Peer Review File

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Reviewer A

1. General - Could the authors consider updating references pertaining to the Global Initiative for the Diagnosis, Management, and Prevention of Chronic Obstructive Lung Disease to the latest 2023 versions.
We have modified our text as advised (see Page3, line 126) to update references pertaining to the Global Initiative for the Diagnosis, Management, and Prevention of Chronic Obstructive Lung Disease to the latest 2023 versions.
Changes in the text:
2) patients with GOLD 2023 spirometry stages B or E;

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2. Introduction - Background - Line 60 - "... and the major clinical COPD phenotype is emphysema" - consider updating to "... and a major ..." given identification of multiple phenotypes e.g bronchitis and asthma variants
We have modified our text as advised (see Page2, line 64) to change "... and the major ..." to "... and a major ...".
Changes in the text:
Chronic obstructive pulmonary disease (COPD) is defined by chronic respiratory symptoms and airflow limitation, and a major clinical COPD phenotype is emphysema, characterised mainly by exertional dyspnoea, which may lead to spontaneous bed rest or reduced activity.
In addition to referring to your opinion, I also revised the concept according to the GOLD2023, which one do you think is better, thank you for your suggestion.
Chronic Obstructive Pulmonary Disease (COPD) is a heterogeneous lung condition characterized by chronic respiratory symptoms (dyspnea, cough, sputum production and/or exacerbations) due to abnormalities of the airways (bronchitis, bronchiolitis) and/or alveoli (emphysema) that cause persistent, often progressive, airflow obstruction.

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3. Introduction - Background - Line 11 - "Telerehabilitation is characterised by home-based activities ..." - if deemed appropriate, could the authors consider adding extra impetus behind telerehabilitation driven by the constraints of SARS-Cov2 insolation
We have modified our text as advised (see Page 2, line 87)adding extra impetus behind telerehabilitation driven by the constraints of SARS-Cov2 insolation.

Changes in the text:
Thus, no patient dislocation is needed, and a lack of programs, issues associated with travel and transport can all be solved.

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4. Materials and Methods - Line 126 - Distinct from exclusion criteria, re withdrawl criteria - could the authors consider documenting criteria by which study participation might be discontinued (i.e deterioration in condition, unrelated infection etc)
This also pertains to withdrawl/cessation criteria for Line 196 Peripheral muscle strength and flexibility (noted that the is included for 6MWT)
If the subject has poor compliance and does not perform the examination according to the prescribed plan, it needs to be eliminated
This ties in with Assessment of Safety - Line 317
We have modified our text as advised (see Page 3, line 131)adding cessation criteria.
Changes in the test:
The cessation criteria are as follows:1) Those who have an aggravated condition or other emergencies in the study and need urgent medical treatment. 2) Those who have poor compliance, low participation, and cannot complete the project research.

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5. Materials and Methods - Control - Line 156 - "The nurse emphasised modifiable factors according to the patient’ s personal habit" - remove extra space preceding apostrophe
We have modified our text as advised (see Page 5, line 163) removing extra space preceding apostrophe.
Changes in the test:
The nurse emphasises modifiable factors according to the patient's personal habits, such as doing an influenza vaccination each year or smoking cessation.

6.Materials and Methods - Line 178 - Outcomes - Citations needed for the measures described in this paragraph

We have modified our text as advised (see Page 5, line 186)adding related citations.

Changes in the test:

The primary outcomes are pulmonary function tests, 6-MWT, and physical fitness, including strength, endurance, flexibility, balance, and motor coordination[18-23]. The modified Medical Research Council Dyspnoea Scale (mMRC), COPD Assessment Test scale(CAT), and International Classification of Functioning, Disability, and Health (ICF) questionnaires are used to measure secondary outcomes[24, 25].

24:Liu, C.J., et al., Predicting hand function in older adults: evaluations of grip strength, arm curl strength, and manual dexterity. Aging Clin Exp Res, 2017. 29(4): p. 753-760.

25:Abdi, S., et al., Understanding the care and support needs of older people: a scoping review and categorisation using the WHO international classification of functioning, disability and health framework (ICF). BMC Geriatr, 2019. 19(1): p. 195.

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7. Materials and Methods - Line 184 Assessments of basic characteristics - place include description of the source/reference data used for calculation/prediction of normal lung function parameters.

We have modified our text as advised (see Page 6, line 201)adding related citations.

Changes in the test:

Assessments of basic characteristics will mainly assess pulmonary function, dyspnoea, and health status. Specialist personnel will perform the pulmonary function test. Participants will be instructed to breathe, and three reproducible measurements, such as forced expiratory volume in 1 second (FEV1), forced vital capacity (FVC), and maximal mid-expiratory flow, will be obtained. The highest value will be recorded and used for analysis. The symptoms of dyspnoea will be assessed using the mMRC, a five-point scale (0–4) for the severity of dyspnoea, with a higher score indicating a higher severity. The CAT is simple for analysis, consisting of eight questions about general symptoms and limitations in activities of daily life. The score varies from 0 to 5 points for each item, with a maximum of 40 points. Lower scores correspond to a low impact of the disease on health status, and scores >10 correspond to patients with a poorer health status owing to COPD. In addition, body mass index will be calculated by measuring height and weight[27, 28].

27:Ge, P., et al., Self-medication in Chinese residents and the related factors of whether or not they would take suggestions from medical staff as an important consideration during self-medication. Front Public Health, 2022. 10: p. 1074559.

28:Hogg, J.C., et al., The nature of small-airway obstruction in chronic obstructive pulmonary disease. N Engl J Med, 2004. 350(26): p. 2645-53.

Reviewer B

1.The Abstract should be structured with Background, Methods, Discussion, and Registration.

Reply: I added the registration to the abstract section as recommended by the journal in page 2 line 58.

Changes in the text:Trial registration: The study was registered in the Chinese Clinical Trail Registry: ChiCTR2000040723

2. CSM should be defined upon first use in the Abstract. If the abbreviations are used once in the Abstract, please use the full spelling directly.

Reply: In the abstract, line 45 on page 2 of this study has been introduced in the full name of CSM, and abbreviations have been used in subsequent abstracts.

Changes in the text:Fifty-six participants will be selected and randomly allocated into two groups: (1) control (traditional PR training, medication, and nursing interventions); and (2) intervention (PR training in the hospital and at home by the **Cardiopulmonary Rehabilitation System Management Platform (CSM)**).

3. The citing information of Ref 14 should be provided in English.

Reply: Thanks for your reminder. I have changed the Chinese to English, thank you for your carefulness.

Changes in the text:

ZHANG Haijun, A.K.S.Q., Application status of telerehabilitation for chronic obstructive pulmonary disease under the epidemic of coronavirus disease 2019. West China Medical Journal, 2022: p. 1-5.

4.The Main Text should be organized with Introduction, Methods, and Discussion. Of note, registration details and the study timeline are highly recommended to be included in the Methods.

Reply: The registration of the study, as well as the timeline, have been moved to the methods section as recommended.

Changes in the text:
The present study is a randomised prospective clinical trial. Owing to the nature of the intervention programme, the study participants, clinical, and research staff who collect clinical outcome data will be aware of group allocation. However, the randomisation assignment will be concealed from the outcome adjudication committee members. The study adhered to the Declaration of Helsinki, ethical approval was obtained from the hospital, and the trial was retrospectively registered in the Chinese Clinical Trial Registry: ChiCTR2000040723. The trial status is the registration date, and the initial data is on 1 October 2020. The actual status is ongoing, and the prevision is for December 2023. The study will use a quantitative methodology study with a measurement protocol that utilizes clinical examination as well as internationally accepted scales to effectively ensure the objectivity of the trial. After recruitment, participants will be invited to the outpatient clinic to perform an initial evaluation, and a secure web-based randomisation system system will be used to allocate participants into two groups: the control will be performed traditional PR training, medication, and nursing interventions; and the intervention will be performed twice a week for 8 consecutive weeks in the outpatient department, and the last 6 months will include training in the application of the CSM system. Questionnaires and physical examinations will be conducted at baseline and at1, 3 and 6 months of follow-up to check for changes in pulmonary function, dyspnoea, and health status. The flow chart of the study is shown in Figure 1 and Table 1.
5. “Recent studies have reported the effects of low-cost, home-based physical rehabilitation associated with educational and supervised programmes.”
Studies are mentioned. References are needed.
Reply: I added the corresponding references according to your suggestion.
Changes in the text: Recent studies(30-33) have reported the effects of low-cost, home-based physical rehabilitation associated with educational and supervised programmes.
30.Campo, G., et al., Exercise intervention improves quality of life in older adults after myocardial infarction: randomised clinical trial. Heart, 2020. 106(21): p. 1658-1664.
31.Dor-Haim, H., S. Katzburg and D. Leibowitz, A Novel Digital Platform for a Monitored Home-based Cardiac Rehabilitation Program. J Vis Exp, 2019(146).
32.Holtz, B., et al., Comparison of Veteran experiences of low-cost, home-based diet and exercise interventions. J Rehabil Res Dev, 2014. 51(1): p. 149-60.
33.Burke, L., et al., Physical activity and nutrition behavioural outcomes of a home-based intervention program for seniors: a randomized controlled trial. Int J Behav Nutr Phys Act, 2013. 10: p. 14.
6. As the recruitment process is ongoing, simple past tense and future tense should be applied for the ethical statement (including IRB approval/informed consent/declaration of helsinki).
Reply: The tenses of the study have been modified accordingly. Ethics and registration have been completed, using the past tense, and the rest of the things using the future tense.
Changes in the text: The study adhered to the Declaration of Helsinki and ethical approval was obtained by the Ethics Committee of Tianjin Fourth Central Hospital (SZXLL-2020-KY0413) and was retrospectively registered in the Chinese Clinical Trail Registry: ChiCTR2000040723. Registered 8 December 2020 - Retrospectively registered, https://www.chictr.org.cn/showproj.aspx?proj=65438. All participants will receive information regarding their participation in the study and will sign the informed consent form. All patients' information will be kept confidential during the study.
7. Reply: I have checked the text. May I ask what part of the footnote you are talking about, I did not find it when I checked it. The ethics number of this study is SZXLL-2020-KY0413.
8. Table 1:
*The definition of T/COPD is needed in the Footnote.
Reply: The definition of T is provided in the Footnote, however, COPD is part of CAT, and I change it into "Chronic obstructive pulmonary disease" in page 7 line 271.
t,times; l, left; r, right; rep, repeat; ADL, activities of daily life; CAT, Chronic obstructive pulmonary disease assessment test;
*Please explain X in the table.
Reply: X, represents the datas need to be filled in in the future.
*There should be no blanks in the table.
Reply: I changed all the spaces in the form to "-", which means that these places do not need to be filled with data
Changes in the text:

Table 1. Clinical outcomes before and after the study for patients who completed the study

	Study period				
	Enrolment	Allocation	Post Allocation		
TIMEPOINT	T_{-1}	Baseline T_0	1 months T_1	3 months T_2	6 months T_3
Enrolment	-	-	-	-	-
Eligibility screen	×	-	-	-	-
Informed Consent	×	-	-	-	-
Allocation	-	×	-	-	-
Six-minute walk test	-	×	×	×	×
Back scratch (l)	-	×	×	×	×
Back scratch (r)	-	×	×	×	×
Chair sit and reach (l)	-	×	×	×	×
Chair sit and reach (r)	-	×	×	×	×
Arm curl (left) (rep.)	-	×	×	×	×
Arm curl (right) (rep.)	-	×	×	×	×
Chair stand (rep.)	-	×	×	×	×
ICF	-	×	×	×	×
CAT	-	×	×	×	×
mMRC	-	×	×	×	×

Table 1 lists the time points for enrolment, interventions, and assessment. Baseline characteristics include pulmonary function assessed by spirometry, dyspnoea assessed by mMRC; ADL assessed by the CAT; and height and weight assessed by a body tester. t,times; l, left; r, right; rep, repeat; ADL, activities of daily life; CAT, Chronic obstructive pulmonary disease assessment test; ICF, International Classification of Functioning, Disability, and Health; mMRC, modified Medical Research Council Dyspnoea Scale; X, represents the datas need to be filled in in the future;"-", represents these places do not need to be filled with data..

9. Figure 8: The definition of 6-MWT is needed in the Footnote.

Reply: I've changed the abbreviation of Figure 8 to the full name in page 10 line375.

Changes in the text: Figure 8. 6-minute walking test

10. mMRC, CAT, FEV1, 6-MWT, ICF

Please check the above abbreviations in the Main Text. If they are only used once in the Main Text, please directly use their full terms. If they are used more than once, only provide the full terms on first use and use abbreviations afterwards.

Reply: After careful inspection, I found that mMRC, CAT, 6-MWT, and ICF appeared multiple times except FEV1, so they were abbreviated. FEV1 appeared once in the main text and once in the footnote, therefore, it was not abbreviated.