DEPRESSION AND ITS ASSOCIATED FACTORS AMONG ELDERLY IN ASAJAYA DISTRICT IN SAMARAHAN DIVISION, SARAWAK

Sharifah Norashikin Binti Wan Ahmad

Master of Public Health
2010
DEPRESSION AND ITS ASSOCIATED FACTORS AMONG ELDERLY IN ASAJAYA DISTRICT IN SAMARAHAN DIVISION, SARAWAK

SHARIFAH NORASHIKIN BINTI WAN AHMAD

This project is submitted in partial fulfillment of the requirements for a Master of Public Health (MPH)

Faculty of Medicine and Health Sciences
Universiti Malaysia Sarawak
2010
DECLARATION

No portion of the work referred to in this thesis has been submitted in support of an application for another degree of qualification of this or any other university or institution of higher learning.

Signature :

Name : SHARIFAH NORASHIKIN BINTI WAN AHMAD

Date : 20 JULY 2010
ACKNOWLEDGEMENTS

I am thankful to Allah, Most Gracious and Most Merciful, for blessing me with good health and peaceful mind to conduct and complete my research.

I would like to express my appreciation and gratitude to my supervisor, Dr Sidiah ak John Siop for her guidance, support and advice throughout the course of my research.

I would like to thank the personnel of Asajaya District Office and village leaders of Asajaya districts for their co-operation, kindness and warmest helping hand during my field work until its completion.

My deepest gratitude goes to my parents for their endless love, encouragement and blessing to me to pursue my master’s degree. Last but not least, special thanks and love to my husband, for his patience, love, unconditional support and unfailing encouragement which enable me to accomplish this dissertation.

To all the people who have helped me throughout my research both directly and indirectly, your contribution will be well remembered. May Allah bless you all.

Thank you.
TABLE OF CONTENT

ACKNOWLEDGEMENTS iii
TABLE OF CONTENT iv
ABSTRACT viii
LIST OF TABLES xii
LIST OF FIGURES xiv

CHAPTER 1 - INTRODUCTION

1.1 Introduction 1
1.2 Background 1
1.2.1 Global demographic changes 1
1.2.2 Aging population in Malaysia 2
1.2.3 Mental health of the elderly 3
1.3 Problem Statement 4
1.4 Research Question 5
1.5 Objective 5
1.5.1 General objective 5
1.5.2 Specific objective 6
1.6 Hypothesis 6
1.7 Scope of the Study 6
1.8 Operational of Term 7
1.8.1 Depression 7
1.8.2 Elderly 7
1.8.3 Functional status 7

CHAPTER 2 - LITERATURE REVIEW

2.1 Introduction 8
2.2 Definition of Depression
2.3 Policy on Elderly
2.4 Health of the Elderly
2.5 Burden of Depression
2.6 Factors and Depression
  2.6.1 Socio-demographic factors
  2.6.2 Functional and health status
  2.6.3 Medical illness
  2.6.4 Predictors for depression
2.7 Geriatric Depression Scale in Community Survey
2.8 Research Framework

CHAPTER 3- METHODOLOGY

3.1 Introduction
3.2 Research Design
3.3 Research Setting and Population
3.4 Sampling Method
3.5 Approval
3.6 Data Collection
3.7 Instruments
  3.7.1 Socio-demographic
  3.7.2 Functional status
  3.7.3 Self-rated health status
  3.7.4 Self-reported medical illness
  3.7.5 Geriatric Depression Scale (14 items)
3.8 Data Analysis
  3.8.1 Descriptive analysis
  3.8.2 Inferential analysis
CHAPTER 4- RESULTS

4.1 Introduction 35
4.2 General Descriptive of the Respondents 35
   4.2.1 Socio-demographic characteristics 35
   4.2.2 Functional status 38
   4.2.3 Self-rated health status 40
   4.2.4 Self-reported medical illness 41
4.3 Prevalence of Depression 43
4.4 Relationship between Influencing Factors and Depression 45
   4.4.1 Association between socio-demographic factors and depression 45
   4.4.2 Association between functional status and depression 47
   4.4.3 Association between self-rated health status and depression 47
   4.4.4 Association between self-reported medical illness and depression 48
4.5 Multivariate Analysis for Depression 50
4.6 Goodness of Fit 53

CHAPTER 5- DISCUSSION

5.1 Introduction 54
5.2 Discussion on Findings 54

CHAPTER 6- CONCLUSION

6.1 Introduction 60
6.2 Summary 60
6.3 Limitations 61
6.4 Recommendation 62
6.5 Conclusion 63

REFERENCES 65
APPENDIX A

Questionnaires 74

APPENDIX B

Informed consent form 78

APPENDIX C

Letter of approval to conduct the research 82
ABSTRACT

DEPRESSION AND ITS ASSOCIATED FACTORS AMONG ELDERLY IN ASAJAYA DISTRICT IN SAMARAHAN DIVISION, SARAWAK

The demographic shift with an increased elderly population in Malaysia presents a major challenge for the health care system to meet the demand for health care services for the aged. Depression is a common illness in the older population and yet the recognition in practice is low. Depression is associated with declining in general health of the elderly and it tends to be more severe in nature. This cross-sectional study assesses the prevalence of depression and its associated factor among elderly residing in Asajaya district of Samarahan division. Specifically, this study examined the association between socio-demographic factors, functional status, self-rated health status and self-reported medical illness with depressive symptoms and determined the predictors of depression in elderly population. Data were collected from 582 elderly respondents in eleven selected villages during two months study period study from 15 January 2010 until 15 March 2010 using face-to-face interview. Depression was measured by the Malay version of Geriatric Depression Scale-14 item (MGDS-14). The study finding showed overall prevalence of elderly depression was 65.1% (n=379) of total respondents, with 18.0% (n=105) had moderate depression and 47.1% (n=274) had major depression. Significant associations were found between depression and socio-demographic factors (gender, age group, marital status, educational level, monthly income, source of income and living arrangement), functional status, self-rated health and self-reported medical illness. Hypertension, stroke, vision impairment, hearing deficit, joint pain/arthritis, hand/feet numbness and other medical illness were also significantly associated with
depression. From the multivariate logistic regression analysis, the predictors of depression were educational level, living arrangement, functional status and self-rated health status.
ABSTRAK

KEMURUNGAN DAN FAKTOR-FAKTOR YANG MEMPENGARUHI KEMURUNAGN DI KALANGAN WARGA TUA DI DAERAH ASAJAYA, BAHAGIAN SAMARAHAN

penilaian tahap kesihatan dan laporan masalah kesihatan dengan kemurungan. Hipertensi, angin ahmar (stroke), masalah penglihatan, masalah pendengaran, sakit sendi (arthritis), kebas kaki tangan dan masalah kesihatan lain turut berhubung kait secara signifikan dengan kemurungan. Daripada analisis regresi logistik multivariat, tahap pendidikan, susunan tempat tinggal, status fungsi dan penilaian sendiri tahap kesihatan merupakan faktor peramal kemurungan.
<table>
<thead>
<tr>
<th>Content</th>
<th>Page number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 3.1 Coding scheme used for the predictor factors</td>
<td>33</td>
</tr>
<tr>
<td>Table 4.1 Socio-demographic profile of the respondents</td>
<td>37</td>
</tr>
<tr>
<td>Table 4.2 Functional status of the respondents</td>
<td>38</td>
</tr>
<tr>
<td>Table 4.3 Distribution of respondent functional limitation in activities of daily living</td>
<td>39</td>
</tr>
<tr>
<td>Table 4.4 Self-rated health status</td>
<td>40</td>
</tr>
<tr>
<td>Table 4.5 Distribution of self rated health status</td>
<td>40</td>
</tr>
<tr>
<td>Table 4.6 Self-reported medical illness status</td>
<td>41</td>
</tr>
<tr>
<td>Table 4.7 Distribution of self-reported medical illness</td>
<td>42</td>
</tr>
<tr>
<td>Table 4.8 Prevalence of depression</td>
<td>43</td>
</tr>
<tr>
<td>Table 4.9 Distribution of GDS items</td>
<td>44</td>
</tr>
<tr>
<td>Table 4.10 Association between socio-demographic factors and depression</td>
<td>46</td>
</tr>
<tr>
<td>Table 4.11 Association between functional status and depression</td>
<td>47</td>
</tr>
<tr>
<td>Table 4.12 Association between self-rated health status and depression</td>
<td>48</td>
</tr>
<tr>
<td>Table 4.13 Association between self-reported medical illness and depression</td>
<td>48</td>
</tr>
</tbody>
</table>
Table 4.14 Distribution of association between self-reported medical illness and depression

Table 4.15 Multivariate logistic regression for predictors of depression
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Content</th>
<th>Page number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1. Conceptual framework for depression in elderly</td>
<td>21</td>
</tr>
<tr>
<td>Figure 2. Flow chart of sampling procedure</td>
<td>25</td>
</tr>
</tbody>
</table>
CHAPTER 1
INTRODUCTION

1.1 Introduction

This section discusses the background of the study, statement of problem, research questions, objectives, hypothesis, scope of the study, limitation in the study and its conceptual framework. The definition of terms is also explained in this chapter.

1.2 Background

Rapid social and economic changes occurred in the post independence era has led to age transformation in Malaysia. These changes exert great implications for the elderly population as their living circumstances are affected by such changes. This resulted in increasing in size and proportion of the elderly population in Malaysia. The shift in population is also occurring in every part of the world.

1.2.1 Global demographic changes

United Nations (2009) had projected the population of those aged 60 years old and above to rise from 264 million in 2009 to 416 million in 2050 in more developed countries and 473 million to 1.6 billion in developing regions. As the population of 60 years old and above increased by three-fold, those oldest old group (80 years old and above) is also estimated to rise by almost four-fold to 395 million in 2050.
Aging population resulted from prolonged longevity, leads to increase in global life expectancy from 68 years in 2005-2010 to 76 years in 2045-2050. Specifically, the life expectancy is projected to increase from 77 years to 83 years in 2005-2010 to 2045-2050 in more developed regions and 66 years to 74 years by mid-century in less developed countries (United Nations, 2009). Declining in birth rate accompanied with prolonged life span and decreased in mortality rates would lead to low proportion of support ratio for elderly, which projected to fall exceeding 60% in Asian region between 1999 and 2050 (WHO, 2004).

### 1.2.2 Aging population in Malaysia

In Malaysia, elderly population aged 60 years and older had almost doubled from 546 thousand in 1971 to 1.03 million in 1991. The aged population increased to 6.3% (1.4 million) of the total population in 2000 and projected further increased to 9.9% (3.4 million) in 2020 and 12.0% (4.9 million) in 2030 (Rabieyah & Hajar, 2003).

It is known that increasing age is associated with increasing risk of developing chronic medical illness as precipitated by changes of life styles for example obesity, physical inactivity, poor dietary intake and smoking. Hence, a growing number of elderly populations should be alarming because it would impose a significant burden on health care services, cost and social support system.

The old age dependency index in Malaysia had also increased from 11.7% in 1970 to 18.5% in 2000 (Rabieyah & Hajar, 2003). This fact shows that there was diminishing social support derived from family system to accommodate the demand for elderly health care. The elderly generally considered as dependent group due to declining of physical capability and financial insecurity. Eventually, lack of social support would influence the provision of health care
treatment, psychosocial support and unequal distribution of income. Inability to address these issues would result in neglecting the health status of the susceptible elderly.

1.2.3 Mental health of the elderly

The demographic shift with an increased elderly population in Malaysia presents a major challenge for the health care system to meet with the demand for health care services for the aged. In line with the Malaysian Vision 2020, that is establishing a fully caring society and a caring culture, fulfilment of elderly health care needs including mental health is essential. Depression is a common and frequently undiagnosed, misdiagnosed and untreated illness in the older adult population (Billig, 1991).

Depression in elderly may compromise health of the elderly and further aggravate risk of prolonged disability and even death. Furthermore, it is associated with declining in general health of the elderly (Noel et al, 2004). Additional, depression in elderly tend to be more severe in nature. Failure to address treatment for the depression lead to deterioration of physical, psychosocial and cognitive status due to delayed recovery. Eventually, it resulting in increased utilisation of health care services which adding to the medical cost and subsequently increase risk for suicidal death.

Inequality between quality of life with increased life span due to medical advances lead to consistent high suicidal rate among late middle and elderly individual (Hayati & Kamarul, 2008). National Institute of Mental Health (2009) in United States shows that suicidal death was 14.2 per 100,000 elderly Americans (aged 65 years old and above), which was higher than 10.9 per 100,000 in the general population. Alexopoulos et al (2009) stated that care
management intervention was able to reduce the risk of suicide in patients with major depression and later improved the outcome.

Henceforth, reducing the consequences of depression potentially will lower the cost significantly. Moreover, working days lost and deaths accounted for indirect substantial increase to the cost in managing depression. It is difficult to quantify the impact of pain on both the patient and their family members (Thomas & Morris, 2003). Therefore, it is important to detect and treat the depression early in elderly because untreated depression made them vulnerable to medical illness complication, leading to further isolation and despair, possibly also suicidal death.

1.3 Problem Statement

The goal of mental health care for the elderly is successful aging. An older person is considered to be ageing successfully when he/ she is able to maintain healthy mind and function throughout his/ her remaining adult life. Depression is one of the psychological problems most commonly encountered by the elderly.

Hence, the need to identify depression among elderly is crucial as the prevalence is on the rise. In Malaysia, study on depression is lacking particularly in Sarawak. Most of these studies were conducted in Peninsular Malaysia but only a few were carried out in Sarawak. Many studies were on the prevalence of depression focused on institutionalised and hospitalised elderly and neglected those in the community (Chowdhury & Rasania, 2008).

A cross sectional study done in rural area by Sherina et al (2005) in Sepang, Selangor found overall prevalence of depression was 7.6% among elderly. Another study conducted in an
urban elderly community reported 6.3% of depression (Sherina, Lekhraj & Mustaqim, 2004). Therefore, this study aims to assess the prevalence of depression among community-dwelling elderly which might provide information and direction for health care need management.

1.4 Research Question

Generally, there is still paucity of information on prevalence of depression and its determinant factors in Sarawak elderly population, particularly in Asajaya district in the division of Samarahan.

The research questions are:

1. What is the prevalence of depression among elderly residing in Asajaya district?
2. What are the factors that affect depression among elderly in Asajaya?
3. What are the factors that predict depression among elderly in Asajaya?

1.5 Objectives

1.5.1 General objective

The purpose of this study is to assess the prevalence of depression and to examine the risk factors that affect depression among community-dwelling elderly in Asajaya district, Samarahan.
1.5.2 Specific objective

1. To assess the prevalence of depression among elderly in Asajaya.

2. To examine the factors affecting depression among elderly in Asajaya.

3. To determine predictors of depression among elderly in Asajaya.

1.6 Hypothesis

Hypothesis of this study was:

H1- Socio-demographic factors, functional status, self-rated health and self-reported medical conditions have significant influence on depression.

1.7 Scope of the Study

Study on prevalence of depression and its determinant factors are essential to improve the understanding on depression. It is crucial to examine predictors of depression in order to address issues in treating depression among elderly in the community. The finding of this study will inform policy makers to plan appropriate screening program and preventive strategies for the older population.

This study finding will serve as baseline information for future research and assist in planning for health care programme for older population.
1.8 Operational of Term

1.8.1 Depression

Depression is defined based on the Malay version of short form Geriatric Depression Scale with 14 items (M-GDS-14) (Ewe Eow & Hasanah, 2003). Scores of 5 and below were considered as normal or had no depression. For respondents who scored between 6 to 7 were considered to have moderate depression and those who scored 8 and higher were classified as having major depression.

1.8.2 Elderly

World Health Organization (WHO) defines elderly as a person with chronological age of 65 years and above which has been accepted by most developed countries. However, United Nations cut-off point for elderly is 60 years old and above. Since Malaysia adopted United Nations' definition, 60 years old and above is used in this study to define elderly.

1.8.3 Functional status

Functional status is assessed by the ability to perform a set of physical activities consisting of a combination of activity of daily living (ADL) and instrumental activity of daily living (IADL). The functional status is characterised as dependent if the respondent had difficulty in performing at least one of the activities with or without assistance. On the other hand, ability to accomplish the physical activities well without difficulties is considered as independent.
CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter is a review of previous studies related to the problem of depression especially among elderly. Reviewing of research topic involved keyword search or phrases of either 'elderly', 'health of the elderly', 'elderly population', 'depression', 'elderly depression', 'depression among elderly', 'prevalence of elderly depression', or 'factors for elderly depression'. The information was searched in books, journals, electronic databases, indexes/abstract printed and government publications.

Theoretical formulations, methodology, instrumentation and interpretation are presented. Through a review of literature, a research framework for the present study is formed.

2.2 Definition of Depression

According to Diagnostic and Statistical Manual (DSM) IV, depression is defined as persistent of depressed or low mood or lost of interest or pleasure in daily activities (pervasive anhedonia) for at least two weeks period. This depressed mood must be accompanied by least three or more symptoms of sleep disorder, change in weight or appetite, fatigue or loss of energy in nearly daily, psychomotor agitation or retardation, difficult to concentrate or indecisiveness, feeling worthlessness or inappropriate guilt feeling or recurrent thought of death or suicide. Additionally, this mood must be associated with impairment to the
psychosocial and functional ability of the individual and not secondary to either substance or medical conditions (Diagnostic and Statistical Manual of Mental Disorder, 1994).

2.3 Policy on Elderly

Following the adoption of the Vienna International Plan of Action on Aging by World Assembly on Aging in 1982, United Nation programme on Aging focuses on developing framework for aging and brought it into global attention and policy setting. Principle of care for older person stated that older person should have access to health care to help them to maintain or regain the optimum level of physical, mental and emotional well-being and to prevent or delay the onset of illness (United Nations, 2009).

National Policy on the Elderly in Malaysia was formulated in 25 October 1995 to meet the challenges of aging phenomenon by fulfilling the United Nations Principles for Older Persons, namely independence, participation, care, self-fulfilment and dignity. Furthermore, National Advisory and Consultative Council for the Elderly and a comprehensive Plan of Action on the National Policy for the Elderly was also approved and set up by the Government of Malaysia to plan for health care provision to the elderly in Malaysia. Collaboration between both government agencies and non-governmental sectors is required in the implementation of this policy (Abdul Aziz, 1999).

2.4 Health of the Elderly

WHO (2001) stated that few illness characteristics in the elderly had implicated the existing health system. These included the pathological condition, non-specific presentation of