

***Cognitive and Affective Disorder Among the Elderly in Privately-Run  
Assisted Living Facilities in Klang Valley, Malaysia***

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**Abstract**

This research was conducted in privately-run assisted living facilities for the elderly in the Klang Valley, Malaysia to screen for cognitive disorder and affective disorder using the Mini-Cog assessment and Patient Health Questionnaire-2, respectively. Besides finding the incidences of these disorders as well as the gender and race distribution among the sample, this research also aimed to find the association between cognitive and affective disorder with two factors; highest level of education and frequency of visits from family and/or friends in the past 2 years. This cross-sectional study managed to obtain consent to interview a total of 591 residents out of which 43 (7.2%) are found to be positive for cognitive impairment and 188 (31.8%) are found to have depressive disorder. Among the 43 residents with cognitive disorder, a majority of 16 (37.2%) did not receive any formal education and the same number also did not receive any visits from family and/or friends. Among the 188 residents with depressive disorder, a majority of 64 (34%) received secondary education and a majority of 65 (34.6%) received monthly visits from family and/or friends. There are positive associations between cognitive disorder and level of education as well as frequency of visits from family and/or friends. But interestingly, there are no associations between depressive disorder and level of education as well as frequency of visits. The reasons behind these figures will be further explored in this paper along with possible intervention methods

Keywords: Cognitive disorder, affective disorder, cognitive impairment, dementia, depression, elderly, nursing homes, old folks home, assisted living facilities, elderly in Malaysia

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## **Introduction**

According to the data released by the Malaysian Department of Statistics in 2017, Malaysia will be an ageing nation by 2030 with the population of citizens aged 65 and above being 15.3% (Fong, 2017). Another data released by the Malaysian Welfare Department revealed that between the years 1993 to 2013, 4968 citizens were placed under the care of 211 government-run assisted living facilities nationwide (Aruna, Farik, Chan & Devindran, 2014). On top of the physiological and health problems faced by the elderly, mental health issues can also become a concern particularly among non-community-dwelling elderly.

A global review indicated that the prevalence of cognitive impairment among the elderly range between 16.1% to 44.5% (Xu et al, 2017) whereas the prevalence of depression range between 11% to as high as 85.5% (Sharifah Munirah, 2018). In Malaysia, the most relevant study that served as part of the background to this research was done by Al-Jawad, Rashid & Narayan (2007) where the sample was taken from an elderly care home in Selangor. The study found the prevalence of undetected cognitive impairment along with depression among the elderly to be 36.5% and 67% respectively.

Since the government-run facilities receive adequate funding to provide the necessary facilities, the more pressing issue would be the wellbeing of elderly living in privately-run homes that are highly dependent on fees and donations therefore might be functioning on a limited capacity, thus housing a higher prevalence of cognitive impairment and depression among the elderly living in these facilities.

With that in view, this research aims to screen for cognitive impairment and depression among the elderly residents of the privately-run assisted living facilities and find the association with two main factors, namely the level of education and the frequency of visits from family members and/or friends in the past two years. At the end of this study, we aim to use the data to create a guideline for proper care of the elderly in terms of cognitive and affective wellbeing as well as come up with simple yet effective intervention programs that can be applied by these homes for the benefit of the elderly.

## **Material and Methods**

There are 113 privately-run homes in the Klang Valley as listed by the Malaysian Welfare Department as of January 2014; 29 of which agreed to participate in this study. A cross-sectional study using two main tools: the Mini-Cog Assessment to screen for cognitive impairment and Patient Health Questionnaire-2 to screen for depression. This was only a section of a larger questionnaire therefore it has to be kept brief in order to not tire out the elderly as it will be done via interview. The inclusive criteria are residents aged 65 and above with no hearing or speech impairment who have consented to the interview. A total of 591 residents were included in the sample.

The Mini-Cog Assessment divides the results into positive or negative for cognitive impairment whereas the Patient Health Questionnaire-2 results would be a range of

score between 0-6 in which 3 is taken as the cut-off point as positive for depression in this study.

## Results

Out of 591 residents, 43 (7.2%) were found to be positive for cognitive impairment with the race distribution being Malay (44%), Chinese (40%), Indian (14%) and others (2%) while the gender distribution reads as 74% female and 26% male.

Out of 591 residents, 188 (31.8%) were found to be positive for depression with the race distribution being Chinese (84%), Malay (12%) and Indian (4%) while the gender distribution reads as 66% female and 34% male.

As for the association with level of education, a majority (37.2%) of those positive for cognitive impairment did not receive any formal education at all whereas the majority (34%) of those positive for depression received at least secondary education.

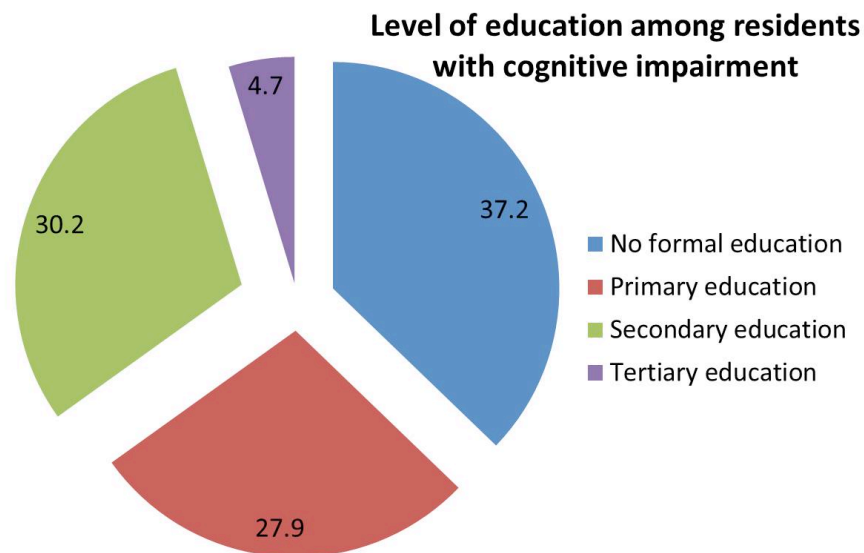


Figure 1: Level of education among residents with cognitive impairment

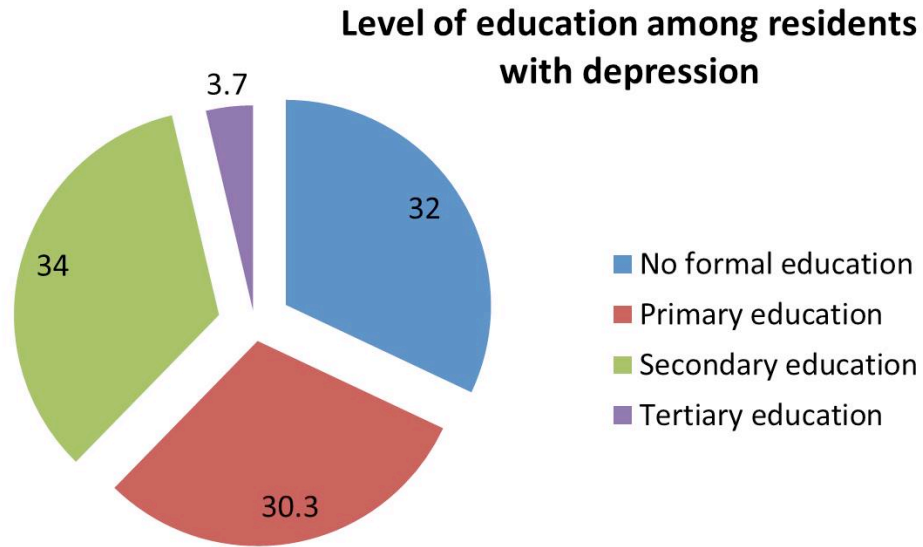


Figure 2: Level of education among residents with depression

In terms of association with frequency of visits from family members and/or friends in the past two years, a majority (37.2%) of those positive for cognitive impairment have had no contact from either family members and/or friends whereas a majority (34.6%) of those positive for depression had received monthly visits from either a family member or a friend in the past 2 years.

### Frequency of visits from family / friends (in the past 2 years) among residents with cognitive impairment

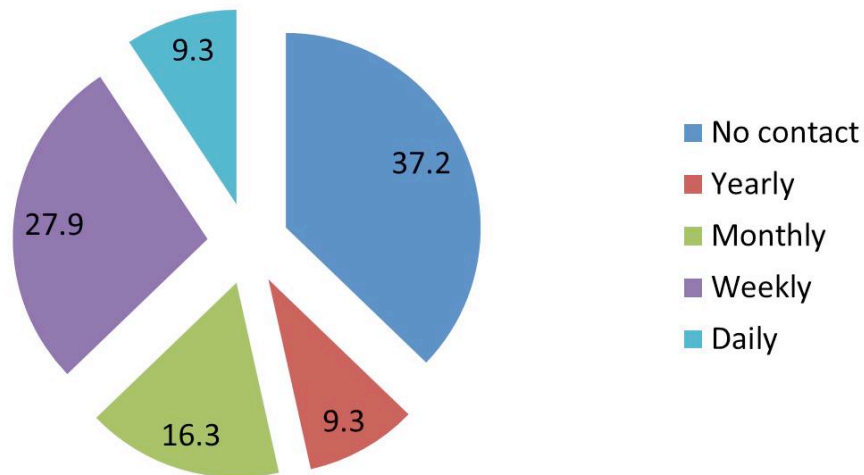


Figure 3: Frequency of visits from family members and/or friends in the past 2 years among residents with cognitive impairment

**Frequency of visits from family/friends  
(in the past 2 years) among residents  
with depression**

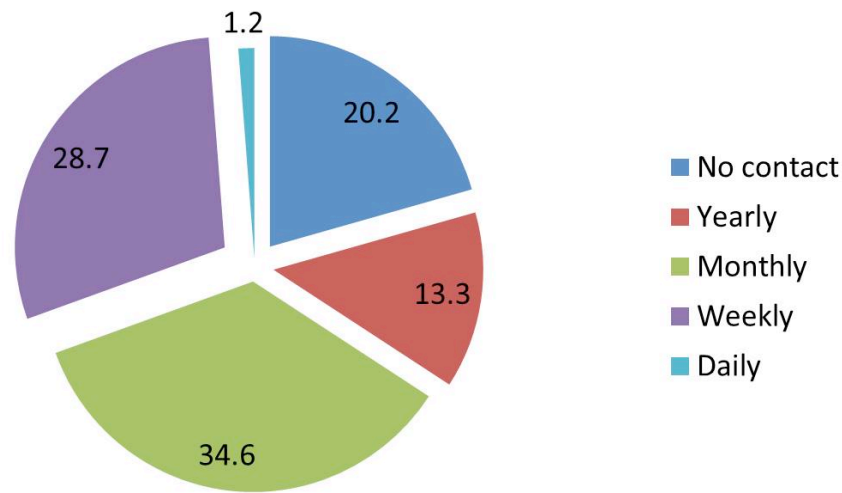


Figure 4: Frequency of visits from family members and/or friends in the past 2 years among residents with depression

**Conclusion**

The prevalence of cognitive impairment and depression stands at 7.2% and 31.8% respectively for this study. From the results, it can be concluded that there is an association between cognitive impairment and level of education as well as frequency of visits from family members and/or friends since the lower the level of education, the higher the prevalence of cognitive impairment and the lesser visits received from family members and friends, the higher the prevalence of cognitive impairment.

However, there seems to be no association between depression and level of education as well as frequency of visits from family members and/or friends. Discussion among the research team members as well as the caretakers of the assisted living facilities as to why this might have been proposed several interesting theories; some residents have shown signs of distress whenever they are visited by family members, which would even predispose to episodes of depression. Delving further into this matter, this may have been caused by family conflict or the fact that whenever the family member leaves, the related resident feels isolated and cut off from the outside world. As for the insignificant association between depression and level of education, the high prevalence of depression among well-educated elderly residents may have been due to the fulfillment of Maslow’s basic tiers of needs which then allows them to assess their lives in terms of love and belonging.

Possible interventions that have been discussed among the research team members include developing a simple app to increase brain activity to prevent cognitive impairment as well as increased physical activity (for example, dancing) as it has been shown to significantly lower the incidence of cognitive impairment and depression. The research team members have also discussed the feasibility of providing frequent counseling for elderly suffering from depression in the assisted living facilities.

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