

AGREEMENT AND TEST-RETEST RELIABILITY OF THE FRENCH VERSION OF THE SYDNEY SWALLOW QUESTIONNAIRE IN YOUNG ADULTS

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BACKGROUND

The Sydney Swallow Questionnaire (SSQ) is a validated questionnaire of the symptomatic severity of oral-pharyngeal dysphagia. This self-report inventory is well accepted, completed in a short time and not time consuming for the clinician. The questions cover the symptoms related to combinations of variables like the anatomic region, type of dysfunction and the consistency of swallowed bolus.

This study is a first stage in the process of the validation of the French version of the SSQ. The purposes of this stage were to evaluate the content validity, test-retest reliability and the agreement in young healthy subjects.

METHODS

Subjects were recruited after formal approval from the lead author of the SSQ, ethical approval (2016/18MAI/215) and registration of the trial (NCT02845362).

Inclusion criteria were as follows: 18 years or older and able to speak, read and write in French. Exclusion criteria were the diagnosis of a mental or neuromuscular disorders or any other impaired swallowing.

The SSQ contains 17 items, completed with a 100-mm horizontal visual analogue scale except one question (Q12), with a maximum score of 100 for each question. The total score is calculated by summing the individual responses, with a maximum total score of 1700. A higher score indicates a more severe swallowing impairment. Subjects were asked to fill in the questionnaire during an outpatient visit. Two weeks later, the SSQ was repeated in the same conditions.

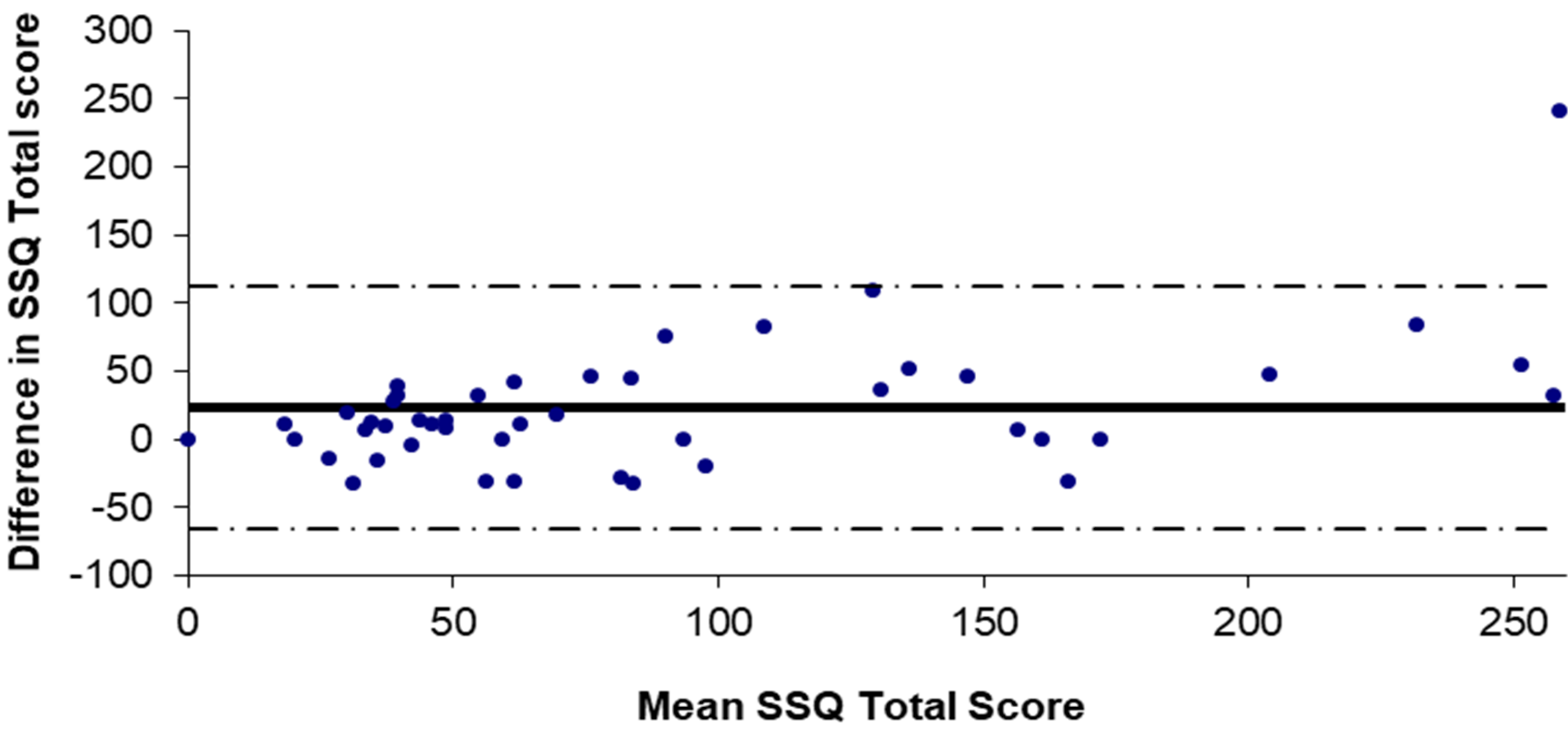
- The content validity was verified by the correlation between each question and total scores of the SSQ.
- The test-retest reliability was evaluated using an intra-class coefficient (ICC) for total score of the SSQ.
- Bias in the SSQ scores and limits of agreement were estimated using the Bland and Altman method.

RESULTS

Ninety-nine consecutive subjects met the inclusion criteria (male/female: 49/50, age: 21.7+/-2.6 years) and completed the French version of the SSQ. The mean SSQ total score was 77.4+/-68.9. Forty-six subjects answered the questionnaire twice. The mean SSQ total score for the retest was 78.8+/-60.1.

- Content validity was good with questions-total scores correlations ranging from 0.289 to 0.703. They were all highly significant (p-value < 0.01).
- Test-retest reliability was evaluated on 46 healthy subjects. The ICC for SSQ total scores within 2 weeks was 0.89 (95% IC: 0.75-0.94; p-value < 0.001).
- Bland and Altman method revealed a low bias between the measurement days for the SSQ total score (bias = 23; limits of agreement: -68; +114).

Bland and Altman plot for the scores of SSQ test-retest



Scoring for the 17 questions and for the total score of the SSQ

Questions	Median	Min.	Max.
Q1	0	0	27
Q2	0	0	15
Q3	0	0	26
Q4	0	0	25
Q5	0	0	45
Q6	0	0	60
Q7	0	0	39
Q8	0	0	33
Q9	5	0	40
Q10	5	0	43
Q11	6	0	65
Q12	20	0	40
Q13	0	0	40
Q14	1	0	49
Q15	0	0	70
Q16	0	0	17
Q17	0	0	17
Total Score	56	0	379

CONCLUSION

In conclusion, the French version of the SSQ is a valid and reliable instrument to assess dysphagia symptoms in young adults. It could be used in clinical settings after further validation in patients.

