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OPEN PEER REVIEW

Language Processing in Individuals with Non-fluent Aphasia: Evidence from Root and Synthetic Compound Nouns

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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 · 7 Dec 2020 – 6 Jan 2021

Referee 1 Reviewer

REJECT 7 Dec 2020

Dear AE,
Comments for the authors:
1- The difference between complex words and complex verbs is not established.
2- The compound verb structure among the languages is not described.
3- The characteristics of regular vs. irregular structures are not fully explained.
4- The experimental setting is not clearly described.
4- N is too small to draw a meaningful conclusion.
5- Such experiments require at least a reaction time paradigm.
6- Overall, the aims, the theoretical basis, the procedures, the results, and the discussion are not convincing for scientific work.
Thanks.

Referee 2 Reviewer

MAJOR REVISION 23 Dec 2020

Dear AE,
Thank you for the opportunity to review the manuscript: Language Processing in People with Non-fluent Aphasias: Evidence from Compound Words.
The authors did a valuable job. At the same time, some concerns emerge that, if addressed, will help to strengthen the paper. They are as follows:
Abstract
- The aim of the study is inconsistent with the title of the study. Also, the importance and aim of the study are not clear.
- The methods section should be revised.
Keywords:
- Check them all using MESH.
Introduction:
1. The introduction is too long, and the importance and aim of the study are not clear.
Methods:
- The methods section should be revised. The criteria for the diagnosis of aphasia are not correct. The research method is not clear.
- Did you check the normal distribution of the data? If so, add your data in this regard.
Discussion:
- At the beginning of the discussion section, the subject of the study and the need to conduct it should be mentioned.
Conclusion:
- This section is not related to the finding of your study. Please revise this and refer to the most important implication of the study's result.
References:
- Some references are very old.
Good Luck

Bahareh Rezaei Reviewer

MAJOR REVISION 25 Dec 2020

Dear AE,
The subject of this article is interesting, but there are many ambiguities and errors in the method section. Because the sample size is small, reporting data for each patient (such as the types of errors in repetition and naming tasks) is also suggested.
Thanks.

Editor-in-Chief

MAJOR REVISION 6 Jan 2021

Dear Authors
According to the reviewers' and associate editor's comments, your article needs major revision. In addition, the manuscript should be edited by a native English speaker.
Thanks.

2

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.

Dear Dr. Kokhaei & Dr. Ehsani

Thank you very much for your kind letter of "Decision on the Manuscript whose reference number is 111387 titled" **Language Processing in People with Non-fluent Aphasias: Evidence from Compound Words**". We express our thanks for all that the dear associate editor has done especially the thoughtful comments and efforts. We also convey our appreciation for the anonymous reviewers' comments and all their hard work. These comments – once properly addressed- will surely increase the potential scientific significance of the original manuscript paper. We modified the manuscript according to the comments as they were addressed. Moreover, the manuscript has been edited natively by Kowsar academic publishing Group (No. 138). We trust that all of your comments and suggestions have been addressed accordingly in the revised manuscript and hope that the revision addresses your concerns and reaches your journal's standards.

Thank you very much for your effort.

Sincerely yours,

Ghonchepour

In the following, we give a point-by-point reply to the comments.

 # Reviewer 1

The aim of the study was revised to be consistent with the title of the study. It was also stated clearly and directly.

The methods section was revised.

All Keywords were selected based on MESH.

The introduction was shortened, and the importance and aim of the study were clarified.

We checked the normal distribution of the data and provided it in table **5** in sections **3-1.** Moreover, its statistical report was mentioned in this section.

The subject of the study and the need to do it was mentioned at the beginning of the discussion section.

The conclusion was revised and related to the findings of the study. Moreover, we referred to the most important implication of the study's result.

On old references, we have used only two articles (Butterworth, 1983 & Snodgrass JG, Vanderwart, 1980) and these are seminal articles. They have explained well-known theories that are influential in developing the neurolinguistics field. Moreover, we think this advice (never using old articles) can limit the researchers' thinking and creative capacity.

 # Reviewer 2

1-3- Persian complex verbs consist of a nonverbal element and a light verb (e.g. gerye kardan weeping doing 'to cry' (Karimi, 1997: 275) while compound nouns are words that are composed of two (or more) bases, roots, or stems (Lieber, 2010: 43). As you consider, the structure of these two categories is different from each other. The former functions as the predicate or verb of a sentence while the later functions as subject or object meaning that their functions are different. This study investigates the processing of compound nouns. Moreover, knowing the difference between compound nouns and complex verbs and reviewing types of complex verbs and their structures is out of the scope of this research. Complex verbs are different from compound nouns and reviewing their types, structures and characteristics are irrelevant to the subject of this study.

4- The experiment setting of the research was described.

4 & 5- The reviewer maintains that N is too small to bring about a meaningful conclusion. We have investigated case series in this manuscript; however, while reviewing the latest neurolinguistics studies, one can find the studies that investigate the performance of case studies. For example, **Badecker** (2001) investigates the lexical composition and the production of compounds in one aphasic person; **Mancopes & Schultz** (2008) report the processing of metaphors in only one Transcortical Motor aphasic individual. **Kordouli et al**. (2017) report findings obtained from a naming by definition task in two Greek-speaking agrammatic individuals. Moreover, using off-line tests are also common in Neurolinguistics research, and the mentioned studies were conducted by two off-line tasks, a picture naming and a production by definition task, using different types of compounds, in order to examine patients' ability to produce complex morphological structures and the impact of specific compound properties.

6- The aims, the theoretical basis, the procedures, the results, and the discussion were revised.

Reviewer 3#

Error data of simple and compound nouns were reported in table **5**.

Associate Editor 1:

1. Statistical analysis for comparison of the mean age in both groups was eliminated.

2. We revised table 1and reported SD for education level.

3. The title of table 1 was changed.

4. The linguistic profile of 4 participants was presented based on the Diagnostic Aphasia Test results in table 2.

5. Repetitive information of participants which was presented in appendix A was eliminated.

6 & 7. We controlled and matched simple, root, and synthetic compound words in terms of frequency, concreteness, and length. The related information was given on page 5 and 6 of the manuscript in section stimuli. Additional information on types of nouns was also provided in this section. Moreover, their structures, parts of speech, and their syntactic and semantic heads were provided in the appendices B, D, and E.

8. ANOVA results for line drawing pictures and nouns were presented in a better format and shape in the parentheses. Moreover, they have been shown in table 3.

9. Different statistical analysis in the data analysis part was introduced as the final section of material and method.

10. Statistical analysis of differences between groups was represented in the tables along with descriptive statistics all over the manuscript.

11. The revised sentence is: There is a difference between the individual constituents (first or second) and the whole compounds affected by errors in naming ($H(2) = 8.171$, $p= 0.017$) and repeating compound nouns, ($H (2) =3.322$, $p=0.046$).

12. The title was rephrased as Comparisons of affected individual constituents and the whole compounds

13. Based on the associate's comment, we reported and compared the normal group performance with PWA in naming and repetition tasks for simple nouns, root, and synthetic compound nouns (page 7, Table 4)

14. The method section was revised.
15. The study design was stated clearly.

2 Revision 1

5 comments · 2 Mar 2021 – 13 Apr 2021

Referee 2 Reviewer

ACCEPT 2 Mar 2021

Dear AE,
Thanks for all the efforts. The desired corrections have been made.
Best Wishes

Referee 3 Reviewer

ACCEPT 28 Mar 2021

Dear AE,
It would have been better for the author to respond to each comment separately. In general, most errors have been corrected, and it seems acceptable.
Thanks.

Referee 4 Reviewer

MINOR REVISION 28 Mar 2021

Dear AE,
Thank you for the opportunity to review this manuscript. The present study investigated the processing of compound nouns in patients with aphasia. It is a well-written manuscript. However, to improve the manuscript, some suggestions should be considered by the authors.
I have attached a Word file of the manuscript containing my comments on improving the manuscript.
Good luck

Associate Editor

MAJOR REVISION 12 Apr 2021

Dear EIC,
Thanks for all the efforts. The desired corrections have been made. However, the authors should address the following suggestions to improve the quality of the manuscript. Please:
1. Review similar articles on compound word processing in patients with aphasia in the introduction.
2. Specify the type of stroke (hemorrhagic or ischemic) in table 1.
3. State the participants' names in the following format (uppercase first initial followed by a period, then uppercase last initial followed by a period) in table 1.
4. In Table 2, state the number of PWAs in each of the two types of aphasia in parentheses opposite the type of aphasia.
5. In Table 2, at the bottom of the table, describe the type of statistical test used to analyze differences.
6. Mention the type of study.
7. Describe the statistical software and the version used at the beginning of the data analysis.
8. Provide a precise operational definition for each of the types of naming and repetition errors.
9. In sections 3.2 & 3.3, note explicitly that these analyses were performed only on patients with aphasia.
10. Mention this study's limitations and add suggestions for future research in the conclusion.
11. Add the acknowledgment section to the manuscript.
12. State any conflicts of interest related to this research.

13. Mention each author's contribution to writing this article.
Best Wishes

Editor-in-Chief MAJOR REVISION 13 Apr 2021

Dear Authors
According to the reviewers and associate editor's comments, your article needs major revision. Please respond to the reviewers' comments and submit the required files. In addition, please have the manuscript edited by a native editor.
Thanks.

3

Revision 2

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.

Dear Dr. Kokhaei & Dr. Ehsani

Thank you very much for your kind letter of "Decision on the Manuscript whose reference number is 111387 titled" ***Language Processing in People with Non-fluent Aphasias: Evidence from Root and Synthetic Compound Words****". We express our thanks for all that the dear associate editor has done, especially the thoughtful comments and efforts. We also convey our appreciation for the anonymous reviewers and all their hard work. These comments – once properly addressed- will surely increase the potential scientific significance of the original manuscript paper. We modified the manuscript according to the comments as they were addressed. Moreover, the manuscript has been edited natively by Kowsar academic publishing Group (No. 138). We trust that all of your comments and suggestions have been addressed accordingly in the revised manuscript and hope that the revision addresses your concerns and reaches your journal's standards.*

Thank you very much for your effort.

Sincerely yours,

Ghonchepour

In the following, we give a point-by-point reply to the comments.

Reviewer 3:

1. "Henceforth" was removed from line two of the Introduction part.

2. "Language disorders" in PWA were mentioned in this part (Introduction of the manuscript).

3. The importance of model processing to show the relationship between language and mind was added to the introduction part.

4. The type of referencing was edited as the reviewer commented.

5. The location of the in-text citation (reference number 19) was changed.

6. The aims of the manuscript had been written but in this revision, they were directly and explicitly specified.

7. The title of table 1 was changed into "Demographic characteristics of the participants" based on the comment of the respectful reviewer.

8. The title of 2.1.2 was revised as it was suggested.

9. The SPSS software version 20 was used for descriptive and inferential statistics. Its name was added at the beginning of the Data Analysis part

10. Previous studies were referred (in text citations) in the discussion section.

11 & 12. e.g. was removed as part of in-text citation from the discussion part.

13. The sentence was revised as the reviewer commented.

Associate Editor's Comments:

Associate Editor 1:

1: The studies (1-10) on compound words' processing in patients with aphasia in the introduction have reviewed similar studies in Italian, German, Finnish and Dutch.

2. Types of stroke in table 1 were specified.

3. Names of the participants have been stated in the table of Appendix A as the associate editor commented. This revision was done in the text of the manuscript too.

4. Number of each type of aphasia was written in parenthesis apposite each type in table 2.

5. At the bottom of table 2, the type of statistical test for difference analysis was described.

6. Type of study (multiple-case study) was mentioned on pages 2, 3 & 6.

7. The statistical software and its version were stated at the beginning of the data analysis. That is, The SPSS software version 20 was used for descriptive and inferential statistics.

8. A precise operational definition for each type of error was provided in the procedure section as the associate editor commented.

9. In sections 3.2 & 3.3, we noted explicitly that these analyses were performed only on patients with aphasia.

10. The limitations of the study were mentioned and the suggestion was added to the conclusion of the manuscript toot.

11. Acknowledgement part was added to the manuscript.

12 & 13. Conflict of interest of this research and each author's participation during writing this article had been mentioned before.

3 Revision 2

2 comments · 19 Jun 2021 – 19 Jun 2021

Associate Editor

ACCEPT 19 Jun 2021

Dear EIC,
Thanks for all the efforts. All the requested corrections have been made in full.
However, in line with the revision of the manuscript based on one of the associate editor's comments, it is better to edit the description of the statistical tests used and present it as a footnote at the bottom of table 2.
Good Luck

Editor-in-Chief

MINOR REVISION 19 Jun 2021

Dear Authors
According to the reviewers' and associate editor's comments, your article needs minor revision.
In addition, please limit the number of tables to 6. You can report the data from table 1 and table 4 in the manuscript.
Please respond to the reviewers' comments and submit the required files.
Thanks.

4

Revision 3

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.

Dear Dr. Kokhaei & Dr. Ehsani

*Thank you very much for your kind letter of "Decision on the Manuscript whose reference number is 111387 titled" **Language Processing in People with Non-fluent Aphasias: Evidence from Root and Synthetic Compound Words**". We express our thanks for all that the dear associate editor has done, especially the thoughtful comments and efforts. We modified the manuscript according to the comments as they were addressed. We trust that all of your comments and suggestions have been addressed accordingly in the revised manuscript and hope that the revision addresses your concerns and reaches your journal's standards.*

Thank you very much for your effort.

Sincerely yours,

Ghonchepour

In the following, we give a point-by-point reply to the comments.

Associate Editor's Comments:

Associate Editor 1:

*At the bottom of table 2 (now is table 1), we described the type of statistical test for difference analysis. Moreover, we mentioned the statistical tests as a footnote at the bottom of other tables. Table 2 was deleted based on **EIC**'s comments.*

EIC Decision:

According to the EIC Decision, we have limited the number of tables up to 6. We deleted tables 1 and 4 and stated the data of table 1 and table 4 in the manuscript.

4 Revision 3

2 comments · 5 Jul 2021 – 7 Jul 2021

Referee 4 Reviewer

ACCEPT 5 Jul 2021

Dear AE,
The present form of the manuscript is ready for publication in the MERJH.
Thanks.

Editor-in-Chief

ACCEPT 7 Jul 2021

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.
Thanks.