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OPEN PEER REVIEW

The Effectiveness of Lower-Body Positive Pressure Treadmill Gait Training on Mobility Function and Quality of Life in Individuals with Chronic Stroke: Prospective Cohort Study

Sattam Almutairi

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

4 comments · 10 Dec 2022 – 17 Dec 2022

Referee 1 Reviewer

MAJOR REVISION 10 Dec 2022

1. In Background: Explain the necessity of conducting this study and the gaps that existed in previous studies. What is the novelty of this study?
2. Why was the number of participants in the study 9? Or which article was cited for the calculation?
3. The age range of the participants included in the study is very wide. Do you have a reference to cite?
4. In addition to the sample size being small, most of the participants were male. Do you think gender could be a confounding factor, and how did you control for it?
5. In Discussion, you only mentioned the results of your study, while you should discuss in more detail why these results were obtained and compare them with previous studies.
6. Introduction and discussion are the most important parts of an article. It seems that these two parts are not well written in this article and need further revision.

Referee 2 Reviewer

MAJOR REVISION 12 Dec 2022

It seems that this study is an analytical prospective cohort study, but the study type has been mentioned neither in the title nor in the study design.
Modify based on the checklist.
How was the sample size determined? Mean? SD? Power? Reference?
How was blinding performed?
“After participants read and signed the informed consent form” is repeated.
‘manual and therapeutic therapy’—what is that? Therapeutic = therapy?
Each outcome measure must be explained in detail.
"chronic stroke since 4.8 ± 3.9 years" is the opposite of your exclusion criteria (<6 months).
Each sentence or word must be mentioned once. The author has repeated all the reports mentioned in the table again in the results section.
This study did not compare its results with similar studies that used LBPP for treatment.
And this treatment method was not compared with other treatment methods for the measured variables.

Associate Editor

MAJOR REVISION 14 Dec 2022

Thank you for sending your article to the Middle East Journal for review. Your article has been carefully reviewed by the reviewers. According to the reviewers, your article needs major revision. Please rewrite the article based on the reviewers' comments and resubmit it to the journal.

Editor-in-Chief

MAJOR REVISION 17 Dec 2022

Dear Authors
According to the reviewers’ and associate editor’s comments, your article needs major revision. When revising

your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline every change made in response to their comments and submit the required files.

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Reply to Reviewer

Dear Editor,

Thank you for reviewing my manuscript the effectiveness of lower-body positive pressure treadmill gait training on mobility function and quality of life in individuals with chronic stroke: prospective cohort study.

A further thanks is due to reviewers who kindly review my manuscript.

Reviewer 1:

1) *Type of study was not mentioned in the title. Please consider this comment.*

Author response: It has been added “prospective cohort study”.

2) *Keywords should be informative and special such as Stroke, Rehabilitation, Gait …*

Author response: I'm trying to use MeSH terms because it's required by the journal guidelines. In addition, using MeSH has been demonstrated to improve search performance, resulting in fewer irrelevant citations.

Richter, R. R., & Austin, T. M. (2012). Using MeSH (medical subject headings) to enhance PubMed search strategies for evidence-based practice in physical therapy. *Physical therapy*, *92*(1), 124-132.

3) *It’s not usual to insert a figure in the introduction part. It’s better to change the position of the figure to “Method” section.*

Author response: It has been removed from the introduction to method section.

4) *“ In this study, we aimed to use functional outcomes that are mostly applicable to clinical use and relatively meaningful to the patient (18).*

Author response: It has been removed.

5) *This paragraph is not suitable for the introduction part: “ Clinicians and researchers widely use gait speed, walking endurance, and balance as predictor factors to categorize post stroke survivors into ambulation categories. In particular, gait speed values measured using the 10 meter walk test (10-MWT) categorized poststroke survivors as*

household ambulator (<0.40 m/s), limited community ambulator (0.40–0.80 m/s), and full community ambulator (> 0.80 m/s) (19). In addition, walking endurance, as measured by the 6 minute walk test (6MWT), showed that walking distance ≥ 205 m discriminates between household and community ambulators (20). "it's better to consider this part for the " discussion" section.

Author response: It has been presented in the introduction with the purpose of demonstrating and providing the reader with information regarding the classification of the clinical outcome measures to patient function. In addition, several paragraphs in the discussion part have been references to this classification.

6) *In the method section you shouldn't consider " demographic variables" as an outcome measure.*

Author response: It has been removed.

7) *Please consider a reference for this sentence in the Method section: "At the first session, the LBPP pressure chamber was set to unload 50% of patient's body weight."*

Author response: The reference has been added.

Reviewer 2:

- *It seems that this study is an analytical prospective cohort study, that the study type has been mentioned neither in the title nor in the study design.*

Author response: It has been added in the title of the study.

- *How was the sample size determined? Mean? SD? Power? Reference?*

Author response: The study has a number of limitations, one of which being the relatively small sample size, which is acknowledged in the section devoted to limitations.

- *How was the blinding?*

Author response: There was no blinding in this study.

- *"After participants read and signed the informed consent form" is repeated.*

Author response: This sentence has been removed from the method section.

- *'manual and therapeutic therapy´ what is that? Therapeutic= therapy?*

Author response: Manual therapy is a form of treatment used in physical therapy in which the therapist performs the treatment with his or her hands. Examples of manual therapy include passive and active range of motion as well as joint mobilization. However, therapeutic therapy entails the utilization of particular modalities or exercises by physical therapists. Examples of these kinds of exercises include balancing exercises, as well as upper- and lower-extremity control exercises.

Manual Therapy - Physiopedia (physio-pedia.com)

Therapeutic Exercise - Physiopedia (physio-pedia.com)

- *Each outcome measures must be explained in detail*

Author response: In order to comply with the restrictions for the number of words in the article as a requirement for submission (3500) including tables and references, I have had to condense the outcome measures. In addition, these outcome measures are widely utilized and are already well-known to the vast majority of clinicians and researchers. Furthermore, I inserted a reference for each outcome for more illustration.

- *"chronic stroke since 4.8 ± 3.9 years" is the opposite of your exclusion criteria (<6 months)*

Author response: The study included participants with a chronic stroke greater than 6 months, which does not interfere with the result of *"chronic stroke since 4.8 ± 3.9 years"*

- *Each sentence or word must be mentioned once. The author has repeated all the reports mentioned in the table again in the result section*

Author response: For table 1, it shows more of participants demographic characteristics than what's written in the results section. For example, BMI, gender, involved side, chronic conditions, marital status, AFO, and assistive device weren't reported in the results section.

For table 2, in order to present the confidence interval and effect size, it is necessary to report the results for each outcome. It is possible to include the confidence interval and effect size in the result section, but I believe it would be more convenient for the reader if they were presented in the table.

- *This study did not compare its results with similar studies that used LBPP for treatment And this treatment method was not compared with other treatment methods for the measured variables.*

Author response: I added two paragraphs as a comparison between this study and other studies.

Reviewer 3:

1. *In Background: Explain the necessity of conducting this study and the gaps that existed in previous studies. What is the novelty of this study?*

Author response: In the background, I added some further explanation about why we are performing this study.

2. *Why was the number of participants in the study 9? Or which article was cited for the calculation?*

Author response: The study has a number of limitations, one of which being the relatively small sample size, which is acknowledged in the section devoted to limitations.

3. *The age range of the participants to inclusion the study is very wide. Do you have a reference for cite?*

Author response: Because recruiting stroke patients to participate in the study is a hassle, limiting the age range may make it challenging for us to carry out the research. In addition to that, the participants in these studies below included a wider age range.

Duran, Ü. D., Duran, M., Tekin, E., Demir, Y., Aydemir, K., Aras, B., & Yasar, E. (2022). Comparison of the effectiveness of anti-gravity treadmill exercises and underwater walking exercises on cardiorespiratory fitness, functional capacity and balance in stroke patients. *Acta Neurologica Belgica*, 1-10.

Oh, K., Im, N., Lee, Y., Lim, N., Cho, T., Ryu, S., & Yoon, S. (2022). Effect of Antigravity Treadmill Gait Training on Gait Function and Fall Risk in Stroke Patients. *Annals of Rehabilitation Medicine*, *46*(3), 114.

Park, J. H., & Chung, Y. J. (2018). Comparison of aquatic treadmill and anti-gravity treadmill gait training to improve balance and gait abilities in stroke patients. *The Journal of Korean Physical Therapy*, *30*(2), 67-72.

4. *In addition to selecting a small sample size, most of the participants were male, do you think gender could be a confounding factor, and how did you control it?*

Author response: The vast majority of the research that has been published on stroke does not differentiate between men and women and is therefore likely to include both factors.

5. *In Discussion, you only mentioned the results of your study, while you should discuss more about why these results were obtained and compare them with previous studies.*

Author response: I added two paragraphs as a comparison between this study and other studies in the introduction and discussion.

6. *Introduction and discussion are the most important parts of an article. It seems that these two parts are not well written in this article and need to be revised more.*

Author response: I revised more sentences in the discussion and the introduction.

2 Revision 1

4 comments · 24 Dec 2022 – 1 Jan 2023

Referee 2 Reviewer — REJECT — 24 Dec 2022

The answers were not convincing.

Referee 1 Reviewer — ACCEPT — 31 Dec 2022

Dear Author
Thank you for answering the questions. The content of your article is now better than before.

Associate Editor — ACCEPT — 31 Dec 2022

We are pleased to inform you that the reviewers accepted the corrections made by the authors and the article now is acceptable for publication.

Editor-in-Chief — ACCEPT — 1 Jan 2023

Dear Authors
We are pleased to inform you that your article is accepted for publication in the MEJRHS. We hope to receive other suitable articles from your group.