LIVING BESIDE A HOSPITAL: ATTITUDE OF LOCAL RESIDENTS STAYING IN CLOSE PROXIMITY TO HOSPITALS

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BY

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A final year project submitted in partial fulfilment of the requirement of the degree of

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DECLARATION

I hereby declare that:

(1) This undergraduate FYP is the end result of my own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this FYP has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) The word count of this research report is 18,137.

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Date: 26 April 2022

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DEDICATION

This research paper is dedicated to Universiti Tunku Abdul Rahman (UTAR) for providing me with a platform to apply and showcase the knowledge that I have accumulated throughout my studies with UTAR.

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LIST OF ABBREVIATIONS

NIMBY	→	Not-in-my-Backyard
YIMBY	→	Yes-in-my-Backyard
LULU	→	Locally Unwanted Land Uses
PLS-SEM	→	Partial Least Squares – Structural Equation Modelling
HTMT	→	Heterotrait-Monotrait
AVE	→	Average Variance Extracted
SCT	→	Social Cognitive Theory

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PREFACE

This research project is conducted as a fulfilment of the requirement of the degree of Bachelor of Building and Property Management (HONS). The topic of "Living Beside a Hospital: Attitude of Local Residents Staying in Close Proximity to Hospitals" has been proposed. The independent variables that were identified as the factors influencing local attitude consist of COVID-19 perceptions, outcome expectations, self-efficacy, social influence and social environment. This study is beneficial to learners, researchers, private service providers, public authorities and institutions in terms of the understanding of local attitude towards semi-obnoxious facilities such as hospitals.

ABSTRACT

The primary objective of this research is to understand and assess the attitude of locals towards semi-obnoxious facilities that brings benefits and risks to locals simultaneously. Hence, this research identified the determinant factors influencing the attitude of locals on the siting of hospitals within residential neighbourhoods and identified the relationship between these factors and local attitude using the Social Cognitive Theory. The theory provides that human's behaviours are highly influenced by our presence of mind and anticipations or expectations of future occurrences. In order to achieve the objectives of this research, this research has been designed as a quantitative study, in which COVID-19 perceptions, outcome expectations, self-efficacy, social influence and social environment were identified as the factors influencing local attitude. Sample data were collected through a questionnaire that was distributed to Malaysians living near hospitals. In order to perform a thorough analysis of the collected data, the Partial Least Squares – Structural Equation Modelling (PLS-SEM) approach was implemented. Additionally, validity and reliability analysis procedures have also been performed including composite reliability, convergent validity and discriminant validity measures. Outer loadings, indicator reliability and Average Variance Extracted (AVE) were involved in examining convergent validity whereas the Heterotrait-monotrait (HTMT) ratio of correlations were applied for the discriminant validity analysis. Nonetheless, the path coefficient (T-values) and Coefficient of Determination (R^2 value) were also identified to assess the structural model results. In a nutshell, significant relationships between outcome expectations, self-efficacy as well as social influence and local attitude were observed. Procedural justice, as an element of social environment was also found to be positively related to local attitude. On the other hand, COVID-19 perceptions along with social trust and distributive justice, both as elements under social environment only portrayed insignificant relationships with local attitude.

Chapter 1: Research Overview

1.0 Introduction

This chapter provides an overview and explains the foundational background of the entire research. In order to achieve that objective, the research background, problem statement, research questions, and research objectives will be illustrated. Nonetheless, the significance of this research would be explained, and the layout of the subsequent chapters will be described.

1.1 Research Background

In this era of continuous improvements, including the advancement of living conditions in urban areas, people have greater demands and requirements for a high-quality habitat. This comes along with their awareness of the environmental factors including the surrounding developments. Nowadays, people tend to have an increased alertness of the proposed land uses of vacant lands surrounding their place of residence. This can be observed through the increased number of social conflicts that have arose due to the development of undesired facilities (Yu, Zhang, Huang, Shao, & Ren, 2021). Common terms or ideas in explaining the local response towards undesired facilities are Not-In-My-Backyard (NIMBY) and Locally Unwanted Land Uses (LULU). Protests have been organized as part of their effort to cease such developments. On the flip side, desired facilities that benefit local residents are highly desired, as the name suggests. Such facilities are typically known as Yes-In-My-Backyard (YIMBY) facilities. Other than that, there are also other variations like Not-in-my-Neighbourhood (NIMN), Not-against-my-business-or-industry (NAMBI), built-absolutely-nothing-anywhere-near-anything/anyone (BANANA), not-in-my-term-of-office (NIMTOO), not-on-planet-earth (NOPE), and citizen-against-virtually everything (CAVE) (Cairns, 2012; Schively, 2007, Maxwell, 2009). However, this research will primarily focus on NIMBY, LULU and YIMBY.

Brown and Glanz (2018) defined NIMBY and YIMBY as the negative and positive perception towards proposed developments. To further illustrate, NIMBY facilities are negatively perceived as they have the tendency to generate negative effects on nearby residents. According to Dear (1992), NIMBY can be explained as the protective behaviour of the local community against undesirable development projects in their neighbourhood. Moreover, LULU facilities are literally locally unwanted usage of lands in which local residents oppose them due to the potential negative financial, environmental and social consequences. The primary distinction between NIMBY and LULU is that LULU refers to the undesired facilities while NIMBY leans towards the locals' reaction towards such facilities (Martin, 2000). Schively (2007) provided that LULU is generally observed with land uses and specific facilities. Regardless, LULU is constantly mentioned alongside NIMBY as locals that are alert about LULU facilities will lead to NIMBY movements. Common examples of NIMBY / LULU facilities are cemeteries, sewage plants, oxidation ponds and so on. A real-life example of a NIMBY / LULU facility in Malaysia is the Lynas Advanced Material Plant (LAMP) rare earth processing plant located in Pahang, Malaysia. Locals perceive the LAMP facility to be harmful to the overall environment, to health and to the living conditions of the local people themselves (Jamaludin et al., 2020). Meanwhile, YIMBY facilities are highly desired facilities that have positive impacts as perceived by the surrounding residents. For instance, a school is a common example of a YIMBY facility.

However, facilities can also be categorized into semi-obnoxious facilities. Semi-obnoxious facilities are facilities in which the nearby residents have contradicting view towards them. It is tough for such facilities to be clearly distinguished into NIMBY / LULU facilities or YIMBY facilities. People demand for easy access to semi-obnoxious facilities but are not willing to reside in close proximity. Hospitals, fire stations, police stations, sports stadiums are common facilities perceived as semi-obnoxious facilities (Peng & Chiang, 2015). Understandably, one would love to have easy access to these facilities but would not be pleased to live right beside them due to the potential health and safety risks, negative traffic impacts, and noise. This is parallel to the research paper of Hui, Liang, & Yip (2018) which mentioned that residing in close proximity to a hospital (a semi-obnoxious facility) will result

in various inconveniences, including ambulance siren noise, traffic congestion, medical waste disposal risks, and high exposure to infectious diseases. Nonetheless, despite providing convenience to the locals in terms of medical treatment, traffic congestion and noise problems are inevitable in the vicinity of hospitals (Wang, 2018).

As mentioned above, living in close proximity to semi-obnoxious facilities comes with various negative consequences including noise, traffic congestion, as well as potential health and safety risks. This research will mainly emphasize on the potential risks of residing near a hospital, including health risks, safety risks and nuisance risks as this research is mainly triggered by the concern on the potential health risks of residing near a hospital, primarily due to the Coronavirus ("COVID-19") pandemic. This will be further explained in the subsequent sections of this chapter.

1.2 Problem Statement

Based on Coronavirus disease (COVID-19) (2021), COVID-19 is an infectious disease induced by the SARS-CoV-2 virus. Symptoms of the disease typically include fever, cough, tiredness, loss of taste or smell, and sore throat, and are also constantly evolving. Referring to Cascella et al. (2021), COVID-19 was initially discovered in Wuhan, Hubei Province, China and was declared by the World Health Organization as a global pandemic on March 11, 2020. It has reported a whopping 247,472,724 confirmed cases as of 3 November 2021. Meanwhile, a total of 5,012,337 deaths have been reported as of the same date (WHO Coronavirus (COVID-19) Dashboard, 2021). Cascella et al. (2021) mentioned that the transmission of the virus is primarily through close contact to individuals carrying the virus mainly through exposure to respiratory droplets and airborne transmission. In other words, being close to virus-carriers will increase the risk of infection. Mohd Hanafiah and Chang's survey in 2020 on 1,075 respondents signified that a large majority of people perceive COVID-19 as a major risk and impact, as they view it as a deadly disease and are worried of getting infected. Hence, this has raised a critical question of whether the risk of being infected with a contagious disease

would increase when a person resides closer to a medical facility, in this case, a hospital. There is also a lack of studies related to the impact of COVID-19 perceptions on local attitude towards a medical facility.

Another problem that has instigated this study is the insufficient amount of past literature that conducted studies on the locals' attitude towards semi-obnoxious facilities. Most of the research conducted in relation to such facilities studied the price impacts, general impacts like local objection and locational decisions like land use planning and zoning (Peng & Chiang, 2015; Hui et al., 2018; Brown & Glanz, 2018; Devine-Wright, 2012; Cavazza & Rubichi, 2014). However, none has been found to evaluate the underlying reason these facilities are controversial, which are the thoughts of locals living around them. Hence, it is critical for such studies to be conducted in order to fully understand the cognitive processes of locals when semi-obnoxious facilities like hospitals are erected near their place of residence.

1.3 Research Questions

In line with the problem statements, the following research questions have been proposed: -

i. What are the determinant factors influencing the attitude of locals on the siting of hospitals within residential neighbourhoods?
ii. How do the identified factors influence the attitude of locals on the siting of hospitals within residential neighbourhoods?

1.4 Research Objectives

In order to answer the research questions, following research objectives have been proposed: -

i. To identify the determinant factors that will influence the attitude of local residents towards the siting of hospitals within the residents' vicinity.

ii. To examine the relationship between the identified factors and the attitude of local residents towards the siting of hospitals within the residents' vicinity.

1.5 Significance of the Study

Future researchers can benefit from this study as it provides them with a clear picture of the relationship between various factors and the society's attitude towards a semi-obnoxious facility. With the lack of studies looking into the attitude of locals in relation to semi-obnoxious facilities, future researchers can benefit from this study which dives into the factors influencing local attitude towards semi-obnoxious facilities. Moreover, further understanding of the social behaviour of the people in regard to an external factor that may bring both positive and negative effects.

Another party that may be benefitted by this study are local planning authorities. This is mainly because future development of hospitals and other semi-obnoxious facilities can take into consideration the influencing factors of the local residents' attitude towards residing nearby a hospital during the planning stage. Local planning authorities are able to understand the criteria that goes through a local resident's mind when assessing the potential benefits and risks of a semi-obnoxious facility. By doing so, local planning authorities can then fine tune their policies and standards in promoting public participation in various development projects while minimizing social conflicts. Referring to an article by Nurudin et al. (2015), low public participation is very normal in Malaysia which reflects a lack of consideration towards the public's perception and opinions. This was further supported by another study conducted by Aiyeola et al. in 2014 which proved that public participation in the Environmental Impact Assessment (EIA) process of a Mass Rapid Transit (MRT) project was low. Soo (2019) also reported that the residents that opposed against a proposed project in Taman Tiara Titiwangsa felt that their opinions were not effectively presented despite being able to participate in the planning and development control stage under Rule 5 of the Federal Territory

Planning Act 1982. The rationale for the low public participation was that the public themselves do not think that they can make an impact on the final results while the administrators also viewed the public participation process as something that can hinder the project's progress. However, public participation is actually very crucial to a project's success as the probability of success in a project's planning will increase when it gathers both expert and local knowledge. Thus, the public's perception is very crucial for planning authorities in their decision-making. As mentioned by Shcively (2007), deeper understanding of local attitude allows decision-makers to modify their procedures and the participation of the locals that take into consideration their attitudes. Thus, this study works as a steppingstone for local planning authorities to further understand the role of and ensure the consideration of local attitude in the land use planning process.

In addition, developers and operators of such facilities can also benefit from this study for the same reason. Developers and operators should contemplate the attitudinal changes of local residents pertaining to semi-obnoxious facilities. Understanding this will help them to better structure their project offerings, design, and even their communication process with the nearby residents. By that, locals will understand that developers have taken their concerns into consideration and should be more willing to accept such facilities in their neighbourhood. This is crucial as there have been cases where project stoppages occurred due to the ferocious public objection (Yu et al., 2021). Achillas et al. (2011) perfectly summarizes this point by mentioning that the effectiveness and successful operation of a project is heavily affected by local acceptance.

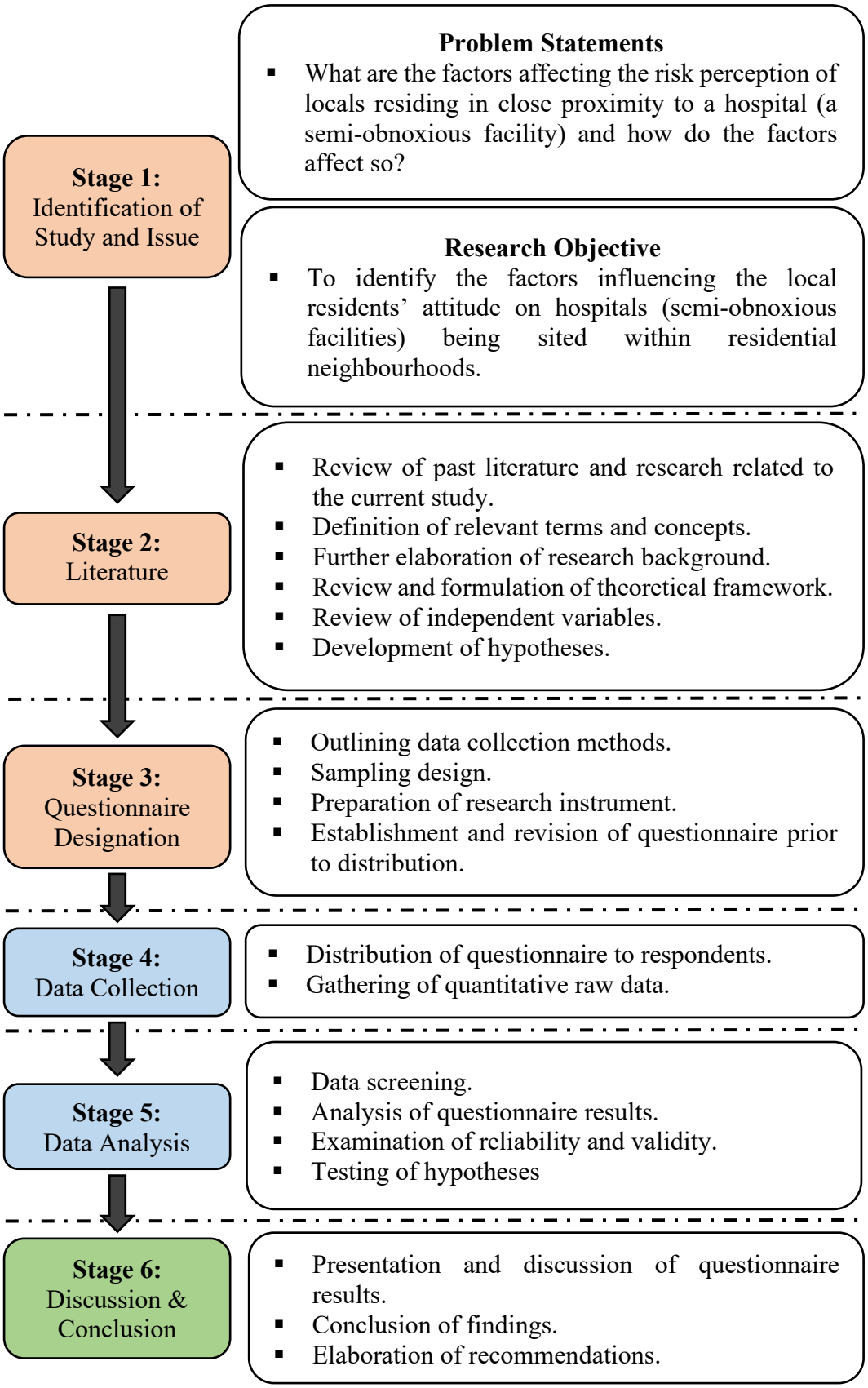
Lastly, the public can also have unbiased decision-making perspectives on future semi-obnoxious facilities. In other words, the public will not simply conform with the opinions of others towards semi-obnoxious facilities due to their fear of standing out. Instead, they will go through the various factors and cost-benefit evaluation before finalizing their perception towards such facilities. Gross and Vostroknutov's paper in 2021 mentioned that people tend to follow social norms to attain a positive self-image, or to avoid having a negative one. Having a clearer picture and guideline of assessing the impacts of a semi-obnoxious facility through this research will

ensure that the public are able to determine their stand without having to follow social norms.

1.6 Research Flow Chart

This subsection shows an illustration of the research flow through Figure 1.1 below which shows the purpose of each stage of the study as well as the outcome derived from the respective stages.

Figure 1.1: Research Flow Chart



1.7 Chapter Layout

The first chapter, which is Chapter 1 of this paper provides a general outline of the entire research which will indicate the overall direction of this study. For that reason, Chapter 1 includes the background of the research, problem statement, research questions, research objectives, hypotheses of the research as well as the significance of the research. These will ensure that readers are clear of the general direction and purpose of this research.

After that, a review of related journal articles is conducted in Chapter 2 with the aim of understanding the past progress of similar research. The literature review in this chapter identifies the issues of past research as well as the knowledge derived from them. Nonetheless, the theoretical framework of this research will be formulated in this chapter while the related concepts and independent variables of this research will be further explored.

Moving on to the third chapter, the research methodology will be explained including the research design, data collection methods, sampling design, and research instrument. Other than that, the constructs measurement, data processing and analysis procedure is also discussed under Chapter 3.

Then, the actual data analysis will be conducted and detailed in the subsequent chapter, which is Chapter 4. A descriptive analysis of the respondents' demographic profile and central tendencies measurement of constructs will be explained. Nevertheless, the results of the reliability analysis and inferential analysis is further discussed.

Last but not least, all the descriptive and inferential analyses is summarized in the final chapter along with the discussions of the major findings of the study. This leads to the practical implications of this study on policy makers and practitioners. On the other hand, limitations of the study are laid out with recommendations to future researchers in relation to the limitations, the topic and the methodology.

1.8 Conclusion

In a nutshell, this chapter provided an introduction on Locally Unwanted Land Uses (LULU), Not-In-My-Backyard (NIMBY), Yes-In-My-Backyard (YIMBY) and semi-obnoxious facilities. Typical perceptions towards these facilities have also been introduced in the research background. Besides that, the current issues and research gap that have prompted this research were also unfolded. Several research questions and objectives were also listed out before developing the hypotheses of the study. Additionally, the implications of the study were also outlined alongside the chapter layout of the entire research. The subsequent chapter will be focusing on the review of relevant literatures.

Chapter 2: Literature Review

2.0 Introduction

Knopf (2006) acknowledged that literature review summarizes and assesses a collection of research on a particular topic. It focuses on summarizing the key inferences that have been concluded in previous studies and aims to identify the accuracy and completeness of that particular topic's knowledge. This chapter focuses on the review of literatures related to the current study beginning from the definition of various terms and concepts related to local attitude.

2.1 Definition and Explanation of Relevant Terms and Concepts

This subsection defines and elaborates on the relevant terms and concepts in relation to this study, including NIMBY, LULU, YIMBY, risk and attitude. Understanding of these terms and concepts is crucial to further proceed with the study.

2.1.1 Not-In-My-Backyard (NIMBY) and Locally Unwanted Land Uses (LULU)

Referring to Schively (2007), the concept of Not-In-My-Backyard ("NIMBY") has been widely used and has remained as a concept of high relevance since the early 1980s. It is commonly used in the field of urban planning, both in industry and academia. Policy makers have been more and more aware of the NIMBY phenomenon (Fort et al, 1993). Other than that, project initiation parties, social welfare proponents, and environmental justice supporters tend to use NIBMY to their advantage (Kinder, 2016). Meanwhile, locally unwanted land uses (LULU) are often associated together with NIMBY as both represent the negative social response towards undesired amenities or facilities. Formally defining NIMBY, it is

the situation in which a person opposes something unappealing to be constructed or conducted near where he or she lives (Cambridge University Press, n.d.). In layman's terms, Dear (1992) defined them as the action of locals in order to safeguard their place of residence. He also explained NIMBY and LULU in a slightly formal tone as the protective behaviour of local communities while facing an unwanted development in their locality. Parallel to these definitions of NIMBY and LULU is the definition by Brown and Glanz in 2018, in which they described the two concepts as the negative attitudes of locals in relation to a proposed development. Locals tend to view NIMBY or LULU projects or facilities as those that seemingly serves the needs of the people but are actually harmful and undesired by those living in the vicinity. Another definition of NIMBY and LULU by Hamblen (1996) states that these facilities or development projects are undesired by locals, communities, regions and even an entire state. Hamblen also provided that a significant amount of effort and resources will be disbursed just to avoid such facilities from being constructed. Since their emergence, various developments and policy decisions have been halted, instead of merely being a conflict between experts and the general public (Fort et al., 1993). To make the distinction of NIMBY and LULU clear, LULU refers to the locally unwanted facilities themselves such as cemeteries, incinerators and drug addiction centres. On the other hand, the reaction or attitudes of the locals affected by LULU facilities are known as the NIMBY phenomenon.

To illustrate, cemeteries, sewage plants, oxidation ponds, airports, expressways are some typical examples of NIMBY / LULU facilities. Taking a recent example in Malaysia, a food court and anaerobic digestion (AD) plant project being proposed in Ampang Jaya was highly objected by the local community due to reasons like the development of unnecessary facilities, lack of impact assessments, absence of objection process as well as the late notification of project approval (Ravindran, 2021). Repeating from the previous chapter, the Lynas Advanced Materials Plant (LAMP) by Lynas Corporation Ltd. is one of Malaysia's most controversial NIMBY / LULU facilities in recent years (Jamaludin et al., 2020). Referring to Kaur (2015), it is one of the world's largest, rare earth processing plants that started its operations in 2012 despite strong opposition from the public. Meanwhile, slightly modern and "innovative" type of NIMBY / LULU facilities are data centres. Just as

the opposition against other types of NIMBY / LULU facilities, locals were concerned about the negative impacts data centres have on land availability, landscape and standard of life (Swinhoe, 2021). Swinhoe (2021) mentioned that the NIMBY / LULU phenomenon is commonly caused by the lack of engagement between the project firms and the local community. This further supports a statement in the previous chapter that public participation in project developments is crucial for a project's success. The NIMBY / LULU behaviour is totally understandable, with historic disasters like the Fukushima Daiichi nuclear accident in Japan, and even the Asia Rare Earth incident in Bukit Merah, Perak, Malaysia (Kaur, 2015).

2.1.2 Yes-In-My-Backyard (YIMBY)

Contrarily, Brown and Glanz (2018) defined YIMBY as the positive attitudes of local communities towards proposed developments. In other words, the development YIMBY facilities in an area is supported by the locals as mentioned in the article by Ishimura et al. in 2014 that a counter to the NIMBY phenomenon is the YIMBY movement that has more welcoming attitudes in relation to changes in the built environment. In a simpler phrase, YIMBY facilities can be defined as the locally desirable facilities (Wu, Wu, & Liou, 2021). According to Maxwell (2009), YIMBYism describes the position of the local community in supporting a proposed project. Just like the NIMBY / LULU behaviour, the YIMBY phenomenon does have its own impacts on projects as well, but in a positive manner. According to Stahl (2018), YIMBY activists have forced changes in zoning, regulations, as well as the success of proposed projects.

2.1.3 Semi-Obnoxious Facilities

Just like there is a "Maybe", which is in between "Yes" or "No", the built environment has a "Semi-Obnoxious Facility" which is in the middle of undesired (NIMBY / LULU) and desired (YIMBY). Before looking deeper into the definitions of a semi-obnoxious facility, it will be easier to understand that hospitals, police

stations, fire brigade stations, markets, and waste collection centres are some common examples of semi-obnoxious facilities. Residing closer to these facilities does come with its conveniences and benefits. However, unwanted inconveniences and issues tend to come along as well such as noise issues, traffic congestion issues, hygienic issues, along with safety and health risks. Hence, facilities that bring along desired and undesired impacts are categorized as semi-obnoxious facilities (Hui et al. 2018; Melachrinoudis, 1999). Melachrinoudis (1999) also described them as facilities that are necessary in an urban area but have the tendency of generating hazards or nuisances like sound and air pollution. These facilities are required to be located close but not too close to residential areas. As defined by Plastria et al. (2013), a semi-obnoxious facility is also described as semi-desirable in which it serves the needs of a community but is also potentially harmful to the environment and requires extra consideration of its risks. They acknowledged that hospitals, airports, train stations, telecommunications stations, and alarms are also semi-obnoxious facilities.

2.1.4 Risks and Attitude

Before we dive deeper in to risks, we should fully understand what risk is although we have all heard of this term before. According to Aven and Renn (2009), among the most common definitions of risk is that it is a situation in which something that is valued by humans is at stake and the outcome is uncertain. For instance, a potential injury is the uncertain outcome of playing basketball. In this example, the physical wellbeing of a person is the object that is being valued and is at stake while playing basketball. There is a risk of getting injured, but a person does not know certainly whether he or she would be injured while playing. In a simpler sentence, risk is the possibility that a person will experience the impacts of a hazard (Sjöberg et al., 2004).

With the definition of risk out of the way, what is attitude? Bain (1928) defined attitude as the relatively consistent and repetitive behaviour of an individual that reflects and influences his or her status. He also stated that affective elements, along with cognitive elements play a major part in determining attitude. Meanwhile,

attitude can also be defined as the responses, either positive or negative, that a person has towards an issue, a situation, an occurrence or an object (Ajzen, 1989). Cialdini et al. (1981) and Van der Linden (2015) provided that attitudes, with their relatively consistent nature, can be used to predict the behaviour of individuals. They included that attitudinal change involves the change in cognition, affection, and behaviours. Various articles such as Onurbodur et al. (2000) and Trafimow and Sheeran (1998) have associated changes in attitudes with cognitive-based and affective-based beliefs.

With regards to impact of the cognitive processes on the changes in attitude of a person, cognition is the combination of various mental processes that acquires, stores, analyses, interprets and uses information. The cognitive processes and cognition as a whole influence our attitudes and behaviours, as the extent of understanding a certain topic will affect our views and attitudes over it (Cambridge Cognition Ltd., 2015). One of the clearer definitions in Bayne et al (2019) is that cognition is the process of thinking, rationalizing, perceiving, visualizing and remembering. In terms of attitude towards the risks of staying in close proximity to hospitals, locals will convey different attitudes towards the risks, and this distinction is based on the cognitive level of each individual in relation to the siting processes of hospitals, operations of hospitals and the risk management procedures of hospitals.

On the other hand, affection has its significance in attitudinal changes of individuals as well (Onurbodur et al., 2000). Referring to Shamai (1991), Västfjäll et al. (2008), and Harth (2021), affection is the emotional closeness, feelings and special meanings assigned to something as a result of subjective experiences. The positive and negative affection influences the cognitive processes of an individual, and also changes attitude (Harth, 2021; Västfjäll et al., 2014; Anton & Lawrence, 2014; Bonaiuto et al., 2016). Relating the influence of affection on the attitude of locals towards nearby hospitals, an individual that has a high sense of belonging and emotional closeness with a particular location will have a more positive attitude towards a nearby hospital.

2.2 Hospitals in Malaysia

Referring to Health Facts 2020 (MoH, 2020), a total of 135 government hospitals and 9 government special medical institutions registered under the Ministry of Health Malaysia (MOH) as of 31 December 2019. The 135 hospitals provided 42,936 number of official beds while the 9 special medical institutions had 4,805 beds. On the other hand, a total of 208 private licensed hospitals were registered under MOH which supplies a total of 16,469 official beds. Furthermore, Hirschmann (2021) provided that approximately 154 government hospitals and 250 private hospitals were operating in 2019.

Musafar (2014) provided that healthcare is classified into public and private healthcare in which public healthcare is provided by the government through national healthcare systems while private healthcare is supplied by for-profit organizations, non-profit organizations, along with faith-based organizations. Musafar (2014) stated that public hospitals in Malaysia are classified into (1) district hospitals, (2) district hospitals with specialist services, (3) general hospitals, (4) National Referral Centres / Institutions and (5) non-MOH hospitals. Meanwhile, Hospital Types in Malaysia (n.d.) listed the types of hospitals in Malaysia by separating them into (1) district hospitals, (2) specialized hospitals, (3) general hospitals and (5) teaching hospitals. The explanations of these hospital classifications are as follows:

(1) District Hospitals

A district hospital is the main healthcare facility in a certain region. District hospitals typically have 24 to 150 hospital beds, as they are small hospitals sited within districts to support intensive care, long-term care and even specialized facilities that are able to handle surgeries, childbirth, paediatrics, obstetrics and gynecology. Generally, district hospitals attend to outpatient care, inpatient, accidents and emergencies.

(2) District Hospitals with Specialist Services / Specialized Hospitals

Specialized hospitals, or district hospitals with specialist services are those that cater to specific medical needs which is usually based on the patient's disease category. Trauma centres, children's hospitals, rehabilitation hospitals, geriatric hospitals, and psychiatric hospitals are some examples of specialized hospitals. These hospitals are located in bigger districts and there are usually 2 to 6 of such hospitals in a state. with approximately 150 to 500 hospital beds being provided.

(3) General Hospitals

General hospitals are the most well-known ones, as they are established to treat with various diseases and injuries. General hospitals typically have emergency departments to support sudden and emergency cases, and they tend to vary in size and facilities available but usually provides 400 to 1000 hospital beds. There is one General Hospital in each state capital and is the final referral for each state.

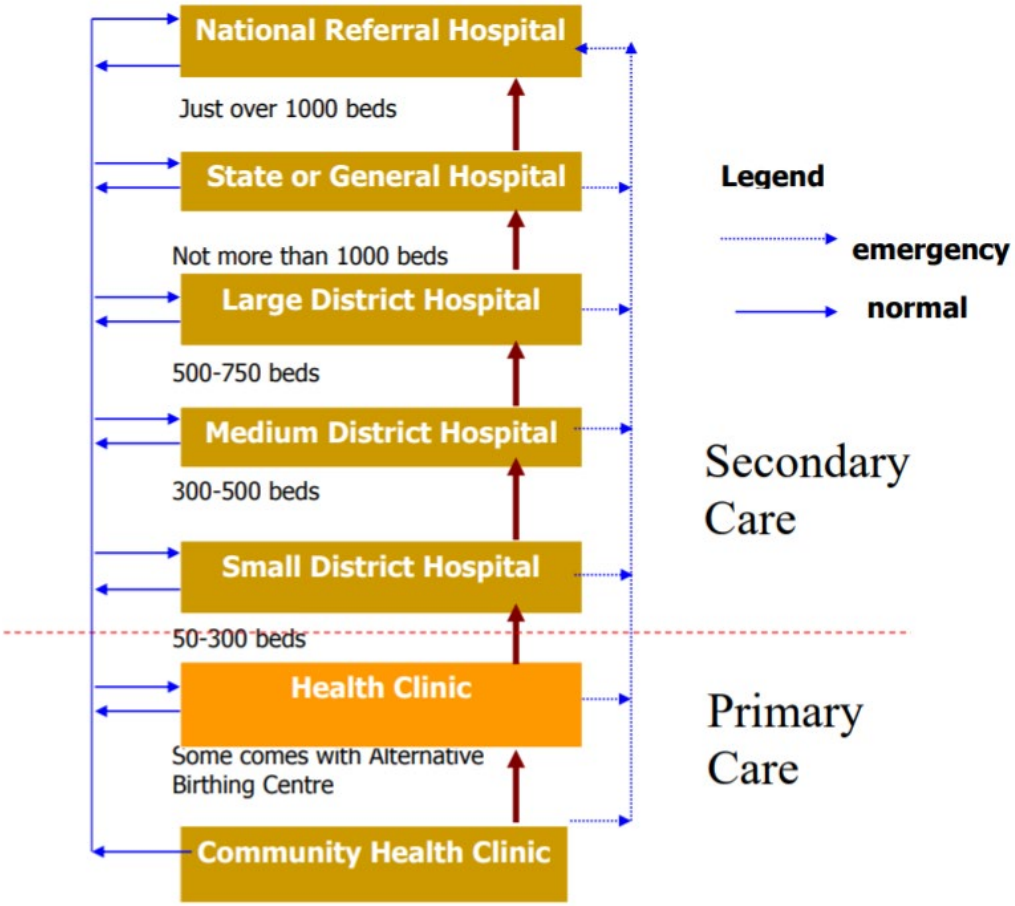
(4) National Referral Centres / Institutions

There are a few National Referral Centres and Institutions in Malaysia, with the main one being Hospital Kuala Lumpur (HKL) located in Kuala Lumpur, the capital of Malaysia. On the other hand, there are other institutions such as the Paediatric Institute, Maternity Hospital, Institute of Urology and Nephrology, Institute of Neurological Sciences and Institute of Orthopaedics.

(5) Non-MOH Hospitals (including teaching hospitals)

Non-MOH hospitals are provided by ministries other than MOH, such as teaching hospitals provided by the Ministry of Higher Education, military hospitals by the Ministry of Defence, Orang Asli hospitals by the Ministry of National Unity and Social Development. Teaching hospitals are built mainly to deal with actual patients while providing practical opportunities to medical students and nurses, as the name suggests. Teaching hospitals are mostly connected to an educational institution in the same sector. At the same time, Nawawi (2000) provided an illustration of the country's healthcare referral system as seen in Figure 2.1 below.

Figure 2.1: Malaysia's Healthcare Referral System



Source: Nawawi (2000).

Additionally, Azreena et al.'s paper in 2016 outlined the principles of hospital planning in Malaysia. With reference to the World Health Organization ("WHO"), hospital planning should consist of 6 main stages, namely the briefing, designing, constructing, testing and commissioning, operating and finally the post-occupancy evaluation stages. Their article also mentioned that the planning and execution of hospitals should take into account the latest government policies. This brings us to the Twelfth Malaysia Plan as well as some other government policies and guidelines in relation to the planning and development of hospitals. Referring to What is Malaysia Plan (n.d.), a Malaysia Plan, also known as the Malaysia 5 Year Plan, provides the details of the government's development policies and strategies. First being introduced back in 1965, Malaysia has recently announced its twelfth Malaysia Plan which covers the development outline and strategies from 2021 to 2025. Referring to the Twelfth Malaysia Plan (2021, September), the government has increased the emphasis on their healthcare service delivery. 4 new hospitals, 77

new clinics, 78 enhanced hospital projects, 17 enhanced health clinics and 61 healthcare facilities including rural water supply and sanitation services were some of the completed initiatives. Other strategies to improve the healthcare system in Malaysia were also being outlined, including redesigning the healthcare service, improving health financing and public awareness along with utilizing technology. Along with that, the Ministry of Health Malaysia have also published various guidelines on the planning and operations of hospitals in Malaysia such as the "Handbook on Setting Up of Private Hospitals in Malaysia", "General Hospital Operational Policy", "Design Development Stages in Hospital Project", "Strategic Framework of the Medical Programme 2021 – 2025" and so on. Other ministries such as the Ministry of Natural Resources and Environment Malaysia and Ministry of Housing and Local Governance have also provided numerous development guidelines for hospitals.

Table 2.1: Key Highlights of Guidelines on Hospital Planning and Operations

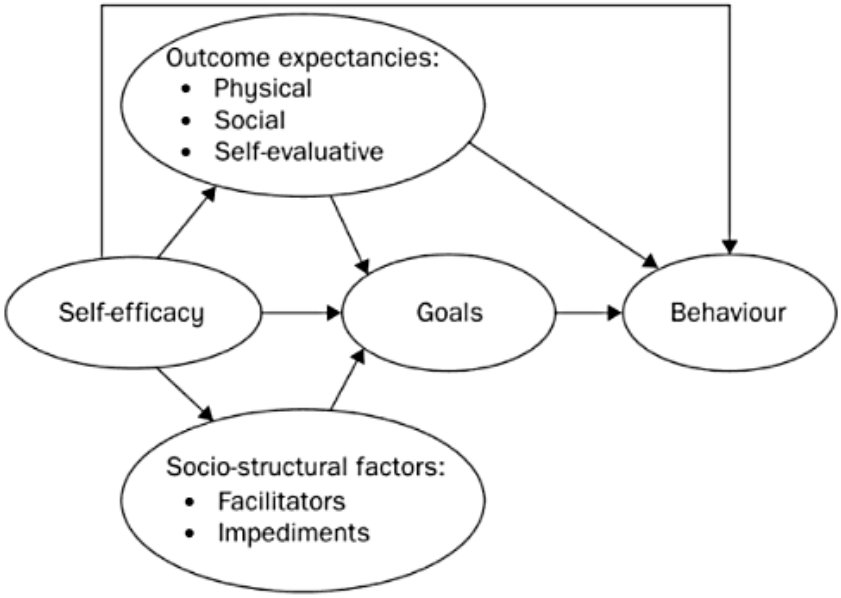
Ministry	Policies	Highlights
Ministry of Health	Handbook on Setting Up of Private Hospitals in Malaysia	▪ Requirements and procedures of private hospitals based on Act 586 ▪ Pre-establishment Approval ▪ Establishment Approval ▪ Operating License
	General Hospital Operational Policy	▪ Operational Policy for General Hospitals ▪ Organization ▪ Corporate Governance ▪ Clinical Governance ▪ Medical Facilities ▪ Quality Management ▪ Training ▪ Research ▪ Supplies and Assets ▪ Communication System ▪ Hospital Amenities

		▪ Privatized Services ▪ Disaster Management ▪ Information and Communication Technology (ICT) ▪ Planning and Development
	Design Development Stages in Hospital Project	▪ Design Development ▪ Concept Plan (Site Masterplan and Building Zone, Departmental Zoning) ▪ Schematic Plan / Preliminary Design (Departmental Layout, Room Data) ▪ Detailed Design / Loaded Drawing
	Strategic Framework of the Medical Programme 2021 – 2025.	▪ Achievements during Eleventh Malaysia Plan (2016 – 2020) ▪ Issues and Challenges ▪ Future Plans

2.3 Theoretical Framework – Social Cognitive Theory

This section will discuss the theoretical framework for this study. Social cognitive theory has been referred as the theoretical backbone for this study. Bandura (2005) stated that the social cognitive theory ("SCT") has been applied in an extended list of areas, including social, developmental, emotional, health and behavioural psychology. Luszczynska and Schwarzer (2015) provided that under the SCT, human's stimulus and behaviours are controlled by their presence of mind, or anticipation of future events. This tendency of having forethoughts is observed as humans having precautionary thoughts about the outcomes of a specific action. Under the SCT, self-efficacy, outcome expectancies, along with goals, perceived obstructions and facilitators are some of the major factors that influence human behaviour. Luszczynska and Schwarzer (2015) included an illustration of the SCT, as seen in Figure 2.2 below.

Figure 2.2: Social Cognitive Theory



Source: Luszczynska and Schwarzer (2015).

One of the applications of the SCT is the research conducted by Prati, Pietrantoni, and Zani (2011) where they applied the theory in identifying the attitudes and responses of individuals towards the H1N1 pandemic. Their SCT research framework included social-contextual factors, cognitive evaluations, affective response, and compliance with recommended behaviours as their independent variables. Meanwhile, Rana and Dwivedi (2015) also applied the SCT in their study on the adoption of an electronic government system in India. Under their SCT model, the effects of outcome expectation, affect, anxiety, self-efficacy and social influence were being studied in identifying the public's acceptance of the system. Nonetheless, Wang et al. (2021a) also applied the SCT in determining the influencers of public acceptance of a NIMBY facility. In their study, personal factors such as self-efficacy and self-regulation, environmental factors like social trust and social justice as well as outcome expectations of the NIMBY facility were being studied under the SCT model, which provided them with a relationship overview of all the above factors and the locals' behavioural tendencies. The applications of the SCT in these studies have shown that the theory is typically applied in studies involving human behaviour and attitude towards certain environmental objects.

2.4 Review of Independent Variables

2.4.1 COVID-19 Perceptions

It is clear that COVID-19 is an infectious disease that has caused an unprecedented epidemic, as explained in the previous chapter. Hence, the question of whether perception towards COVID-19 risks would affect attitude towards a hospital remains to be distinguished. As provided by Wong and Alias (2020), overall fearful and negative attitude increases when health hazards are perceived to be high, out of control, or terrifying. Meanwhile, Koh, Pang, Shoesmith, James, Nor Hadi, and Loo (2020) also showed that various behavioural changes were observed during the COVID-19 pandemic, such as changes to purchasing behaviour, increase in act of familiarity, seeking information and leadership through religion and so on. Furthermore, a survey conducted by Mohd Hanafiah and Wan in 2020 showed that most of the respondents had very strong perceived risk towards the COVID-19 disease which changed a large number of their day-to-day actions. Despite the lack of research regarding the effect of COVID-19 perception on the attitude towards hospitals, it can be inferred that there will be a change in attitude based on the behavioural changes caused by perception towards COVID-19.

2.4.2 Outcome Expectations

Referring to Lin & Chang's research in 2018, outcome expectations are the expected results or aftermath of an individual's actions. A more precise definition of outcome expectations is provided by Lowry, Zhang and Wu (2017) in which outcome expectations are the perceived benefits, risks and negative consequences that are results of a particular behaviour. Lin and Chang (2018) mentioned that outcome expectations consist of physical, social or personal outcomes. In terms of physical outcome expectations, the physical risks and benefits perceived are the primary components. Meanwhile, social acknowledgement and support are the

social outcome expectations along with personal satisfaction and/or dissatisfaction as the personal outcome expectations.

Referring to Arning et al. (2020), outcome expectations have been consistently proven to be one of the key indicators or factors of perception towards an external object, namely technologies, development projects and so on. They included a study on the impact of outcome expectations and concluded that outcome expectations heavily influence the locals' acceptance process. Further supporting this is Boudet's article in 2019, in which it was provided that the perceived social, economic, and environmental risks and benefits are the major factors linked to public behaviour. Besides that, Wu, Zhai, Li, Ren and Tsuchida's paper in 2014 studied the impact of physical outcome expectations, namely perceived utility and perceived risk on the acceptance of the risks of a NIMBY facility. By using a risk acceptability model along with a structural equation model as further support, their study proved that outcome expectations (perceived utility and perceived risks) were the most influential on NIMBY facility risk acceptance. The research by Cavazza and Rubichi (2014) also included a variation of the outcome expectations in which they used the term ambivalence, which is used to describe the situation where individuals have both positive and negative perceptions at the same time. In their study, ambivalence towards an incinerator was found to be very common among locals. Relating this to outcome expectations, outcome expectations can also be viewed as a form of outcome ambivalence where an individual will have positive and negative outcome expectations at the same time. Furthermore, Ismail, Juahir, Aris, Zain, and Abu Samah (2015) provided that the concern of negative effects and perceived social and individual benefits are among the significant factors influencing risk acceptance in relation to the Lynas Advanced Materials Plant (LAMP) in Malaysia.

2.4.3 Self-Efficacy

According to Wang et al. (2021a), self-efficacy is one of the factors influencing public acceptance decisions. Self-efficacy can be defined as an individual's personal opinion on his or her personal ability. At the same time, Cavazza & Rubichi (2014) explained that self-efficacy is a person's belief that his or her action

can achieve a certain target or make an impact on a particular matter. According to Heslin and Klehe (2006), self-efficacy is a person's confidence in his or her own ability to complete a particular task successfully. In the workplace, self-efficacy is often viewed as one of the main factors of employees' effort, persistence and performance in which high self-efficacy will lead to high confidence in performing. Applying this to attitude or the psychological behaviour side of things, high self-efficacy will increase a person's confidence in facing risks. As mentioned in their article, an overly high self-efficacy may lead to extreme risk-taking. Wang et al. (2021a) inferred that self-efficacy does have a direct impact on attitude and an indirect impact on public acceptance, which is parallel to numerous other studies.

Highly related to self-efficacy is an individual's perceived controllability or uncontrollability of risk. It is also a psychological factor that influences our emotions, motivation and ultimately our behaviour. It is also mentioned that attitude is highly influenced by perceived (un)controllability as (un)controllability also covers an individual's perceived (un)controllability over their vulnerability to risks (Arning et al., 2020). Arning et al.'s mixed-approach research including a survey on 509 respondents concluded that there is a significant relationship between (un)controllability of risks and attitude. They proved that a higher feeling of uncontrollability will lead to a higher perception on environmental, health and affective risks. In layman's terms, a person will be more afraid of the risks if they feel that they have less control over the risks.

2.4.4 Social Influence

As defined by Walker (2015), social influence is the changes in a person's thoughts, feelings, and behaviours as a result of interactions with others. Social influence occurs when an individual's thoughts and attitudes are changed after interacting with other individuals or groups. This change is mainly due to the desire of becoming similar to other individuals or groups who are viewed as desirable or experts. Meanwhile, social influence can also be observed when an individual's thoughts and attitudes change in accordance with a larger group of individuals with similar thoughts. Meanwhile, social norms are closely related to social influence in

which they are expectations of the types of behaviours that are considered as appropriate in a group (McDonald, & Crandall, 2015) (Van der Linden (2015). It can be described as the common beliefs or standards, or unwritten behavioural rules that are viewed as normal in a group of people or in the society as a whole. Looking deeper into social norms, we can separate them into subjective norms, descriptive norms, injunctive norms and personal norms. Subjective norms are individuals' attitudes towards a particular behaviour and their thoughts on how the people they care about are going to think about the behaviour. On the other hand, descriptive norms are certain behaviours that are normal while injunctive norms are the community's agreement on what should be done. Nonetheless, personal norms are personal expectations of behaviour in a particular situation (Park, & Smith, 2007) (Bobek, Hageman, & Kelliher, 2013).

Social norms do not only influence the thoughts, feelings and behaviours, they can affect a person's lifestyle and intentions as well (Yu, Chang, Chang, and Yu, 2019). It has been proven that social norms do have significant mediating effects on attitude (Yu et al., 2019) (Lo, 2013). Furthermore, it has also been found that social norms have direct influences on attitude as shown in Van der Linden's article in 2015. Meanwhile, social influence in general has its say on attitude as proven by Knoll, Magis-Weinberg, Speekenbrink, and Blakemore (2015). They provided that the attitude of individuals is shifted by social influence throughout their lives but tend to decrease when age increases. Lastly, social norms are found to be impactful on the supportive or oppositive behaviour of the public (Wang, Gong, Wang, Li, & Sun, 2021b).

2.4.5 Social Environment

According to Boateng, Adam, Okoe, and Anning-Dorson (2016), environmental factors of an individual will direct his or her behaviour. Other than the physical environment, the social environment has an impact on a person's behaviour as well. The social environment includes social interactions, cultural environment, social norms, peer pressure, social values and so on. Wang et al. (2021a) mentioned that

social environment is incorporated with procedural justice, distributive justice and social trust.

Starting off with procedural justice, Wolsink (2010) and Komendantova & Battaglini (2016) provided that the absence of procedural justice in the policy development and decision-making processes will induce greater public opposition towards NIMBY / LULU facilities. Devine-Wright (2012) provided that procedural justice is the assurance that the land-use planning and decision-making is unbiased and transparent to the public. It is said that there should not be an imperfection of information as the public should have complete access to the information as well as opportunities to participate in the process. The research proved the stand of various other research that procedural justice is a significant factor in local attitude and public acceptance. Meanwhile, Pereira, Schwanen, and Banister (2017) provided that procedural justice is the fairness of the decision-making and distribution processes of desired and undesired economic goods and services. The public is highly concerned about the site-selection procedure of NIMBY / LULU facilities, which is procedural justice (Wu et al., 2014). It was proven through their study that procedural justice has considerable influence on attitude and acceptability, right behind perceived utility and risks.

Moving on to distributive justice, which is defined as the study on the ethics and righteousness of the distribution of economic goods and services. Understanding and awareness of distributive justice started to increase when the people started to realize that the distribution of economic structures do not proceed naturally, it is instead decided (Lamont, 2017). Another explanation of distributive justice is provided by Pereira et al. (2016), which is how the benefitting goods and services, and hazardous ones are distributed in the society. Again, Wang et al. (2021a) provided that justice in distribution will improve the acceptance of NIMBY / LULU facilities by influencing the public's benefits and risk perception, subsequently influencing attitude.

Boateng et al.'s research in 2016 included the analysis of social trust. Social trust is a critical issue under social environment that involves people and technology as it can improve the facilitation of social relationships and reduce behavioural

uncertainty. As defined by Bashir and Madhavaiah (2015) and Boateng et al. (2016), trust is the confidence that individuals have towards another individual or towards an organization. Directing this to the built environment, it is the local community or the people's confidence towards a developer or operator. Referring back to Boateng et al.'s 2016 study on the adoption of Internet banking, it was found that trust and Internet banking usage intention were significantly related. In the meantime, Liu, Sun, Xia, Cui, and Coffey (2018) provided another definition of social trust as an individual's willingness to depend on the parties that are responsible for the decision-making, implementation and management of technologies and policies. It is stated that the public tend to rely on the opinions of the people or organizations that they trust, due to the lack of access to information regarding the hazards that they are exposed to. Their study proved that social trust has a positive impact towards the public's acceptance of waste-to-energy incineration projects, a type of NIMBY / LULU project, directly and indirectly through local attitude.

2.5 Hypotheses Development

2.5.1 COVID-19 Perceptions

Referring to Mohd Hanafiah and Wan (2020), behaviors of the public were being altered or affected due to COVID-19 perceptions. To illustrate, an individual with a stronger risk perception towards COVID-19 changed some of his or her day-to-day actions. Supporting this statement is the finding that behavioural changes were observed during the COVID-19 pandemic (Koh et al., 2020). Nonetheless, Wong and Alias (2020) found that there is a negative relationship between COVID-19 perceptions and overall attitudes towards hospitals

H1: COVID-19 perceptions have a negative impact on the attitude of locals residing in close proximity to a hospital.

2.5.2 Outcome Expectations

According to the study by Wu et al. (2014) and Arning et al. (2019) perceived benefits and perceived risks which are components of public outcome expectations have significant impacts on the attitude and risk acceptability of a public facility. Referring to their article, perceived benefits significantly improve attitude and risk acceptability while perceived risks significantly decrease them. Ismail et al. (2015) also showed that attitude and acceptance of a public facility are influenced by the outcome expectations. Cavazza and Rubichi (2013) also supported by providing that ambivalence (conflict between benefit and risk perception) which is similar to outcome expectations, has a significant relationship with local attitude.

H2: Outcome expectations have a significant relationship with the attitude of locals residing in close proximity to a hospital.

H3: Perceived benefits of a hospital has a positive relationship with the attitude of locals residing in close proximity to a hospital.

H4: Perceived risks of a hospital has a negative relationship with the attitude of locals residing in close proximity to a hospital.

2.5.3 Self-Efficacy

Referring to Wang et al. (2021a), Tumlison and Song (2019), and also Rana and Dwivendi (2019), self-efficacy is found to have a positive relationship with the perceived risk of a public facility. Wang et al. (2021a) provided that the perception of risks is highly deterred by the public's self-efficacy. A higher self-efficacy is generally found to result in an increase in the public's belief in coping with the risks of a public facility. Meanwhile, Rana and Dwivendi (2019) and Beauchamp, Crawford, and Jackson (2018) also found that there are direct and indirect relationship between self-efficacy and the attitude of the public.

H5: Self-efficacy has a positive impact on the attitude of locals residing in close proximity to a hospital.

2.5.4 Social Influence

Van der Linden (2015), Renn (2010), and Swim, Clayton, Doherty, Gifford, Howard, Reser, and Weber (2011) indicated that social influence has a significant parallel relationship with attitude of locals. Meanwhile, Knoll et al. (2015) showed that social influence significantly influences the attitudes of all age groups but showed a declining trend as age increases.

H6: Social influence has a positive relationship with the attitude of locals residing in close proximity to a hospital.

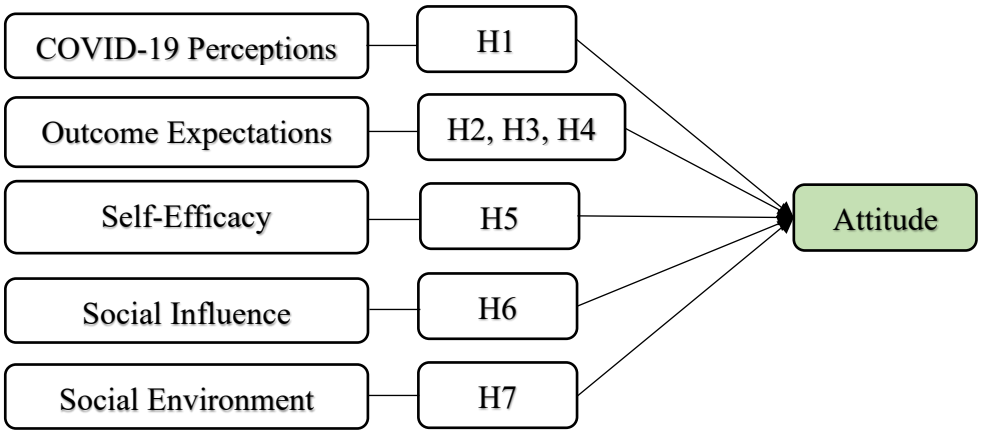
2.5.5 Social Environment

Wang et al. (2021a) implied that the social environment positively affects local attitude towards a public facility. They explained this by stating that social environment increases the public's exposure to information and news about a public facility, which in turn improves their attitude. This has been indirectly supported by various studies such as Wu et al. (2014), and Liu et al. (2018) in which they showed that social environment influences the public's awareness and acceptance of public facilities, by increasing their perception towards the risks that comes along.

H7: Social environment has a positive relationship with the attitude of locals residing in close proximity to a hospital.

2.6 Proposed Theoretical Framework

Figure 2.3: Social-Cognitive Theory Framework in this Research



As illustrated in Figure 2.5, the proposed theoretical framework outlines the relationship among all five of the independent variables and the locals' attitude towards living near a hospital. It is hypothesized that self-efficacy, outcome expectations, social influence, social environment and COVID-19 perceptions have significant impacts over the local attitude.

2.7 Conclusion

To sum up, this chapter provides the definition and explanation of terms and concepts that are relevant to this research. Besides that, deeper elaboration of the subject of this research, hospitals in Malaysia are provided. After that, the independent variables of this research are being explained along with their application through a systematic review of relevant literatures before providing an illustration of the social cognitive theory. Based on that, the proposed theoretical framework is outlined and explained, followed by the development of the hypotheses of this study.

Chapter 3: Research Methodology

3.0 Introduction

This chapter elaborates on the methodologies being applied in the analysis of data collected from the questionnaire. The main methodologies used in this study including the research design, research method, data collection methods, sampling design, research instrument, constructs measurement, questionnaire design, pilot study as well as data processing and analysis will be explained in the following subsections.

3.1 Research Design

This research aims to quantitatively identify the factors affecting the attitude of local residents staying in close proximity to a hospital, which is a type of semi-obnoxious facility. The effects that the studied independent variables have on the local attitude, including self-efficacy, outcome expectations, social influence, social environment, and COVID-19 perceptions will be identified through this research. In order to achieve the above purposes, a questionnaire survey will be conducted in which the questionnaire will be prepared based on measurement constructs of previous research. However, the measurement constructs collected based on past studies will be modified and adapted to the current research purpose.

3.1.1 Quantitative Research

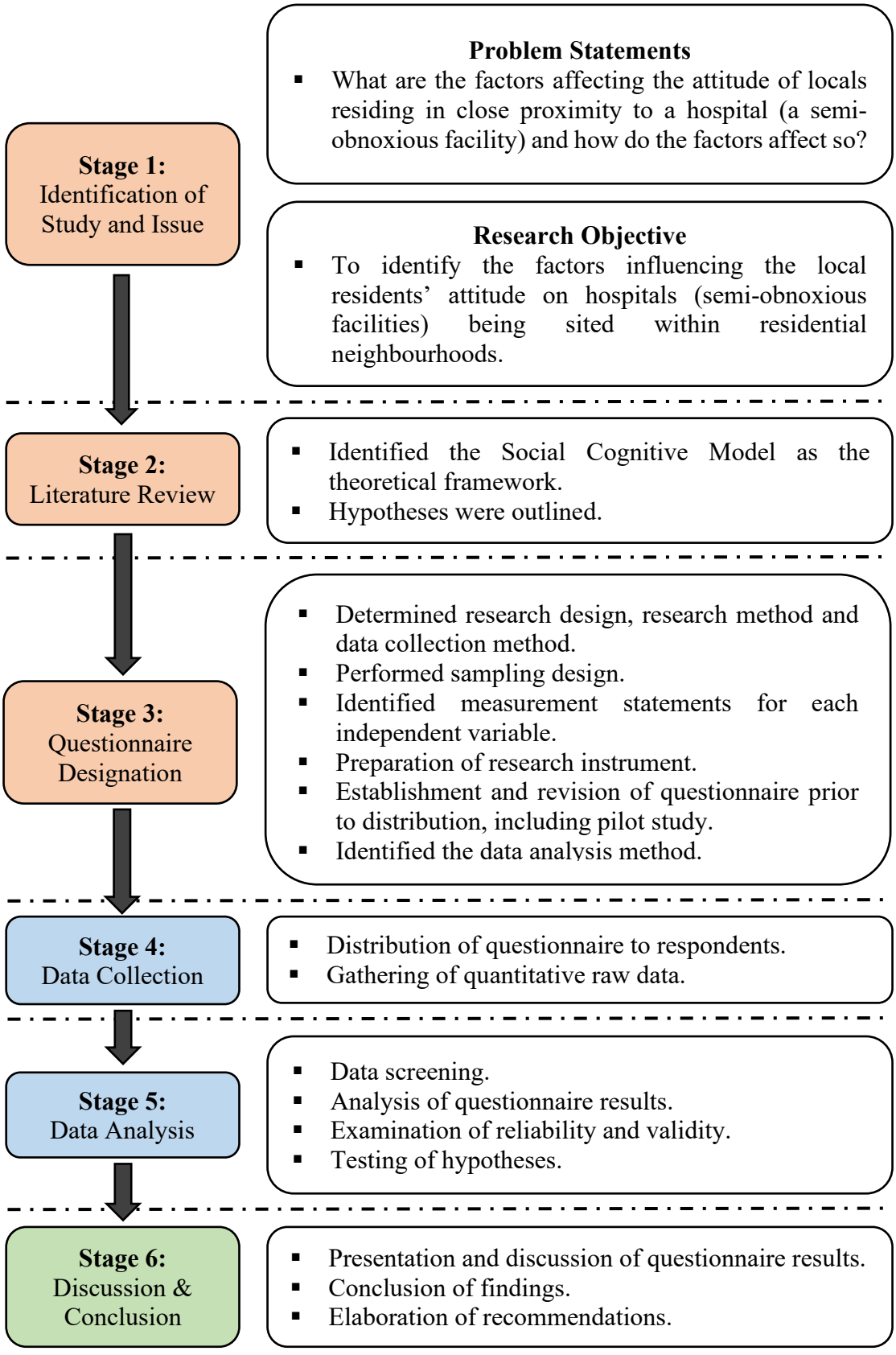
The types of information sought after in research can be differentiated into quantitative and qualitative information. Referring to Goertzen (2017); Sukamolson (2007), quantitative research numerically represents and analyses the observations of a research in order to explain a certain phenomenon. In a much simpler

explanation by Creswell (1994), quantitative research explains phenomenon through the collection and analysis of numerical data mathematically. The numerical data being collected are usually converted and analysed in the form of statistical data. Based on the above, a researcher will then have an inference to his or her initial hypothesis. Quantitative research is very useful in answering "What?" or "How?" questions. Direct and quantifiable questions such as "What?", "How much?", and "To what extent?" typically rely on quantitative research to be solved. At the same time, it is very helpful in learning about attitudes, behaviours, trends, frequencies, proportions, and relationships. Despite that, it is limited to understanding the above and not the underlying reasons (Goertzen, 2017).

3.1.2 Research Flow Chart

Figure 3.1 is the research flow chart for this study, for which the subsequent subsections in this chapter will be thoroughly explained with reference to it.

Figure 3.1: Research Flow Chart



3.2 Data Collection Method

Data collection is among the crucial components or procedures of research, which is the collection of raw data that will help researchers answer their research questions, affirm or deny their hypotheses, and formulate inferences of their study. There are two main types of data collection method, namely primary data collection and secondary data collection. In short, primary data are new data collected specifically for the use of a research while secondary data are existing data that have been collected by past research which are reused by current research (Hox, & Boeije, 2005). The former would be the data collection method implied in this research.

3.2.1 Primary Data

As mentioned earlier, primary data collection is the collection of new data for the use of a specific research. According to Kabir (2016), primary data are highly reliable and objective as it has not been altered by others. This research also collects primary data in order to learn about the factors influencing the attitude of locals residing near hospitals. For that reason, online distribution of the survey questionnaires will also be performed. Due to that, personal identification questions have been incorporated to avoid the issue of fraudulent responses (Lefever et al., 2007).

3.3 Sampling Design

This subsection will explain about the overall sampling design, including the target population, sampling location, sampling technique, sampling size as well as research instrument being used. Referring to Barreiro and Albandoz (2001); Alvi (2016), a portion of the entire population, which is known as a sample, is being diligently selected to perform a study on in order to draw a conclusion on the entire population. Sampling is performed due to economic and convenience reasons.

3.3.1 Sampling Target and Sampling Location

The sampling target of this research focuses on residents living in close proximity to hospitals in Malaysia, and is not constrained by gender, age, occupation, nor race and religion. At the same time, the sampling location would be locations with hospitals or near hospitals.

3.3.2 Sampling Technique

The sampling technique being used in this research is the convenience sampling technique. Referring to Etikan et al. (2016); Emerson (2015); and Sedgwick (2013), convenience sampling can also be referred to as Haphazard Sampling or Accidental Sampling, which is a type of non-probability sampling technique in which participants (respondents) are being selected mainly because of the ease of accessibility, proximity, availability and their willingness to participate. As its name suggests, convenience to the researcher is being prioritized in which in the current study, the COVID-19 pandemic has hindered the conduction of physical questionnaire distribution and surveys. Thus, an online survey questionnaire has been developed and distributed to willing participants using the Google Forms survey administration software.

3.3.3 Sampling Size

After identifying the sampling target, location and technique, it is crucial to identify the sampling size for this research. As suggested by Cohen (1992) as well as approved by the developer of the SmartPLS software, which is the data analysis software being utilized in this research, a minimum of 217 respondents is the optimum sampling size applied onto this research. As an addition to the sample size 10-times rule of thumb, Cohen's suggestion considers the statistical significance level and validity for the dependent variable. With that being said, the suggested

minimum sample size with a minimum R2 value of 0.10 and significance level of 1% in 217 (Cohen, 1992; Hair et al., 2014).

3.4 Research Instrument

Referring to Birmingham and Wilkinson (2003), research instruments are useful equipment that helps researchers collect necessary information, with different alternatives including questionnaires, interviews, content analysis, focus-group interviews, and observations. In this research, survey questionnaires would be the research instrument being used to identify the factors influencing the attitude of locals residing near hospitals.

3.4.1 Survey Questionnaire

Survey questionnaires conveniently allows researchers to identify the views and opinions of individuals in regard to a particular topic, in a systematic and well-managed manner. It is very effective and efficient in collecting responses from a large number and great discrepancy of respondents, and are also easy to formulate, manage and analyse (Birmingham, & Wilkinson, 2003). Survey questionnaires can be distributed through mail, physically, on the phone and even through the Internet. As mentioned earlier, this research prioritizes the distribution of questionnaire through the Internet for any willing participant residing near a hospital.

3.4.2 Questionnaire Design

With reference to the research objectives, the survey questionnaire for this study was formulated using Google Forms, a survey administration software developed by Google and will be conducted in English. The survey questionnaire is segregated into four sections, namely Section A, B, C and D.

First of all, section A includes 8 questions related to the respondents' habitat characteristics. They include questions regarding their length of staying in their current location, ownership of their current residential property, density of their neighbourhood, as well as whether they plan to move out in the future. Nonetheless, their awareness and knowledge on the existence of a hospital near their place of residence will also be identified. Furthermore, 14 questions related to the respondents' perception on the COVID-19 disease were also tested with the 7-Points Likert Scale Measurement starting from strongly disagree (1) to strongly agree (7).

Referring to Joshi et al. (2015) and Dawes (2008), Likert Scale Measurement is a type of rating scale that allows respondents to indicate their responses. It is commonly used for respondents to provide their level of agreement to a statement. For example, the Likert Scale can collect responses ranging from strongly disagree, disagree, slightly disagree, neither disagree nor agree, slightly agree, agree, to strongly agree. To make it simple, numbers are also used to represent each of the responses, where 1 represents strongly disagree and 7 represents strongly agree. A 7-Point Likert Scale and 10-Point Likert Scale has an advantage over 5-Point Likert Scale as respondents will not be forced to choose a response that is close to his or her actual choice, he or she will be able to select an exact level of agreement (Joshi et al., 2015). Thus, the 7-Point Likert Scale Measurement has been utilized for a majority of the questions of the questionnaire.

Moving on to section B, 23 questions using the same 7-Points Likert Scale Measurement are also included. These questions are related to the operation of the hospital(s) at the respondents' neighbourhood. These questions are also used to collect data that are related to the independent variables self-efficacy, outcome expectations and social norms.

Moreover, section C lists down another 25 7-Points Likert Scale Measurement questions that were prepared based on the independent variable of social environment, which is categorized into procedural justice, distributive justice, and social trust. Generally, these questions are related to the respondents' trust on the various stakeholders involved in the hospital(s)' operation.

In the final section, which is section D, the respondents' demographic data will be collected, including their gender, age, household size, whether they have a child aged 16 years and below, highest level of education and monthly income.

3.4.3 Variables and Respective Measurement Statements

Measurement Statements	Item in Questionnaire	Reference(s)
COVID-19 PERCEPTIONS		
I believe that COVID-19 is a very deadly disease.	S. A Q.9(a)	Mohd Hanafiah & Wan, 2020
I am worried about the possibility that my loved ones and I would get sick with COVID-19.	S. A Q.9(b)	Mohd Hanafiah & Wan, 2020
I am worried about spreading COVID-19 to others.	S. A Q.9(c)	Mohd Hanafiah & Wan, 2020
I am worried about the impact of COVID-19 on my work, livelihood and the economy.	S. A Q.9(d)	Mohd Hanafiah & Wan, 2020
I can reduce my risk of getting COVID-19 by avoiding crowded public areas, keeping my hands clean, and not touching my face.	S. A Q.9(e)	Mohd Hanafiah & Wan, 2020
I think my current living location is seriously affected by COVID-19.	S. A Q.9(f)	Self-Elicitation
I think my current living location is directly affected by COVID-19 due to the hospital nearby.	S. A Q.9(g)	Engida et al., 2021
I have felt dysfunctional anxiety during the COVID-19 pandemic due to the distance of my place of residence from a hospital.	S. A Q.9(h)	Engida et al., 2021

I have implemented coping strategies during the COVID-19 pandemic due to the distance of my place of residence from a hospital.	S. A Q.9(i)	Engida et al., 2021
I am concerned over the patients who seek medical treatment at the hospital.	S. A Q.9(j)	Self-Elicitation
Patients who seek medical treatment are those with chronic diseases.	S. A Q.9(k)	Self-Elicitation
Patients who seek medical treatment are affected with communicable diseases.	S. A Q.9(l)	Self-Elicitation
The spread of COVID-19 in my neighbourhood is due to the patients who received treatment at the hospital nearby.	S. A Q.9(m)	Self-Elicitation
I am exposed to potential diseases that may be spread by patients who receive treatment at the hospital nearby.	S. A Q.9(n)	Deressa et al. (2021)
ATTITUDE		
I am satisfied with the hospital near my place of residence.	S. B Q.1	Li et al., 2019
I feel calm towards the hospital near my place of residence.	S. B Q.15	Li et al., 2019
I feel hopeful towards the hospital near my place of residence.	S. B Q.23	Li et al., 2019
I feel positive about having a hospital near my place of residence.	S. B Q.18	Emmerich et al., 2020
OUTCOME EXPECTATIONS (GENERAL)		
In general, I think it is safe to have a hospital near my place of residence.	S. B Q.7	Ismail et al., 2015
PERCEIVED BENEFITS (OUTCOME EXPECTATIONS)		
A hospital near my place of residence is necessary for my personal needs.	S. B Q.2	Li et al., 2019

A hospital near my place of residence will bring great economic benefits to the society.	S. B Q.5	Li et al., 2019
I think that the hospital near my place of residence is important to me.	S. B Q.10	Ismail et al., 2015
I think the hospital near my place of residence will benefit the future generations.	S. B Q.20	Ismail et al., 2015
The hospital near my place of residence is contributing to the social needs.	S. B Q.19	Ismail et al., 2015
I believe that the hospital near my place of residence will increase the value of my property.	S. B Q.11	Self-Elicitation
PERCEIVED RISKS (OUTCOME EXPECTATIONS)		
The surrounding environment will be negatively affected by the hospital near my place of residence.	S. B Q.16	Li et al., 2019
My safety is negatively affected by the hospital near my place of residence.	S. B Q.22	Li et al., 2019
There is a strong fear (dread risk) towards the hospital near my place of residence.	S. B Q.3	Li et al., 2019
When something bad happens to the hospital near my place of residence, the impact will be fatal.	S. B Q.8	Ismail et al, 2015
The operation of the hospital near my place of residence is the cause to serious traffic congestion in this area.	S. B Q.21	Self-Elicitation
SELF-EFFICACY		
I believe that I have the ability to avoid the risks of living near a hospital.	S. B Q.9	Thogersen et al., 2010; Yazdanpanah et al., 2015; Wang et al.,

		2021; Cho & Lee, 2015
I am confident that I can avoid the risks of living near a hospital.	S. B Q.12	Thogersen et al., 2010
I have the control over the risks associated with living near a hospital.	S. B Q.13	Thogersen et al., 2010
SOCIAL NORMS (SOCIAL INFLUENCE)		
My view towards the hospital near my place of residence is influenced by how my friends/relatives view it.	S. B Q.17	Lo, 2013; Li et al., 2020
My view towards the hospital near my place of residence is based on the suggestions of others.	S. B Q.4	Li et al., 2020
My view towards the hospital near my place of residence follows the views of others.	S. B Q.14	Li et al., 2020
Most people who are important to me think that I should take precautionary actions against the hospital near my place of residence.	S. B Q.6	Cho, & Lee, 2015
PROCEDURAL JUSTICE (SOCIAL ENVIRONMENT)		
There is a fair procedure and communication with the public in the siting process of hospitals.	S. C Q.4	Wu et al., 2014
Decision-making about the hospital near my place of residence has involved opportunities for the locals to provide their opinions.	S. C Q.25	Devine-Wright, 2013
I think that the public's interest will be taken into account in the government's decision-making procedure.	S. C Q.13	Li et al., 2019; Dettori et al., 2020; Wang et al. 2021
I consider it fair when selecting a region to build a hospital that benefits	S. C Q.11	Li et al., 2019

the whole society but could bring negative effects to the locals.		
I consider it fair when there is a lack of public participation in the decision-making process.	S. C Q.17	Li et al., 2019
I consider it fair when the wishes of the locals are not taken into consideration in the government's decision-making process.	S. C Q.1	Li et al., 2019
DISTRIBUTIVE JUSTICE (SOCIAL ENVIRONMENT)		
I believe the public's interest will be taken into consideration when the government makes decisions.	S. C Q.8	Li et al., 2019; Dettori et al., 2020; Wang et al., 2021
I think that the site selection and construction of the hospital near my place of residence were conducted in accordance with scientific verifications.	S. C Q.15	Wang et al., 2021
I think that the risks of the hospital near my place of residence are fair to the public.	S. C Q.21	Wang et al., 2021
Once the hospital near my place of residence is operational, we will all benefit from greater access to healthcare support.	S. C Q.22	King, & Murphy, 2012
I think that the benefits of the hospital near my place of residence are fair to the public.	S. C Q.9	Wang et al., 2021
SOCIAL TRUST (SOCIAL ENVIRONMENT)		
I believe in the government's ability to make fair/responsible/optimal decisions.	S. C Q.23	Li et al., 2019; Emmerich et al, 2020; Wu et al., 2014

I believe in the government's ability to assess risks and benefits.	S. C Q.2	Li et al., 2019
I believe that the government will guard the interests of the local public and the environment.	S. C Q.14	Li et al., 2019
Complete information about the hospital near my place of residence is accessible.	S. C Q.5	Tantitaechochart et al., 2020
The hospital near my place of residence is efficient.	S. C Q.6	Tantitaechochart et al., 2020
The hospital near my place of residence is safe.	S. C Q.18	Tantitaechochart et al., 2020
The medical/healthcare policy of the government is trustworthy.	S. C Q.3	Tantitaechochart et al., 2020
The local government openly provides the public with information about hospitals.	S. C Q.24	Tantitaechochart et al., 2020
The government has the ability to deal with accidents that occur in hospitals.	S. C Q.12	Tantitaechochart et al., 2020
The staff operating the hospital near my place of residence are competent.	S. C Q.7	Tantitaechochart et al., 2020
I trust that companies in the private sector have the necessary expertise to successfully build secure hospital facilities.	S. C Q.10	Emmerich et al., 2020
I trust companies in the private sector in ensuring that safe hospital facilities are built.	S. C Q.16	Emmerich et al., 2020
I trust companies in the private sector in operating their hospital systems safely.	S. C Q.19	Emmerich et al., 2020
I trust the government or the responsible state authorities in	S. C Q.20	Emmerich et al., 2020

adequately considering the needs of local residents.		

3.5 Pilot Study

After drafting the questionnaire survey, a pilot study was performed as a feasibility procedure to identify any issues that may occur during the subsequent research stages. As defined by in (2017) and Hassan et al. (2006), a pilot study is a small-scale study that is conducted to identify problems and potential improvements in terms of quality and efficiency before conducting the main study. Researchers may also familiarize themselves with the rationale, techniques and procedures of the research by conducting a pilot study.

In this research, the initial questionnaire survey drafted went through a pilot study to pinpoint potential issues with the questionnaire, such as being unclear, hard to understand or overly repetitive. After the pilot study, the primary issue identified based on the pilot study respondents' feedback was the lengthy questionnaire survey due to some repetitive questions. However, some of the repetitive questions were necessary for the reliability and validity of the survey's responses. Nevertheless, the time taken to complete the survey is deemed reasonable as the average time taken for the pilot study respondents to complete the survey was 10 – 15 minutes.

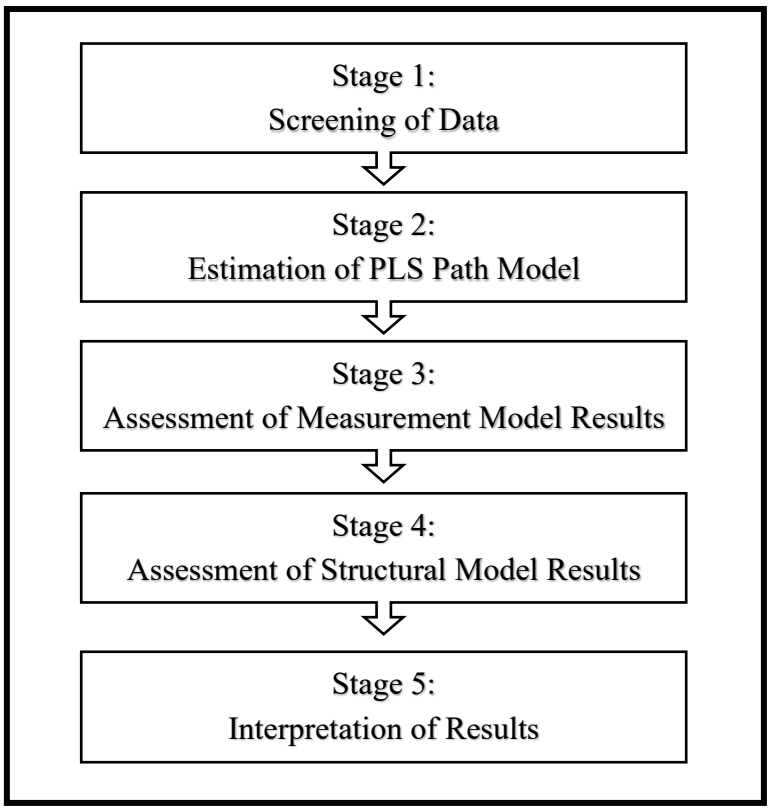
3.6 Data Analysis

The Partial Least Squares - Structural Equation Modelling (PLS-SEM) is the data analysis approach being conducted for this study. Hoyle (1995) provided that SEM is a statistical approach that evaluates research hypotheses regarding the relationship between the variables. There are two main reasons the SEM approach is being incorporated. One of them is the fact that SEM is used to measure latent variables, which are unobserved variables that can be distributed into multiple

distinct items. On the other hand, SEM allows researchers to comprehensively examine the interrelationships between different variables (Hair et al., 2010; Maruyama, 1997). According to Hair et al. (2019), PLS-SEM allows researchers to estimate complicated models that have many constructs, variables and relationships without the need of performing distributional assumptions. In addition, it deals with the prediction within statistical models and shows causal inferences.

Based on the above considerations and the main focus of this research, the data analysis of this research will be conducted using the PLS-SEM approach. Nonetheless, SmartPLS 3.0 is the analytical software being used as mentioned by Hair et al. (2019) as a user-friendly PLS-SEM computer software that do not require much technical expertise. Figure 3.2 illustrates the systematic data analysis procedure using the PLS-SEM approach.

Figure 3.2: PLS-SEM Systematic Data Analysis Procedure



In order to perform the assessment of the measurement model results, the composite reliability, convergent validity and discriminant validity will be used to evaluate the measurement models' validity and reliability, using PLS Algorithm included in the

SmartPLS 3.0 software. In terms of composite reliability, its value will fall between 0 and 1, in which a value falling between 0.7 and 0.9 is viewed as positive as it shows the internal consistency reliability (Nunally, & Bernstern, 1994).

Meanwhile, convergent validity is assessed based on the outer loadings, indicator reliability and Average Variance Extracted (AVE). According to Hair et al. (2014), they shall satisfy certain criterion to satisfactorily prove the validity and reliability of the variables. The outer loadings must be greater than 0.7; the indicator reliability should not fall below 0.708; whereas the AVE should exceed 0.5 (Hair et al., 2014; Fornell, & Larcker, 1981).

Nevertheless, the Heterotrait-monotrait (HTMT) ratio of correlations is also used for the discriminant validity analysis of the study. Discriminant validity analysis is used to ensure that construct measurements of a study are heuristically unique from one another. In other words, it shows the degree of correlation between measures that were meant to be distinctly viewed. The HTMT ratio of correlations is viewed by some as a better alternative of the Fornell-Larcker criterion which has a low sensitivity in assessing discriminant validity. The HTMT ratio of correlations is the average of the heterotrait-heteromethod correlations relative to the monotrait-heteromethod correlations average, in which the geometric mean of these two averages will be extracted as seen in Figure 3.3 (Henseler et al., 2015). Referring to the articles of Hamid et al. (2017); Gold et al. (2001); and Kline (2011), values exceeding 0.85 or 0.90 is not desirable and the closer they are to 1, the more serious the lack of discriminant validity is.

Figure 3.3: HTMT Ratio of Correlations Formula

$$\underbrace{\mathrm{HTMT}_{ij} = \frac{1}{K_i K_j} \sum_{g=1}^{K_i} \sum_{h=1}^{K_j} r_{ig,jh}}_{\substack{\text{average} \\ \text{heterotrait–} \\ \text{heteromethod}}} \div \underbrace{\left(\frac{2}{K_i(K_i-1)} \cdot \sum_{g=1}^{K_i-1} \sum_{h=g+1}^{K_i} r_{ig,ih} \cdot \frac{2}{K_j(K_j-1)} \cdot \sum_{g=1}^{K_j-1} \sum_{h=g+1}^{K_j} r_{jg,jh} \right)^{\frac{1}{2}}}_{\substack{\textit{geometric mean of the average monotrait–heteromethod} \\ \textit{correlation of construct } \xi_i \textit{ and the average} \\ \textit{monotrait–heteromethod correlation of construct } \xi_j}}.$$

Extracted from Henseler et al. (2015).

Moving on to the assessment of structural model results, it will be performed by determining the path coefficient (T-values) and Coefficient of Determination (R^2 value). The path coefficient (T-values) reflects the significance of each path coefficient, in which 1.96 is the threshold value. T-values greater than the threshold value indicates that a path relationship is significant.

Last but not least, the R^2 value is used to show the extent to which the dependent variable(s) of a study is affected or influenced by the independent variables. In other words, it represents the proportion that a variation in a dependent variable is explained by other variables (Chicco et al., 2021; Kasuya, 2018). It was suggested by Hair et al. (2011) that R^2 values of 0.25, 0.50 and 0.70 are respectively interpreted as having weak, moderate, and strong correlations.

It is important to take note that the measurement constructs that were found to have low validity and reliability and even affects the overall validity and reliability of the structural model will be removed during the data analysis procedure.

3.7 Conclusion

To sum up, this chapter included a detailed illustration of the research flow chart. With reference to the research flow chart, the research design, data collection method and sampling design were explained under this chapter followed by the details of the research instrument preparation. Subsequently, the pilot study performed using the research instrument is being explained along with the data analysis process to be conducted in the subsequent chapter.

Chapter 4: Data Analysis

4.0 Introduction

The primary focus of this chapter is on the findings of the data analysis, providing detailed discussions on the data analysis results obtained using the SmartPLS 3.0 software. Besides that, a descriptive analysis on the profile and background of respondents has also been performed and will be elaborated in this chapter.

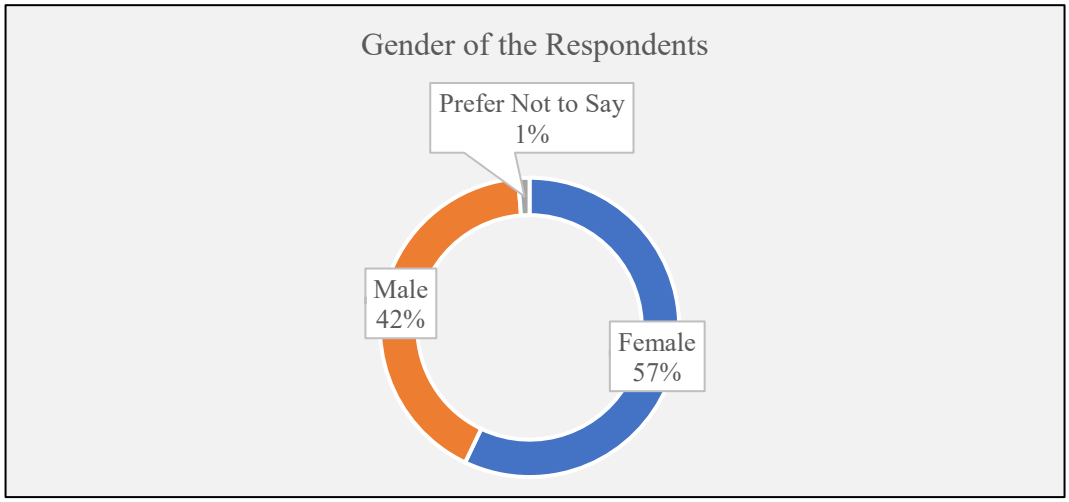
4.1 Descriptive Analysis

4.1.1 Respondents' Demographic Profile

This subsection explains the demographic background of the respondents involved in this study. Out of 259 total responses collected through the survey questionnaire, 12 has been eliminated as invalid responses, leaving us with 247 total valid responses.

4.1.1.1 Gender

Figure 4.1: Frequency Analysis - Gender

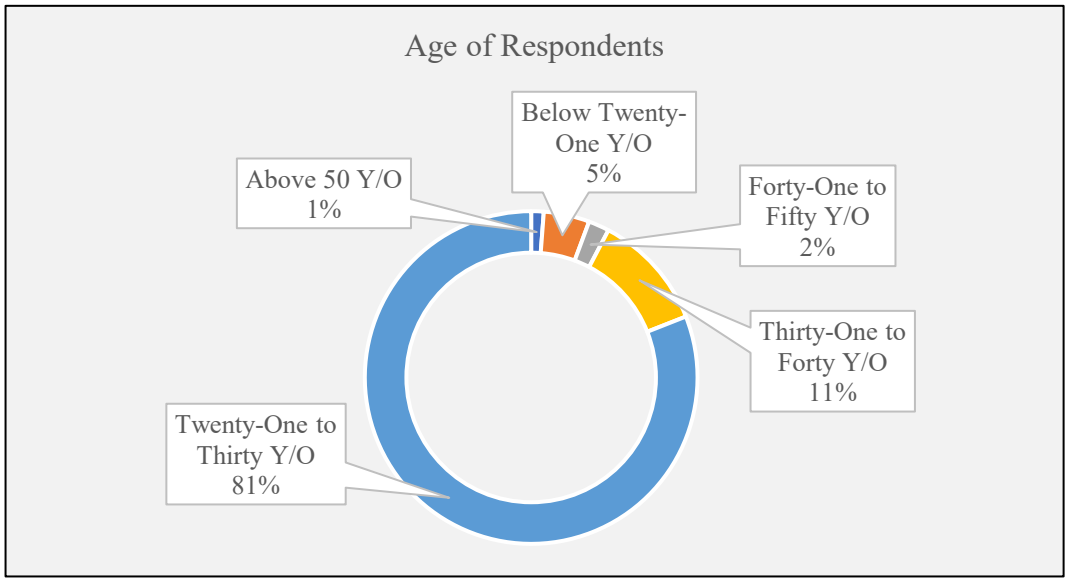


Source: Survey Questionnaire of this Research

As seen in Figure 4.1, a total of 42% (103 Respondents) are male respondents while 57% of the respondents (141 Respondents) are female respondents. Meanwhile, 3 respondents preferred not to disclose their gender. We can see that there were more female respondents as compared to male respondents.

4.1.1.2 Age

Figure 4.2: Frequency Analysis - Age

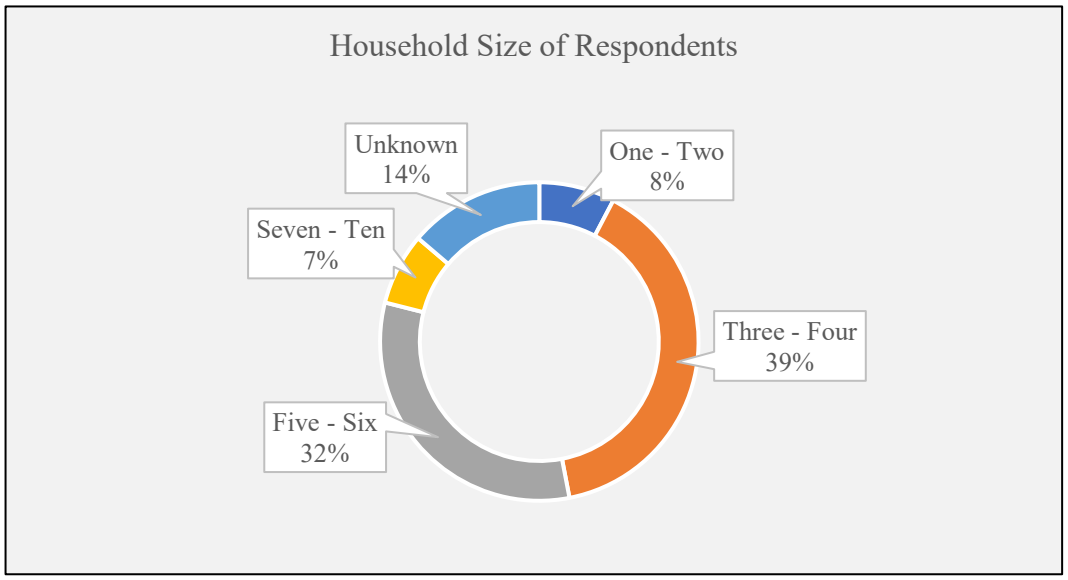


Source: Survey Questionnaire of this Research

Referring to Figure 1.2, a huge majority of 81% of the respondents are aged between 21 years old and 30 years old, which is 200 respondents. Meanwhile, 11% (28 Respondents) are aged between 31 years old and 40 years old, followed by the age group of below 21 years old at 5% (11 Respondents). Furthermore, 5 respondents (2%) are aged 41 to 50 years old, while the remaining 3 respondents (1%) are aged above 50 years old.

4.1.1.3 Household Size

Figure 4.3: Frequency Analysis – Household Size

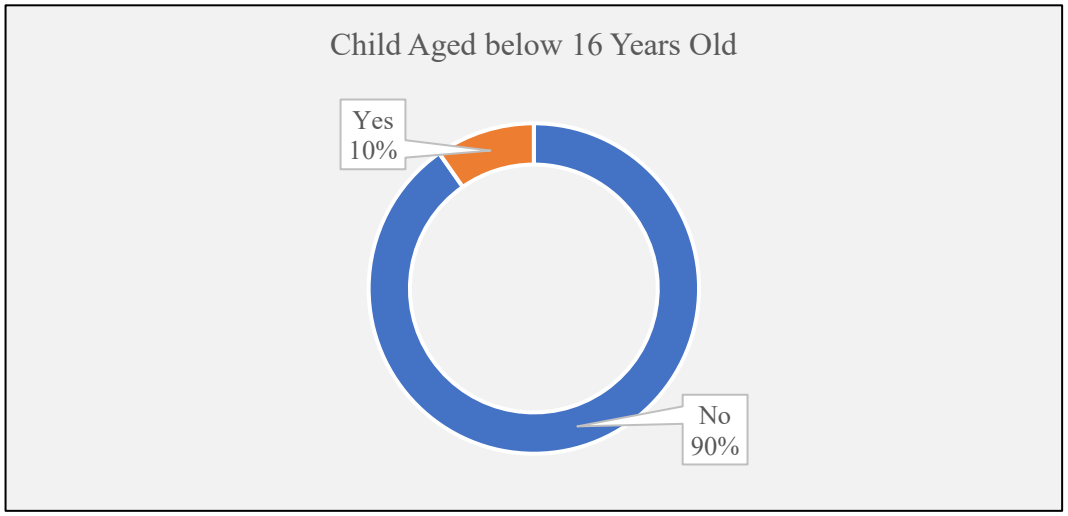


Source: Survey Questionnaire of this Research

Figure 4.3 shows that 39% of the respondents (97 Respondents) come from households of 3 to 4 persons, while 32% (79 Respondents) are from 5 to 6 person-households. Moving on, 8% of the respondents' (19 Respondents) households are 1 to 2 person-households and 7% are 7 to 10 person-households. The household size of 34 respondents were unknown, as their responses for this particular question were invalid due to the misunderstanding of the question.

4.1.1.4 Child Aged below 16 Years Old

Figure 4.4: Frequency Analysis – Child Aged below 16 Years Old

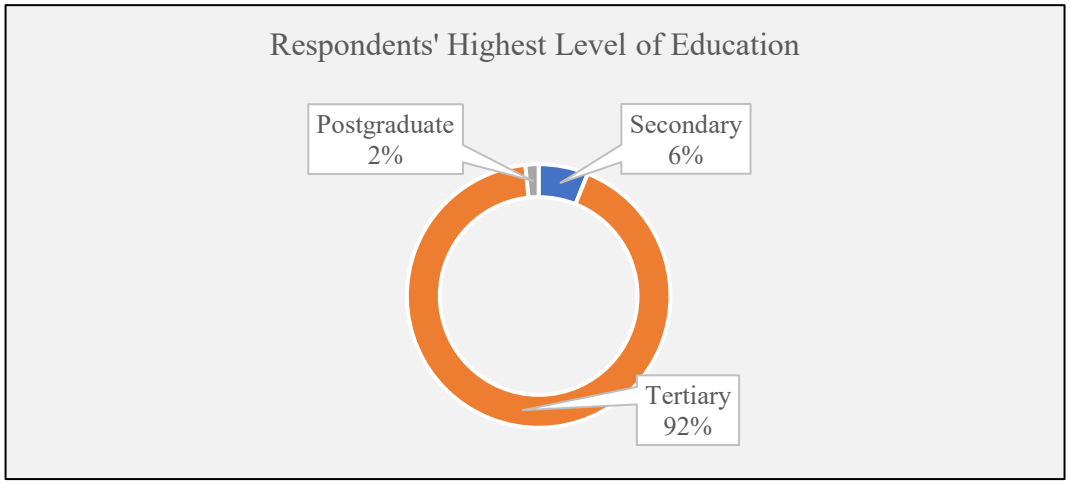


Source: Survey Questionnaire of this Research

One of the questions of the survey questionnaire was on whether the respondents have a child age under 16 years old, and the results are 90% of them (223 Respondents) do not while 10% of them (24 Respondents) do. This can be related to the fact that a majority of the respondents are aged between 21 years old and 30 years old.

4.1.1.5 Highest Level of Education

Figure 4.5: Frequency Analysis – Highest Level of Education

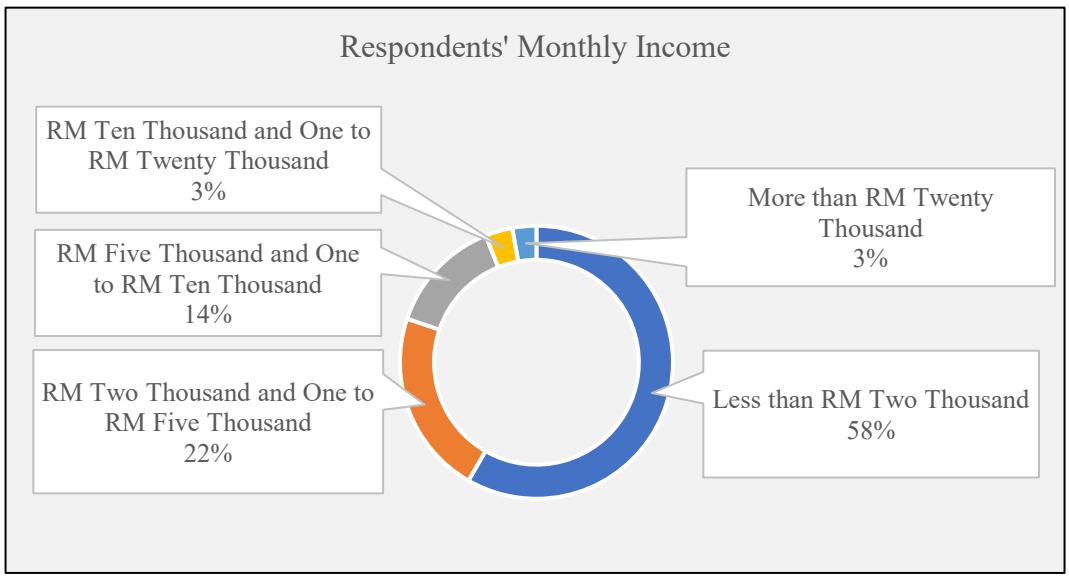


Source: Survey Questionnaire of this Research

As shown in Figure 4.5, the highest level of education of 228 respondents (92%) is tertiary education, which includes Diploma and Degree holders. In the meantime, 6% of the respondents' (15 Respondents) highest level of education is secondary education. Lastly, postgraduate education was selected as the highest level of education by 4 respondents, amounting to 2% of the respondents.

4.1.1.6 Monthly Income

Figure 4.6: Frequency Analysis – Monthly Income



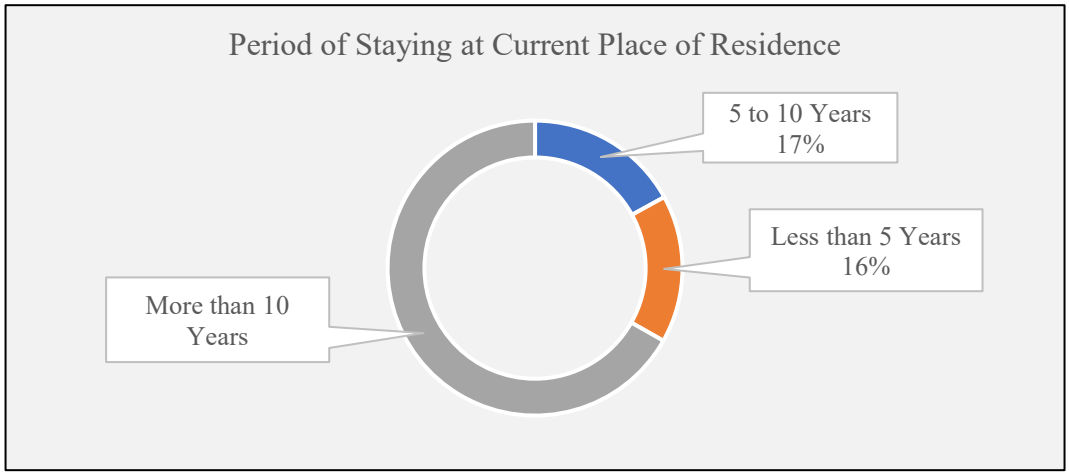
Source: Survey Questionnaire of this Research

Figure 4.6 above shows that 58% of the respondents (144 Respondents) have monthly incomes of less than RM2,000, followed by 22% of them (54 Respondents) that have monthly incomes between RM2,001 to RM5,000. Furthermore, 14% of the respondents (34 Respondents) earn monthly incomes of between RM5,001 to RM10,000. Subsequently, 8 respondents have monthly incomes between the range of RM10,001 to RM20,000 whereas 7 of them earn monthly incomes greater than RM20,000.

4.1.2 Background of Respondents in Relation to their Place of Residence

4.1.2.1 Period of Staying at Current Place of Residence

Figure 4.7: Period of Staying at Current Place of Residence

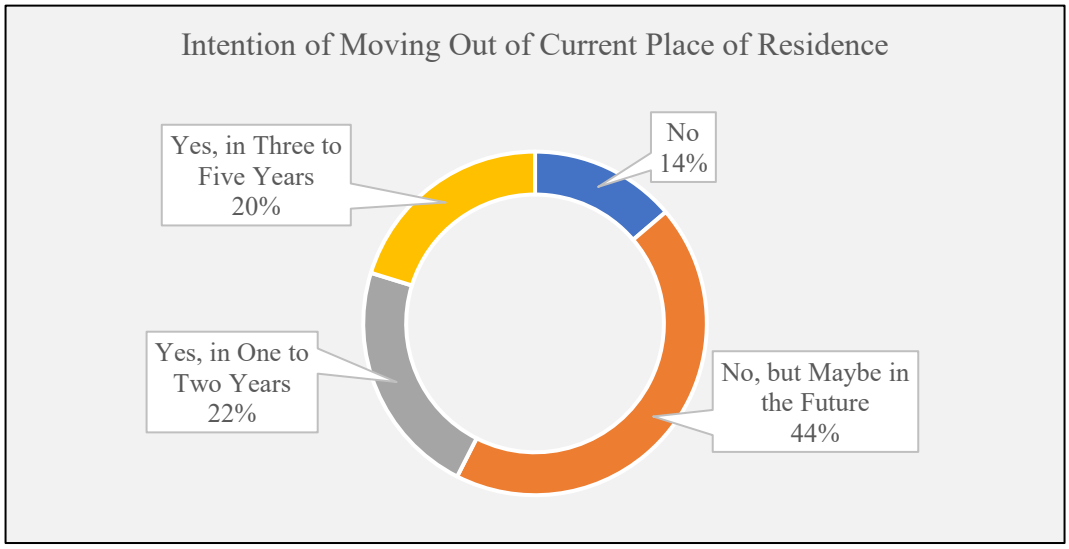


Source: Survey Questionnaire of this Research

As provided in Figure 4.7, 67% of the respondents (165 Respondents) have been residing in their current place of residence for more than 10 years while 17% of them (42 Respondents) have been staying at their current residence for 5 to 10 years. Nonetheless, 16% of the respondents (40 Respondents) have only been staying in their current place of residence for less than 5 years.

4.1.2.2 Intention of Moving Out of Current Place of Residence

Figure 4.8: Intention of Moving Out of Current Place of Residence

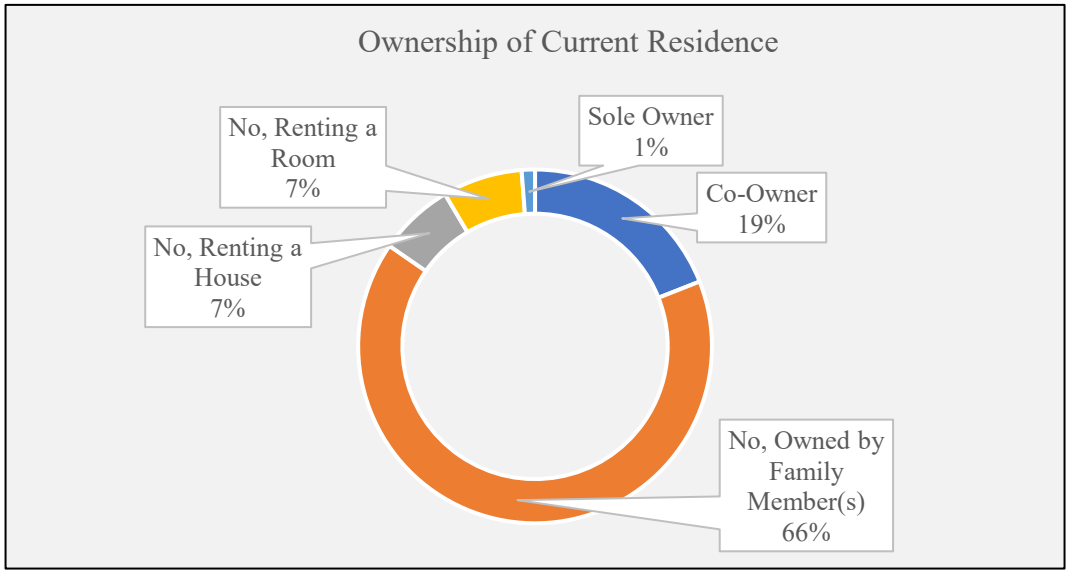


Source: Survey Questionnaire of this Research

108 respondents do not plan to move out of their current place of residence within a short period of time, but do not exclude the possibility of doing so in the future. In contrast, 22% (55 Respondents) and 20% of the respondents (50 Respondents) plan to move out in 1 to 2 years and 3 to 5 years respectively. Last but not least, 14% of the responses recorded no intention to move out at all.

4.1.2.3 Ownership of Current Place of Residence

Figure 4.9: Ownership of Current Place of Residence

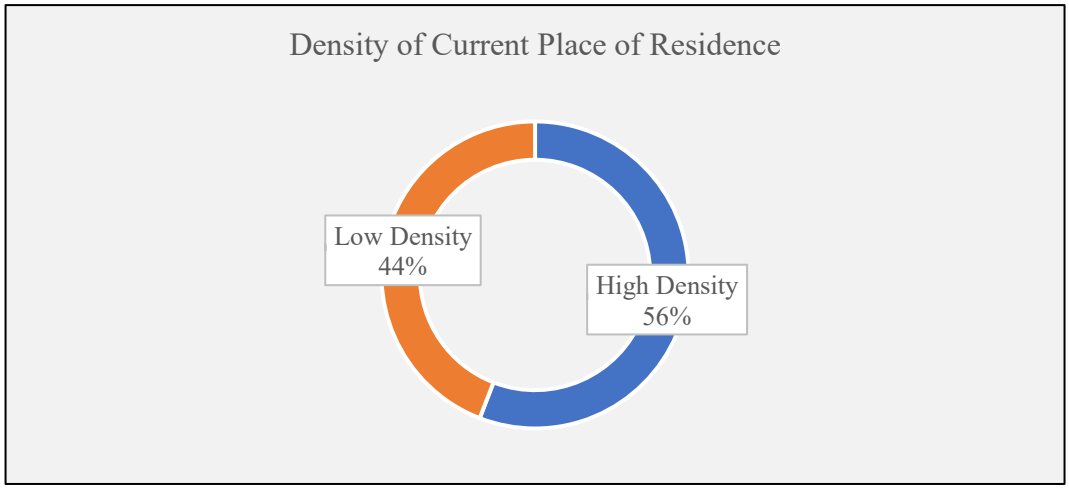


Source: Survey Questionnaire of this Research

Based on Figure 4.9, it is clear that most of the respondents (66%, 162 Respondents) do not own their current place of residence. On the other hand, 19% of the respondents (47 Respondents) are co-owners of their current place of residence. Nonetheless, 17 respondents are renting the entire house while 18 respondents are renting a room within their current place of residence, whereas merely 3 respondents are sole owners.

4.1.2.4 Density of Current Place of Residence

Figure 4.10: Density of Current Place of Residence

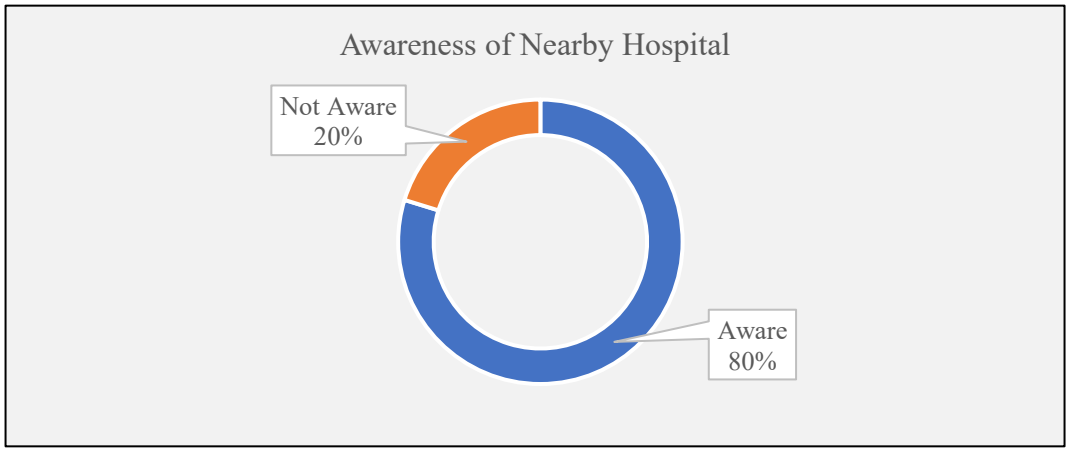


Source: Survey Questionnaire of this Research

With reference to Figure 4.10 above, 56% of the respondents (138 Respondents) are residing in high density places of residence while the remaining 44% of them (109 Respondents) reside in low density places of residence.

4.1.2.5 Awareness of Nearby Hospital

Figure 4.11: Awareness of Nearby Hospital

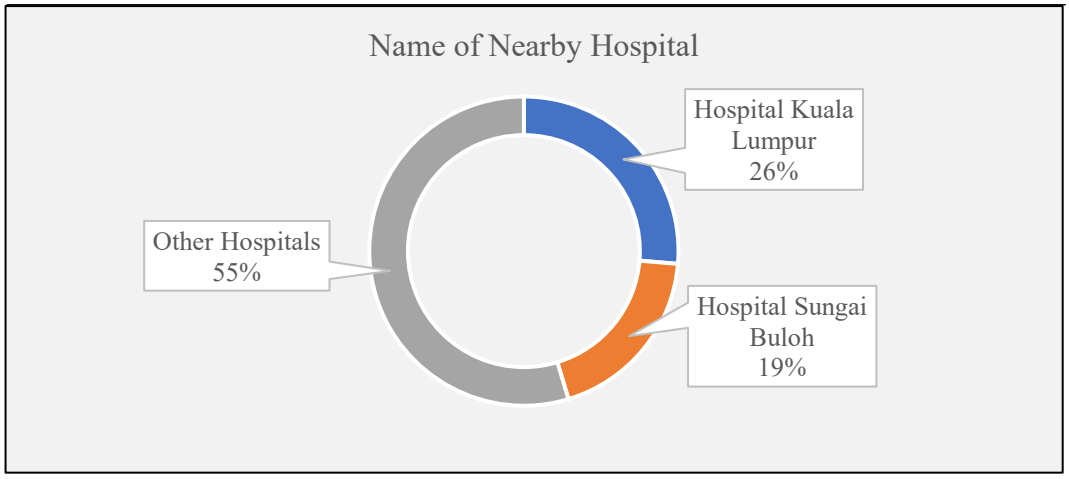


Source: Survey Questionnaire of this Research

Interestingly, 80% of the respondents (197 Respondents) were aware of the hospital located near their place of residence, and 20% of them (50 Respondents) were not.

4.1.2.6 Name of Nearby Hospital

Figure 4.12: Name of Nearby Hospital

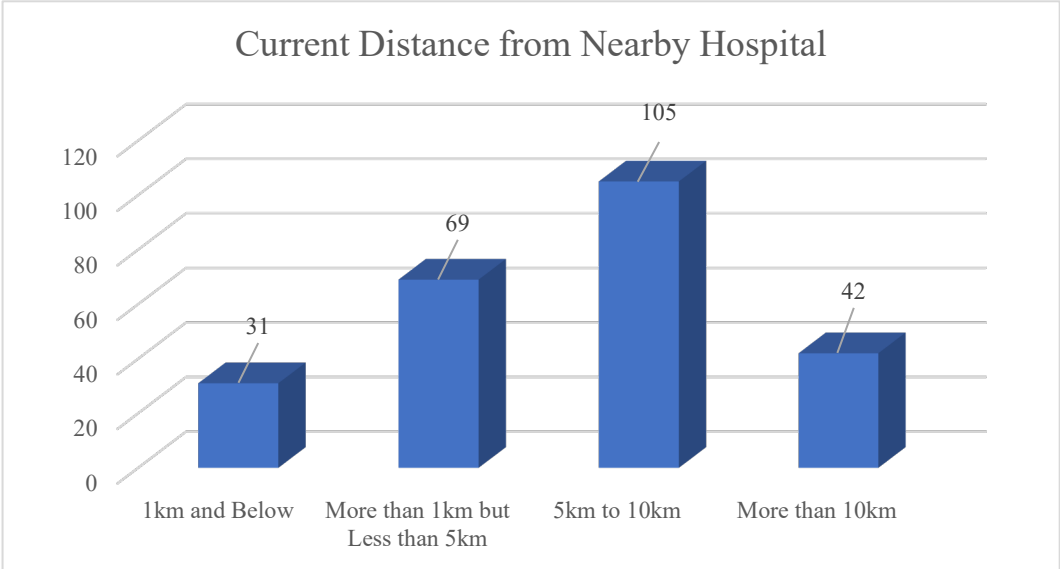


Source: Survey Questionnaire of this Research

Based on the responses collected, 26% of the respondents (65 Respondents) resided in close proximity to Hospital Kuala Lumpur while 19% of the respondents (47 Respondents) resided near Hospital Sungai Buloh. On the flip side, other hospitals were also recorded and amount for 55% of the responses, such as Hospital Kajang, Hospital Bukit Mertajam, Hospital Seberang Jaya and various other public and private hospitals.

4.1.2.7 Current Distance from the Nearby Hospital

Figure 4.13: Current Distance from Nearby Hospital



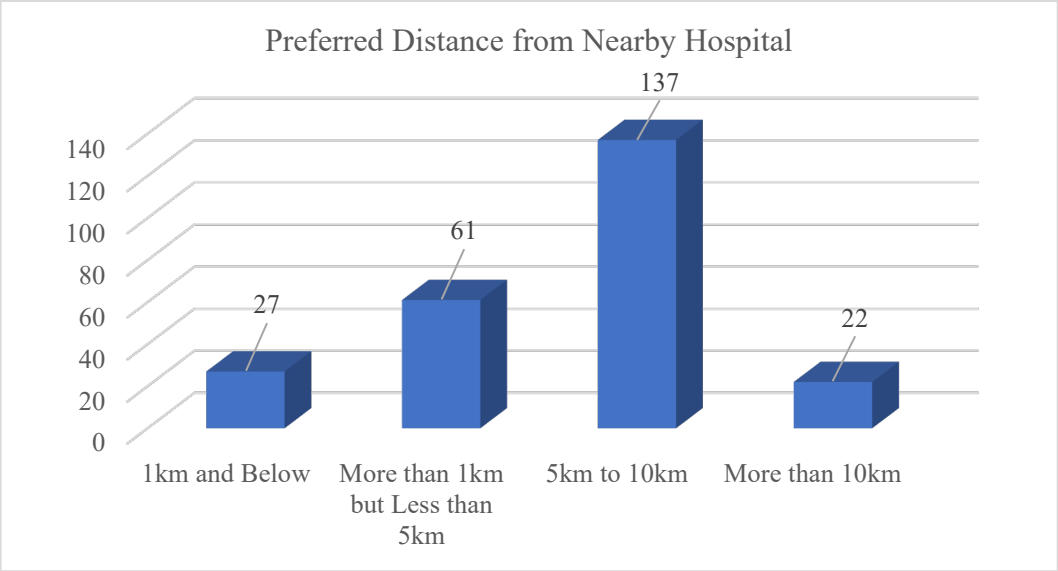
Source: Survey Questionnaire of this Research

Based on Figure 4.13 above, 31 respondents (13%) currently reside at less than 1 kilometre from the hospital near their places of residence, and 69 respondents (28%

of them stay in between 1 kilometre to 5 kilometres from the nearby hospital. Moreover, it was found that a huge portion of the respondents (105 Respondents) reside within 5 kilometres to 10 kilometres away from the nearby hospital. The place of residence of the remaining respondents (42 Respondents) are located at more than 10 kilometres from the nearby hospital.

4.1.2.8 Preferred Distance from Nearby Hospital

Figure 4.14: Preferred Distance from Nearby Hospital



Source: Survey Questionnaire of this Research

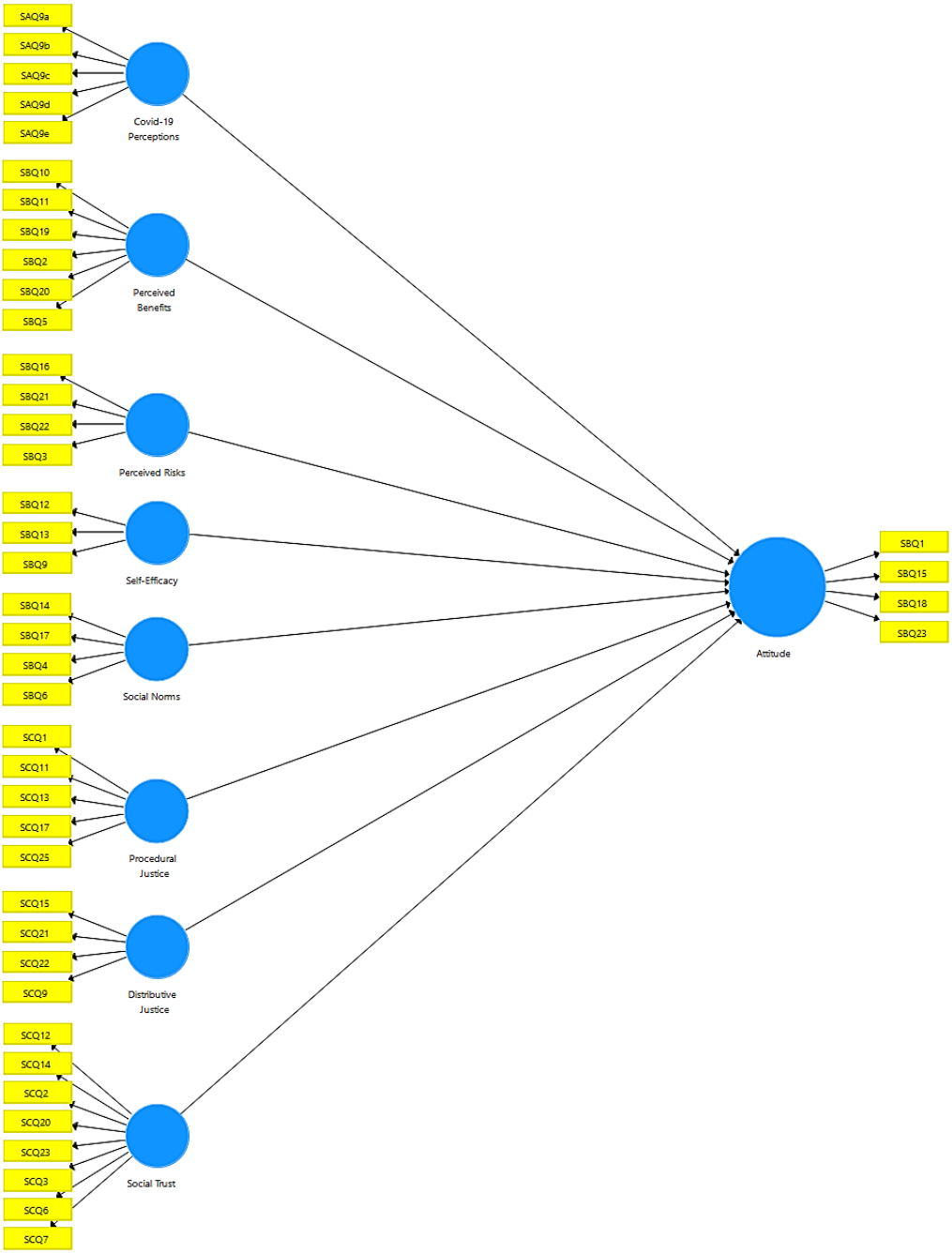
In comparison, the overall distribution of the preferred distance from a nearby hospital is largely similar to the respondents' current distance from a nearby hospital. A total of 27 of them preferred to reside at less than 1 kilometre from a nearby hospital while 61 preferred to reside in between 1 kilometre to 5 kilometres away. Simultaneously, a total of 137 respondents and 22 respondents respectively prefers staying at 5 to 10 kilometres and more than 10 kilometres away from a nearby hospital.

4.2 PLS-SEM Analysis

The PLS-SEM model for this research was analysed using the SmartPLS 3.0 software, in which two distinct models, namely a measurement model and the

structural equation model were analysed. The measurement model illustrates the relationship between the latent variables and their respective indicators while the structural equation model shows the relationship among different variables.

Figure 4.15: Structural Equation Model



4.2.1 Measurement Model Validity and Reliability Results

Table 4.1 provides the validity and reliability results of the measurement models while Table 4.2 illustrates the HTMT ratio of correlation results. In a nutshell, the measurement models in this research are valid and reliable based on the results obtained as well as the elaborations provided in the previous chapter.

Table 4.1: Measurement Model Validity and Reliability Results

Latent Variables	Items	Outer Loadings	Indicator Reliability	Composite Reliability	Average Variance Extracted (AVE)
Attitude	Att_1	0.650	0.423	0.889	0.671
	Att_2	0.863	0.745		
	Att_3	0.874	0.764		
	Att_4	0.867	0.752		
Covid-19 Perceptions	CP_1	0.709	0.503	0.874	0.582
	CP_2	0.761	0.579		
	CP_3	0.798	0.637		
	CP_4	0.862	0.743		
	CP_5	0.672	0.452		
Distributive Justice	DJ_1	0.836	0.699	0.833	0.557
	DJ_2	0.807	0.651		
	DJ_3	0.665	0.442		
	DJ_4	0.660	0.436		
Perceived Benefits	PB_1	0.819	0.671	0.882	0.557
	PB_2	0.813	0.661		
	PB_3	0.789	0.623		
	PB_4	0.712	0.507		
	PB_5	0.689	0.475		
	PB_6	0.638	0.407		
	PR_1	0.913	0.834	0.816	0.537

Perceived Risks	PR_2	0.753	0.567		
	PR_3	0.718	0.516		
	PR_4	0.482	0.232		
Procedural Justice	PJ_1	0.817	0.667	0.865	0.564
	PJ_2	0.772	0.596		
	PJ_3	0.769	0.591		
	PJ_4	0.726	0.527		
	PJ_5	0.660	0.436		
Self-Efficacy	SE_1	0.925	0.856	0.911	0.773
	SE_2	0.883	0.780		
	SE_3	0.828	0.686		
Social Norms	SN_1	0.868	0.753	0.847	0.592
	SN_2	0.860	0.740		
	SN_3	0.807	0.651		
	SN_4	0.473	0.224		
Social Trust	ST_1	0.835	0.697	0.917	0.581
	ST_2	0.806	0.650		
	ST_3	0.798	0.637		
	ST_4	0.787	0.619		
	ST_5	0.742	0.551		
	ST_6	0.726	0.527		
	ST_7	0.706	0.498		
	ST_8	0.683	0.466		

Table 4.2: Heterotrait-Monotrait (HTMT) Ratio of Correlations

Latent Variables	**Att**	**CP**	**DJ**	**PB**	**PR**	**PJ**	**SE**	**SN**	**ST**
Att									
CP	0.307								
DJ	0.687	0.466							
PB	0.854	0.381	0.681						
PR	0.196	0.169	0.117	0.196					

PJ	0.463	0.210	0.710	0.238	0.276				
SE	0.538	0.171	0.381	0.276	0.087	0.446			
SN	0.293	0.177	0.322	0.209	0.726	0.605	0.421		
ST	0.538	0.359	0.894	0.334	0.159	0.868	0.421	0.389	

Note: Att – Attitude; CP – COVID-19 Perceptions; PB – Perceived Benefits; PR – Perceived Risks; SE – Self-Efficacy; SN – Social Norms; PJ – Procedural Justice; DJ – Distributive Justice; ST – Social Trust.

4.2.2 Structural Model Validity and Reliability Analysis

4.2.2.1 Bootstrapping Procedure

In order to determine the significance of each structural model path, and subsequently identifying the significance of the hypotheses developed in the research, a bootstrapping procedure has been performed using 247 cases and 5,000 subsamples. The results of the bootstrapping procedure are outlined in Table 4.3, showing the path coefficient and path significance (T Statistics).

Table 4.3: Significance Testing Results of the Structural Model Path Coefficient

Path	Path Coefficient (β)	T Statistics
CP → Att	-0.024	0.614
PB → Att	0.597	10.425*
PR → Att	-0.267	2.612*
SE → Att	0.178	3.716*
SN → Att	0.144	2.396**
PJ → Att	0.137	2.167**
DJ → Att	0.019	0.287
ST → Att	0.073	0.960

Notes:

*P < 0.01; **P < 0.05

Att – Attitude; CP – COVID-19 Perceptions; PB – Perceived Benefits; PR – Perceived Risks; SE – Self-Efficacy; SN – Social Norms; PJ – Procedural Justice; DJ – Distributive Justice; ST – Social Trust.

4.2.3 Coefficient of Determination

Table 4.4 provides the Coefficient of Determination (R^2) value for the dependent variable of this research. As seen below, the R^2 value obtained shows that there is a significant amount of variation in the local attitude towards hospitals that can be explained by COVID-19 perceptions, perceived benefits, perceived risks, self-efficacy, social norms, distributive justice, procedural justice, and social trust.

Table 4.4: Coefficient of Determination (R^2)

Dependent Variable	R Square
Attitude	0.696

4.3 Discussion

Hospitals have always been categorized as semi-obnoxious public facilities, in which the public would love to have easy access to the healthcare and medical facility but would refrain from staying close to it due to the negative effects such as health risks and traffic congestion. After experiencing an unprecedented pandemic caused by the COVID-19 disease, could there be a shift in the locals' attitude towards the semi-obnoxious nature of hospitals? In order to answer this, a Social Cognitive Theory ("SCT") model has been developed to study the locals' attitude towards residing in close proximity to a hospital. The independent variables under the SCT model of this research include COVID-19 perceptions (CP), perceived benefits (PB), perceived risks (PR), distributive justice (DJ), procedural justice (PJ), self-efficacy (SE), social norms (SN) and social trust (ST) whereas the dependent variable is the attitude towards living near a hospital.

Starting off with the independent variable with the most significant impact towards local attitude, the perceived benefits (PB) by the locals positively influence their attitude by a highly significant 59.7% (**β** = 0.597; T= 10.425, P = 0.000 < 0.01). This supports our hypothesis (H3) that perceived benefits has a positive relationship with the locals' attitude towards a nearby hospital, as well as previous research such as Wu et al. (2014) and Arning et al. (2019). It was provided in their studies that perceived benefits positively influences the locals' attitude towards a nearby hospital. In simpler terms, the greater the locals perceive that they are obtaining benefits from a nearby hospital, the more positive they will feel about it. Therefore, it is clear that benefitting them with easier and more convenient access to a medical facility is sufficient to form a positive attitude of the locals.

In the meantime, another independent variable that has a similar impact towards local attitude is self-efficacy (SE), only at a lesser degree. As explained previously, self-efficacy is an individual's belief on his or her own ability to either avoid risks, control risks, have an impact or perform something. In terms of attitude, an individual's self-efficacy would be related to his or her confidence in avoiding or even controlling risks. This study has proven that it has a positive influence on local attitude regarding a nearby hospital (supportive of H5). 17.8% of the improvement in attitude could be promoted by the locals' self-efficacy (**β** = 0.178; T= 3.716; P = 0.000 < 0.01). This finding is parallel to our self-efficacy hypothesis and the findings by Wang et al. (2021a); Tumlison and Song (2019); & Rana and Dwivendi (2019), as they all proved that self-efficacy positively relates to the locals' attitude towards a public facility. In short, locals having greater self-efficacy will have greater confidence in dealing with the risks of staying in close proximity, thus promoting a better attitude towards the nearby hospital.

Furthermore, social norms (SN) as part of social influence have been inferred to have a significant positive impact on the attitude of locals towards a nearby hospital, supportive of our hypothesis (H6). The path coefficient of (SN → Att) was 0.144, showing a significance of P = 0.017 < 0.05 and a T statistic of 2.396. In words, we can say that social norms positively influence local attitude by 14.4%, which is constant with the findings of Van der Linden (2015), Renn (2010), and Swim et al. (2011). As we know that social influence is the influence on an individual's

thoughts, feelings and behaviours due to those of others or due to standards and beliefs practiced by most other individuals, we can infer that such influences have parallel relationships with the attitude towards nearby hospitals. Furthermore, a highly similar relationship is also observed with procedural justice (PJ), one of the elements of social environment (**β** = 0.137; T= 2.167; P = 0.030 < 0.05). Being part of social environment, procedural justice is the fairness in the procedures involved in introducing a social product. In this case, the policy development, decision-making, and land use planning procedures as well as the transparency and availability of information are found to have positive relationships with local attitude (H7). The more just these procedures are, the better the locals would feel about the nearby hospitals, as supported by Wolsink (2010); Komendantova and Battaglini (2016); Wu et al. (2014).

Contrarily yet parallel to our hypothesis (H4), perceived risk maintains a substantial negative relationship with local attitude (**β** = -0.267; T= 2.612; P = 0.009 < 0.01). Obviously, the greater the risks perceived by the locals, the worse the attitude they would have towards the nearby hospital. The findings in a number of articles including Wu et al. (2014); Arning et al. (2019); Arning et al. (2020); Boudet (2019); and Ismail et al. (2015) are parallel to this finding that perceived risks negatively relate to local attitude.

Nonetheless, COVID-19 perceptions (CP), distributive justice (DJ) and social trust (ST) were found to be insignificant in influencing local attitude towards nearby hospitals. The significance of each variable is respectively **β** = -0.024; T= 0.614; P = 0.539 > 0.05; **β** = 0.019; T= 0.287; P = 0.774 > 0.05; and **β** = 0.073; T= 0.960; P = 0.337 > 0.05. Despite being insignificant in influencing attitude, each finding should be interpreted as they do provide some useful insights as well. In terms of COVID-19 perceptions, they have an insignificant negative influence on local attitude, which is somewhat parallel to our hypothesis. It is actually apparent that the greater the locals' perceived risk of the COVID-19 disease in relation to a nearby hospital, the worse they would feel about the hospital. The concerns of infection, impact over their livelihood, work, surrounding environment, and overall risks are major reasons for that. It is interesting however, that merely an insignificant relationship was observed. Moreover, two other elements of social

environment, distributive justice and social trust both showed slight positive impact on the local attitude. Distributive justice in this case is the ethicality or rightfulness of distributing or locating a hospital that presents risks to the proximate locals yet benefits the entire society, whereas social trust is the trust or confidence that the locals have on the authorities such as the government or private operator of hospitals. Wang et al. (2021a) proved that better distributive justice improves local acceptance and attitude Liu et al. (2018) provided that social trust has a positive relationship with local attitude towards a nearby hospital. All in all, the findings on distributive justice and social trust were parallel to our hypotheses (H1, and H7) and previous studies, which are only hindered by their non-significance.

4.4 Conclusion

Conclusively, the demographical characteristics of the 247 respondents involved in this research were identified and elaborated. Afterwards, the SCT framework formulated prior to this chapter was researched and analysed using a PLS-SEM model through the SmartPLS 3.0 software. The composite reliability, convergent reliability using outer loadings, indicator reliability and AVE, as well as discriminant analysis utilizing the HTMT ratio of correlation were analysed in this chapter. Also, bootstrapping was also performed to analyse the significance of the structural model path coefficient and standard errors. The Coefficient of Determination (R^2) value of 0.696 proved that the local attitude towards nearby hospitals were substantially influenced by the independent variables of this study. This leads us to the significance of the independent variables, in which it was explained in this chapter that perceived benefits (PB), and self-efficacy (SE) have highly significant positive impacts on local attitude while perceived risks (PR) has highly significant negative impact. Nevertheless, procedural justice (PJ) and social norms (SN) have similar impact on local attitude, which is significantly positive. Lastly, COVID-19 perceptions (CP), distributive justice (DJ) and social trust (ST) were all not found to have significant influence over local attitude. The significance and relationships between all the independent variables and the local attitude will

be further explained in the next and final chapter, along with the implications of the study as well as limitations that can be overcome by future researchers.

Chapter 5: Discussion, Conclusion and Implications

5.0 Introduction

This chapter will include a further discussion of the major findings of this research, continuing from the discussions provided in the previous chapter. Nonetheless, implications as well as limitations observed from this study will also be explained. On top of that, recommendations directed towards future research will be provided as to overcome the said limitations.

5.1 Discussions of Major Findings

This subsection provides the relationships between the various independent variables and the dependent variable of this study. In general, the objectives of the study have been fulfilled.

5.1.1 Relationship between COVID-19 Perceptions and Local Attitude

In assessing the impact of COVID-19 perceptions on the attitudes of locals in relation to nearby hospitals, only an insignificantly negative relationship was found through this research. Although the results were proven to be insignificant, the negative relationship is parallel to the findings of Wong and Alias in 2020 which inferred that the increment in COVID-19 risk perceptions has induced fearful and negative attitude, especially when the risks are perceived as uncontrollable or extremely scary. Various other articles such as Mohd Hanafiah and Wan (2020) and Koh et al. (2020) also proved attitudinal and behavioural changes caused by COVID-19 perceptions.

Unfortunately, the relationship found in this study is far from significant, directing us to think about the underlying reason. Could locals have a better attitude towards hospitals due to the fear of not getting sufficient medical support in the situation where they get infected? Or could locals be fearful of medical facilities accepting COVID-19 patients? There may be a possibility in which the locals themselves are not sure what they feel about a nearby hospital as there is still a huge contradiction in their attitudes in relation to greater access and greater risk.

5.1.2 Relationship between Outcome Expectations and Local Attitude

The two elements of outcome expectations, including perceived benefits and perceived risks were both found to have significant impact on the attitude of locals when it comes to a semi-obnoxious facility. These findings fully support the three hypotheses developed under outcome expectations as perceived benefits positively affects local attitude, perceived risks negatively affect local attitude, concluding that outcome expectations have significant supremacy over local attitude. Other than being supported by Wu et al. (2014); Arning et al. (2019), Boudet (2019) as well as Ismail et al. (2015), Sundstrom et al. (1977) has provided that locals, when assessing controversial facilities, do not only ponder upon the downsides of the facilities like congestion, but they also evaluate the potential benefits such as economic growth. Hence, our research further concretes the fact that local attitude is influenced by the locals' perceived benefits and risks.

5.1.3 Relationship between Self-Efficacy and Local Attitude

Self-efficacy also influences local attitude in a significantly positive manner. Locals that are confident with their controllability of risks and ability to deal or even avoid the risks brought by a semi-obnoxious facility will generally have a stronger attitude towards such facility. In the case of hospitals, if someone living right beside a hospital believes that he or she can avoid the risks by bypassing the hospital instead of crossing the hospital as usual, the person may have a better attitude towards the hospital. Contrarily, if a person believes that anything done to avoid the risks will

be useless, the person will feel negative about staying within close range of a hospital. As explained by Wang et al. (2021), people with lower self-efficacy will generally have greater concern over the risks of controversial facilities, thus having a worse attitude towards them. Further supporting this relationship are Tumlison and Song (2019) as well as Rana and Dwivendi (2019).

5.1.4 Relationship between Social Influence and Local Attitude

Local attitude towards nearby hospitals is also positively influenced by social influence, specifically social norms. Van der Linden et al. (2015) provided that social norms are the expectations of the normal way people should act, feel or think about something. As the society generally views people practicing social norms as "normal" while people who do not as "not normal", the fear of standing out gets in the way of the behaviours and attitudes that are not parallel with social norms. As provided by Richards (2015), the society is used to applauding conservative actions and attitudes, those that are in line with social norms, and individuals like ourselves are guilty of complying with social norms even when they may not be correct. Thus, it is possible that if the general society, or a smaller part of the society in which an individual is in feels positive about a nearby hospital, the individual would conform with the social norm, vice versa. This is known as social influence, the influence of social groups towards the attitude and behaviour of a member.

5.1.5 Relationship between Social Environment and Local Attitude

Three elements of the social environment showed distinct results, in which procedural justice was proven to be positively correlated to local attitude, while distributive justice and social trust have positive, yet trivial influence over local attitude. Starting with procedural justice, it relates to the fairness of various procedures involved in introducing a social product to the public. If the locals feel that the procedures were not implemented justly, they will definitely have negative attitudes towards the said product being introduced especially when the injustice causes fear and serious hindrances. The studies done by Wu et al. (2014);

Komendantova and Battaglini (2016) are supportive, providing that the lack of procedural justice inspires objection, which is a negative attitude. They also stated that the absence of opportunity to voice out their concerns and opinions and the lack of transparency give rise to negative attitudes.

Concurrently, distributive justice may be a vaguer and more distant social environment element, as it concerns on the fairness of siting certain facilities that benefits the overall society but brings disadvantages to the most proximate locals. This includes the presence of scientific verifications of the siting process and fairness, which itself is already a highly subjective principle. Therefore, the vagueness of the distributive justice principle may be the underlying reason that only an unsubstantial relationship is observed. The vagueness issue with it is supported by an article by Cooley (2002).

Lastly, it is very interesting to find that social trust is found to be an insignificant factor of attitude changes as it has been supported by various research, including Wang et al. (2021a) that as the general public do not have the knowledge and competency to perform objective risk-benefit analysis of controversial facilities, they usually rely on the managing and operating authorities. In the case of hospitals, the competency of the government and private hospital operators are counted on by locals in determining their attitude as supported by Lu et al. (2014) and Ross et al. (2014). One possible reason for the insignificance is the lack of substitutes available for medical facilities. Even when the locals do not trust the public operator or private operator of the local hospital, do they really have a choice not to accept it? This is related to the non-substitutability and irreplaceable nature of hospitals that are generally viewed as public goods, as provided by Kling et al. (2004). It was mentioned in their article that non-substitutability influences Willingness-to-Accept (WTA), which is a form of attitude. Regardless, further research on this matter is highly required.

5.2 Implications of the Study

Based on this research, a number of factors that significantly influence the attitudes of locals in relation to staying in close proximity to a hospital have been identified and analysed. Authorities such as the Federal government, local government and related ministries as well as private industry players such as private hospital operators should take into account the influencing factors, in order to introduce hospitals into residential localities in a more effective and efficient way while reducing disapproval from the locals.

The major factor influencing local attitude in this study is the outcome expectations of the locals, which includes their perceived benefits and perceived risks. As provided previously, greater perceived benefits greatly improve attitude while greater perceived benefits worsen attitude. With the understanding of outcome expectations as potential objection rationales of locals, public and private providers and operators of hospitals should aim to provide sufficient benefits for the locals, to a level that justifies the risks faced by the same group of people. As an example, hospitals may assure that locals living within a 1 kilometre will receive emergency ambulance services at slightly discounted rates. This benefit could be perceived by locals as adequate to overcome the perceived risks. By putting greater emphasis on the delivery and communication of such benefits, hospitals, or other controversial public facilities can minimize the objection received from the locals.

Besides that, self-efficacy of the locals also positively affects their attitude towards nearby hospitals, which means that the greater the locals feel confident in handling the risks and downsides of the hospitals, the better their attitude would be. As mentioned in Bandura's article in 1994, there are initiatives that can be taken to improve the self-efficacy of a person such as providing self-efficacy-enhancing experiences or performing social persuasion which convinces a person that he or she is capable of making an impact or capable of avoiding risks. The finding that self-efficacy significantly impact local attitude raises an implication that the government should aim to improve the self-efficacy of the nearby locals in terms of risk avoidance techniques. For example, the government should educate the locals on the dos and don'ts of staying near a hospital and assure them that these recommendations effectively reduce their risks. In order to persuade them so, the

government can provide existing success cases of similar hospitals. Nonetheless, this applies to other types of controversial facilities as well.

Furthermore, as procedural justice is also significantly influential on the improvement of the attitudes of locals in relation to nearby hospitals, the government should ensure that the land-use planning, site selection, decision-making, public participation, and distribution of public facilities like hospitals are performed unbiasedly and transparently. As provided by Maguire and Lind (2003), procedural justice that allows the public to be represented in the procedures, considers the opinions of the public, and enforce fair and satisfactory procedures and outcomes will be viewed as procedurally fair. In terms of public facilities, the government should ensure that public participation is sufficient, and the public's voice is not only heard, but considered in the decision-making process. Post-operational procedures should also be fair, especially by ensuring the public's access to information.

5.3 Limitations of the Study

Despite meeting all the objectives of this research, a few limitations were observed that should be highlighted to avoid any misunderstandings. The first limitation observed is regarding the overall structural model of the research. As seen above, the structural path in the model directly links each independent variable with the dependent variable, without showing any possible mediating or moderating effects. Unlike some other public attitude studies (Rana & Dwivedi, 2015; Wang et al., 2021a), this research lacks the illustration of the mediating effects of variables such as self-efficacy and moderating effects that outcome expectations have on other variables. As provided by MacKinnon (2011), mediating variables and moderating variables are used when there are relationships or impacts among independent variables themselves prior to influencing the dependent variable. For instance, the effects that self-efficacy has on local attitude may be moderated by outcome expectations. However, this research has failed to take into account such relationships.

Besides that, the second limitation is regarding the overall scope of the study, precisely due to the age of a majority of the respondents as well as the sampling technique being implemented. As illustrated in Chapter 4, 81% of the respondents are aged between 21 years old and 30 years old, and merely 3% of them are aged at least 41 years old. This could cause the lack of identification of the viewpoints of those that are aged above 41 years old, in which they obviously have more experience than those aged below 41 years old. In the meantime, this has caused imbalances in the other demographics such as household size, monthly income, ownership of current residence and whether they have a child below 16 years old, in which they could influence their attitude towards the nearby hospitals. This limitation is also related to the choice of sampling technique, as this research has implemented convenience sampling due to COVID-19 concerns. Because of the choice of sampling technique, the responses collected have been highly biased as reflected in the overall respondents' age. Also, the convenience sampling technique has not allowed the focus on specific locations, hospitals or age groups. Thus, this limitation should be taken into consideration by future researchers.

5.4 Recommendations for Future Research

To overcome the first limitation of this study in which the structural paths only show direct relationships between the independent variables and dependent variable, without showing mediating and moderating effects, future research should aim to include such relationships in their structural models and study on the relationships.

On the other hand, future researchers may opt for other sampling techniques such as cluster sampling or stratified sampling that divides the population into distinct groups. Cluster sampling would allow researchers to focus on specific locations whereas stratified sampling allows researchers to select samples based on their characteristics. By using either one of these sampling techniques, future research may overcome the limitation faced in this research that the responses collected are biased. Specific emphasis on hospitals such as Hospital Kuala Lumpur or Hospital

Sungai Buloh can be done using cluster sampling whereas the biased respondents' age can be avoided using stratified sampling.

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APPENDICES

Appendix A: Questionnaire

Dear Respondents,

Wishing you a wonderful day. I am Ng Zhen Yu, a final year student pursuing Bachelor's Degree of Building and Property Management (Hons) in Universiti Tunku Abdul Rahman (UTAR). I am currently conducting a research project with the topic of "Living Beside a Hospital: Risk Perception of Residents in Close Proximity to Hospitals".

You are invited to participate in this research by filling up this questionnaire.

This survey aims to investigate the local residents' response towards the operation of a hospital within their residential neighborhood vicinity. To help us have a better understanding about your view and opinion in relation to the hospital operation within your vicinity, please take a few minutes (10-15 minutes) to complete and return this questionnaire.

Your cooperation and honest response is highly appreciated for the success of my research.

Your response will be kept confidential, and we will only share the compiled information from the many questionnaires we collected.

For any suggestions or inquires related to this survey, please contact Ng Zhen Yu at ngzhenyu00@1utar.my or +60 11-1301 4514.

PERSONAL DATA PROTECTION NOTICE

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

1.Personal data refers to any information which may directly or indirectly identify a person which could include sensitive personal data and expression of opinion.
Among others it includes:
a) Name
b) Identity card
c) Place of Birth
d) Address
e) Education History
f) Employment History
g) Medical History
h) Blood type
i) Race

j) Religion
k) Photo
l) Personal Information and Associated Research Data

2. The purposes for which your personal data may be used are inclusive but not limited to:
a) For assessment of any application to UTAR
b) For processing any benefits and services
c) For communication purposes
d) For advertorial and news
e) For general administration and record purposes
f) For enhancing the value of education
g) For educational and related purposes consequential to UTAR
h) For replying any responds to complaints and enquiries
i) For the purpose of our corporate governance
j) For the purposes of conducting research / collaboration

3. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

4. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

5. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:
6. By submitting or providing your personal data to UTAR, you had consented and agreed for your personal data to be used in accordance to the terms and conditions in the Notice and our relevant policy.

7. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

8. You may access and update your personal data by writing to us at: ngzhenyu00@1utar.my

Acknowledgement of Notice

☐	I have been notified and I hereby understand, consent to, and agree per UTAR's notice above.
☐	I disagree, my personal data will not be processed.

I hereby consent on my voluntary participation in this survey which will be conducted anonymously. (As proposed accordingly by Personal Data Protection Statement - UTAR)

☐	Yes - proceed to the questionnaire.
☐	No - thank you for your time.

Section A: Please tell us more about your current habitat characteristic

1. Since when have you started to stay in this neighbourhood (eg. year 1999, 2002, etc)? _____

2. Do you own the house that you are currently staying in?

☐	Yes. I am the sole owner of the house that I am currently staying in.
☐	Yes. I am a co-owner of the house that I am currently staying in.
☐	No. It is owned by my family member(s) (wife/husband, parent(s), sibling(s), etc).
☐	No. I am renting the house.
☐	No. I am renting a room within the house.

3. Do you consider your neighbourhood as a low-density or high-density neighbourhood?

☐	Low density
☐	High density

4. Will you move to other places within the following time period?

☐	Yes, I plan to move out within 1-2 years' time.
☐	Yes, I plan to move out within 3-5 years' time.
☐	No, I wouldn't move out within a short period of time, but, maybe someday in future.
☐	No, I don't have the intention to move out.

5. Are you aware that there is a hospital near your place of residence?

☐	Yes, I am aware of it.
☐	No, I am not aware of it.

6. Which of the following is the hospital near your place of residence?

☐	Hospital Kuala Lumpur

☐	Hospital Sungai Buloh
☐	None of the above. Please provide the hospital's name (E.g.: Hospital Kajang): _____

7. Based on your estimation, what is the distance between your place of residence and the nearby hospital?

_____ km

8. In your opinion, what is the preferred distance between your place of residence and the nearby hospital?

_____ km

9. In general,	Strongly Disagree						Strongly Agree
a) I believe that COVID-19 is a very deadly disease.	1	2	3	4	5	6	7
b) I am worried about the possibility that my loved ones and I would get sick with COVID-19.	1	2	3	4	5	6	7
c) I am worried about spreading COVID-19 to others.	1	2	3	4	5	6	7
d) I am worried about the impact of COVID-19 on my work, livelihood and the economy.	1	2	3	4	5	6	7
e) I can reduce my risk of getting COVID-19 by avoiding crowded public areas, keeping my hands clean, and not touching my face.	1	2	3	4	5	6	7
f) I think my current living location is seriously affected by COVID-19.	1	2	3	4	5	6	7
g) I think my current living location is directly affected by COVID-19 due to the hospital nearby.	1	2	3	4	5	6	7
h) I have felt dysfunctional anxiety during the COVID-19 pandemic due to the distance of my place of residence from a hospital.	1	2	3	4	5	6	7
i) I have implemented coping strategies during the COVID-19 pandemic due to the distance of my place of residence from a hospital.	1	2	3	4	5	6	7
j) I am concerned over the patients who seek medical treatment at the hospital.	1	2	3	4	5	6	7
k) Patients who seek medical treatment are those with chronic diseases.	1	2	3	4	5	6	7
l) Patients who seek medical treatment are affected with communicable diseases.	1	2	3	4	5	6	7
m) The spread of COVID-19 in my neighborhood is due to the patients who received treatment at the hospital nearby.	1	2	3	4	5	6	7

n)	I am exposed to potential diseases that may be spread by patients who receive treatment at the hospital nearby.	1	2	3	4	5	6	7

Section B: The followings are related to the operation of hospital at your neigbourhood. Kindly inform us your concern and opinion on the followings.

		Strongly Disagree →						Strongly Agree
1.	I am satisfied with the hospital near my place of residence.	1	2	3	4	5	6	7
2.	A hospital near my place of residence is necessary for my personal needs.	1	2	3	4	5	6	7
3.	There is a strong fear (dread risk) towards the hospital near my place of residence.	1	2	3	4	5	6	7
4.	My view towards the hospital near my place of residence is based on the suggestions of others.	1	2	3	4	5	6	7
5.	A hospital near my place of residence will bring great economic benefits to the society.	1	2	3	4	5	6	7
6.	Most people who are important to me think that I should take precautionary actions against the hospital near my place of residence.	1	2	3	4	5	6	7
7.	In general, I think it is safe to have a hospital near my place of residence.	1	2	3	4	5	6	7
8.	When something bad happens to the hospital near my place of residence, the impact will be fatal.	1	2	3	4	5	6	7
9.	I believe that I have the ability to avoid the risks of living near a hospital.	1	2	3	4	5	6	7
10.	I think that the hospital near my place of residence is important to me.	1	2	3	4	5	6	7
11.	I believe that the hospital near my place of residence will increase the value of my property.	1	2	3	4	5	6	7
12.	I am confident that I can avoid the risks of living near a hospital.	1	2	3	4	5	6	7
13.	I have the control over the risks associated with living near a hospital.	1	2	3	4	5	6	7
14.	My view towards the hospital near my place of residence follows the views of others.	1	2	3	4	5	6	7
15.	I feel calm towards the hospital near my place of residence.	1	2	3	4	5	6	7
16.	The surrounding environment will be negatively affected by the hospital near my place of residence.	1	2	3	4	5	6	7

17. My view towards the hospital near my place of residence is influenced by how my friends/relatives view it.	1	2	3	4	5	6	7
18. I feel positive about having a hospital near my place of residence.	1	2	3	4	5	6	7
19. The hospital near my place of residence is contributing to the social needs.	1	2	3	4	5	6	7
20. I think the hospital near my place of residence will benefit the future generations.	1	2	3	4	5	6	7
21. The operation of the hospital near my place of residence is the cause to serious traffic congestion in this area.	1	2	3	4	5	6	7
22. My safety is negatively affected by the hospital near my place of residence.	1	2	3	4	5	6	7
23. I feel hopeful towards the hospital near my place of residence.	1	2	3	4	5	6	7

Section C: The following is related to your trust on stakeholders involved in hospital operation. Kindly inform your agreement on the following.

	Strongly Disagree → Strongly Agree						
1. I consider it fair when the wishes of the locals are not taken into consideration in the government's decision-making process.	1	2	3	4	5	6	7
2. I believe in the government's ability to assess risks and benefits.	1	2	3	4	5	6	7
3. The medical/healthcare policy of the government is trustworthy.	1	2	3	4	5	6	7
4. There is a fair procedure and communication with the public in the siting process of hospitals.	1	2	3	4	5	6	7
5. Complete information about the hospital near my place of residence is accessible.	1	2	3	4	5	6	7
6. The hospital near my place of residence is efficient.	1	2	3	4	5	6	7
7. The staff operating the hospital near my place of residence are competent.	1	2	3	4	5	6	7
8. I believe the public's interest will be taken into consideration when the government makes decisions.	1	2	3	4	5	6	7
9. I think that the benefits of the hospital near my place of residence are fair to the public.	1	2	3	4	5	6	7
10. I trust that companies in the private sector have the necessary expertise to successfully build secure hospital facilities.	1	2	3	4	5	6	7

11. I consider it fair when selecting a region to build a hospital that benefits the whole society but could bring negative effects to the locals.	1	2	3	4	5	6	7
12. The government has the ability to deal with accidents that occur in hospitals.	1	2	3	4	5	6	7
13. I think that the public's interest will be taken into account in the government's decision-making procedure.	1	2	3	4	5	6	7
14. I believe that the government will guard the interests of the local public and the environment.	1	2	3	4	5	6	7
15. I think that the site selection and construction of the hospital near my place of residence were conducted in accordance with scientific verifications.	1	2	3	4	5	6	7
16. I trust companies in the private sector in ensuring that safe hospital facilities are built.	1	2	3	4	5	6	7
17. I consider it fair when there is a lack of public participation in the decision-making process.	1	2	3	4	5	6	7
18. The hospital near my place of residence is safe.	1	2	3	4	5	6	7
19. I trust companies in the private sector in operating their hospital systems safely.	1	2	3	4	5	6	7
20. I trust the government or the responsible state authorities in adequately considering the needs of local residents.	1	2	3	4	5	6	7
21. I think that the risks of the hospital near my place of residence are fair to the public.	1	2	3	4	5	6	7
22. Once the hospital near my place of residence is operational, we will all benefit from greater access to healthcare support.	1	2	3	4	5	6	7
23. I believe in the government's ability to make fair/responsible/optimal decisions.	1	2	3	4	5	6	7
24. The local government openly provides the public with information about hospitals.	1	2	3	4	5	6	7
25. Decision-making about the hospital near my place of residence has involved opportunities for the locals to provide their opinions.	1	2	3	4	5	6	7

Section D: Kindly tell us about your background. Your information will be kept confidential, and no details will be linked to you.

1. Gender: Male / Female

2. Age: _____

3. Household Size: _____

4. Do you have a child that is currently aged below 16? YES / NO

5. Highest Level of Education: _____

6. Monthly Income:

	Less than RM2,000
	RM2,001 – RM5,000
	RM5,001 – RM10,000
	RM10,001 – RM20,000
	More than RM20,000