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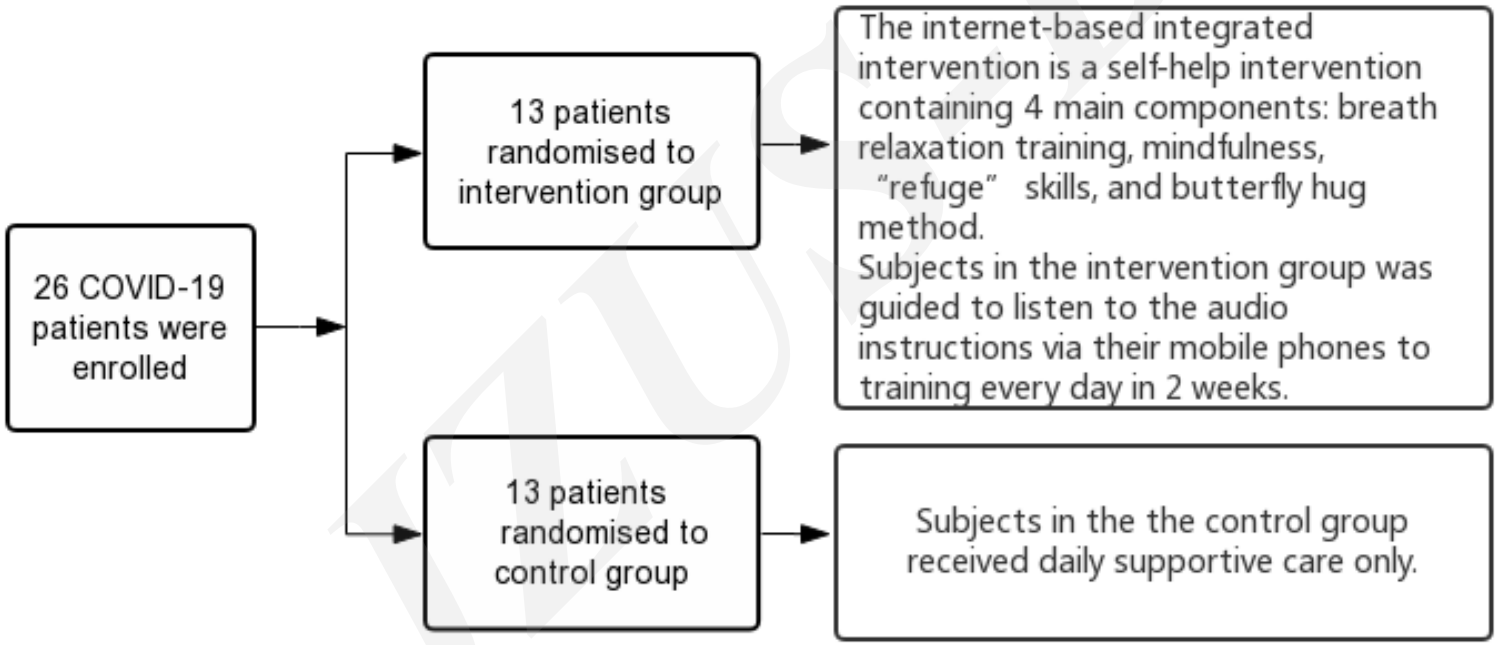
Efficacy of internet-based integrated intervention on depression and anxiety symptoms in patients with COVID-19

Key words: **COVID-19, Internet-based integrated intervention, Depression, Anxiety**

Study design

- This is a prospective, randomized, controlled, 2-week study .
- Participants were randomly assigned to group sequentially, with an equal probability of receiving an internet-based integrated intervention (intervention group) or just supportive care (control group).
- The 17-item Hamilton Depression Scale(17-HAMD) and Hamilton Anxiety Scale(HAMA) was used to assess the severity of depression and anxiety symptoms respectively every week.

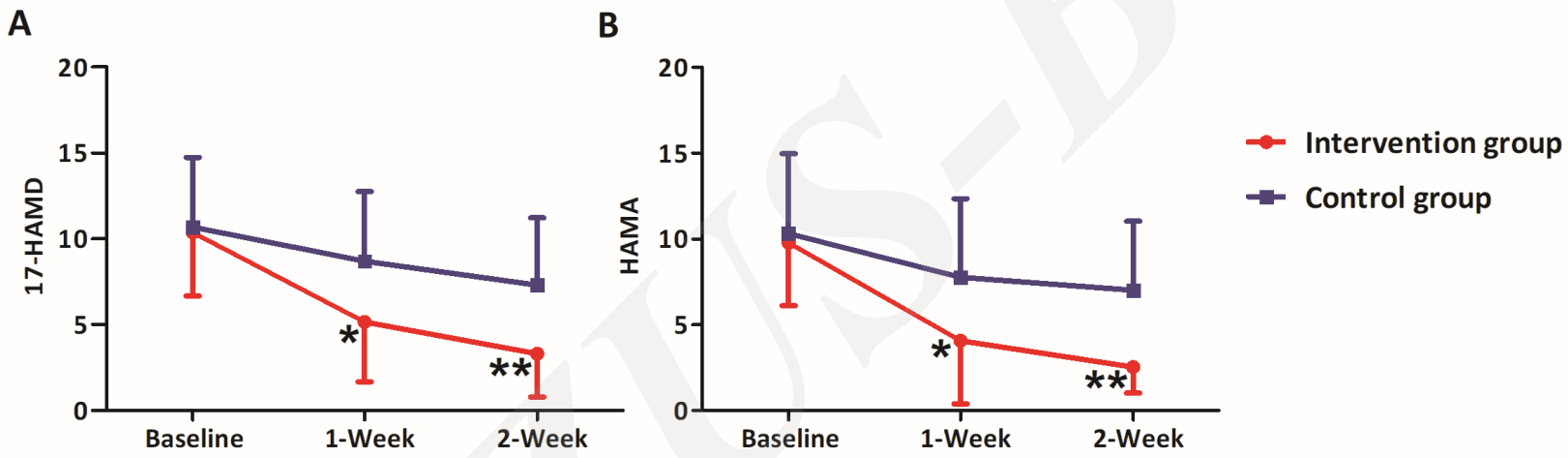
Clinical Procedures



Demographic and clinical characteristics

	Intervention group n=13 means(SD)	Control group n=13 means(SD)	t/χ^2	*p*-values
Age (Years)	40.8(13.5)	48.5(9.54)	$t = -1.693$	0.103
Gender (Male/Female)	9/4	7/6	$\chi^2 = 0.650$	0.420
Severtiy of illness: n(%)				
Medium	5(38.5)	4(30.8)		
Severe	8(61.5)	9(69.2)	$\chi^2 = 0.170$	0.680
Coexisting conditions: n(%)				
Any	5(38.5)	4(30.8)		
Hypertension	3(23.1)	1(7.7)		
Live disease	1(7.7)	1(7.7)		
Gastric ulcer	0	1(7.7)		
CHD	1(7.7)	0		
AIDS	0	1(7.7)		

Assessment for the symptoms of depression and anxiety



Changes in scores of 17-HAMD and HAMA across the experimental groups.
(A) Significant decreases of scores of 17-HAMD were observed in patients of the intervention group at the end of the first ($t = -2.381$, $p = 0.026$) and second ($t = -3.089$, $p = 0.005$) week when comparing to patients of the control group since recruitments.
(B) Compared with the controls, patients of the intervention group showed decreased scores of HAMA with statistical significance at the end of the first ($t = -2.263$, $p = 0.033$) and second ($t = -3.746$, $p = 0.001$) week since recruitments.
*Comparison with the control group, $p < 0.05$; ** Comparison with the control group, $p < 0.01$.

Conclusions

1. It was the first time that the efficacy of the internet-based self-help intervention was evaluated for COVID-19 patients with psychological distress.
2. We found that the internet-based integrated intervention showed a rapid improving effect on mood disturbance and it should be applied in the management of psychological distress in COVID-19 patients.
3. The internet-based interventions also showed advantages over face-to-face therapy mainly included accessibility, flexible use, independent of time and place, a high level of autonomy and privacy, and lower costs . Because the SARS-CoV-2 was confirmed human-to-human transmission， these advantages might be especially relevant for COVID-19 patients in quarantine and could reduce the risk of infection for mental healthcare providers