HRQoL scores between the residents of the two cities. It thus investigated how air pollution affects the human health quality of life. A cross-sectional study was conducted and residents were selected using simple random sampling from Shah Alam and Putrajaya. The SF36v2 questionnaire with socio demographic information was distributed to the residents within four weeks. A total of 266 participated in the study, of which 133 samples per groups. Trend analysis was used to analyse Air Pollutant Index. On the other hand, descriptive analyses, independent samples t-test and MANOVA were used to analyse the HRQoL data. Results of the time series analysis on the air pollutant index shows that, the overall air quality in these cities was between good to moderate level, but it shows that there is some increase in Shah Alam and decrease in Putrajaya, over time. Meanwhile, based on HRQoL result analysis, residents in Shah Alam shows lower HRQoL than the residents in Putrajaya. Surprisingly, the quality of life of residents in both cities is lower than the general population norm for all domains.