

## PEER REVIEW HISTORY

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### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Living in Latvia after stroke; the association between functional, social and personal factors and the level of self-perceived disability: A cross-sectional study
<b>AUTHORS</b>	Bērziņa, Guna; Smilškalne, Baiba; Vētra, Anita; Stibrant Sunnerhagen, Katharina

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Frances Horgan Royal College of Surgeons in Ireland
<b>REVIEW RETURNED</b>	08-Feb-2016

<b>GENERAL COMMENTS</b>	<p>Living in Latvia after stroke; the influence of functional, social and personal factors on the level of self-perceived disability.</p> <p>This is an interesting paper with an analysis of stroke register data from Latvia.</p> <p>Reviewer comments;</p> <p>Suggested amendments;</p> <p>Key words Perhaps change disability to perceived disability</p> <p>Abstract Specify in participant section of the abstract that data was register based. Last line of abstract – change ‘done’ to assessed.</p> <p>Introduction Quite long, but well organized with all relevant material to the topic of the paper. Paragraph 4, line 4, Later, when the person.... Define the period referred to as ‘later’. The aim of the paper is clearly stated.</p> <p>Methods Why was the WHODAS 2.0 chosen. How did the researchers obtain participant emails, the methods state that ‘WHODAS 2.0 were sent by mail or email’... I would expect that there was a gatekeeper. If this was the case it should be specified and this is in line with data protection and ethical considerations. Add a statement regarding the psychometrics, reliability/validity of the self-completion method of the WHODAS. Inclusion criteria – who were the clinical specialist – treating doctor, add more specific details.</p>
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	<p>Add details on page 6 regarding the response rate, of 382 who agreed to participate, 255 completed the questionnaire. Add details to results section also.</p> <p>Page 7, the trichotomised FIM score, has this been used elsewhere. Did the researchers seek statistical advice?</p> <p>Page 8, clarify that the questionnaire included a question relating to return to work.</p> <p><b>Results</b>          Add response rate details.          The formatting of all of the tables could be improved. Standardise the reporting of decimal places. Highlight statistically significant results in the tables.          Add the title of the table at the top of the table. Review formatting of Table 2, perhaps in landscape view for ease of reading.</p> <p><b>Discussion</b>          Page 19, last paragraph, the first statement s difficult to follow, suggest rephrase. ' The results of the present study underlines..... the importance of the rehabilitation process and points to the lack of its ultimate implication of the outcome. This component... the lack of its ultimate implication of the outcome.          .... is difficult to follow, what do the authors mean here.</p> <p>The limitations and recommendations are described. There are good comparisons to other relevant data.</p>
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<b>REVIEWER</b>	Dr Victoria Allgar University of York, England
<b>REVIEW RETURNED</b>	17-Mar-2016

<b>GENERAL COMMENTS</b>	<p>Thank you for the opportunity to review this paper.</p> <p>I have a couple of statistical comments:          1. There is no power calculation or justification of the sample size.          2. There is no discussion about the missing data e.g. 600 to 382 to 255 (final analysis) - do they differ from the final dataset? e.g. bias</p> <p>The formatting was a little strange but I guess this would be addressed before publication.</p>
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### VERSION 1 – AUTHOR RESPONSE

Reviewer 1

Thank you for your comments on our manuscript. We have revised it accordingly.

Reviewer’s comment: Key words: Perhaps change disability to perceived disability

Response: The keyword “disability” has now been changed to “perceived disability”.

Reviewer’s comment: Specify in participant section of the abstract that data was register based.

Response: The participant section in the abstract kas now been revised as follows: "Of 600 persons after stroke who were identified through hospital register and selected for the study, 255 persons were included in the analysis."

Reviewer's comment: Last line of abstract – change 'done' to assessed.

Response: The word "done" in the last line of the abstract has now been changed to "assessed".

Reviewer's comment: Introduction: Paragraph 4, line 4, Later, when the person.... Define the period referred to as 'later'.

Response: The time when person returns home after stroke is not defined and depends on individual functional limitations of person, as well as organisation of stroke care. Therefore, we would prefer to leave the current version of the sentence.

Reviewer's comment: Why was the WHODAS 2.0 chosen.

Response: The WHODAS 2.0 was chosen because it evaluates the self-perceived level of disability as World Health Organization defines it, within the framework of the International Classification of Functioning, Disability and Health.

Reviewer's comment: How did the researchers obtain participant emails, the methods state that 'WHODAS 2.0 were sent by mail or email'... I would expect that there was a gatekeeper. If this was the case it should be specified and this is in line with data protection and ethical considerations.

Response: To address this suggestion, we have revised the sentence as follows: "After consent, the correspondence address where obtained and a set of questions that included current socio-demographic information, as well as WHO Disability Assessment Schedule 2.0 (WHODAS 2.0) were sent by mail or e-mail."

Reviewer's comment: Add a statement regarding the psychometrics, reliability/validity of the self-completion method of the WHODAS.

Response: The statements of psychometric properties has now been added in page 6: "It is directly linked to the 'Activity and Participation' component of ICF and it has showed good psychometric properties (validity, reliability, sensitivity to changes and item-response characteristics."

Reviewer's comment: Inclusion criteria – who were the clinical specialist – treating doctor, add more specific details.

Response: The term "specialists" in inclusion criteria has now been changed to "attending physician".

Reviewer's comment: Add details on page 6 regarding the response rate, of 382 who agreed to participate, 255 completed the questionnaire. Add details to results section also.

Response: Details on the response rate now has been added in page 6: "Out of the 600 persons who were selected for the study, 49 refused to participate, 50 were deceased and 119 were not reachable. Out of the 382 persons who agreed to participate in the study, 255 completed the questionnaire and sent it back."

Characteristics on study populations that were selected and agreed to participate has been added to Table 1.

Reviewer's comment: Page 7, the trichotomised FIM score, has this been used elsewhere. Did the researchers seek statistical advice?

Response: We received statistical advice during the process of data analysis. This approach to the FIM scores we also used previously in article that compares outcomes of stroke rehabilitation in two countries (Berzina G, Vetra A, Sunnerhagen KS. A comparison of stroke rehabilitation; data from two national cohorts. *Acta Neurol Scand.* 2015 Dec 15. doi: 10.1111/ane.12542 - <http://www.ncbi.nlm.nih.gov/pubmed/26666964>). The reason for use of this approach is as follows:

The FIM is an assessment tool that contains ordinal data. The use of FIM sum scores would be a violation of mathematical assumptions, as well as loss of clinical relevance of data. Therefore, we used trichotomised data, that are based on extent of the person's need for help to fulfil the activity and are relevant for rehabilitation objectives.

Reviewer's comment: Page 8, clarify that the questionnaire included a question relating to return to work.

Response: The relevant sentence has now been revised accordingly: "Further independent variables that were included in the questionnaire were status of employment (working or not after stroke), time after discharge from rehabilitation (months)."

Reviewer's comment: Add response rate details.

Response: Response rate details has now been reported on Table 1.

Reviewer's comment: The formatting of all of the tables could be improved. Standardise the reporting of decimal places. Highlight statistically significant results in the tables.

Response: The formatting of the tables has now been changed. Reporting of p values has now been standardized to two decimals after point. Statistically significant factors in the models are now marked with \*.

Reviewer's comment: Add the title of the table at the top of the table. Review formatting of Table 2, perhaps in landscape view for ease of reading.

Response: The titles has now been placed at the top of the tables. The formatting of the tables has now been changed.

Reviewer's comment: Page 19, last paragraph, the first statement s difficult to follow, suggest rephrase. ' The results of the present study underlines..... the importance of the rehabilitation process and points to the lack of its ultimate implication of the outcome. This component... the lack of its ultimate implication of the outcome.

.... is difficult to follow, what do the authors mean here.

Response: We agree that the last part of the first sentence in last paragraph of discussion is somewhat confusing. Moreover, the meaning of it is similar to one in the second sentence. Therefore, we decided to take out it from the text: "The results of the present study underlines the importance of the rehabilitation process. However, the consequences of stroke and its impact on lives depend on a complex entirety that is formed by interactions of different factors."

Reviewer 2

Thank you for reviewing our manuscript. We have read you and the other reviewers' comments and have tried to improve the manuscript following the suggestions.

Reviewer's comment: There is no power calculation or justification of the sample size.

Response: We agree that we have not done a-priori sample size calculation. However, the sample size of the study population is large and the results of classical suggested methods for the sample size calculation does not exceed the current number of sample. Moreover, results the post-hoc calculation for statistical power shows large statistical power (1.0) for all final models. The stepwise approach to the analysis, allowed us to compare different models using F test and use the best explanatory model, therefore decreasing the number of predictive variables and increasing the statistical power.

Reviewer's comment: There is no discussion about the missing data e.g. 600 to 382 to 255 (final analysis) - do they differ from the final dataset? e.g. bias

Response: Response rate details has now been reported on Table 1 and reported in the results section: "There were no significant difference in the basic characteristics between selected and final study populations."

Reviewer's comment: The formatting was a little strange but I guess this would be addressed before

publication.

Response: The formatting of the tables has now been changed.

#### VERSION 2 – REVIEW

<b>REVIEWER</b>	Frances Horgan Royal College of Surgeons in Ireland IRELAND
<b>REVIEW RETURNED</b>	22-Apr-2016

<b>GENERAL COMMENTS</b>	The reviewer completed the checklist but made no further comments.
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<b>REVIEWER</b>	Dr Victoria Allgar University of York
<b>REVIEW RETURNED</b>	26-Apr-2016

<b>GENERAL COMMENTS</b>	The authors have addressed the previous review comments and amended the text and tables accordingly.
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## Correction: *Living in Latvia after stroke: the association between functional, social and personal factors and the level of selfperceived disability—a cross-sectional study*

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Bērziņa G, Smilškalne B, Vētra A, *et al.* Living in Latvia after stroke: the association between functional, social and personal factors and the level of selfperceived disability—a cross-sectional study. *BMJ Open* 2016;6:e010327. The last author of this paper, 'Katharina Stibrant Sunnerhagen' should be listed as 'Katharina S Sunnerhagen' and cited as 'Sunnerhagen KS'.

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