

Supplementary Table S1. Basic Characteristics of Study Subjects

Variables		N (Total n=413)	%
Age (Years)	≥ 50	42	10.2
	51-60	103	24.9
	61-70	137	33.2
	71-80	108	26.2
	≤ 81	23	5.5
Sex	Male	298	72.2
	Female	115	27.8
Education Level	≤ Elementary School	95	23.0
	Middle School	123	29.7
	High School	94	22.8
	≥ College	101	24.5
Marital Status	Co-Inhabited	5	1.2
	Married	327	79.2
	Separated	10	2.4
	Divorced	13	3.2
	Widowed	58	14.0
Disease Duration (Years)	≤5	43	10.4
	6 ~ 10	106	37.8
	11 ~ 15	115	27.8
	16 ~ 20	52	12.6
	≥21	47	11.4
Clinic Location	Outpatient	139	33.7
	Inpatient	274	66.3

Supplementary Table S2. The 51-Item COPD Self-Management Scale

1. I practice breathing exercises (e.g. abdominal breathing) when I do not feel shortness of breath. (A1)
2. I inhale bronchodilators (e.g. salbutamol, terbutaline) when I feel shortness of breath. (A2)
3. I exercise more than 2-3hours per week when my disease is stable. (B1)
4. I wear enough clothes to keep warm to avoid catching cold in winter. (B2)
5. I often encourage myself to be optimistic. (C1)
6. I try not to lose temper on others. (C2)
7. I communicate disease-related information with other COPD patients. (D1)
8. I get disease-related information through the Internet or medical books. (D2)
9. I think I can alleviate discomfortable symptoms by my own. (E1)
10. I take effective means (e.g. chest percussion method) to clear sputum during cough. (A3)
11. I seek help (e.g. call an ambulance or relatives) when the shortness of breath worsens rapidly. (A4)
12. I avoid eating foods containing too much sugar or calories (e.g. coke). (B3)
13. I take much water when I do not have edema or much sputum. (B4)
14. I talk with relatives and friends when I feel upset or anxious. (C3)
15. I seek help and consolation with my family or friends when I feel down. (C4)
16. I discuss with medical staff about issues related to the disease (e.g. is the disease infectious?) (D3)
17. I keep complete records of my disease-related documents (e.g. patient medical records, medical examination results). (D4)
18. I think I can take effective exercises. (E2)
19. I do not take steroids (e.g. prednisone, dexamethasone) when I feel serious shortness of breath. (A5)
20. I take flu vaccination 1-2 times yearly. (B5)
21. I train myself to be more resistant to coldness (e.g. wash face with cold water in summer and autumn). (B6)
22. I think I can control bad moods caused by COPD (e.g. anxiety, depression). (C5)
23. I try my best to change the though that I am a burden to the family. (C6)
24. I often read newspapers to learn disease-related information. (D5)
25. I can actively stick to the doctor's prescription instructions. (E3)
26. I can find solutions when the disease recurs. (E4)
27. I inhale oxygen 1-2 mL/minute when I feel serious shortness of breath. (A6)
28. I use heating facilities to raise room temperature in cold weather. (B7)
29. I adjust my exercise intensity according to my health status (e.g. just walk around the house when I feel uncomfortable). (B8)
30. I think my control of symptoms can ease the burden of my family. (C7)

31. I do not dwell on unpleasant things. (C8)
32. I consult with medical staff when I have questions about treatment. (D6)
33. I think I can get disease-related information as long as I try. (E5)
34. I think I can optimistically face COPD. (E6)
35. I automatically follow the doctor's prescription instructions. (A7)
36. I avoid eating raw, cold and hard food. (B9)
37. I often open windows to ventilate rather than directly face the wind. (B10)
38. I adjust my exercise speed according to my health status. (B11)
39. I try to look at the bright side of life. (C9)
40. I divert my attention to interesting things when I am in bad mood. (C10)
41. I make a list of all my questions when I consult with medical staff. (D7)
42. I think I can effectively prevent catching cold. (E7)
43. I think I can handle housework independently. (E8)
44. I do not take anti-inflammatory drugs when I feel serious shortness of breath. (A8)
45. I try to avoid inhaling dust, smoke and noxious fumes. (B12)
46. I pick appropriate means of exercises (e.g. walking, jogging, bicycling). (B13)
47. I talk with medical staff when I feel upset or anxious about the disease. (C11)
48. I exchange psychological experiences with other patients with similar diseases. (C12)
49. I do appropriate amount of housework (e.g. cleaning, grocery shopping) according to my health status. (B14)
50. I modify my mood (e.g. anxiety, depression) through exercises. (E9)
51. I consult with medical staff when I have questions about my medical examination results. (D8)

Note: The responses to each item were graded on a 5-point scale (1=never, 2=rarely, 3=sometimes, 4=often, and 5=always). The domain each item belongs to is marked as follows: A1-A8, symptom management; B1-B14, daily life management; C1-C12, emotion management; D1-D8, information management; E1-E9, self-efficacy.