



UNIVERSITI PUTRA MALAYSIA

***FACTORS ASSOCIATED WITH ATTITUDE TOWARDS THE ELDERLY
AMONG MEDICAL AND NURSING STUDENTS IN A MALAYSIAN
PUBLIC UNIVERSITY***

PANMIAL PRISCILLA DAMULAK

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UNIVERSITY**

By

PANMIAL PRISCILLA DAMULAK

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in
Fulfilment of the Requirements for the Degree of Master of Science**

January 2016

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DEDICATION

This thesis is dedicated to Barrister Victor Denlong Damulak, Dr. Jacob Ambrose Dawam, Barrister Jellat Jimmy Dieldye and Sandra Diyesun Garba, who never made it to old age. Your memories will last for centuries, you live on.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in
fulfilment of the requirement for the Degree of Master of Science

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PANMIAL PRISCILLA DAMULAK

January 2016

Chair : Halimatus Sakdiah Minhat, DrPH
Faculty : Medicine and Health Sciences

Introduction: The improvement in healthcare services and life expectancy, and also decrease in fertility rate, leads to an exponential increase in elderly population. The attitude of healthcare workers has to change with this increase as they will be encountering more aged clients in future. Research has shown that health care workers and undergraduate health care students have negatively preconceived ideas about the elderly leading to unfavourable attitude towards them.

Aims and objectives: To determine the factors associated with attitude towards the elderly among Medical and Nursing students in Universiti Putra Malaysia.

Method: A cross-sectional study was carried out using proportional stratified sampling, involving 456 medical students and 63 nursing students. The selection of the respondents was done by simple random sampling method using guided self-administered questionnaire distributed to year 1 to year 5 medical students and year 1 to year 3 nursing students from the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia. The questionnaire was pre-tested and validated prior to its use and consisted of 6 sections; socio-demographic characteristics, modified Kogan's Attitude Towards Old People Scale (ATOP), modified Facts on Ageing Quiz 2 (FAQ2), modified filial responsibility questionnaire, experience of living with elderly questions as well as questions on exposure to geriatric module. Three level of analyses were conducted which are descriptive analysis, chi-square and logistic regression. The significance level was set at 0.05.

Results: A total of 519 respondents were involved in the study with 91.4% response rate. It was observed that 52.0% of the respondents had negative attitude towards the elderly, 70.3% had good knowledge of ageing, only 29.7% were currently living with the elderly. Meanwhile 74.0% have ever lived with

the elderly, 53.0% had low perceived filial responsibility, and 54.1% had no exposure to geriatric module. There were significant associations between attitude towards elderly people and year of study ($X^2=12.699$, $p= 0.013$), and also perceived filial responsibility $X^2 =44.599$, $p = 0.001$). However, only perceived filial responsibility was the significant predicting factor for attitude towards the elderly (AOR=2.957, $p = 0.001$, 95% CI=1.999-4.372), in which those with high perceived filial responsibility had 3 times higher odds of having positive attitude towards the elderly than those who had low perceived filial responsibility. However, the model only explains 12.4% of the variation in positive attitude towards the elderly (Nagelkerke's $R^2 = 0.124$).

Conclusion: The findings of the study revealed that slightly more than half of the medical and nursing students in Universiti Putra Malaysia have negative attitude towards the elderly and perceived filial responsibility is the only predictor of attitude towards the elderly. In view of the upsurge in elderly population and an important role play by the healthcare workers in the care of elderly people, it is suggested that the importance of filial responsibility be more emphasized and embedded in the geriatric curriculum of medical and nursing students at every stage of their training.

Keywords: attitude, knowledge of ageing, perceived filial responsibility, exposure to geriatric module, elderly

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Master Sains

**FAKTOR BERKAITAN DENGAN SIKAP TERHADAP ORANG TUA DALAM
KALANGAN PELAJAR PERUBATAN DAN KEJURURAWATAN DI
UNIVERSITI AWAM DI MALAYSIA**

Oleh

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Pengenalan: Akibat penambahbaikan dalam perkhidmatan kesihatan dan jangka hayat dan juga penurunan kadar fertiliti, telah menyebabkan peningkatan dalam populasi orang tua. Sikap pekerja kesihatan harus berubah selaras dengan peningkatan eksponensial kerana mereka akan berurusan dengan lebih ramai pesakit tua pada masa hadapan. Kajian telah menunjukkan bahawa pekerja kesihatan, dan pelajar kesihatan mempunyai idea pratanggap yang negatif tentang orang tua hingga menyebabkan sikap yang tidak baik terhadap orang tua.

Objektif: Untuk menentukan faktor yang berkaitan dengan sikap terhadap orang tua dalam kalangan pelajar perubatan dan jurusan kejururawatan di Universiti Putra Malaysia.

Kaedah Kajian: Kajian keratan rentas telah dijalankan dengan menggunakan persampelan strata berkadaran, melibatkan 456 pelajar jurusan perubatan dan 63 pelajar jurusan kejururawatan. Kemudian, data pemilihan responden adalah menggunakan kaedah persampelan rawak mudah, iaitu menggunakan soal selidik terarah yang diedarkan kepada pelajar jurusan perubatan tahun 1 hingga tahun 5 dan pelajar jurusan kejururawatan tahun 1 hingga tahun 3 Fakulti Perubatan dan Sains Kesihatan, Universiti Putra Malaysia. Di samping itu, soalan soal selidik telah di jalankan pra ujian dan disahkan sebelum kajian dijalankan dan mengandungi mengandungi ciri-ciri sosiodemografi, Skala Sikap Kogan terhadap Orang Tua yang diubah suai (ATOP), Fakta tentang Kuiz 2 Penuaan (FAQ2) yang diubah suai, soal selidik tanggungjawab filial yang diubah suai, pengalaman tinggal dengan orang tua yang berkenaan, di samping soalan tentang pendedahan terhadap modul geriatrik. ATOP diukur berdasarkan skala likert 1-5, iaitu “sangat tidak setuju” (0), “tidak setuju” (1), “tidak pasti” (2), “setuju” (3), “sangat setuju” (4), manakala FAQ2 diukur berdasarkan skala likert 1-3, iaitu “(0)-Tidak, (1) –Ya, (2)- Saya tidak tahu; tanggungjawab filial pula diukur berdasarkan skala likert 1-5, iaitu antara “sangat tidak setuju” (0), “tidak setuju” (1), “tidak pasti” (2), “setuju” (3), sangat setuju” (4), manakala

soalan tentang pengalaman tinggal dengan orang tua dan pendedahan pada modul geriatrik diukur menggunakan opsyen “Ya” atau “Tidak”. Tiga tahap analisis telah dijalankan, iaitu analisis deskriptif, khi kuasa dua dan regresi logistik. Tahap signifikan yang telah ditetapkan adalah pada 0.05.

Hasil kajian : Sebanyak 519 responden terlibat dalam kajian ini dengan 91.4% kadar respon. Kajian ini mendapati bahawa 52.0% responden mempunyai sikap yang negatif terhadap orang tua, pengetahuan yang baik tentang penuaan, iaitu (74.0%). 70.3% pada ketika ini tinggal dengan orang tua, manakala 74.0% pernah tinggal dengan orang tua, 53.0% mempunyai tanggungjawab filial tanggapan yang rendah, dan tidak mempunyai pendedahan pada modul geriatrik 281 (54.1%). Terdapat hubungan yang signifikan antara sikap terhadap orang tua dan tahun pengajian ($X^2=12.699$, $p = 0.013$), dan juga tanggungjawab filial tanggapan ($X^2=44.599$, $p = 0.001$). Walau bagaimanapun, hanya tanggungjawab filial tanggapan merupakan faktor ramalan yang signifikan bagi sikap terhadap orang tua (AOR= 2.957, $p = 0.001$, 95% CI= 1.999-4.372), responden yang mempunyai tanggungjawab filial tanggapan yang tinggi adalah tiga kali lebih tinggi mempunyai sikap positif terhadap orang tua berbanding dengan mereka yang mempunyai tanggungjawab filial tanggapan yang rendah. Walau bagaimanapun, model tersebut hanya menerangkan lebih kurang 12.5% variasi dari segi sikap positif terhadap orang tua sebagaimana yang diterangkan oleh model (Nagelkerke $R^2 = 0.124$)

Kesimpulan: Hasil kajian ini menunjukkan bahawa lebih daripada separuh pelajar perubatan dan bidang kejurawatan kesihatan di Universiti Putra Malaysia mempunyai sikap yang negatif terhadap orang tua dan tanggungjawab filial tanggapan merupakan prediktor utama bagi mengukur sikap terhadap orang tua. Oleh sebab itu, akibat kenaikan populasi orang tua yang mendadak, dan peranan penting yang dimainkan oleh pekerja kesihatan dalam penjagaan orang tua, kajian ini mencadangkan supaya tanggungjawab filial ini diberikan penekanan yang lebih dan harus diserapkan dalam kurikulum geriatrik bagi pelajar jurusan perubatan dan kejurawatan pada setiap tahap latihan mereka.

Kata kunci: sikap, pengetahuan tentang penuaan, tanggungjawab filial tanggapan, pendedahan pada geriatrik modul, orang tua

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

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LIST OF ABBREVIATIONS

%	percentage
<	Less than
>	Greater than
\geq	Greater than or equal to
\leq	Less than or equal to
ATOP	Attitude towards old people
ASD	Ageing Semantic Differential
CI	Confidence interval
DESA	Department of Economic and Social Affairs
Df	Degree of freedom
IQR	Inter-quartile range
KOPS	Kogan old people scale
N	Total number
n	Frequency
OR	Odds ratio
UN	United Nations
UPM	Universiti Putra Malaysia
χ^2	Chisquare
WHO	World Health Organisation

CHAPTER 1

INTRODUCTION

1.1 Background

As the world is trending towards an ageing population due to demographic transition, Malaysia is not an exception to this growing concern (Ambigga, Ramli, Suthahar, Tauhid, Clearihan, & Browning, 2011). Its rapid socio-economic expansion over the past two decades, coupled with longer life expectancy as a result of improvements in health care and social services, have greatly contributed to the rise in its elderly population (Husna, Robaiyah & Tanti, 2009; Samad & Mansor, 2012). People aged 60 and over, numbered around 600 million worldwide in 2000, and these figures are expected to reach 1.2 billion by 2025 and 2 billion by 2050. Of these, about two thirds currently live in the developing world, and by 2025 it is estimated that this figure will rise to 75% (WHO, 2005; Alsenany, 2009). In Malaysia, the indicators of the 2010 census submit a transition of age structure suggestive of ageing population. The proportion of the population of Malaysia below the age of fifteen years decreased from 33.3% in the year 2000 to 27.6% in 2010 meanwhile, the population of those aged 65 years and above rose to 5.1% from 3.9% (Department of statistics Malaysia 2010). This increase in older population has considerable implications both for older people themselves and for services generally, as this will lead to changing demands on health care systems in both developing and developed countries (Alsenany, 2009). The ageing population has a direct effect on health care systems as it is presented with higher incidence of chronic diseases that often require long-term care (Lambrinou, 2009). The upsurge of older population in the society has great impact on aspects of social life, health and social security, education and environmental concerns, employment and family life, cultural activities and legal areas (Unalan, Soyuer & Elmali, 2012). Therefore, it is crucial that all healthcare providers develop their knowledge, attitudes and skills relating to geriatrics as they tend to encounter elderly patients more frequently (Wang et al, 2009). In Malaysia, it has been reported that there is a privation of geriatricians who can bolster clinical practice as well as train upcoming health care professionals (Poi, Forsyth & Chan, 2004).

There have been a lot of researches carried out investigating the attitude towards the elderly among health care related students all over the world in response to the emerging 'ageing population' and demographic transition (Hweidi and Al-Obeisat, 2006; Lambrinou, Sourtzi, Kalokerinou & Lemonidou, 2009). It is important to note that the medical and nursing students will become the future doctors and nurses who will be mainly dealing with the health care of the elderly population. Hence, knowing their attitude towards the elderly is necessary, in order to prepare them for the various health implications and social problems related to the care of the elderly population. Several studies on attitude towards the elderly among healthcare related students have been carried out and are reported to be either positive or negative. A study among first year medical students in Singapore revealed positive attitude towards the

elderly (Chua et al, 2008). In Turkey, medical students in years one, four, and six opined that education changed their knowledge, but their own experience had more effect on attitude (Sheikh, Mathew, Rafique, Suraweera, & Khan, 2013).

Findings of previous studies by other researchers in western countries concerning knowledge of ageing and attitudes toward the older people have been worrying and alarming (Soderhamn et al., 2001; Alsenany, 2009). It was pointed out that student nurses have developed stereotypes and misconceptions about older people and thereby exhibiting minimal interest in working at nursing homes (Alsenany, 2009). Similarly, a study in Miami, Florida revealed that medical students had negative misconceptions about the elderly until they were exposed to a geriatric course to improve their knowledge base (Zuilen, Rubert, Silverman, Lewis, 2001).

Attitudes are dislikes and likes and feelings for and/or against something or someone. They are important because they determine the response of a person or people towards something or somebody. All attitudes include beliefs, but not all beliefs are attitudes. When specific attitudes are organized into a tiered structure, they comprise value systems (Serem, 2011). In this respect, the attitudes towards the elderly by the students determine the way they value them and hence how they relate to them. Once underlying factors causing negative attitudes towards something or somebody are disinterred, addressed or aloof, the negative attitude is most likely changed to positive attitude (Serem, 2011). Several factors such as culture, age, gender, education, experience and previous relationships with older people, have been studied and said to influence attitudes toward older people (Hweidi and Al-Obeisat, 2006; Lambrinou, Sourtzi, Kalokerinou & Lemonidou, 2009).

1.2 Problem Statement

With improved life expectancy and low fertility rate globally, the population of the elderly tends to increase leading to an ageing population (Husna et al., 2009); the world population of people 60 years and above is 650 million, and conjectured to reach 2 billion by the year 2050 (Sheik et al, 2013). According to Sim (2001), by the year 2020, Malaysia will experience a 9.5% increase in the population of people above 60 years of age. The senior citizens of Malaysia are growing at a faster rate than the total population and will more than double in numbers from the current 1.4 million to 3.4 million in 2020 (Taha & Mat, 2003).

In response to the exponential increase in the elderly population, the health care delivery system is expected to prepare for the ageing population which will include improvements in quality of health care towards the elderly and also training of more specialists to cater for the elderly. However, it is also pertinent that all healthcare practitioners should ideally improve their knowledge, attitudes and skills with regard to the management of elderly patients, as they will increasingly encounter elderly patients (Chua, Tan, Merchant & Soiza, 2008).

According to Poi et al (2004), as the older population ages in Malaysia, they will form a larger proportion of the hospital patients, as such, geriatric medicine needs to

be firmly embedded in undergraduate and postgraduate curricula in order to empower the present and future generations of health care professionals develop skills on assessment and management of the elderly (Poi et al, 2004). Therefore, the quality of the care being delivered to the elderly should be an important aspect of medical training (Cankurtaran, Halil, Zekeriya, Dagli, Balam Yavuz, Karaca, & Ariogul, 2006).

In present day, the society tends to exclude the elderly; they are considered incompetent and are denied any responsibilities (Gonzalez & Carmen, 2008). Attitude towards old age is rather negative, particularly among the young ones who regard old people as pessimistic, conservative, and petulant thus using disparaging terms on them (Gonzalez & Carmen, 2008). Some of the future physicians possess negative pre-conceived attitudes and ideas about the care of the elderly, because they believe that elderly patients' conditions are chronic and terminal. Regrettably, these attitudes may affect their eventual management of patients, and therefore should be addressed to help generate more "elderly-friendly" physicians (Chua et al, 2008). There are several studies that revealed the negative attitude of medical and nursing students towards the elderly, and this negative attitude is influenced by some factors which shall be discussed subsequently. A study conducted in Malaysia among nursing students revealed that students begin school with negative misconception and ideas about the elderly (Wan & Poi, 1997). Similarly a study by Cankurtaran et al. (2006) in Turkey among medical students of different classes showed that there were no significant changes from first year to last year, but in the fourth year there was significant negative attitude. The general positive attitude is a reflection of the attitude of the Turkish society. There was no clear reason why the fourth year students exhibited negative attitude but it could be attributed to experiences and knowledge they have in medical school. According to a recent study in United Arab Emirates (UAE), support groups for older people suggest that, the elderly are treated unacceptably, insensitively, and disrespectfully by health care staff. Moreover, the quality of care for older adults may depend on the attitude of the caregivers, and health professionals worldwide who have a negative attitude toward them and hold more ageist attitudes than the general population (Sheikh et al., 2013).

It is important to note that the attitude of medical and nursing students towards the elderly will predict if they will pick an interest in geriatrics or not. The ageing population will need not only trained professionals in the field, but those who will deliver their duties with passion and zeal. It is also pertinent to note that whatever kind of attitude exhibited by the young adult, especially students, whether positive or negative, is associated with some factors, and these factors are responsible for their behaviour as well. A number of factors like environment, socio-demographic factors, culture, family background, knowledge of ageing, exposure to geriatric modules and level of education among so many can affect the behaviour of an individual towards an elderly person (Lambrinou et al., 2009). Several studies have shown that medical and nursing students have little or no interest in geriatrics which is a thing of concern because medical and nursing students tend to specialise in other fields like paediatrics and obstetrics and gynaecology. A study by Bernardini Zambrini et al (2008) in university of Salamanca among students of health care related studies showed that medical and nursing students showed less positive attitude towards the

elderly compared to their psychology and pharmacy counterparts who showed high interests in choosing geriatrics as specialty. Another issue is that gender tends to affect the willingness of medical and nursing students in picking an interest in geriatrics. Several studies have shown that males show less positive attitude towards the elderly and seldom have interest in specializing in geriatrics. A study by Soderhamn et al. (2001) among nursing students and registered nurses in Sweden revealed that male gender was significant factor in showing less favourable feelings towards the aged. However, findings of previous studies by other researchers in western countries concerning knowledge of ageing and attitudes toward the older people and nurses' demographic characteristics have been worrying and alarming (Soderhamn et al., 2001; Alsenany 2009). Although beliefs and attitude towards the elderly differ by culture, and some societies associate negative ideologies to ageing for instance worthlessness and weakness, traditional societies uphold the concept of elder respect and place them on a higher social status (Turgay, Sahin, Aykar, Sari, Badir & Ozer, 2015).

In Malaysia, research pertaining to factors associated with attitude towards the elderly is not sufficient and therefore needs urgent attention in order to prepare them for the challenges of the upcoming ageing population. A similar study has been carried out in Malaysia, by Tien, Alagappan & David. (2007) on “The Attitude of Filial Responsibility of Malaysian Students towards their Elderly Parents”, and it is reassuring to know that Malaysian students still care for their parents and have a positive attitude towards the elderly in their society. However, it will be very accomplishing to study the factors associated with attitude of medical and nursing students towards the elderly in Malaysia, in preparation for the emerging ageing population. Thus, it is necessary to study the attitude and factors associated with the attitude of medical and nursing students, who will be charged with the responsibility of caring for the elderly in few years to come, as this will predict their willingness to work with the elderly in future.

1.3 Research Questions

This study aims at identifying factors that could possibly affect the attitude of Medical and Nursing students (who will be the future doctors and nurses in years to come) towards the elderly population. The increasing number of the elderly people may pose a great challenge in the health care systems which may be worsen by the undesirable attitude of the healthcare workers towards the elderly. By knowing the pattern of attitude of the medical and nursing students, and the factors influencing their attitude, necessary actions can be taken to prevent unnecessary negative attitudes that may impair the delivery of quality health care system to the elderly people.

- a. What is the attitude towards the elderly among Medical and Nursing students in a Malaysian public university?
- b. What is the association between the socio-demographic factors (age, gender, religion, ethnicity, year of study, marital status), and the attitude towards the elderly among Medical and Nursing students in a Malaysian public university?

- c. What is the association between the factors (experience living with the elderly, perceived filial responsibility, knowledge of ageing, and exposure to geriatric module) and the attitude towards the elderly among Medical and Nursing students in a Malaysian public university?
- d. What is the predictive model for attitude towards the elderly among Medical and Nursing students ?

1.4 Significance of Study

The rise in ageing population is a major challenge to the health sector globally, advancement in age is accompanied by decline in health status, chronic ailments and degenerative disorders which will lead to an increase in demand for health resources by the aged (Chua et al., 2008; Wang et al., 2009). It is in this light that this study is carried out in order to find out the attitude towards the elderly among the prospective healthcare providers including the medical and nursing students, who will be the doctors and nurses to care for this elderly population in future. Although several studies have been carried out in the past to determine the attitude of medical and nursing students towards the elderly, and most studies reveal some level of positive attitudes towards the elderly, some have invariably shown negative attitudes and lack of willingness to work with the aged in future. It is important to note that the study to determine the factors associated with these 'positive' or 'negative' attitudes have not been carried out in Malaysia. Little is known about the attitude of medical and nursing students towards the elderly in Malaysia. It is crucial to study the attitude of the people whom the lives of the future population will be entrusted. However, it will be very accomplishing to study factors associated with the attitude of medical and nursing students towards the elderly in Malaysia, in preparation for the emerging ageing population. The benefits of this study include:

- Examining the attitude of medical and nursing students in UPM towards the elderly which will articulate their knowledge, willingness and intention to work with the elderly. Attitudes of students towards elderly affect their decisions of working with them as well as their care behaviours (Cortney et al., 2000). Attempts to provide high-quality elder care must take into consideration both the attitudes of the nurses toward the elderly and their knowledge of the aging process (Kizilci et al 2013). Knowledge and attitude may affect nurses' expectations of their working lives and influence the way in which they care for the elderly. Research on this relationship indicates that adequate education and preparation in meeting the needs of the aging population are necessary to develop the positive attitudes and approaches needed for the provision of quality care (Zakari, 2005). Gaps in this knowledge can lead to elder abuse, a decrease in the quality of life for the elderly and increased anxiety and tension for the nurse (Serem, 2011).
- The findings can assist the local authorities and respective agencies in the improvement of the existing elderly-related policy in order to deliver a more effective and elderly-friendly health care services for the senior citizens. Also, the study will provide policy makers both government and NGOs

information about the interaction between the young and the old therefore improve on the policies that will bridge the gap and solve the underlying issue. According to Kyu-Taik Sung (2004), although older persons need food, shelter, healthcare and security, they have another cardinal need which is the need to be treated with respect and care. This study will enable government involve the senior citizens of this country in the social development and other affairs of the country so that they can locate their seat of relevance in the society.

- The study can provide a new knowledge related to attitude of the younger population towards the elderly; their knowledge of aging, willingness, and intention to work with the elderly can provide valuable conceptual insight and empirical information for designing effective educational and recruitment programs in elder care. It is important to determine the influence of gerontology components and curriculum on student's attitudes and knowledge of ageing (Lambrinou et al., 2009). Therefore, the study will reveal the importance of geriatrics in nursing and medical schools.

1.5 Objectives

For the purpose of this study, there would be general objectives and specific objectives.

1.5.1 General Objective

To determine the associated factors related with attitude towards the elderly among medical and nursing students in a Malaysian public university.

1.5.2 Specific Objectives

1. To determine the distribution of the respondents according to;
 - i. Attitude towards the elderly
 - ii. Socio-demographic characteristics (age, gender, year of study, ethnicity, religion and marital status)
 - iii. Knowledge of ageing
 - iv. Experience living with the elderly
 - v. Exposure to geriatric module
 - vi. Perceived Filial responsibility
2. To determine the associations between the attitude towards the elderly among Medical and Nursing students in a Malaysian public university and;
 - i. Socio-demographic characteristics (age, gender, year of study, ethnicity, religion, marital status)
 - ii. Knowledge of ageing
 - iii. Experience living with the elderly
 - iv. Exposure to geriatric modules
 - v. Perceived Filial responsibility

3. To determine the predicting factors associated with the attitude towards the elderly among Medical and Nursing students in a Malaysian public university.

1.6 Study Hypothesis

1. There is significant association between the socio-demographic characteristics (age, gender, year of study, ethnicity, religion, marital status) and the attitude towards the elderly among Medical and Nursing students in a Malaysian public university.
2. There is significant association between the knowledge of ageing and attitude towards the elderly among Medical and Nursing students in a Malaysian public university.
3. There is significant association between experience living with the elderly and attitude towards the elderly among Medical and Nursing students in a Malaysian public university.
4. There is significant association between exposure to geriatric modules and attitude towards the elderly among Medical and Nursing students in a Malaysian public university.
5. There is significant association between perceived filial responsibility and attitude towards the elderly among Medical and Nursing students in a Malaysian public university.

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