

Adaptation of the Bilingual Aphasia Test to Lebanese Arabic

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► **To cite this version:**

Nour Ezzeddine, Barbara Köpke. Adaptation of the Bilingual Aphasia Test to Lebanese Arabic. 20th International Science of Aphasia Conference, Sep 2019, Rome, Italy. Ezzeddine, N. (2019). Adaptation of the Bilingual Aphasia Test to Lebanese Arabic. *Stem-, Spraak- en Taalpathologie*, Vol 24, ., 24, pp.32.8310/2019/, *Stem-, Spraak- en Taalpathologie*. hal-02283220

HAL Id: hal-02283220

<https://hal-univ-tlse2.archives-ouvertes.fr/hal-02283220>

Submitted on 30 Sep 2019

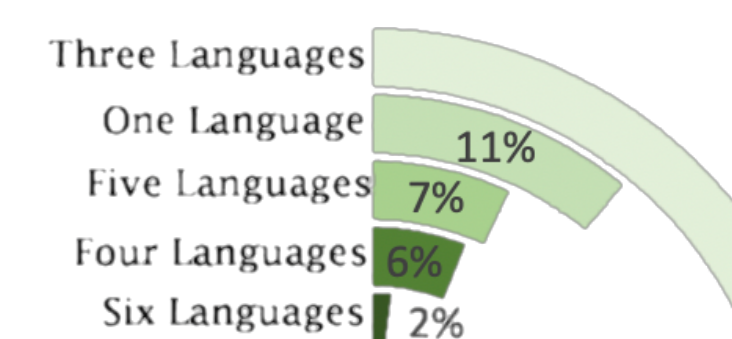
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Assessment of Bilingual Aphasia in Lebanon

- Lebanese Arabic (LA) is spoken in Lebanon along with other languages such as French (45%), English (40%), Kurdish (4.9%), Armenian (4.9%)...
- In addition to diglossic context, bilingual education is mandatory: 55.8% for French vs. 21.6% for English as a second language of Lebanese schools.
- Due to bilingualism, codeswitching (CS) is frequent and practiced in different settings (media, classrooms, etc.).
- No aphasia test exists for the Lebanese linguistic context: diagnosis of aphasia is limited to qualitative assessment. *This is why the short version of the Bilingual Aphasia Test was adapted to Lebanese Arabic (L-BAT).*
- The BAT is composed of 3 parts: A (linguistic background questionnaire, B (subtests for oral and written language) & C (translation skills).



Standardization Process: Method & Results

1. STIMULI SELECTION FOR THE L-BAT

Part A: 59 items. Add questions related to the use of standard Arabic and CS habits.

Part B: 21 subtests

- Auditory discrimination:** consonantic structure & pronunciation. E.g.: [fa] & [fel] refer to the word "scarf".
- Syntactic comprehension:** non-standard sentence (inexistent passive structure) → VSO sentence forms (e.g. عضت البسينة الكلب. = bit the.cat the.dog = the cat bit the dog).

2. STANDARDIZATION PROCEDURE 1

- 55 participants (43F)
- Mean age=40.27; Mean level of education= 15.45 years
- 80% of participants CS frequently

4. STANDARDIZATION PROCEDURE 2

- 28 participants (21F)
- Mean age=48.66; Mean level of education: 14.85 years
- 89% of participants CS frequently

3. RESULTS FROM 1ST STUDY

- L-BAT success rate= 92,54%.
- Score are correlated with age and education level.
- Despite this relatively high success rate, multiple items needed re-evaluation, especially in auditory discrimination, syntactic comprehension, series.
- Changes were made for L-BAT.
- Stimuli for a French BAT (F-BAT) and Part C LA-French were chosen.

5. RESULTS FROM 2ND STUDY

- Success rates:** L-BAT (92.98%) > F-BAT (92.07%)
- Effects** of age and education level for the L-BAT only
- Item analyses:** low success rate for some items in the F-BAT, e.g. "goulot" (bottleneck) leading to major changes in the F-BAT.

Testing the L-BAT with a Lebanese-French Bilingual Patient With Aphasia

The patient

- Female, Right handed,
- Age 71, 14 years of education (accountant),
- Stroke in the LH (at 68),
- 3 years post onset at time of study
- LA-French Bilingual:
 - Native speaker of LA, acquired at home,
 - Early French bilingualism, acquired at school (education only in French)
 - Written language skills: French > LA.

Language assessment & intervention

- Initial assessment of LA: Qualitative approach,
- Non Fluent aphasia with anomia & phonological processing deficits,
- Compensation strategies: CS & phonological repair strategies,
- Language therapy for 2 years,
- Improvement in language skills; verbal deficits only increased with fatigue and stress.

Results from assessment with the BAT

- BAT's language questionnaires provided a clear image of her linguistic background.
- F-BAT (196/228) scores > L-BAT (207/291) → better recovery of French compared to LA.
- Errors at specific subtests involving phonological processing in both languages.
- CS in both directions in spontaneous speech.

Summary & Discussion

- The BAT is adaptable to LA (high success rate of 92.98%) despite the dialectal variation.
- Age and education level effect only for LA suggest an heterogeneity in French proficiency among participants, regardless of their sociodemographic characteristics.

- The case study indicates effectiveness of the L-BAT in establishing aphasia diagnosis and stresses the necessity to describe CS behavior in Lebanese population.
- Normative data for language assessment in Arabic-speaking countries is needed to allow speech-language practice improvement.

Ongoing work with a collaborative group of linguists and speech-language pathologists aims at:

- Adapting the French and English versions of the BAT to the Lebanese context,
- Obtaining normative data for these versions.

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