

Preliminary study of lexical-semantic impairment screening in mild neurocognitive disorder

Presentation of the relevance of two tools, the SNT-AD and the mini-SKQ

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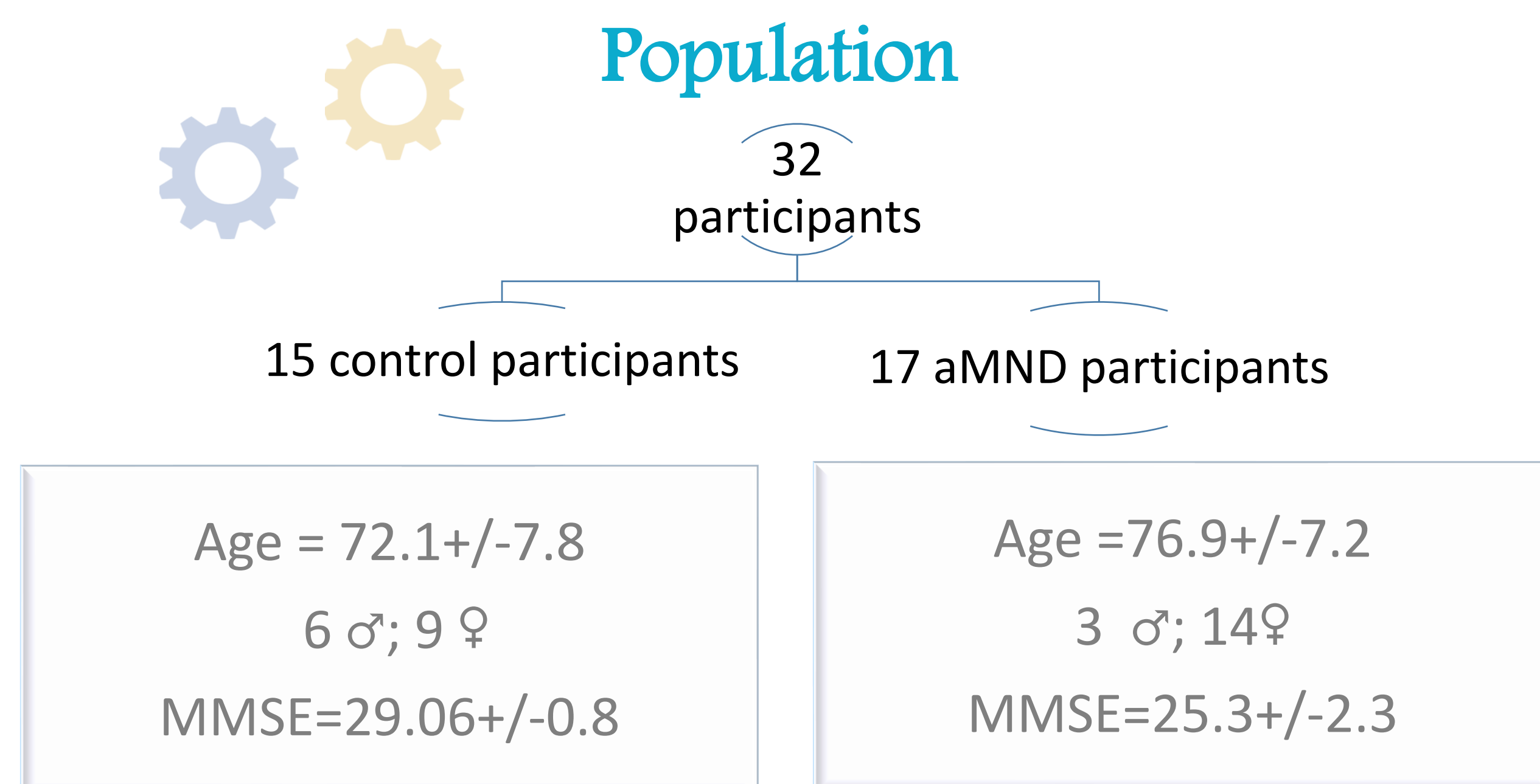
INTRODUCTION

Lexical-semantic impairment is one of the symptoms of **amnesic Mild Neurocognitive Disorder (aMND)** and appears to be a predictive criterion for a progression to an Alzheimer's disease (Gainotti et al., 2014). The purpose of this study is to present preliminary results obtained with a population presenting aMND assessed with two quick tools measuring:

- 1) Semantic memory disorders with the **mini-SKQ**¹ (Semantic Knowledge Questionnaire)
- 2) Picture naming disorders with the **SNT-AD**² (Short Naming Test adapted to AD)

METHODOLOGY

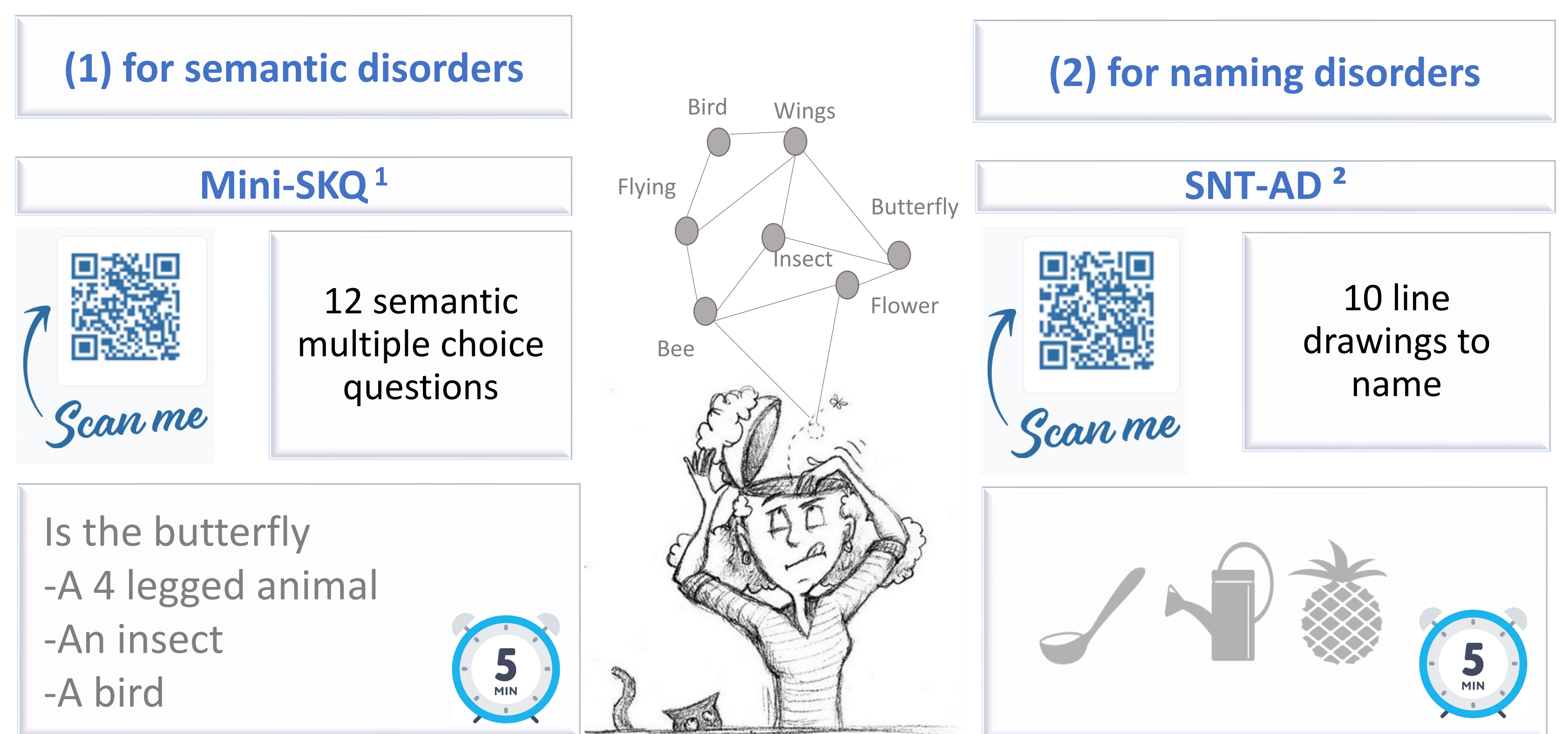
Population



The two groups are matched in age and socio-cultural level ($p > .05$)
aMND group: memory complaint + mild memory deficit + neurologist diagnosis
Exclusion criteria for all: sensory disorders, psychiatric or neurological history

Material

Two quick screening tools:



RESULTS

Descriptive data

Table 1. Descriptive data		N	Median	Mean	Standard-deviation	Min	Max
SNT-AD	Control group	15	9	8,87	0,92	7	10
	aMND group	17	7	7	2,47	0	10
MiniSKQ	Control group	15	12	11,27	1	9	12
	aMND group	17	11	10,18	2	5	12

Mann-Whitney tests were performed to compare the performance of the two groups. The aMND group showed significantly lower performance on the SNT-AD ($p = .012$) and marginally significant on the mini-SKQ ($p = .067$) (see Table 2 and Figure 1)

Group comparisons

Table 2. Statistical tests	SNT-AD	Mini-SKQ
Mann-Whitney U	63,00	81,50
Z	-2,515	-1,829
Significance	0,012	0,067

Correlations

The correlations (Spearman's Rho and Bravais-Pearson's r) between the MMSE and the SNT-AD, between the MMSE and the mini-SKQ, and between the SNT-AD and the mini-SKQ were all positive and significant ($p < \text{or} = .001$).

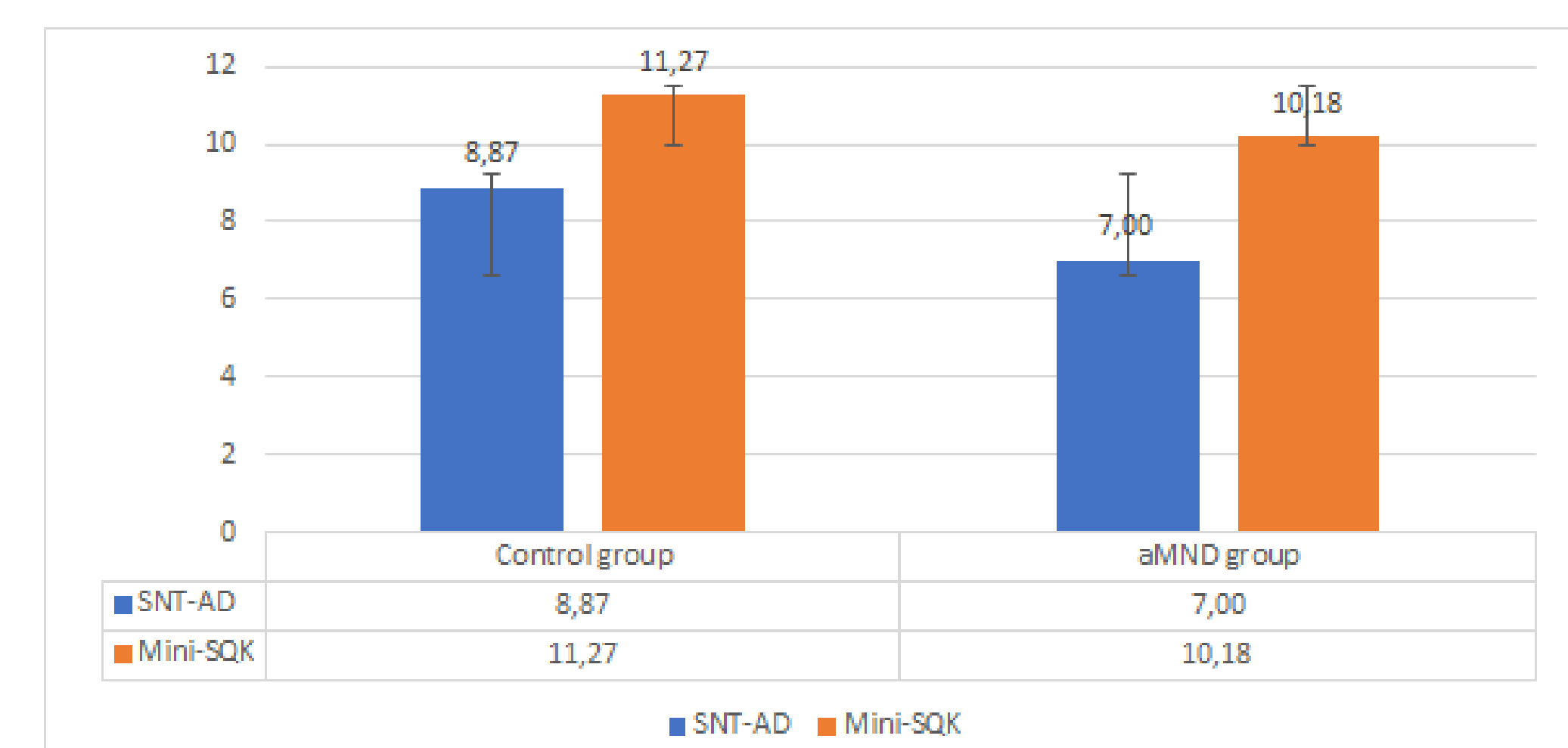


Figure 1: Comparison of groups in the SNT-AD and Mini-SKQ

DISCUSSION and CONCLUSIONS

The aim of this preliminary study was to evaluate the relevance of two quick screening tools for both semantic impairment (with **the mini-SKQ**) and denomination impairment (with **the SNT-AD**) in **amnesic mild neurocognitive disorder (aMND)**. The impairment of the naming aspects revealed by the SNT-AD seems to be a distinctive feature of the aMND group compared to the control group. Nevertheless, the modest size of our groups should be noted, which leads us to pursue our data collection to reinforce our observations. These first results are encouraging and lead us to further reflect upon the early and quick detection of lexical semantic disorders. In addition, a longitudinal follow-up of the patients could be a real added value in order to distinguish the markers of a future conversion towards an Alzheimer's disease.

References

1. SIMOES LOUREIRO, I., TAVERNE, M & LEFEBVRE, L (2018). Le mini-QCS : un nouvel outil de dépistage des troubles de la mémoire sémantique de la maladie d'Alzheimer, *Gériatrie et Psychologie Neuropsychiatrie Du Vieillissement*, 16 (4) : 429-38
2. SIMOES LOUREIRO, I., TAVERNE, M., MALOU, V., BASAGLIA-PAPPAS, S., BESIN, R., INVERNIZZI, S. & LEFEBVRE, L. (2021). Présentation du test court de dénomination adapté à la maladie d'Alzheimer (TCD-MA). *Revue de Neuropsychologie*. 2021;13(3):214-222. doi:10.1684/nrp.2021.0683