

Translation and Validation of the Overactive Bladder Symptom Score in Chinese

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Introduction

- Overactive bladder (OAB) is marked by urgency, frequency, nocturia, and incontinence.
- Few OAB QAs can capture the full range of symptoms and severity.
- A validated OAB Symptom Score (OABSS) developed by Blaivas et al. captures a wide range of OAB symptoms, quantifies severity, and includes a graded response for urgency.
- Chinese is the second most spoken language in the world.
- Barriers to healthcare in English speaking countries exist in the Chinese patient population due to language and cultural differences.
- Health literacy among Chinese speakers is higher when they are immersed in communication in Chinese rather than English.
- A translated and validated OABSS in Chinese may provide better urologic health outcomes.
- COVID-19 proved to be a major factor in the increasing use of telehealth in all specialties of medicine.
- In Urology alone, telehealth visits may have increased up to 30%.
- To our knowledge, this is the first urologic survey designed for remote use.

Methods and Materials

- OABSS was first translated into Chinese and subsequently back translated into English.
- Chinese speaking patients from a urologic private practice in Brooklyn over the age of 18 years were targeted in this study.
- Patients who underwent invasive office or operating room procedures and/or endorsed urinary symptoms, undergone any urologic procedures, or started any medications were excluded from this study.
- The survey was first administered to 10 patients to gauge feedback on clarity, simplicity, and overall meaning of the questions.
- No revisions to the survey were made based on feedback from the original 10 patients.
- A trained volunteer called consented patients to administer the survey using a prepared script in their respective dialects.
- Patients were subsequently called again within 14 days by the same trained volunteer who administered the first call.
- Patients who had any changes in symptoms, no longer met the inclusion criteria, or could not complete the second survey were excluded from the final analysis.
- The 5th question on the survey "How often do you get the sudden urge or desire to urinate that makes you want to stop what you are doing and rush to the bathroom" acted as the proxy question for OAB.
- SPSS version 28 was used for data analysis.
- Cronbach's alpha coefficient for internal validity, Spearman's coefficient for test-retest validity, and t-test between subgroups for discriminant validity.

Results

- 56 patients completed both surveys
- 16 (28%) had OAB and 40 (72%) did not have OAB.
- Cronbach's alpha score for internal validity was 0.76 on both visits 1 and 2.
- Spearman's coefficients ranged from 0.62 – 0.92, with all questions and total OABSS showing statistically significant associations between visits 1 and 2 (p<0.001).
- No significant differences in mean OAB scores were appreciated between visit 1 and visit 2 in both OAB (mean OAB score visit 1 = 21.4, mean OAB score visit 2 = 20.5, p=0.95) and non OAB groups (mean OAB score visit 1 = 15.8, mean OAB score visit 2 = 15.6, p=0.89).
- The OAB group had significantly higher mean OAB scores in both visits 1 (mean OAB score for OAB group = 21.4, mean OAB score for non OAB group = 15.8, p<0.001) and 2 (mean OAB score for OAB group = 20.5, mean OAB score for non OAB group = 15.6, p<0.001) compared to the non OAB group.

Table 1. Spearman Coefficient

OABSS Question #	Spearman's Coefficient
1	0.834*
2	0.922*
3	0.689*
4	0.769*
5	0.712*
6	0.706*
7	0.619*
Total OAB Score	0.812*

*significant at p<0.001

Table 2. Comparison Between Groups

Group	Mean Visit 1	Mean Visit 2	p-value
Total	17.375	17.8462	0.722
OAB	21.375	20.5	0.954
non-OAB	15.775	15.55	0.887

*no significant difference at a=0.05

Visit	OAB Mean	OAB (-) Mean	p-value
1	21.375	15.775	<0.001
2	20.5	15.55	<0.001

*significant at p<0.001

Discussion

- The Chinese OABSS proved to have acceptable internal validity, strong test-retest validity, and significant discriminant validity.
- This newly developed tool will be a useful survey for busy physicians to quickly assess patients for OAB and continue to monitor their OAB symptoms over time.
- This survey was specifically designed for remote use in Chinese speaking patients, allowing physicians to adapt to a changing medical landscape.

Conclusions

- Multiple analyses of validity demonstrate the usefulness of the Chinese OABSS as a useful tool for assessing the full spectrum of OAB with a graded severity scale.
- As telehealth visits increase in frequency, OAB symptoms can continue to be monitored adequately in the Chinese-speaking population.

Figure 1. OABSS English

OAB Questionnaire

NAME: _____ DATE: _____

1. How often do you usually urinate during the day?

☐ no more often than once in 4 hours

☐ about every 2-4 hours

☐ about every 2-3 hours

☐ about every 1-2 hours

☐ at least once an hour

2. How many times do you usually urinate at night (from the time you go to bed until the time you wake up for the day)?

☐ 0-1 times

☐ 2 times

☐ 3 times

☐ 4 times

☐ 5 or more times

3. What is the reason that you usually urinate?

☐ out of convenience (no urge or desire)

☐ because I have a mild urge or desire (but can delay urination for over an hour if I have to)

☐ because I have a moderate urge or desire (but can delay urination for more than 10 but less than 60 minutes if I have to)

☐ because I have a severe urge or desire (but can delay urination for less than 10 minutes if I have to)

☐ because I have desperate urge or desire (must stop what I am doing and go immediately)

4. Once you get the urge or desire to urinate, how long can you usually postpone it comfortably?

☐ more than 60 minutes

☐ about 30-60 minutes

☐ about 10-30 minutes

☐ a few minutes (less than 10 minutes)

☐ must go immediately

5. How often do you get a sudden urge or desire to urinate that makes you want to stop what you are doing and rush to the bathroom?

☐ never

☐ rarely

☐ a few times a month

☐ a few times a week

☐ at least once a day

6. How often do you get a sudden urge or desire to urinate that makes you want to stop what you are doing and rush to the bathroom but you do not get there in time (so you leak urine or wet pads)?

☐ never

☐ rarely

☐ a few times a month

☐ a few times a week

☐ at least once a day

7. In your opinion how good is your bladder control?

☐ perfect control

☐ very good

☐ good

☐ poor

☐ no control at all

Figure 2. OABSS Chinese

OABSS 问卷

姓名: _____ 日期: _____

1. 你白天通常多久排尿一次?

☐ 超过 4 小时一次

☐ 大约每 2-4 小时一次

☐ 大约每 2-3 小时一次

☐ 大约每 1-2 小时一次

☐ 大约每 1-2 小时一次

☐ 每小时至少一次

2. 你通常晚上排尿几次 (从你上床睡觉到起床)?

☐ 0-1 次

☐ 2 次

☐ 3 次

☐ 4 次

☐ 5 次或更多

3. 你排尿的原因是什么?

☐ 因为肚子胀 (可以不停尿)

☐ 因为我有轻微的排尿感 (但我知道如果必要的话可以延迟一个多小时排尿)

☐ 因为我有中等的排尿感 (但我知道如果必要的话可以延迟 10-30 分钟或一个多小时排尿)

☐ 因为我有强烈的排尿感 (但我知道如果必要的话可以延迟 10 分钟或一个多小时排尿)

☐ 因为我有迫切的排尿感 (我必须立即去上厕所)

4. 一旦你有了尿意或想排尿, 你能舒适地推迟多久?

☐ 超过 60 分钟

☐ 30-60 分钟

☐ 10-30 分钟

☐ 10 分钟以内

☐ 必须立即去

5. 你多久会感到突然的尿意或想排尿, 以至于你必须立即去上厕所?

☐ 从来没有

☐ 很少

☐ 一个月几次

☐ 一星期几次

☐ 每天至少一次

6. 你多久会感到突然的尿意或想排尿, 以至于你必须立即去上厕所, 但是你没有及时到达洗手间而漏尿?

☐ 从来没有

☐ 很少

☐ 一个月几次

☐ 一星期几次

☐ 每天至少一次

7. 你认为你的膀胱控制得好吗?

☐ 完全控制

☐ 非常好

☐ 好

☐ 一般

☐ 很差

References

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