Depressive Symptom and Its Predicting Factors in Overweight Older Adults with Knee Osteoarthritis



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Background

Depressive symptom was frequently reported in older adults with chronic conditions^{1,2}, and it was found to be significantly associated with knee osteoarthritis (OA) and its progression^{3,4}. Evidence from previous studies demonstrated factors including knee pain severity and fatigue were associated with depressive symptom or mood in persons with knee OA⁵⁻⁷, and a strong relationship was found between fatigue and depressive symptom in Thai older adults². However, very few studies have investigated the magnitude and its predicting factors among older adults with knee OA. Our study sorted to examine the prevalence of depressive symptom and investigate the predictive factors of depressive symptom among overweight and diabetic older adults with knee OA.

Methods

Design: A cross-sectional study.

Sample: A total of 119 community-dwelling older adults who met the following inclusion criteria: age 60 or over; knee OA based on the American College of Rheumatology criteria, body mass index of 23.00-24.99 kg/m², and independent in performing activities of daily life, were recruited.

Data collection: Data collection was carried out by using an interview method to avoid a vision problem to complete the research instruments, which includes the Health Information Record Form, the Multidimensional Assessment of Fatigue4, the Thai Geriatric Depression Scale-15 (GDS-15)⁵, and the Knee Severity Scale⁶.

Data analysis: Descriptive statistics and Logistic regression were performed for data analysis; a significant level was set at p < .05.

Results

An average age of participants was 66.45 year (SD = 7.47). Most of them were female (84%). Table 1 displays participants' characteristics and clinical information. Among all participants, 47.89% experienced depressive symptom. When age, severity of knee OA symptom, number of comorbidities, and fatigue were selected as predictors of depressive symptom, only age and fatigue were uniquely significant predictors (odds ratio = 1.07, 95%CI 1.009-1.132; 1.08, 95%CI 1.026-1.142, respectively) as shown in Table 2.

Table 1. Participants' Characteristics and Clinical Information (n = 119)

Variables	n (%)	Variables	n (%)	
Gender				
male	19(16)	agriculture	52(43.7)	
female	100(84)	unemployed/retirement	32(26.9)	
Education Level		housewife	26(21.8)	
Primary school & High school	108(90.7)	employee	5(4.2)	
Diploma & Bachelor degree	11(9.3)	merchant	4(3.4)	
Diploma & Bachelor degree	11(9.3)			
Comorbidity (except diabetes)		Depressive Symptom		
no	18(15.1)	no	62(52.11)	
yes	101984.9)	yes	57(47.89)	
diabetes	119(100)	Knee OA Severity		
hypertension	59(49.6)	mild	74(62.2)	
dyslipidemia	26(21.8)	moderate	43(36.1)	
Others		severe	2(1.7)	

Table 2. Factors Predicting Depressive Symptom using Logistic Regression Analysis (n = 119)

Variables		В	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step ^a	age	.066	.029	5.087	1	.024	1.068	1.009	1.132
	severity	.053	.063	.715	1	.398	1.055	.932	1.194
	Comorbidity	087	.274	.100	1	.751	.917	.535	1.569
	MAF	.079	.027	8.377	1	.004	1.082	1.026	1.142
	Constant	-6.433	2.218	8.416	1	.004	.002		

a. Variable(s) entered on step 1: age, severity, Comorbidity, MAF.

Discussion

It was clear that depression was common psychological comorbidity in patients with knee OA^{2,3} similar to other chronic conditions1. Notably, fatigue showed a strong predictive power of depressive symptom; the coexistence of fatigue and depressive symptom among older adults with knee OA is needed for further investigation.

Conclusion

Depressive symptom was found as a high prevalence and it increases with advancing age. Moreover, an increase in fatigue level led to an increase in depressive symptom among overweight and diabetic older adults with knee osteoarthritis.

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