



PRIMARY CARE PHYSICIANS' PERCEPTION AND PRACTICE TOWARD DEPRESSION ASSESSMENT FOR ELDERLY PATIENTS, IN EASTERN PROVINCE, KSA 2018

Medicine

Ashwaq Al-ghamdi MBBS, SDFM ,Family medicine physician, Ministry of Health in Saudi Arabia

Ezdehar Muhanna* MBBS, SDFM ,Family medicine physician, Ministry of Health in Saudi Arabia*
*Corresponding Author

Sara Alabdullah MBBS, SDFM ,Family medicine physician, Ministry of Health in Saudi Arabia

Abdulrahman Abudahish MBBS, DKFFC, FKFFC, SBFM, ABFM, Eastern Province-MOH

ABSTRACT

Introduction: Depression in elderly is a disabling disease that affect quality of life. It is under-recognized and undertreated. The aim of this study is to asses physicians perception and practice toward depression in elderly in KSA.

Method: a cross sectional study conducted in eastern providence. A self-administered questionnaire was sent to all PHC physicians in Dammam, Alkobar and Alqatif cities.

Results: thirty six percent of physicians had adequate general knowledge. Better knowledge level is associated with attending postgraduate courses. Physicians reported positive attitude toward depression in elderly. Positive attitude was associated with attending the postgraduate courses. One-third of PHC physicians do not assess depression in elderly.

Conclusion: PHC physicians' knowledge was poor, their attitude is positive. Postgraduate mental and geriatric care courses improve PHC physicians' perception.

Recommendation: effective postgraduate courses in geriatric and mental care should involve all PHC physicians to ensure better care for elderlies.

KEYWORDS

Elderly Depression, Late Life Depression

Introduction

Improvement in health care worldwide has lead to decrease mortality rate and increase life expectancy. As a result, population is aging rapidly. It is estimated that by the year of 2050 people above age of 60 will double from 12% to 22 % worldwide (1, 2). Saudi Arabia is following the same pattern as the percentage of elderly increased from 3.48 % in 1993 to 6.7 % in 2004 (3). WHO predicts that elderly above 65 years will be 18.4% by 2050 in Saudi Arabia (4).

Aging is a normal biological process, not an illness or a cause of disability (2). Elderly continue to contribute positively to society as family members, workforce and volunteers (1). Islamic culture value the elderly, consider the eldest members as a source of spiritual blessing, religious faith, wisdom, and love (2). Providing good medical care is essential to enable elderly to fulfill that important role in our community.

Quality of life among elderly is affected by their health status. Health status of elderly is determined by their physical health, mental wellbeing and functional status (5, 6).

Mental illness accounts for 10% of all disabilities in elderly (7). Depression is the most common of all mental disorders (1, 6). The prevalence of elderly depression in the community worldwide range between 10 -15 %. Studies in Arab countries has reported a much higher prevalence. The prevalence of elderly depression is 24.3% in Jordan, 25% in Kuwait, 38.9% in Iraq, 16.9% in Oman and 17.5% in Saudi Arabia (3, 8).

Depression is a serious disease that can lead to many complications if untreated. These complications include poor control of preexisting medical condition, functional disability and substance abuse (1, 9, 10). Furthermore, depression in this age as in others can also lead to suicide. Elderlies are more likely to comet successful suicide than younger adults (8, 11). Depression also increase the load on health care system through frequent clinic visit and economic burden (9, 10). Early diagnosis and treatment of elderly depression will prevent these complications and improve quality of life (1).

Primary care physician play an essential role in management of elderly with depression. Primary care physicians are the first access to elderly with depressive symptoms (12). They provide comprehensive care that involve chronic disease, acute complains as well as mental illness. Studies showed that elderly patient with depression prefer to receive

their treatment in primary health care (13). It reduces the stigma of depression and allow easier access for them (9, 14, 15) .Furthermore, depression is managed more effectively when there is collaboration between primary care physician and psychiatrist (2).

Clinical presentation in elderlies differs than adults. Elderlies usually present with somatic complaints rather than emotional symptoms. These symptoms may be incorrectly assumed to be due to aging. Many elderlies suffer for years without receiving diagnosis (11, 16).

Many tools are available to help PHC physicians screen depression in elderlies. PHQ-9 is a valid screening tool, helpful in establishing diagnosis and follow up (17). GDS is a valid screening tool but not helpful for follow up (6, 18, 19). However, a comprehensive clinical interview is essential for all patients to confirm the diagnosis before starting treatment (11, 18).

Depression treatment in elderly is challenging because of increased risk of drug interaction, side effect, comorbidities and memory impairment (20). First line medications are SSRIs (6, 9). Psychotherapy in form of CBT, IPP is helpful as well (6, 21, 22, 23). Family support and involvement in management improves outcome (24).

Studies over the world shows that quality of depression management depends on physician knowledge and attitude toward it (25, 26). Physicians who have adequate knowledge about depression are more confident to diagnose and start treatment. In contrast, those who have gaps in this topic are more reluctant to manage depression (27).The most common knowledge defect reported in research was about pharmacological therapy of depression. Physician attitude toward depression is also an important influence of management. Physician with positive attitude are more likely to participate in depressed patient care (26).

Rational:

In Saudi Arabia, majority of elderly patients with depression have been followed in primary health care centers, almost all studies conducted were hospital based. Therefore, our study aimed to fill a gap in research about elderly depression assessment in primary health care settings.

We hope to raise awareness among primary care physician on depression assessment in elderly patients. On the other hand; to end up with specific recommendations to improve elderly psychiatric care in primary health care in the near future.

Aim:

The aim of this study is to assess knowledge, attitudes, practices and barriers of primary health care physicians toward depression assessment in elderly patients in Eastern Province, KSA, 2018

Research design and methodology:

- Study setting and time This study was conducted in Alkhobar, Dammam and Alqatif cities, kingdom of Saudi Arabia during the period from January to end of May 2018.

Study design

- A cross-sectional study was conducted to assess primary health care physicians' perceptions and practices toward depression assessment for elderly patients in Alkhobar, Dammam and Alqatif cities, KSA 2018.

Study population

Primary health care physicians working in PHC centers of Ministry of Health (MOH) in Alkhobar, Dammam and Alqatif cities, KSA.

Sample size and sampling technique

- The total population is 313 physicians working in PHC centers of Ministry of Health (MOH) in Alkhobar, Dammam and Alqatif cities.
- All PHC physicians were included.

Study tool:

A self-administrated questionnaire was adapted from University of Illinois College of Medicine (10).

- Content validity of the questionnaire was obtained by two psychiatric consultants and four family medicine consultants, and it was modified accordingly.
- A pilot study was conducted with 20 participants. Then, the data was entered in to SPSS v.22 and the reliability of the questionnaire was calculated by Cronbach Alpha, which was 0.704.

Main study

- The study was conducted online using self-administered questionnaire from 13th of March to 30th of April 2018.
- A total of 137 physicians participated (n=137)
- Response rate was 43.7%.

Statistical analysis:

- Data were analyzed using SPSS v22.

The main contents of questionnaire:

- Knowledge section:
- The knowledge section consists of five questions that assess physicians' general background. Physicians were asked to mark the statements as true, false or I do not know. Correct answers were scored as 1 and incorrect, I don't know as 0.
- Mean of total knowledge score was obtained. Those above mean were considered to have good knowledge. And those below mean were considered to have poor knowledge.

Attitude section:

- Attitude section consists of seven questions. Five-point Likert scale was used to assess it. For statements that reflect positive attitude, strongly agree was scored as 5, agree scored as 4, uncertain as 3, disagree as 2 and strongly disagree as 1. For statement that reflects negative attitude strongly agree was scored as 1, agree scored as 2 and so on.

Current practice

- Practice section consists of two parts including question about routine screening, laboratory examinations, gaps between preference of treatment and the availability of that treatment and the use of patient education material.
- This section was analyzed using frequency and percentage.

- Association between demographic data and physicians' knowledge and attitude were performed using Chi-square test, independent t-test and ANOVA test as appropriate.

Ethical consideration:

- Approval for this study obtained from institutional review board (IRB), Ministry of Health.
- A written informed consent was attached to the questionnaire and it was anonymous to ensure confidentiality.

Results:

Table (1): Demographic characteristics of PHC physicians in Alkhobar, Dammam and Alqatif, KSA, 2018

Characteristics		Frequency (n=137)	%
Age	25-34 year	93	67.9
	35-44 year	31	22.6
	45 and above	13	9.5
Gender	male	36	26.3
	female	101	73.7
Nationality	Saudi	123	89.8
	Non-Saudi	14	10.2
Title	General Practitioner	108	78.8
	Family physician	29	21.1
Sector	Alkhobar	38	27.7
	Dammam	71	51.8
	Alqatif	28	20.4
Years of experience in PHC	less than 5 years	57	41.6
	5-10 years	54	39.4
	more than 10 years	26	19.0
Number of patients over 65y seen/ week/physician	less than 20	65	47.4
	20-40	60	43.8
	more than 40	12	8.8
Percentage of depressed elderly seen/week/physician	I don't assess	45	32.8
	less than 5%	59	43.1
	5-10%	25	18.2
	more than 10%	8	5.8
Attendance of geriatric courses	yes	48	35.0
	no	89	65.0
Attendance of mental health courses	yes	36	26.3
	no	101	73.7
Presence of psychologist in PHC	yes	26	19.0
	no	111	81.0

Table (1) shows that majority of participants age range between 25-34 year (67.9%) and were female (73.7%). Most of them (89.8%) were Saudis and were general practitioner (78.8%). More than half of participants work in Dammam PHC (51.8%). Majority of them did not attend any geriatric courses (65%) or mental health courses (73.7%). Some of them (19 %) reported that they have psychologists in their centers.

Figure (1): knowledge level of PHC physicians toward depression assessment of elderly patients in Alkhobar, Dammam and Alqatif, KSA, 2018

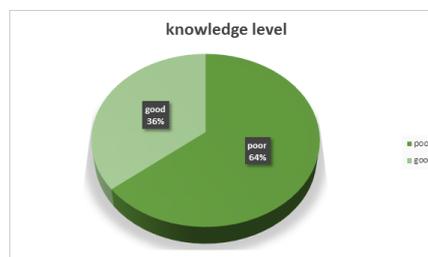


Figure (1) shows that one third of PHC physicians (36%) have good knowledge toward depression assessment of elderly patients.

Table (2): PHC physicians' attitudes toward depression assessment of elderly patients in Alkhobar, Dammam and Alqatif, KSA, 2018

Variable	Strongly disagree n (%)	Disagree n (%)	Uncertain n (%)	Agree n (%)	Strongly agree n (%)
“helping depressed patient is important to me”	15 (10.9)	1 (0.7)	8 (5.8)	28 (20.4)	85 (62.0)
“I consider diagnosing and treating depression in elderly is my responsibility”	12 (8.8)	10 (7.3)	30 (21.9)	47 (34.3)	38 (27.7)

“I feel confident that I can diagnose depression in elderly”	8 (5.8)	17 (12.4)	43 (31.4)	51 (37.2)	18 (13.1)
“I am confident to prescribe anti-depressive medications for elderly patients”	41 (29.9)	40 (29.2)	27 (19.7)	23 (16.8)	6 (4.4)
“I feel comfortable dealing with the family of depressed patients”	12 (8.8)	19 (13.9)	37 (27.0)	48 (35.0)	21 (15.3)
“diagnosing depression burden me with responsibility for treatment”	12 (8.8)	35 (25.5)	47 (34.3)	33 (24.1)	10 (7.3)
“I have not to use term depression to avoid stigmatizing patient”	14 (10.2)	37 (27.0)	43 (31.4)	32 (23.4)	11 (8.0)

Table (2): shows that majority of PHC physicians (82.4%) agree that helping depressed patient is important. Two-third of PHC physicians (62%) considered diagnosing and treating depression are their responsibilities. More than half of participants (50.3%) felt confident in diagnosing depression in elderly and felt comfortable in dealing with family of those patients. One-fifth of PHC physicians (21.2%) were confident in prescribing antidepressants for elderly. One-third of participants (31.4%) thought that diagnosing depression burden them and favored not to use the term depression to avoid stigmatizing patient.

Table (3-A): PHC physicians reporting their practices toward depression assessment of elderly patients in Alkhubar, Dammam and Alqatif, KSA, 2018

	Frequency	%
A) Symptoms that routinely screening by PHC physicians for depression in elderly patients		
sad mood	120	87.6
Pain (headache/body ache)	53	38.7
Unexplained symptoms	75	54.7
decrease energy	73	53.3
anxiety/irritability	60	43.8
sexual complaints	45	32.8
weight change	63	46.0
loss of interest	125	91.2
work/relationship dysfunction	66	48.2
sleep disturbance	99	72.3
death wishes	83	60.6
suicide thoughts	83	60.6
multiple worries	62	45.3
don't routine screen for depression	4	2.9
B) Tools used by PHC physicians to diagnose depression in elderly patients		
mini-mental state exam	21	15.3
PHQ 9	67	48.9
Geriatric depression scale	39	28.5
no standard tool	39	28.5
C) management plan		
SSRI	57	41.6
SNRI	9	6.6
TCA	5	3.6
referral to psychiatrist	97	70.8
referral to psychotherapy	41	29.9

Table (3-A) shows that majority of PHC physicians asked about sad mood (87.6%) and loss of interest (91.2%) as the main symptoms of depression respectively, while more than one-third (38.7%) asked about pain and more than half (53.3%) asked for decrease energy. Less

than half of PHC physicians (43.8%) asked for anxiety as a combined disorder and more than one-third (32.8%) asked for sexual complaints. Less than half of participants (46%) asked for weight change and (48.2%) asked for work and relationship dysfunction. Majority of PHC physicians (72.4%) asked for sleep disturbance, less than two-third (60.6%) asked for suicidal thoughts and less than half (45.3%) asked for multiple worries. Rarely, of PHC physicians (2.9%) reported were not do screening for depression routinely for these patients at high risk. The majority of PHC physicians (88%) didn't use any tool for diagnosing depression. Among those who used a tool to aid diagnosis PHQ9 (48.9%), GDS (28.5%), and mini-mental state examination (15.3%) were the preferred choice respectively. SSRI was the preferred drug by less than half of PHC physicians (41.6%). More than two-third of PHC physicians (70.1%) included referral to psychiatrist as part of their management while nearly one-third of PHC physicians (29.9%) referred to psychotherapy. N.B. Participants can chose all that apply in each section of this part.

Table (3-B): PHC physicians reporting their practices toward depression assessment of elderly patients in AL Khobar, Dammam and Alqatif, KSA, 2018

Variable	Frequency (%)
“I don't diagnose depression until rule out organic diseases”	94 (68.6)
“Family should be included in management plan”	123 (89.8)
“There is a gap between treatment I prefer and availability of the treatment”	70 (51.1)

Table (3-B) shows that more than two-third of PHC physicians (68.6%) don't diagnose depression until they rule out organic diseases and most of them included the family of patients in the management plan (89.8%). More than half of PHC physicians (51.1%) find a gap between the treatment they prefer and the available treatment.

Table (4): Association between demographic characteristics and PHC physicians' knowledge toward depression assessment of elderly patient in AL Khobar, Dammam and Alqatif, KSA, 2018

		knowledge				P value
		poor		Good		
		n	%	Count	%	
Age	25-34 year	56	63.6	37	75.5	0.312
	35-44 year	21	23.9	10	20.4	
	45 and above	11	12.5	2	4.1	
Gender	male	22	25.0	14	28.6	0.649
	female	66	75.0	35	71.4	
Nationality	Saudi	76	86.4	47	95.9	0.077
	Non-Saudi	12	13.6	2	4.1	
Title	General Practitioner	73	67.6	35	32.4	0.113
	Family Physician	15	51.7	14	48.3	
Sector	Khobar	20	22.7	18	36.7	0.125
	Dammam	51	58.0	20	40.8	
	Alqatif	17	19.3	11	22.4	
Years of experience in PHC	less than 5 y	37	42.0	20	40.8	0.770
	5-10 y	33	37.5	21	42.9	
	more than 10 y	18	20.5	8	16.3	
Number of pt. over 65y you see /week/ physician	less than 20	41	46.6	24	49.0	0.959
	20-40	39	44.3	21	42.9	
	more than 40	8	9.1	4	8.2	
Percentage of depressed elderly seen /week/physician	I don't assess	35	39.8	10	20.4	0.019*
	less than 5%	38	43.2	21	42.9	
	5-10%	10	11.4	15	30.6	
	more than 10%	5	5.7	3	6.1	
Attendance of geriatric courses	yes	24	27.3	24	49.0	0.011*
	no	64	72.7	25	51.0	
Attendance of mental health courses	yes	18	20.5	18	36.7	0.038*
	no	70	79.5	31	63.3	
Presence of psychologist in PHC	yes	16	18.2	10	20.4	0.750
	no	72	81.8	39	79.6	

* p<0.05

Table (5): summarize the association between several demographic characteristic of PHC physicians and their knowledge toward depression assessment in elderly patients. There is significant relation between knowledge and percentage of depressed elderly seen per week ($p=0.019$), attendance of geriatric courses ($p=0.011$) and attendance of mental health courses ($p=0.038$).

Table (5): Association between demographic characteristics and PHC physicians' attitude toward depression assessment of elderly patient in AL Khobar, Dammam and Alqatif, KSA, 2018

		Frequency (n=137)	mean	P value
Age	25-34 year	93	22.74	0.412
	35-44 year	31	23.70	
	45 and above	13	24.15	
Gender	male	36	22.91	0.788
	female	101	23.15	
Nationality	Saudi	123	22.94	0.254
	Non-Saudi	14	24.42	
Title	General Practitioner	108	22.00	0.000*
	Family Physician	29	27.13	
Sector	Khobar	38	22.76	0.491
	Dammam	71	23.53	
	Alqatif	28	22.42	
Years of experience in PHC	less than 5 y	57	22.40	0.071
	5-10 y	54	22.93	
	more than 10 y	26	24.88	
Number of pt. over 65y you see /week/ physician	less than 20	65	22.92	0.910
	20-40	60	23.98	
	more than 40	12	23.08	
Percentage of depressed elderly seen /week/physician	I don't assess	45	20.66	0.000*
	less than 5%	59	23.28	
	5-10%	25	26.44	
	more than 10%	8	24.87	
Attendance of geriatric courses	yes	48	25.60	0.000*
	no	89	21.74	
Attendance of mental health courses	yes	36	26.16	0.000*
	no	101	22.00	
Presence of psychologist in PHC	yes	26	21.53	0.055
	no	111	23.45	

* $p < 0.05$

Table (5): summarize the association between several demographic characteristic of PHC physicians and their attitude toward depression assessment in elderly patients. There is significant relation between attitude and job title ($p=0.000$), percentage of depressed elderly seen per week ($p=0.000$), attendance of geriatric courses ($p=0.000$) and attendance of mental health courses ($p=0.000$).

Discussion:

Depression in elderly is a disabling disease that negatively affect quality of life. It is under-recognized and undermanaged. Our study is one among few that investigate PHC physicians' perceptions and practices toward depression in elderly in Saudi Arabia.

Knowledge:

Overall, the mean total score of knowledge of PHC physicians on depression assessment and management in elderly was poor. Only nearly, one-third of PHC physicians (36%) had adequate score of knowledge. In contrast to Zylstra et al (28) that found 80% of PHC physicians in USA were knowledgeable as well as In Lui et al study, Taiwan (29), 78.3% of participants answered the questions correctly. The explanation of such discrepancy between our study and the other studies, in results, could be due to ineffective training on assessment and management of depression in elderly among PHC physicians or poor implementation of guidelines and supervision as well as lack of high-qualified PHC physicians.

As expected, the mean score of knowledge level was significantly associated positively with the frequency of attending geriatric courses ($P = 0.011$), attending mental health courses ($P = 0.038$) and number of depressed elderly patients seen by PHC physicians ($P = 0.019$). These

results are comparable with several studies, which verified the positive association (15, 26, 30, 31, 32). Our study found no association between knowledge level and job title, this suggests that formal education in board program does not increase physicians' knowledge as postgraduate courses do.

Attitude:

The majority of PHC physicians (82%) reported that helping depressed elderly is important to them, yet nearly two-third (62%) reported that they consider diagnosing and treating depression in elderly as their responsibility. This suggests that many PHC physicians in Eastern Province still consider psychiatrist as the main care provider for depressed patients and themselves as collaborators in care. It is possible that they view themselves as unqualified for such responsibility. Half of them reported lack of confidence in diagnosis, and thus explain their answers on their responsibilities in diagnosing and treating depression in elderly. Furthermore, only one-fifth (21%) are confident to prescribe antidepressants. This shows that they care for their patients but they are still reluctant to take the responsibility in prescribing medication. They might be unaware of the global recommendation to manage such patient primarily in PHC (11, 27). On the other hand, almost all PHC physicians in USA reported diagnosing and treating depression in elderly as their responsibility, and they felt confident in diagnosing depression (99%) and most of them (89%) are confident in prescribing antidepressants (26).

Job title, attendance of geriatric courses, attendance of mental health courses and percentage of depressed elderly seen per week were significantly associated with better attitude in this study ($P = 0.000$ for all). This is in line with several local and international studies that confirm the association (29, 31, 32).

Practice:

Although MOH has adopted screening tool for depression in elderly as a part of geriatric assessment in primary health care setting, our study shows that nearly one-third of PHC physicians do *not* assess depression in elderly patients. Considering that most Saudi elderlies receive their medical care in PHC, hence, there are no geriatric clinics elsewhere; this suggest that many cases might be missed. Our result is in line with Al Zulfah et al study (25), conducted in Abha, (2016), which showed that one-third of PHC physicians do not screen depression in elderly. On the other hand, Habib study (34) in Bahrain found that only 9.8% of PHC physicians do not screen depression in elderly, and Glasser et al (26) in USA found that all PHC physicians screen all their elderly patients for depression. This discrepancy between PHC physicians in Saudi Arabia and others suggests a defect in implementation strategy of screening tool in PHC centers in Saudi Arabia.

Most frequent symptoms routinely screened for depression in elderly by PHC physicians were sad mood (87.6%) and loss of interests (91.2%). Although somatic complaints, are the most common presentation of depression in elderly (11, 13, 30), only 54.7% of PHC physicians reported asking for it. This suggest that PHC physicians deal with depression in elderly as in adult. This might be important reason why many cases are unrecognized (11, 30).

Many tools are available to help PHC physicians to screen depression in elderly. PHQ 9, GDS and MMSE are the most familiar to PHC physicians in eastern province, SA. Most of PHC physicians in this study reported using PHQ 9, which is a valid tool, for screening, assessment and follow up in adults and elderlies (17).

GDS is a part of annual screening tests recommended by Saudi MOH and is available on Geriatric assessment forms in all PHC centers, yet only 28.5% of PHC physicians reported using it. Probably the implementation of geriatric clinics in PHC is still suboptimal. That is why most physicians are not familiar with this tool and not using it.

Few of PHC physicians (15.3%) used MMSE in assessment. MMSE is an important tool in the comprehensive evaluation of elderlies with depressive symptoms (11). It helps in detecting symptoms of cognitive impairment that might be associated with depression (21).

In our study, 70.8% of our sample referred their patients to psychiatrist for management of depression. This is in line with previously mentioned lack of confidence in management.

Although only 21% were confident in prescribing antidepressants, 41.6% reported using it. That might be due to them refilling medications rather than starting it.

Job description, attending geriatric and mental courses were significantly associated positively with the frequency of prescribing antidepressants in this study. Volkers et al (30) also stated that post graduate courses and attending symposiums influence the frequency prescribing antidepressants by PHC physicians.

Conclusion:

PHC physicians' knowledge was poor, their attitude is positive. Postgraduate mental and geriatric care courses improve PHC physicians' knowledge and attitudes toward depression assessment in elderly, and increase frequency of prescribing antidepressants for depressed elderly.

Limitations:

- Response rate in this study was 43.7%, although it is considered acceptable for electronic data collection, it could be raised if more time was available.
- Assessment of physicians' practices through self-administered questionnaires are liable to over estimation of actual practice, so; further evaluation of medical records of patients should be conducted in the future.

Recommendation:

- The MOH should conduct interactive and effective courses in geriatric care and mental health for primary care physicians, to raise their knowledge and skills in dealing with depression and other geriatric related problems.
- To enhance and encourage PHC physicians to start prescription of antidepressants for those patients who need and to be aware with the side effects and the problems of polypharmacy and drug interaction through direct supervision and on job training.
- To start and implement policies and procedures concern with old patients in the PHC centers, for prevention and treatment of psychiatric problems; particularly depression.

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Abbreviations:

Abbreviation	Description
KSA	Kingdom of Saudi Arabia
PHC	Primary Health Care
PHQ-9	Patient Health Questionnaire
GDS	Geriatric Depression Scale
SSRI	Selective Serotonin Reuptake Inhibitor
WHO	World Health Organization
MOH	Ministry Of Health
MMSE	Mini Mental State Exam

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