Training Primary Care Physicians to Recognize and Manage Depression in Rural China: Dose It Relate to Their Subsequent Practices?

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Introduction: In response to the increasing burden of mental disorders, global initiatives call for the integration of mental health into primary care system (Collins, et al. 2013). However, it is frequently shown that primary care physicians (PCPs) do not always provide effective mental health services, especially in low-and-middle income countries. This study aimed to examine the efficacy of a training program on depression care management in PCPs in rural China, and to determine whether it relate to their subsequent depression care practices.

Methods: Data for the analysis were obtained from the Depression/HTN in Chinese Older Adults—Collaborations in Health (COACH) Study, an ongoing project funded by the U. S. National Institute of Mental Health (NIMH) designed to compare collaborative depression care management with care as usual for the treatment of comorbid depression and hypertension in Chinese older rural village residents(Chen, et al. 2018).

During 2013 to 2015, 65 PCPs from rural villages in Tonglu County, China underwent a four-day training at the County Mental Hospital, and all of them completed a pre-post delivered survey on their knowledge of depression and self-efficacy toward depression management. In 2017, they were invited to undergo an online survey investigating their depression management practice in the past year. 60 PCPs (response rate of 92%) completed the survey and were included in the analysis. All participants gave informed consent before participation.

Results: Demographic characteristics are listed in Table 1. The sample included 35 (58.3%) females with a mean age of 43.7±14.2 years old. All participants had received more than five years of education, and 28.3% of them had been working as PCPs for more than 10 years.

Table 2 Learning outcomes of training			
Outcomes	Pre-score	Post-score	p-value
Knowledge			
Symptoms of Dep	3.08±0.42	3.30±0.42	0.005
Myths of Dep	2.08±0.60	2.84±0.77	<0.001
Responding to Dep	2.24±0.42	2.83±0.57	<0.001
Self-efficacy			
Listening/Asking about Dep	2.61±0.60	2.83±0.53	0.023
Recognizing Dep	2.18±0.60	2.83±0.62	<0.001
Communicating to seniors	2.27±0.68	2.74±0.66	<0.001

After trained, PCPs achieved significant improvements on each aspects of their knowledge on depression and self-efficacy on working with depressed patients (Table 2).

Both knowledge ($p=0.046$) and self-efficacy ($p=0.007$) change were found to significantly predict one’s depression screening, while only the latter ($p=0.005$) significantly predict the frequency of consulting a psychiatrist (Table 3).

Conclusion: The training program is effective in improving PCPs’ knowledge and self-efficacy on depression care management, which are significantly associated with their subsequent depression care practices. More and more appropriate and sufficient training should be delivered in order to improve PCPs’ capability of providing effective mental health services.

Table 1 Demographic characteristics of participants		
Demographic characteristics	N	%
Age		
20-39	29	48.3
40-59	18	30.0
60 or more	13	21.7
Female	35	58.3
Education		
0-5 years	0	0.0
6-8 years	7	11.7
9-11 years	32	53.3
≥ 12 years	21	35.0
Years as a PCP		
1-9	43	71.7
≥10	17	28.3
Doing depression screening	50	83.3
Consulting a psychiatrist		
Once per month	8	13.3
Once every 2 or 3 months	28	46.7
2 or 3 times per year	24	40.0
Confident in prescribing antidepressants		
Not confident	42	70
Confident)	18	30

Table 3 Predictors for PCPs' depression management behaviors					
Behavior	variable	B	S.E.	Wald	Sig.
Depression screening	Age	-0.142	0.090	2.487	0.115
	Years as a PCP	0.179	0.103	3.032	0.082
	Post knowledge	-0.679	0.387	3.075	0.080
	Knowledge change	0.671	0.336	3.981	0.046
	Confidence change	0.577	0.214	7.283	0.007
Consulting case ^a					
Once per month	Years as a PCP	-0.129	0.096	1.826	0.177
	Knowledge change	0.300	0.156	3.693	0.055
	Confidence change	0.256	0.091	7.959	0.005
Once 2 or 3 months	Years as a PCP	-0.214	0.079	7.317	0.007
	Knowledge change	0.103	0.087	1.401	0.236
	Confidence change	0.077	0.060	1.669	0.196
Confidence in prescribing ^b					
	2 ^c Years as a PCP	-0.109	0.056	3.712	0.054
	3 ^c Years as a PCP	-0.131	0.060	4.816	0.028
	4 ^c Years as a PCP	-0.183	0.163	1.253	0.263

Note: a. the reference category is “2 or 3 times per year”.
b. the reference category is “1”
c. from 1 to 5, 1 means not confident, and 5 means very confident. No one answered 5.