

Depression, Anxiety and Locus of Control among Elderly with Dementia

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ABSTRACT

The aging population has increased due to increasing longevity. Dementia, however, is one threat that has not received much attention particularly from the perspective of psychological well-being within this population. Thus, this study examined depression, anxiety, and locus of control in elderly suffering dementia. Instruments used were Geriatric Depression Scale to measure depression, Beck Anxiety Inventory for anxiety, and Rotter's Locus of Control Scale to measure locus of control. Clinical Dementia Rating (CDR) was used to evaluate stages of dementia. One hundred elderly from various nursing homes participated in the study. Descriptive analysis of the CDR showed that 61% of the sample suffered very mild to mild dementia, 21% suffered moderate dementia, and 10% suffered severe dementia. Inferential analysis showed that there was a significant positive correlation between depression and anxiety. The results led to a conclusion that elderly suffering dementia experience depression. Also, the more depressed the elderly were, the higher their anxiety level.

Keywords: Anxiety, cognitive function, dementia, depression, elderly, locus of control, memory, problem solving

INTRODUCTION

There is a threat to aging that has become a serious concern for some. A disease known as dementia can be an impediment to the well-being of aged individuals. Dementia is a progressive disease affecting the normal functions of the brain. Among the cognitive functions that can be affected by brain lesions and diseases are memory, attention, language, and the ability to solve problems (e.g. Miller *et al.*, 1991). Higher mental functions are affected first. In later stages of the condition, affected persons may be disoriented in time (not knowing what day of the week, day of the month, month, or even what year it is), in place (not knowing where they are), and in person (not knowing who they are or who others around them are) (Schwab *et al.*, 2009). These problems can contribute to a decrease in

daily activities which in turn may create a need for long term care and attention from others. To date, sadly, dementia has no cure; however, it can be controlled with the use of medication (Velayudhan *et al.*, 2010).

Research on dementia, especially those that looked at the psychological well-being of patients is still new and limited. The disease is taken as something that is 'normal' for someone who is old. However, dementia should receive more attention from researchers as it could burden care takers as much as it does on the sufferer. There are studies (e.g. Haley *et al.*, 1987; Clair *et al.*, 1995; Peter *et al.*, 1991; Epstein-Lubow *et al.*, 2008; Raccichini *et al.*, 2009) that showed care-givers of dementia patients suffer high level of depression and anxiety. For these reasons, this study has two

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objectives: (1) to measure the level of dementia in the elderly in relation to gender and race in the sample, (2) to identify the level of psychological well-being in elderly patients with dementia in terms of depression, anxiety, and locus of control as well as relationships between the variables.

METHODS

This study adopted the purposive method which involved the use of survey. This study involved elderly patients from various government and private nursing homes, as well as those who live at home in the Klang Valley. The respondents were selected from the elderly aged 65 to 90 years old. Selection was also based on the use of the Clinical Dementia Rating (CDR) Scale. There were 100 respondents in this study. The selection of participants of the study was done carefully to ensure ethical clearance was taken great care. The first step in obtaining participants was to get the approval from the Social Welfare Department of Malaysia. The approval was granted. Then, a letter of permission was written to various nursing homes. The care-givers provided signatures on behalf of the respondents for the purpose of consent for participation. The participants themselves could not provide their own signatures for consent because most of them could no longer write. With these steps, we ensured that ethical clearance was taken into account.

This study used four instruments which were the Clinical Dementia Rating (CDR) Scale, Geriatric Depression Scale (GDS, Short Form), Beck Anxiety Inventory (BAI) and Rotter's Locus of Control Scale to measure stages of dementia and psychological well-being (depression, anxiety, and locus of control). The scales reliability and validity have been established in several studies. For this reason, the reliabilities and validities of all the four instruments used in the current study were based on other studies. Beck Anxiety Inventory (BAI) is a self-report measure with 21 items used to assess the severity of anxiety symptoms (Beck *et al.*, 1988) with a high internal consistency ($\alpha = 0.92$) (Beck *et al.*, 1988). The total score of

all 21 items (range 0 -63) provides an estimate of the severity of anxiety symptoms (Beck and Steer, 1993). Geriatric Depression Scale (GDS) is a self-rating screening tool for depression developed to be used in geriatric populations. Cronbach's alpha coefficient was 0.89 in internal consistency analysis (Sivrioglu *et al.*, 2009). Locus of Control was assessed using Rotter I-E Locus of Control Scale. This scale has been widely used as a measure of internal-external control expectancies, leading to the confirmation of the locus of control construct as an important personality variable (Lefcourt, 1976). The I-E scale is designed to sample behavior from a wide range of life areas such as love and affection, dominance, social-political events, social recognition, academic recognition, and general life philosophy. The alpha for this scale is 0.74 (Lefcourt, 1976). The Clinical Dementia Rating scale (CDR) measures cognitive and functional impairment in dementia patients (Hughes *et al.*, 1982). The scale's reliability has been established with $\alpha=0.92$.

RESULTS AND DISCUSSION

The distribution of respondents according to gender is shown in *Fig. 1*. There were 51 males (51%) and 49 females (49%). As for the race factor, 67 respondents were Malay (67%), 11 were Chinese (11%), and 19 were Indian (19%). The distribution of respondents by race is shown in *Fig. 2*.

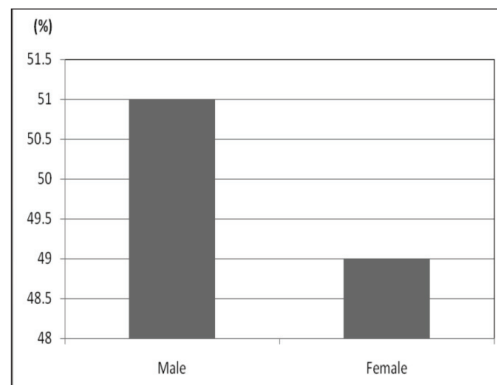


Fig. 1: The distribution of respondents by gender

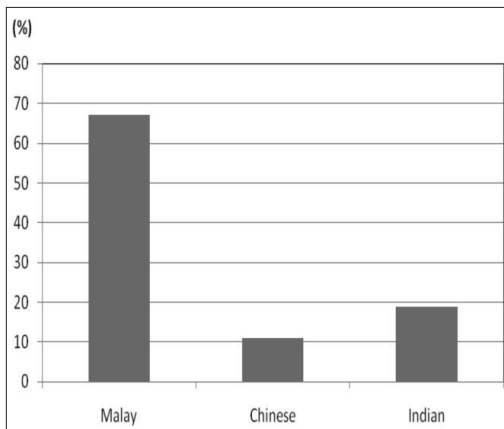


Fig. 2: The distribution of respondents by race

The Clinical Dementia Rating (CDR) Scale was used to measure the levels of dementia among the respondents. The results showed that 35% of the elderly who suffered from dementia had very mild dementia; 34% suffered mild dementia; 21% experienced moderate dementia; and 10% experienced severe dementia. The results are shown in Fig. 3.

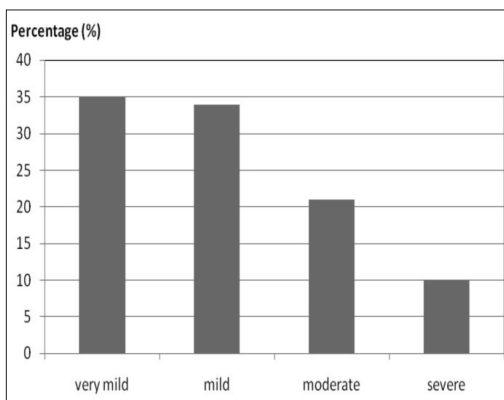


Fig. 3: The distribution of respondents by stages of dementia

The descriptive results for psychological well-being showed that 36% of the respondents did not suffer depression, but the other 64% did suffer depression. Of the latter, 38% suffered minimal anxiety, 36% had mild anxiety, 19% had moderate anxiety, and 7% had severe anxiety. Descriptive analysis on the locus of control

showed that 5% of the respondents had strong external locus of control, 9% had moderate external locus of control, 36% had both internal and external locus of control, 27% had moderate internal locus of control, and 23% had strong internal locus of control.

Analysis using Pearson Correlation Coefficient showed that there was a significant positive correlation between depression and anxiety among the elderly with dementia ($r=0.41$, $p<0.001$). Table 1 shows the relationship between depression and anxiety. The results indicated that the higher the level of depression in an elderly person with dementia, the higher the level of his or her anxiety. However, correlations between locus of control and depression, and between locus of control and anxiety did not reach significance (depression; anxiety: $r=-0.14$, $p=0.152$; $r=-0.03$, $p=0.75$, respectively).

TABLE 1

Relationship between depression and anxiety

Construct	r
Depression	
Anxiety	.412**

** $p<0.001$

The analysis of gender differences revealed that the only factor that reached significance was locus of control ($t=2.2$, $p=0.03$). However, the difference was only marginal. Differences in depression and anxiety based on gender were not significant (depression; anxiety: $t=0.90$, $p=0.37$; $t=1.40$, $p=0.16$, respectively). The data for gender differences is shown in Table 2.

TABLE 2

Difference in locus of control based on gender

Gender	N	Mean	SD	df	t
Male	51	3.31	1.19	98	-2.145*
Female	49	3.78	0.94		

* $p<0.05$

Analysis of differences in locus of control, depression, and anxiety based on race revealed that there was a significant difference in anxiety based on race ($t=2.26$, $p<0.05$). The results are shown in Table 3. However, there were no significant differences in depression and locus of control based on race (depression; locus of control: $t=0.64$, $p=0.52$; $t=1.73$, $p=0.09$, respectively).

TABLE 3
Difference in anxiety based on race

Race	N	Mean	SD	df	t
Malay	67	1.81	0.84	98	-2.264*
Non Malay	33	2.24	1.03		

* $p<0.05$

The results showed that most of the elderly in the sample suffered very mild, mild, or moderate levels of dementia, as measured by the Clinical Dementia Rating (CDR) Scale. In terms of CDR domains, some of the respondents had problems in orientation, while others had difficulties in judgment and problem solving. But for most of the respondents the main symptom was the loss of memory. In the first stage of memory loss, the patient forgets a lot of things in his or her daily life. At a more severe stage, the patient often forgets the day, time, place, and even his or her own birth date (Cassimjee, 2008).

Disorientation and the inability to solve problems are caused by damage to the frontal lobe of the brain, which is responsible for the processes of planning, problem solving, and decision making (Goel *et al.*, 1997). Clearly, if the elderly with dementia have difficulties in planning, then they will also have difficulties in solving any kind of problem, including problems dealing with his or her daily life.

This study showed that most of elderly with dementia in the sample suffered depression. One possible reason for this is the fact that the major problem of dementia is the loss of memory. Without the ability to remember, performing

normal daily activities would be impaired. For instance, the elderly with dementia may have to stop doing his or her favorite activity, like gardening, because of memory problems. The subsequent feelings of boredom, aggravation, and frustration can lead to depression (Edwards, 2006).

This study also showed that most of the elderly in the respondents possessed minimal to mild anxiety. Most of the respondents lived in nursing homes where the constant attention from professional care-givers may have helped in making them feel relaxed and not too anxious about negative things. Consequently, they may feel that they can control their own providence. This would explain the study's result that most of the elderly with dementia had internal locus of control.

The results of this study indicated a significant positive correlation between depression and anxiety. The elderly with a high level of depression were more likely to endure a high level of anxiety. This is to some extent not surprising as both depression and anxiety are types of mood disorder. And finally, there was a significant difference between races in terms of anxiety. The non-Malays experienced higher anxiety (mean=2.3) than the Malays (mean=1.8). One possible reason for this was due to the coping strategies that the elderly possess for controlling anxiety: since most Malays were Muslims and they were usually more religious conscious as they get older, it was probable that the prayers they practised were a means of relaxation which in turn helped to lessen their anxiety. Moreover, Islam encourages patience and self-control and the Malay elderly might have practiced what they had learned as Muslims.

CONCLUSION

This study found that there exists a high prevalence of detrimental well-being, particularly in terms of depression and anxiety, among the elderly with dementia within the sample. Because of problems related to their cognitive abilities, they were unable to carry out normal daily living. Depression and anxiety were the

major negative psychological ailments affecting their contentment. Note that the samples in the current study had mild to very mild levels of dementia. Even so, the presence of psychological problems was exhibited in these samples. This matter calls for serious attention. Cautions should be taken when arriving at any conclusions as the present study did not examine any cause and effect issues. This is one limitation of the study. Nevertheless, the insights provided here about the elderly with dementia are noteworthy as they can contribute to the efforts to improve the quality of their care.

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