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OPEN PEER REVIEW

Turkish Adaptation and Psychometric Properties of the Standardized Infant Neurodevelopmental Assessment Neurological Scale in Turkish At-Risk Infants

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1 Original submission

1 comment · 24 Dec 2023

Soheila Shahshahani Reviewer

MAJOR REVISION 24 Dec 2023

Thank you for preparing this manuscript. It addresses an important issue in pediatric medicine but has some ambiguities. Please see the attached file for my recommendations.

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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 1:

Thank you very much for taking the time to review this manuscript and your contributions.

Please find the detailed responses below and the corresponding revisions/corrections highlighted in the re-submitted files.

Abstract

1-It seems that version is better than conversion.

Reply: *Line 8: We corrected "conversion" to "version".*

2- It is enough to mention one of the two cases

Reply: *Line 9: We included only the number of girls.*

3-. The Cronbach's alpha is to determine internal consistency not test-retest reliability.

Reply: *Line 15: We corrected the statement about ICC in the sentence.*

4-Please add some information about the correlation of the SINDA with HINE and AIMS in the abstract.

Reply: *Line 19: We added the correlation information of SINDA with AIMS and HINE.*

5- These aren't suitable keywords. Developmental screening or at-risk infants are better ones.

Reply: *Line 24: We corrected keywords.*

Introduction

1- Did you mean 10% of 11/1%?

Reply: *Line 36: We corrected the statement 'Furthermore, 11.1% of all births worldwide occur prematurely and 5% of these births are very low gestational age (<28 weeks)."*

2- Both of this tools examine neuromotor development and are not in cotrast to each other. The age range of both tools are near to each other.

Reply: *Line 54: We corrected the statement "The HINE is a measurement employed to assess the neurological development of infants ranging from 2 to 24 months of age."*

*3-*Please add some details about the time.

Reply: *Line 62: We added the application time of SINDA (20-25 min).*

Methods

1- Primary care giver or parens are better ones

Reply:*Line 77: We changed “family” to “parents”.*

2- Did you perform test-retest for all 110 infants?

Reply:*Line 80: Test-retest reliability was performed all participants.*

3- The sentence is unfinished.

Reply:*Line 111: We correctly wrote the sentence.*

4- Did you assess all of the children two times at first and then again by one of the physiotherapist one hour later (3 time in a day)? If on the same day two physiotherapists assessed the children separately, this means an inter-rater reliability testing and there was no need for a third assessment.

Reply:*Line 111: We corrected the statement as “The patient was evaluated using the SINDA neurological scale on the same day by two physiotherapists for inter-rater reliability.” We made two evaluations for the SINDA.*

5- Please clarify the age range of the test. Is this 6 weeks to 12 months or 24 months or older?

Reply:*Line 124: We corrected the statement as the age range of the test was 6 weeks to 12 months.*

6- Please add something about the psychometric characteristics of HINE and AIMS. Which of them was used as golden standard test?

Reply:*Line 138: We added the properties and the psychometric characteristics of the tests highlighted under HINE and AIMS. We added the statement that HINE used as golden standart test.*

7- Please write something about 7-8 months old children.

Reply:*Line 149: We did not have data for the 7-8 months score in the HINE test in the literature. Nevertheless, we included information about global scores associated with cerebral palsy in line 157.*

Results:

1- Two decimal places are enough

Reply:*Line 194: We changed 3 decimals to 2 decimals in the manuscript..*

2- Is this correct? It seems that this value refers to mean length of children and not to their mean length at birth

Reply:*Line 201 Table 1: We removed the "length of the infants" information irrelevant to the study.*

3- Is this number obtained by subtracting the item? If so, in some cases e.g. B and C, the Cronbach's Alpha was increased by item deletion. How do you interpret this?

Reply:*Line 214: Table 2: Total correlation values should be above 0.40. If any of these correlations falls below 0.40, the corresponding item should be removed from the scale. To decide on the item to be removed, the Item Subtracted Cronbach's Alpha section of this part is examined. If removing the section increases Cronbach's Alpha value, the relevant section should be removed from the scale. It is recommended not to remove any section if the Total Correlation value is above 0.40 and the Cronbach's Alpha value of the scale is above 0.70 (Vaske, J. J., Beaman, J., & Sponarski, C. C. (2017). Rethinking internal consistency in Cronbach's alpha. Leisure sciences, 39(2), 163-173.)*

4- The table shows that the total score of the test has good and moderate correlation with HINE and AIMS results respectively. Less than of 50% of subdomains of SINDA had moderate correlation with HINE and AIMS (r≥0.50). Do you mean acceptable, more than 0.50 or more than 0.70? Please clarify this issue.

Reply:*Line 263: The level of relationship was classified using Spearman's correlation coefficient, as follows: '<0.30 = small/negligible', '0.30–0.50 = low', '0.50–0.69 = moderate', '0.70–0.90 = high' and '>0.90 = very high'. This statement is highlighted in the statistical analysis part in line 200.*

Ethics Approval Statement:

1- This is true? Did you obtain the written consent from the infants?

Reply:*Line 347: We corrected the statement.*

Reply to Reviewer 2:

Thank you very much for taking the time to review this manuscript and making a contribution to strengthen our discussion part of this study.

Please find the detailed responses below and the corresponding revisions/corrections highlighted in the re-submitted files.

Results:
The results section reports findings on the reliability (internal consistency, inter-rater) and validity (construct and concurrent) of the Turkish SINDA scale. However, one potential weakness is the lack of clear interpretation or discussion of some of the complex statistical analyses like confirmatory factor analysis and path coefficients. The clinical relevance of these statistical findings is not very evident.

Reply: *We have added the interpretation to the discussion part of the study in line 314.*

Discussion:
The discussion could be improved in the following ways:
1. *Provide more context by comparing the psychometric findings to previous adaptations of SINDA in other languages/cultures. This would allow readers to gauge if the Turkish version performs similarly or differently.*

Reply: *As the scale has not yet been translated into other languages, this issue could not be discussed in the discussion part.*

2. Discuss the implications of using the Turkish SINDA clinically - how would identifying at-risk infants via this tool enable earlier interventions and improved outcomes?

Reply: *We added a paragraph in line 352about this topic.*

3. Address the study's limitations more explicitly, such as the lack of evaluating effects of sociodemographic factors.

Reply: *We identified the linitations of the study in line 362.*

4. Provide clear take-home messages summarizing the key strengths and applicability of the Turkish SINDA scale based on this validation study.

Reply: *We pointed out this situation in the conclusion part of the study line 369.*

References:
There are some older references from the 1980s/1990s when describing general assessment

principles. While not critically outdated, the authors could consider updating those with more contemporary references.

Reply: *The references has been updated.*

2 Revision 1

1 comment · 2 Apr 2024

Soheila Shahshahani Reviewer

MINOR REVISION 2 Apr 2024

Thank you for taking the time to implement my comments. I hope this makes your valuable work clearer.
Here are some recommendations.
In the Procedure part, the first sentence is unfinished.
Please make the execution method clear. Conducting two examinations by a physiotherapist is test-retest. Did you use this method as well, or was only inter-rater evaluation used?
Did you assess all of the children twice initially and then have them assessed again by one of the physiotherapists one hour later (3 times in a day)?
For the overall HINE score, please reorder the information about the cut-off points (from the younger age group to the older one). Begin with the younger age group. Do these cut-off points mean that we can use the test in the 3, 6, 9 and 12 age groups?
In the results, please make the number of decimal places consistent throughout the text; usually, 2 decimal places are used. You have used 1 to 3 decimal places in different parts of the text.
In fact, many readers know the interpretation of Cronbach's Alpha, but it is better to clearly state in one sentence that there was no need to delete any item based on the value of Cronbach's Alpha.
I mean that it is better to use specific words, as you did earlier in the text, such as moderate and high. Then you can interpret them as acceptable.
In table 7, it seems that the data in the last two lines have been moved together.
Please see the attached file.

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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.

Reply to Reviewers:

Thank you very much for taking the time to review this manuscript and your contributions.

Please find the detailed responses below and the corresponding revisions/corrections highlighted in bright green in the re-submitted files.

Reviewer 1:

1-*The paper is greatly improved after revision. Is It possible that the red highlighting of your new references?*

Reply: *Thank you very much for your additions to this article. We have highlighted in red our new references.*

Reviewer 2:

1- *In the Procedure part, the first sentence is unfinished.*
Reply: *We corrected the first sentence in the Procedure part.*

2- *Please make the execution method clear. Conducting two examinations by a physiotherapist is test-retest. Did you use this method as well, or was only inter-rater evaluation used? Did you assess all of the children two times at first and then again by one of the physiotherapist one hour later (3 time in a day)?*
Reply**:** *Thank you for pointing out this situation. Measurements were applied twice as recommended to calculate the test-retest reliability with one physiotherapist, and the test-retest reliability was computed after these applications* ***(****Awan SN, Novaleski CK, Yingling JR. Test-retest reliability for aerodynamic measures of voice. J Voice 2013; 27: 674-84.). We also used inter-rater reliability evaluation. So one physiotherapist made two evaluations for the test-retest evaluation and the second physiotherapist evaluated for inter-rater reliability. We also corrected the statement in line 113 in the "Procedure" part and highlighted it in green.*

3- *For the overall HINE score, please reorder the information about the cut-off points (from smaller age group to older one). Begin from smaller age group. Do these cut-off points mean that we can use the test in 3, 6, 9 and 12 age groups?*

Reply: *We have rearranged the order of scores of HINE from 3 months to 12 months of age. We can use HINE in all ages between 2 to 24 months old. The literature only has 3, 6, 9 and 12 months cut-off points. We also added this statement to the HINE section.*

4- *In the results, Please make the number of decimals consistent throughout the text, usually 2 decimals are used. You have used 1 to 3 decimal places in different parts of the text.*

Reply: *We corrected all decimals in 2 decimals through the text (except p values and the ICC).*

5- *In fact, many readers know the interpretation of Cronbach's Alpha, but it is better to clearly state in one sentence that there was no need to delete any item due to the amount of Cronbach's Alpha value.*

Reply: *We added the statement to Line 225: Total correlation values should be above 0.40. If any of these correlations falls below 0.40, the corresponding item should be removed from the scale. To decide on the item to be removed, the Item Subtracted Cronbach's Alpha section of this part is examined. If removing the section increases Cronbach's Alpha value, the relevant section should be removed from the scale. It is recommended not to remove any section if the Total Correlation value is above 0.40 and the Cronbach's Alpha value of the scale is above 0.70.* ***Reference:*** *Vaske, J. J., Beaman, J., & Sponarski, C. C. (2017). Rethinking internal consistency in Cronbach's alpha. Leisure sciences, 39(2), 163-173.*

6- *I mean that is better to use specific words like as you described it before in the text, such as moderate and high. Then you can interpret them as acceptable.*

Reply: *We added the statement to the line 258 : "The level of relationship was classified using Spearman's correlation coefficient, as follows: '<0.30 = small/negligible', '0.30–0.50 = low', '0.50–0.69 = moderate', '0.70–0.90 = high' and '>0.90 = very high'", especially more than 0.50 is acceptable for the correlation analysis."*

7- *In the table 7, it seems that the data of the last two lines have been moved together.*

Reply: *In Table 7, the data of the last 2 rows have not been moved.*

Dear Editor,
We have revised and corrected our manuscript according to the suggestions of the reviewers and highlighted in bright green the corrections and the statements in the text, and red highlight in the references.
Regards,
Deniz Cakir

3 Revision 2

1 comment · 30 Apr 2024

Soheila Shahshahani Reviewer

ACCEPT 30 Apr 2024

Thank you for inviting me to review this manuscript. The authors implemented the recommended changes.