Research on Development of the Manual for Self Detection of Depression in the Thai Elderly

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Abstract

The purposes of this study were to develop an effective manual for the early self detection of depression in the Thai elderly, to detect the comorbidity of depression (pattern of drug and alcohol abuse, suicidal idea) and to ascertain the quality of life. A quasi experimental field research methodology (Randomized Control Group Pretest-Posttest Design) was implemented. The sample consisted of 1,390 elderly people in 35 communities from 4 districts surrounding Siriraj Hospital-Bangkok Noi, Bangkok Yai, Taling Chan and Bang Phlat. These areas are the peripheral parts of Bangkok and most of them have extended families.

The result showed that:

1. The internal consistency reliability of the nine criteria of the manual for the self detection of depression in the Thai elderly ranged from 0.84 to 0.94. The validity tested by epidemiological methods, disclosed that the sensitivity was 82.14 per cent and the specificity was 97.56 per cent.

2. There was a statistically significant difference in the incidence of depression between the study and the control group ($p<0.000$); self referred cases = 86.7 per cent and 9.8 per cent respectively. The study group was able to detect depression in 42 days, while the control group did so in 122 days. In addition, in the associated comorbidity, there were differences in the patterns of drug and alcohol abuse, suicidal ideas and quality of life after the experiment. These findings showed a decreasing pattern of self medication for depression, and suicidal ideas and an improvement in the quality of life in the study group.

Key word : Manual for Self Detection, Depression

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The problem of underrecognition and undertreatment of depression in elderly populations is highest, because older adults are much less likely than younger adults to visit a specialist in mental health, but are more likely to seek care in the general medical sector(1).

Many studies have also found that undertreated depressive symptoms are associated with poor health and functional status, as well as increased disability, health care utilization, and cost of health services(2,3).

This scenario will be much worse in the next twenty years. According to the report of WHO-Global Burden of Disease project, unipolar depression, which was the fourth leading cause of disability in 1990 worldwide, will be second only to heart disease in 2020.

This study intended to develop a manual that will be effective in the early self detection of depression, and in detecting comorbidity of depression (pattern of drug and alcohol abuse, suicidal idea) and determining the quality of life.

MATERIAL AND METHOD

A quasi experimental field research methodology (Randomized Control Group Pretest-Posttest Design) was implemented. The sample consisted of 1,390 elderly people (aged 60 and above) in 35 communities from 4 districts surrounding Siriraj Hospital, 667 for control and 723 for study groups respectively. The Thai Geriatric Depression Scale (TGDS), Thai Mini Mental State Examination (TMSE), The Philadelphia Geriatric Center Morale Scale (PGCM-S), and questionnaires of personal background, drug and alcohol use were used for screening and data collection. Leaflets and video tape demonstration of depressive symptomatology were used as an intervention technique in the study group. In order to compare the control and study group, descriptive and analytical statistics were computed by using SPSS for Windows

RESULTS

The results of the study were as follows :-

1. Efficiency of the Manual for the self-detection of depression in the Thai elderly.

1.1. Reliability coefficient = 0.84-0.94, as tested by KR-20 method. The result reflected the high level of internal consistency of the instrument.

1.2. Validity of the instrument tested by epidemiological methods, indicated a sensitivity of 82.14 per cent, a specificity of 97.56 per cent, a positive predictive value of 97.87 per cent and a negative predictive value of 80 per cent.

2. The Effectiveness of the Manual was shown by the subjects' ability to recognize depression by themselves, in their searching for earlier treatment, in the decreasing frequency of substance use and in their improved quality of life.

2.1. 86.7 per cent of the study group sought hospital treatment, compared with only 9.8 per cent of the control group. In the control group, a depressive syndrome was detected mostly by psychiatrists at a community visit, while the study group was aware of the disturbing symptoms and sought hospital treatment by themselves.

2.2. The number of days prior to seeking hospital treatment was 42 days in the study group and 122 days in the control group. In the case of detection by a community visit by a psychiatrist, the average number of days wasted before detection were 58 and 128 days for the study and control group respectively.

2.3. A new diagnosis of depression was found in 52 cases in the study group, on voluntarily seeking hospital treatment, while the incidence of newly diagnosed depression was only 4 cases in the control group. This finding revealed 48 more cases who sought treatment in the study group. In addition, the number of days before the physician detected depression in the study group was 80 days sooner than in the control group.

The findings in the present study suggest that the manual can help in the earlier detection of depression and awareness of the syndrome, facilitating early treatment, This resulted in a cost saving of 2,320,000 baht. (Table 1) In addition, this self-detection manual can help reduce the costs of medical care for depression in the Thai elderly population by 1,713 million baht, a diagnostic evaluation cost of 250 million baht and inpatient hospital bed occupancy of 7,932 beds, annually. (Table 2)

2.4. There were statistical differences in the percentages of psychiatric diagnoses between the study and control group ($p<0.001$). In the control group, we found Adjustment disorder with depressed mood was found in 53.66 per cent, Major depressive disorder in 29.95 per cent and dysthymia in

Table 1. Reliability coefficient of manual for self-detection of depression for Thai elderly.

Depressive symptoms from the manual	Reliability coefficient (r)
Criteria 1 : Feel sad and /or irritable.	0.94
Criteria 2 : Don't enjoy the things that once gave pleasure.	0.91
Criteria 3 : Appetite and/or weight has changed.	0.93
Criteria 4 : Sleep patterns have changed.	0.92
Criteria 5 : Tired all the time and have no energy.	0.89
Criteria 6 : Feel guilty, hopeless, or worthless.	0.89
Criteria 7 : Can't concentrate, remember things, or make decisions.	0.94
Criteria 8 : Restless or have decreased activity	0.89
Criteria 9 : Often think about death, or have even tried to commit suicide	0.84

Table 2. Validity of manual for self-detection of depression for the Thai elderly.

Screening test	Gold standard		Total
	+	-	
+	46	1	47
-	10	40	50
Total	56	41	97

Sensitivity = 82.14%
Specificity = 97.56%
Predictive value positive = 97.87%
Predictive value negative = 80%

19.51 per cent. The study group showed percentage differences of all 3 diagnoses at rates of 38.33 per cent, 31.67 per cent and 26.67 per cent, respectively.

2.5. Study of the psychiatric diagnoses in patients who sought hospital treatment revealed that in the control group of Dysthymia and Adjustment disorder with depressed mood, diagnosis was made within 150 days and 106 days respectively. In the meantime, the study group showed an incidence of major depression, dysthymia, organic mood syndrome and adjustment disorder with depressed mood, were diagnosed in 34, 38, 40 and 56 days respectively.

2.6. There was a difference in the chief presenting complaints at time of seeking treatment between the control and study group ($p<0.000$). Most of the control group came in with physical complaints (68.30%) while the majority (90%) of the study group complained of psychological symptoms.

2.7. Comparison of the effects of interventions towards risk factors for depression i.e. :- problems with alcohol abuse, anxiolytic use and the quality of life (Table 3).

2.7.1. During the preintervention period, there was no difference in the problem of alcohol abuse in both groups. However, at 6 and 12 month follow-ups, the study group revealed significantly lower percentages of alcohol abuse compared with the control group.

2.7.2. There was a significant difference in the percentages of anxiolytics and hypnotics used between the two groups at 6 and 12 month follow-ups. The study group showed a lower percentage of anxiolytic use.

2.7.3. There was a significant difference in the percentages of other substance use during the 6 and 12 month follow-ups of the control and study group. Percentages of other substance use were significantly lower in the study group.

2.7.4. The percentage of those experiencing suicidal ideas in the control and study groups during the study period were significantly different at both 6 and 12 month follow-up phases. Suicidal idea occured less in the study group compared with the control group.

2.7.5. Mean score of "quality of life" (QOL) was significantly different between the two groups, during their 12-month follow-up phase. The study group showed a higher mean QOL score when compared with the control group.

DISCUSSION

The Kuder Richardson Formula 20 (KR-20) was used to study the internal consistency reliability coefficients (r) of the manual. It was found to be between 0.84-0.94, reflecting high correlation of the criteria[4]. Moreover, this study revealed a sensiti-

Table 3. Indicators of the effectiveness of the manual in preintervention and postintervention follow-up phases percentages.

Alcohol abuse	Group		P-value
	Control (N=41)	Study (N=60)	
Preintervention	16.7	17.1	0.873
6 months follow-up	16.9	12.8	0.044
12 months follow-up	16.0	9.4	0.001
P-value	0.097	0.024	

Anxiolytics/Hypnotics use	Group		P-value
	Control (N=41)	Study (N=60)	
Preintervention	32.0	38.3	0.215
6 months follow-up	42.2	28.2	0.033
12 months follow-up	54.5	22.3	<0.001
P-value	0.011	0.001	

Other substance use	Group		P-value
	Control (N=41)	Study (N=60)	
Preintervention	78.1	77.7	0.549
6 months follow-up	71.8	66.1	0.045
12 months follow-up	65.6	55.5	0.017
P-value	0.193	0.001	

Suicidal idea	Group		P-value
	Control (N=41)	Study (N=60)	
Preintervention	31.8	35.0	0.346
6 months follow-up	35.9	26.7	0.044
12 months follow-up	43.8	21.7	<0.001
P-value	0.187	0.185	

"Quality of life" score	Group		P-value
	Control (N=41) Mean ± SD	Study (N=60) Mean ± SD	
Preintervention	11.07 ± 3.86	9.93 ± 4.42	0.184
6 months follow-up	8.10 ± 4.00	8.32 ± 4.17	0.795
12 months follow-up	5.78 ± 4.13	7.23 ± 4.26	0.034

vity of 82.14, a specificity of 97.56 per cent, a positive predictive value of 97.87 per cent, and a negative predictive value of 80 per cent. In terms of epidemiolgy, these findings indicated that the instrument also had high validative quality ; therefore, this evidence proves that this manual is highly efficient in detecting depressive symptoms in the elderly.

The results of the experimental study were evaluated in the incidence group, after intervention with the subjects and 2 trial follow-ups. (at 6 months

Manual for self detection of depression in the thai elderly

Please check √ in front of the items which correspond to your health or feelings or behavior during these two week periods.

- ☐ 1 : I feel sad and/or irritable.
- ☐ 2 : I don't enjoy the things that once gave pleasure (eg, job, hobbies, sport, friends, sex).
- ☐ 3 : My appetite and/or weight has changed.
- ☐ 4 : My sleep patterns have changed, and I now sleep too much, or not enough.
- ☐ 5 : I am tired all the time and have no energy.
- ☐ 6 : I feel guilty, hopeless, or worthless.
- ☐ 7 : I can't concentrate, remember things, or make decisions.
- ☐ 8 : I am restless or (my activity has decreased) much less active.
- ☐ 9 : I often think about death, or have even tried to commit suicide.

Total Score.....

คู่มือสำรวจอารมณ์ซึมเศร้าด้วยตนเอง

ขีดเครื่องหมาย "√" ลงหน้าข้อที่มีอาการ และอาการนั้นเป็นอยู่นานสองสัปดาห์ขึ้นไป

- ☐ 1. มีความรู้สึกเซ็ง หรือรู้สึกเสียใจ หรือรู้สึกเศร้า หรือรู้สึกหงุดหงิด โดยไม่มีสาเหตุ หรือไม่สมเหตุผล
- ☐ 2. รู้สึกเบื่อหน่ายสิ่งต่าง ๆ ที่เคยชอบ เคยทำหรือเคยสนุกสนาน เช่น การทำงานอดิเรกต่าง ๆ, การเล่นกีฬา, การทำงานบ้าน, งานสังคม, รวมทั้งความต้องการทางเพศก็จะลดลงหรือหมดไป บางคนจะมีความรู้สึกและต้องการทางเพศมากขึ้นแต่พบน้อย
- ☐ 3. มีความเปลี่ยนแปลงเกี่ยวกับความอยากอาหาร (เบื่ออาหาร กินได้น้อยลง หรือหิวบ่อยขึ้น กินมากขึ้น) หรือน้ำหนักตัวเปลี่ยนแปลงไป (ลดลงหรือเพิ่มขึ้น)
- ☐ 4. มีความเปลี่ยนแปลงในการนอนไปจากเดิม เช่นนอนไม่หลับ หรือหลับไม่พอ หรือหลับมากเกินไป
- ☐ 5. รู้สึกอ่อนเพลีย อ่อนล้า ไม่มีแรง โดยไม่มีสาเหตุ
- ☐ 6. รู้สึกหมดหวัง หรือมองตัวเองไม่มีคุณค่า หรือคอยคิดว่าตัวเองทำผิด หรือน่าตำหนิ
- ☐ 7. สมาธิไม่ดี ลืมง่าย หรือไม่กล้าตัดสินใจอะไร หรือตัดสินใจได้ช้ากว่าเดิมในเรื่องที่เคยรู้หรือเคยทำ
- ☐ 8. รู้สึกกระวนกระวายจิตใจไม่เป็นสุข โดยไม่มีสาเหตุหรือไม่มีความสนใจจะเข้าร่วมกิจกรรมต่างๆที่เคยทำ
- ☐ 9. คิดถึงเรื่องตายบ่อย ๆ หรือคิดเบื่อชีวิต หรือคิดอยากตาย หรือพยายามจะฆ่าตัวตาย

รวมคะแนน.....

and 12 months post intervention). The instruments used for intervention were pamphlets and videotape casettes, giving information about depression. To prove the efficacy of the intervention manual in the early self-detection of depression, the pattern of treatment seeking behavior, frequency of drug and alcohol use and quality of life were compared between depressed subjects from the control and study group.

It was found that 86.7 per cent of the elderly in the study group could detect depressive symptoms themselves and sought treatment before the routine appointment date, while only 9.8 per cent of the control group showed this treatment seeking behavior. Moreover, 90 per cent of the former group were aware that disturbing symptoms had a psychogenic bases, while 68.30 per cent of the control group identified their problems as having physical causes. The benefit of early detection is shown by the initiation of necessary treatment, resulting in fewer complications and a reduced burden of care, as supported by many other studies(5).

The manual was able to help in the early detection and treatment of depressive illness ; thus, shortening the duration of the patient's suffering. The average number of days before seeking treatment in the study group was 42-58 days, in contrast to 122-128 days in the control group. Many studies have indicated the positive correlation between early treatment and a shortened duration of illness. The effect of earlier treatment was to decrease the economic loss due to illness and its complications, such as

unnecessary use of health services, burden of care takers and suicide, as stated in many studies[6,7]. The cost-effectiveness in this study shows that the manual can reduce the cost of treatment by approximately 2,230,000 baht.

The usual complications of depressive syndrome were drug and alcohol abuse[8], and suicidal idea[9]. Therefore, study of these types of behavior might indirectly reveal the efficiency of intervention using the manual and video demonstration to help in the self detection of depression. The findings indicated that information from the manual could reduce the above problems. In the problem of suicidal idea, there was a significant difference between the control and study group, but no difference was found within each group at their 6, and 12 months follow-up. It was found that suicidal ideas in the control group were increased but decreased in the study group.

The quality of life was identified by The Philadelphia Geriatric Center Morale Scale : PGCMS. It showed a better quality of life in the study group. This evidence could indicate the efficiency of the manual. However, an interesting finding was that the total score of both groups showed a tendency to decrease. This information was quite similar to Warner[10] showing that chronic illness, handicapped status, ability to adjust, social support from relatives, friends and network, economic status and attitude toward life, might have a major impact on the quality of life of the elderly. The present study, therefore, showed that exogenous factors will influence both the illness and quality of life experienced by the elderly. The results of this study also reflect the importance of the financial problems, interpersonal relationships in families and physical problems which are the main precipitating causes of Dysthymia and Adjustment disorder with depressed mood.

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การวิจัยเพื่อพัฒนาคู่มือสำรวจอารมณ์เศร้าด้วยตนเองในผู้สูงอายุไทย

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วัตถุประสงค์ของโครงการวิจัยเพื่อพัฒนาคู่มือสำรวจอารมณ์เศร้าด้วยตนเองในผู้สูงอายุไทย เป็นการวิจัยกึ่งทดลองในสนาม (Randomized Control Group Pretest–Posttest Design) กลุ่มตัวอย่างประกอบด้วยผู้สูงอายุจำนวน 1,390 คน ใน 35 ชุมชน จาก 4 เขตรอบบริเวณโรงพยาบาลศิริราช คือ เขตบางกอกน้อย บางกอกใหญ่ ตลิ่งชัน และบางพลัด ซึ่งชุมชนทั้งหมดเป็นชุมชนรอบนอกกรุงเทพฯ มีลักษณะเป็นครอบครัวขยาย

ผลการศึกษาพบว่า

1. ค่าความเที่ยงตรงเชิงความสอดคล้องภายใน (0.84 ถึง 0.94) ค่าความไว (82.14%) ค่าความจำเพาะ (97.56%) อยู่ในเกณฑ์สูง

2. คู่มือมีประสิทธิภาพในการวินิจฉัยภาวะซึมเศร้าด้วยตนเองในระยะเริ่มแรก โดยพบอุบัติการณ์การเกิดภาวะซึมเศร้าในกลุ่มทดลองสูงกว่ากลุ่มควบคุม (86.7% และ 9.8% ตามลำดับ) และการแสวงหาการรักษาได้เร็วขึ้น (กลุ่มทดลองและกลุ่มควบคุมมาพบแพทย์เองที่โรงพยาบาลเมื่อสงสัยว่าเป็นภาวะซึมเศร้าใน 42 วัน และ 122 ตามลำดับ) ทำให้ปัญหาที่พบร่วมกับภาวะซึมเศร้าต่าง ๆ ลดลง ได้แก่ ความถี่ของพฤติกรรมการดื่มสุรา การใช้ยาคลายเครียด การใช้สารเสพติด ความคิดอยากฆ่าตัวตายและคะแนนเฉลี่ยคุณภาพชีวิต ซึ่งผลทั้งหมดนี้แสดงให้เห็นถึงการมีคุณภาพชีวิตที่ดีขึ้น

คำสำคัญ : คู่มือสำรวจอารมณ์เศร้าด้วยตนเอง, ผู้สูงอายุไทย

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