



**UNIVERSITI PUTRA MALAYSIA**

***RISK FACTORS OF SELF-NEGLECT AMONG COMMUNITY LIVING  
OLDER PERSONS IN SELANGOR, MALAYSIA***

**HOMA MARDAN**

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**RISK FACTORS OF SELF-NEGLECT AMONG COMMUNITY LIVING  
OLDER PERSONS IN SELANGOR, MALAYSIA**

**By**

**HOMA MARDAN**

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

**June 2016**

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## DEDICATION

This thesis is dedicated to my kind & helpful Parents, Mohammad Mardan & Marzieh Rafati and my daughter, Dr Atieh Khanjani for their encouragement, and belief in me.



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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in  
fulfilment of the requirement for the degree of Doctor of Philosophy

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**June 2016**

**Chairman : Professor Tengku Aizan Hamid, PhD**  
**Institute : Malaysian Research Institute on Ageing**

Older Malaysian recorded high prevalence of self-neglect compared to other types of elder abuse. The prevalence of elder self-neglect continues to rise due to population aging. This study aimed to develop an elder self-neglect instrument and identify predictors of self-neglect among community-dwelling older adults living at Selangor. In addition, this study also examines the mediating role of self-efficacy in the relationship between significant predictors on self-neglect. Self-care theory, self-efficacy theory and the biopsychosocial model form the theoretical background of this study. This was a cross-sectional study and the sampling of this study was assisted by the Department of Statistics Malaysia to randomly selected a representative sample from Selangor. Two hundred and one older persons were successfully interviewed in their homes by using structured questionnaires.

A new instrument to measure the elder self-neglect (ESN) was developed from this study. The scale yielded four factors, namely, 'changes in attitude,' 'personal behavior and environment,' 'personal health and hygiene' and 'lifestyle.' The reliability of this instrument and sub-scales shows sufficient internal consistency, with Cronbach alphas between 0.90-0.76 respectively. Multiple linear regression results showed that older age, lower ADL, higher depressive symptoms, and lower self-efficacy were significantly predicted elder self-neglect. Self-efficacy fully mediated the association between the social network on ESN, partially mediated ADL and depression on ESN.

This study provides a deeper understanding of the phenomenon of elder self-neglect among older adults living in Selangor. The newly developed instrument from this study could be used by researchers and social care workers to identify the self-neglect older adults. The findings of this study are useful for therapists, counselors, gerontologists, and policymakers to develop programs and policies to identify, prevent and report elder self-neglect cases in the community.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia  
Sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**FAKTOR RISIKO PENGABAIAN DIRI DALAM KALANGAN WARGA  
EMAS YANG TINGGAL DALAM KOMUNITI DI SELANGOR,  
MALAYSIA**

Oleh

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Warga emas di Malaysia mencatatkan kelaziman pengabaian diri yang tinggi. Kelaziman pengabaian diri dalam warga emas akan terus meningkat akibat penuaan penduduk. Kajian ini bertujuan membinakan skala pengabaian diri untuk warga emas dan mengenal pasti peramal pengabaian diri. Di samping itu, kajian ini juga mengkaji peranan mediasi keberkesanan diri dalam hubungan antara peramal penting terhadap pengabaian diri. Teori penjagaan diri, teori keberkesanan diri, and model biopsikososial membentuk latar belakang teoritis kajian ini. Kajian ini adalah berbentuk keratan rentas dan pensampelan kajian ini dibantu oleh Jabatan Perangkaan Malaysia untuk mendapatkan sampel yang dapat mewakili warge emas dari Selangor. 201 orang warga emas telah berjaya ditemuramah di rumah mereka dengan menggunakan soal selidik berstruktur.

Instrumen baru untuk mengukur pengabaian diri telah dibina. Skala ini mengandungi empat faktor iaitu 'perubahan sikap,'tingkah laku peribadi dan persekitaran,' 'kesihatan dan kebersihan peribadi' dan 'gaya hidup'. Kebolehpercayaan alat dan sub-skala ini menunjukkan konsistensi dalaman yang mencukupi, dengan *Cronbach alpha* antara 0.90-0.76. Keputusan regresi linier berganda menunjukkan bahawa umur yang lebih tua, keupayaan aktiviti kehidupan harian yang lebih rendah, gejala depresi yang lebih tinggi, dan keberkesanan diri yang lebih rendah meramalkan pengabaian diri. Keberkesanan diri mengantarakan hubungan antara rangkaian sosial dan pengabaian diri secara sepenuhnya, dan mengantarakan keupayaan aktiviti kehidupan harian dan depresi pada pengabaian diri secara sebahagian.

Kajian ini memberikan pemahaman yang lebih mendalam tentang fenomena pengabaian diri dalam kalangan warga emas. Instrumen yang baru dibina daripada kajian ini boleh digunakan oleh para penyelidik dan staff penjagaan sosial untuk

mengenal pasti warga emas yang berisiko dalam pengabaian diri. Penemuan kajian ini berguna bagi ahli terapi, kaunselor, pakar gerontologi dan pembuat dasar untuk pembangunan program dan dasar untuk mengenal pasti, mencegah dan melaporkan kes-kes pengabaian diri dalam masyarakat.



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I certify that a Thesis Examination Committee has met on 9 June 2016 to conduct the final examination of Homa Mardan on her thesis entitled "Risk Factors of Self-Neglect among Community-Living Older Persons in Selangor, Malaysia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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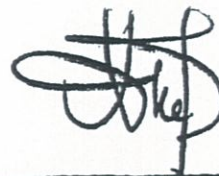
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## LIST OF ABBREVIATIONS

ESN	Elder Self-neglect
EPNS	Elder Self-neglect Scale
APS	Adult Protective Services
APA	American Psychology Association
WHO	World Health Organization
KELS	Kohlman Evaluation of Living Skills
NCAN	National Centre of Abuse and Neglect
SCA	Self-care Agency
ADL	Activity Daily Living
IADL	Instrumental Activity Daily Living
MMSE	Mini Mental State Examination
GDS	Geriatric Depression Scale
GSE	General Self-efficacy
EPQR-S	Eysenck Personality Questionnaire, Short form
N	Neuroticism
SWLS	Satisfaction with Life Scale
LSNS	Lubben Social Network Scale
UPM	Universiti Putra Malaysia
NCEA	National Centre on Elder Abuse
SPSS	Software Package Statistical Analysis

# CHAPTER 1

## INTRODUCTION

This chapter describes the background, rationale, problem statements and research questions, and objectives of the study. Followed by significant of the study, hypotheses, conceptual and operational definition of terms, and lastly, the conceptual framework is presented.

### 1.1 Background of the Study

Elder abuse is a problem that exists in both developing and developed countries, yet is typically under-reported globally and ignored by societies across the world. Cooper, Selwood, Livingston (2008) noted that the rate of abuse is probably underestimated because people might be reluctant to report abuse. Pillemer and Finkelhor (1988) reported the incidence of all types elder abuse in the United States were 32 per 1000 persons. Empirical data on elder abuse in Malaysia is not available as such the prevalence rate of the problem is unknown. Consequently, the National Centre on Elder Abuse (NCEA, 2005) identified several types of elder abuse which include physical, emotional, sexual, financial/material exploitation, neglect, abandonment and self-neglect. Self-neglect is considered as a distinct abuse category event from neglect due to its different etiology and effects (NCEA, 2005). Hence, it is crucial to understand better the phenomenon of elder self-neglect to prevent and curtail the incidences (Gorbien & Eisenstein, 2005). Self-neglect is purported to result from mental, physical and social issues (Abrams, Lachs, McAvay, Keohane & Bruce, 2002). Therefore, understanding the self-neglect phenomena needs a more comprehensive perspective that takes into accounts, biological, sociological and psychological issues faced by the older person.

Dong, Simon, and Evans (2010) noted that there were 1.2 million elder self-neglect cases each year in the United States, and was the most common form of elder abuse reported to the Agency on Ageing (Dyer, Goodwin, Pickens-Pace, Burnett & Kelly, 2007). Similarly, the National Association of Professional Geriatric Care Managers (NAPGCM, 2014) noted that self-neglect among seniors is the most common form of non-financial elderly abuse/neglect encountered by professional care managers but yet the phenomenon is remains unclear.

Understanding the multifactorial issue of self-neglect among older person is crucial as the growth of the aged population will heighten this phenomenon further. Besides, the mechanism to understanding of self-neglect is hampered due to the lack of gold standard to measure the phenomenon (Dyer, Kelly, Pavlik, Lee, Doody, Regev, Pickens, Burnett & Smith, 2006), even though in the United States, elder self-neglect was the most common allegation recorded by the Adult Protective Service with the prevalence of 50.3%, and 39.1% reported among clients.

Several risk factors of self-neglect have been identified in studies conducted in the west. The socio-demographic variables such as age, marital status, income (Burnett et al, 2008), physical or cognitive impairment (Dong, 2010; Dyer et al., 2000), mental health (Iris, 2010), personality (Pavlou and Lachs, 2008; and Gibbons, 2006), social network (Iris, 2010; Dong, Simons, Beck and Evans, 2010; Stephens, Towers, and Stevenson, 2011), isolation (Spensley, 2008), dependency (O'Brien, 2014), disability (Dyer et al., 2008), health status (Day, 2012; Dong, Simon and Evans, 2012), malnutrition (Smith, et al., 2006), cognitive and affective disorders (Chen, Hu, and Dang, 2010). These risk factors can be grouped as bio-psychosocial risk factors and should be incorporated into one study to determine which risk factors contribute to elder self-neglect.

Moreover, in Malaysia, the prevalence rate of elder self-neglect is still not clear and there is a dearth of research to determine factors that affect elder self-neglect. This study attempts to measure the perceived experience of elder self-neglect and determinant of elder self-neglect among older persons living in Selangor, Malaysia.

## **1.2 Problem statement**

Self-neglect is self-imposed, and the peculiarity of an individual's dispositions and lifestyles may or may not lead to self-neglect (Reyes- Ortiz, 2001). Elder self-neglect is an increasingly common public health problem among older population and has high-cost implications in terms of the medical and social care that will affect the family, community and the government that commonly goes underreported and under-recognized (Day, Mulcahy, Leahy-Warren & Downey, 2015). Elderly self-neglect is referring to the behavior of an elderly person that threatens his/her own health and safety (National Center on Elder Abuse, 2005). A systematic review conducted by Cooper, Selwood & Livingston (2008) on elder abuse highlighted that one in four vulnerable elders were at risk of abuse and only a small proportion of them was detected. Elderly Self-Neglect was the most frequently reported form of elder abuse which could increase the risk of death up to 16 times (Hildebrand, Taylor & Bradway, 2014; Dong et al., 2011; Pickens, Naik, and Dyer., 2006; Lachs, Williams, O'Brien, Pillemer, and Charson, 1989). This trend is particularly alarming because the literature suggests that elder self-neglect and abuse may be associated with adverse health outcomes and diminished quality of life (Reed and Leonard, 1989). In addition, elder self-neglect traditionally been seen to be more common among the most vulnerable individuals, especially those with the most impaired cognitive and physical function. It is important to note that the need to study the prevalence and risk factors of self-neglect as results seem to yield different factors (Pavlou and Lachs (2008).

However, large gaps remain in understanding elder self-neglect. Hence, there is an urgent need to conduct epidemiological and systematic research on this issues because current understanding of the prevalence, associated risk factors, and understanding the mechanism of elder self-neglect and abuse in a socio-demographically diverse population remains limited. The absence of local data on

elder abuse (Esther, Shahrul, and Low, 2006) or maltreatment is a reflection of the low level of awareness and priority on the issue.

A local study conducted by Institute of Gerontology, Universiti Putra Malaysia showed that 26% respondents reported having experienced at least one incidence of abuse since age 50 years, with emotional abuse being the most prevalent type, followed by financial/ material, physical and sexual abuse (Hamid, Krishnaswamy, Abdullah, & Momtaz, 2011). Hamid, Abdullah, and Yahya (2009) also noted that older Malaysians were able to identify the severe form of elder abuse such as physical abuse and were not able to identify neglect as to them it was a normal part of life. Therefore, there is a need to better understand this emerging issue in Malaysia. It is important to have baseline data on elder self-neglect in Malaysia so that appropriate intervention strategy can be developed to address the issue.

Another concern of the present study is the difficulty in determining self-neglect due to limited availability of valid and reliable instruments, as well as lack of a gold standard to measure the phenomenon of ESN (Dyer et al 2006). Like another geriatric ailment, the condition is progressive and may not be recognized at earlier stage until it became more serious. Before detection can be done, a valid and reliable instrument must be developed.

To date, no local instrument is available to identify self-neglecter, and understanding of the phenomenon in Malaysian elderly. At the time of this study, only two self-neglect scales had been developed. The first scale was CREST Severity-neglect Severity Scale (CREST SSS) which was developed to achieve a common understanding of self-neglect for use by professionals in the Adult Protective Services in Texas (Dyer et al., 2006; Kelly et al 2008). Another was an observational assessment tool called Elder Self-Neglect Assessment (ESNA) developed by Iris, Conrad & Ridings (2014). It was a tool used by professionals for Adult Abuse Decision Support System (AADSS) in the Adult Protection Services in Illinois. However, these instruments may not be suitable for non-healthcare personnel to identify self-neglect in the community.

In Malaysia, besides the Malaysian Elder Maltreatment Scale (Hamid, Abdullah and Yahya. 2009), no other scale on elder neglect was available. The Malaysian Elder Maltreatment Scale included items to measure neglect but not specific to self-neglect. Thus, development of such instrument to measure self-neglect is timely as the population is rapidly aging, and an increase of disability and frailty in the elderly population which may lead to self-neglect. Thus, there is a need to expand and continue their work and develop a new instrument focusing on elder self-neglect.

### **1.3 Significance of the study**

Aforementioned, Malaysia's population is aging and is accompanied by the increase in the elderly population itself. It was estimated that by the years 2020, population aged 65 years and above will reach to about 8% of the total population (Hamid, 2015). Within the population aged 60 years and over, there will be a decrease in growth the population in the cohort of age 60-69 but increase in growth of the 70s and 80s cohort (Hamid, 2015). Meaning that Malaysians are growing older and living longer. With longevity, multiple medical problems will surface and would increase their vulnerability to physical, financial, emotional and social dependence. With the growth of the old-old population, functional disabilities and frailty will increase and these are potential risk factors for self-neglect. Moreover, as the growth of the aged population will affect all aspects of life, hence governments, policy makers, stakeholders as well as society need to be ready to address this issues of the aged population.

As ESN has multifactorial risk factors, a broad perspective of the variable should be included in one study and could identify the unique determinant of self- general, our ability to understand, intervene, and prevent self-neglect is still neglect. In limited. Given the limited research is undertaken, studying the phenomenon using the bio- psychosocial variables could provide a better understanding the nature of self-neglect.

Therefore, eliciting the risk factors could lead to a better understanding of the complex behavior and could help in earlier detection and development of interventions programmes for ESN. Moreover, no studies have been conducted in Malaysia on elder self-neglect, as such no prevalence rate is available. This would enhance the knowledge on self-neglect. In addition, these results form the basis for a data-driven intervention study. In addition, this study will add to current knowledge and understanding regarding improved elderly self-neglect risk assessment. The findings from the present study could potentially help older adults who were identified as self-neglectful and also could be used as a basis for informing an appropriate policy and intervention program for ESN in Malaysia

### **1.4 Research Objectives**

#### **1.4.1 General objective**

The general objective of this study was to investigate the elder self-neglect in community-dwelling older Malaysians living in Selangor.

## 1.4.2 Specific objectives

The specific objectives of the present study are:

1. To develop elder self-neglect scale (ESN) for older Malaysians.
2. To determine the associations between socio-demographic and economic characteristics (age, gender, marital status, education and income), functional dependency (activities of daily living (ADL) and Instrumental activities of daily living (IADL)), psychosocial factors (perceive health, capacity for self-care, depression, neuroticism, life satisfaction), social factors (social support network), self-efficacy and ESN among community-dwelling older Malaysians living in Selangor.
3. To determine the unique predictors of elder ESN among community-dwelling older Malaysians living in Selangor.
4. To determine the mediating role of self-efficacy between functional dependency (activities of daily living (ADL) and instrumental activities of daily living (IADL)), psychosocial factors (perceive health, capacity for self-care, depression, neuroticism, life satisfaction), social factors (social support network), and ESN among community-dwelling older Malaysians living in Selangor.

## 1.5 Hypotheses

Three general hypotheses for the study are as follows:

### Hypothesis 1.

There are significant relationships between age, household income, ADL, IADL, the capacity of self-care, life satisfaction, neuroticism, depression, perceived health status, social support network, self-efficacy and elder self-neglect.

There are significant differences in elder self-neglect across different gender, ethnicity, education level, marital status, and perceived health status.

### Hypothesis 2.

Gender, ethnicity, education level, marital status, age, household income, ADL, IADL, the capacity of self-care, life satisfaction, neuroticism, depression, perceived health status, social support network, self-efficacy and perceived health status are significant predictors of elder self-neglect.

### Hypothesis 3

Self-efficacy mediates the association between independent variables and elder self-neglect.

## 1.6 Definition of Terminology

According to Tuckman (1994):

*“An operational definition is a definition based on the observable characteristics of that which is being defined. And conceptual definition, on the other hand, identifies something in terms of conceptual or hypothetical criteria rather than observable ones” (p.103). ...it is not considered necessary to operationally define all terms, just the principal variables (p.307).*

In this section, the principal study variables are conceptually and operationally defined.

### 1.6.1 Independent Variables

#### a. Functional Dependency

##### Conceptual definition

Functional risk activity of daily living (ADL) and instrumental activity of daily living (IADL). ADL activities are daily activities which older adults are able to do, and they need help if they are not able to do these activities. IADL as instrumental activity refers to higher levels of functioning in both mental and physical capacity (Lawton & Brody, 1969).

##### Operational definition

In this study, the ADL and IADL were measured using the Barthel Index of Activity of Daily Living (ADL-10 items) and the Lawton Instrumental Activities (IADL- 8 items). The lower scores in ADL and IADL means the older persons needed help in activities of daily living

#### b. Psychosocial Factors

Psychosocial factors were consisted perceived health, capacity of self care, depression, neuroticism and life satisfaction.

##### (i) Perceive health

##### Conceptual definition

Self-perceived health refers to the perception of a person's health in general. Health means not only the absence of disease or injury but also physical, mental and social well-being (North West Territory Bureau of Statistics, 2014).

#### Operational definition

Perceived health status was assessed by using a single item asking respondents to rate their perceptions of health status. The item was in ordinal form (1 = very good, 2 = good, 3 = normal, 4 = poor, 5 = very poor).

#### **(ii) Capacity of self-care**

##### Conceptual definition

The capacity of self-care refers to the ability of a person to take responsibility for individual care function (Orem, 1991).

##### Operational definition

In this study, the capacity of self-care was adopted from the Appraisal Self-Care Agency Scale. Positive component of Self-Care Agency (15-items) was used and higher scores indicate the higher capacity of self-care.

#### **(iii) Depression**

##### Conceptual definition

Depression is a common mental disorder, characterized by persistent sadness and a loss of interest in activities that you normally enjoy, accompanied by an inability to carry out daily activities, for at least two weeks (WHO, 2001).

##### Operational definition

Depression was assessed by 15-item Geriatric Depression Scale (GDS-15; Sheikh & Yesavage, 1986) which scores ranging from 0 to 15. Each item consists of 'yes' and 'no' response and each item with 'yes' response contribute one mark. Higher GDS score indicates higher depression symptoms.

#### **(iv) Neuroticism**

##### Conceptual definition

Individuals behave differently because of different personality traits. Eysenck identified three dimensions of human personality which is Extroversion, Neuroticism, and Psychoticism. People with high level of Neuroticism tend to be shy, overly, emotional, and anxious, depressive and recorded a low self-esteem (Eysenck, 1987).

##### Operational definition

In this study, only Neuroticism trait is used and measured using Eysenck Personality Questionnaire (EPQR-S, Neuroticism, 12 items) in which the respondents answered yes or no to the 12 items and the total score was created. A higher score represents a higher level of the Neuroticism (Eysenck, 1987).

#### **(v) Life Satisfaction**

##### Conceptual definition

Life satisfaction is an overall assessment of feelings and attitudes about one's life at a particular point in time ranging from negative to positive (Diener, 1984).



### Operational definition

The levels of satisfaction of the elderly respondent in this study were examined using Satisfaction with Life Scale (SWLS) (Diener et al, 1985). A higher score means a higher level of life satisfaction.

## **c. Social support network**

### Conceptual definition

The social network is defined as a group of people such as family members, friendship ties, neighbors or others with an important relationship in their social network. Social support is a process of interaction in relationships that improve coping, esteem, belonging, competence and exchange (Lubben, Blozik, Gillmann, Iliffe, Kruse, Beck, & Struck, 2006).

### Operational definition

In this study social network was measured using Lubben Social Network Scale (LSNS-6 items). A higher score on the social network scale means a higher level of support by family and friends.

## **1.6.2 Mediator**

### **Self-efficacy**

#### Conceptual definition

Self-efficacy is the belief in one's ability to overcome negative life events and through perseverance individual's goals are met. Indeed, self-efficacy is the belief in the capacity to solve problems and to obtain goals (Fritscher, 2009).

#### Operational definition

The General Self-Efficacy Scale developed by (Schwarzer, R., & Jerusalem, 1995) is used in this study. It is a 10-item psychometric scale that is designed to assess optimistic self-beliefs to cope with a variety of difficult demands in life. Items are in 4-point Likert scale (1 = not true at all to 4 exactly true). The score ranges between 10 and 40, with a higher score indicating higher self-efficacy.

## **1.6.3 Dependent variable**

### **Elder Self-Neglect (ESN)**

#### Conceptual definition

ESN is defined as the failure to do daily activities to meet basic needs. Elder self-neglect is "the inability (intentional or non-intentional) to maintain socially and culturally accepted standard of self-care with the potential for serious consequences to the health and well-being of the self-neglecters and perhaps even to their community" (Gibbons, Lauder & Ludwick, 2006,p 16).

### Operational definition

A new instrument, the perceived experience of Elder Self Neglect Scale was developed for the study. The instrument consisted of 18 statements expanded from Hamid et al (2009). The statement covers 4 aspects which include health and environment, psychosocial, behavioral, and lifestyle aspect of daily living. The responses to the statements were Likert agreement scale from 1 (*strongly disagree*) to 5 (*strongly agree*). A higher score in the self-neglect instrument means a higher level of perceived experience of self-neglect.

## **1.7 Theoretical Framework**

The biopsychosocial model and self-efficacy theory form the theoretical framework of this study. The model guides the selection of independent and dependent variables as well as how independent variables predict the dependent variable in the current study.

The biopsychosocial model incorporates biological, psychological, and social factor into account in human functioning, especially in the context of illness and health. It posits health is best explained in terms of a joining of biological, psychological, and social factors rather than entirely in biological terms (Engel, 1997). The psychological aspect of the biopsychosocial model identifies a potential negative psychological state that might cause a health problem whereas the social part investigates how different social background such as socioeconomic status, poverty, culture, and religion can influence health (Santrock, 2007). In addition, Ghaemi (2009) noted that biopsychosocial model was a mainstream ideology in contemporary psychiatry. As ESN is attributable to multi-causal risk factors, the adoption of the biopsychosocial model was appropriate.

ESN was defined as the inability (intentional or non-intentional) to maintain socially and culturally accepted standard of self-care with the potential for serious consequences to the health and well-being of the self-neglecters and perhaps even to their community (Gibbons 2006...pg 16 ). This definition reveals the interaction of biological, psychology, social and environment aspect of the individual's life. Thus, in the present study, several variables relates to these components were identified to explain the ESN among older Malaysians.

In addition, self-efficacy was proposed as a mediator in the relationship between biopsychosocial variables (functional dependency, psychosocial and social factors) and ESN. Self-efficacy is defined as individual's belief in their own abilities to overcome their daily issues and fulfill their goals and task (Bandura, 1994). In an older person, self- efficacy capabilities play important role in determining the successful functioning and coping with changes associated with aging.

## 1.8 Conceptual Framework

Based on the theoretical foundation discussed above, a conceptual framework was developed as in Figure 1.1 to explain the relationships between the bio-psychosocial variables and ESN. Antecedent variables include socio-demographic and economic characteristics (age, gender, marital status, education, and income). The independent variable comprises of functional dependency (activities of daily living (ADL) and Instrumental activities of daily living (IADL), psychosocial (perceive health, capacity for self-care, depression, neuroticism and life satisfaction), and social factor (social support network). Self-efficacy was considered as a mediator factor between variables, and self-neglect. The conceptual framework shows the propose relationships between biopsychosocial variables with ES and self-efficacy as a mediator.

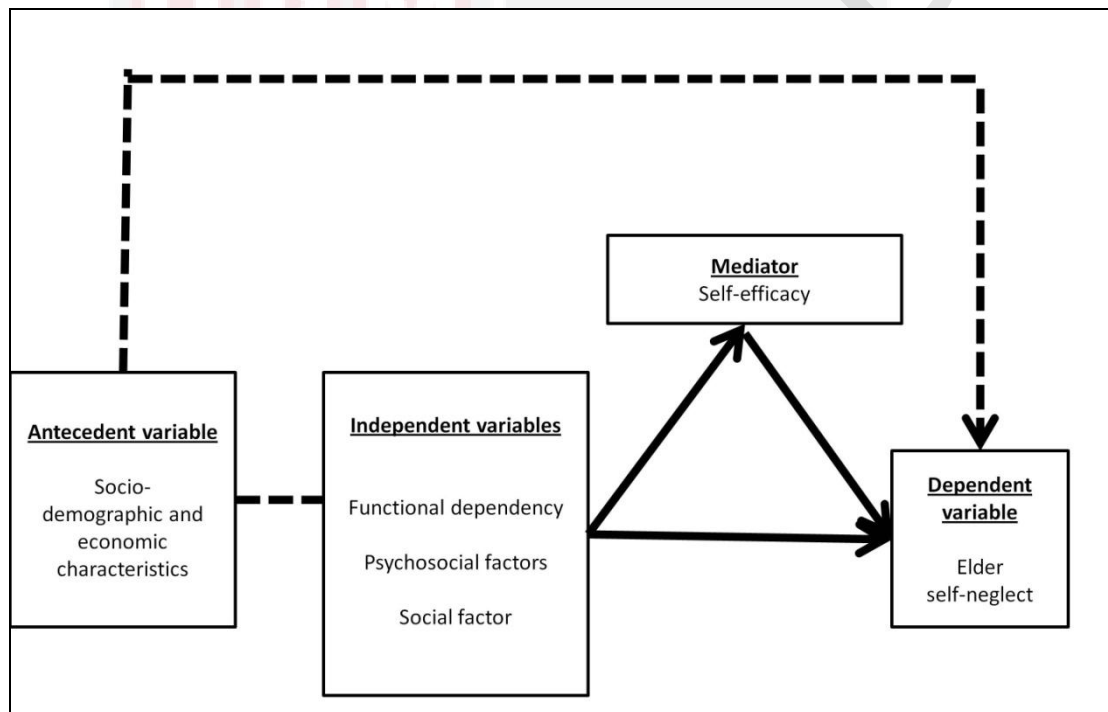


Figure 1.1: Conceptual framework of the study

## 1.9 Summary

This chapter presents the foundation of the study which includes the background, statement of the problem, significant of the study, research objective, hypotheses, and definition of terminology used in the study. Theoretical foundation and conceptual framework of the study variables were also discussed.

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