Electronic picture name agreement in 5290 Czech respondents

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Introduction:

Pictures are frequently used in many cognitive tests to capture memory and language deficits. The validity of pictures is dependent on the high name agreement. Pictures with the low name agreement are the source of incorrect and unclear answers. A number of naming variants cause it difficult to adapt pictures from different language. To avoid picture ambiguity we decided to prepare our own set of 70 pictures with specifically predefined attributes. In order to eliminate regional, gender, education and age factor we used an electronic form of testing in a large sample with thousands of respondents.

Aim:

The main aim was to verify recognition and name agreement of a set of 70 black and white line pictures on a large Czech population sample.

Methods:

The set of pictures was selected based on previous research, arrayed into electronic form (fig. 1) and distributed via the internet. The electronic form was filled in by 6055 participants across the whole country. The group for final evaluation comprised of 5290 respondents (age 53 ± 15 years, 77 % of women, years of completed education 15 ± 3 years) from all regions. The effect of age, education, gender, history of neurological brain diseases or psychiatric disorders, subjective cognitive status and word frequency on naming agreement was analyzed**.**

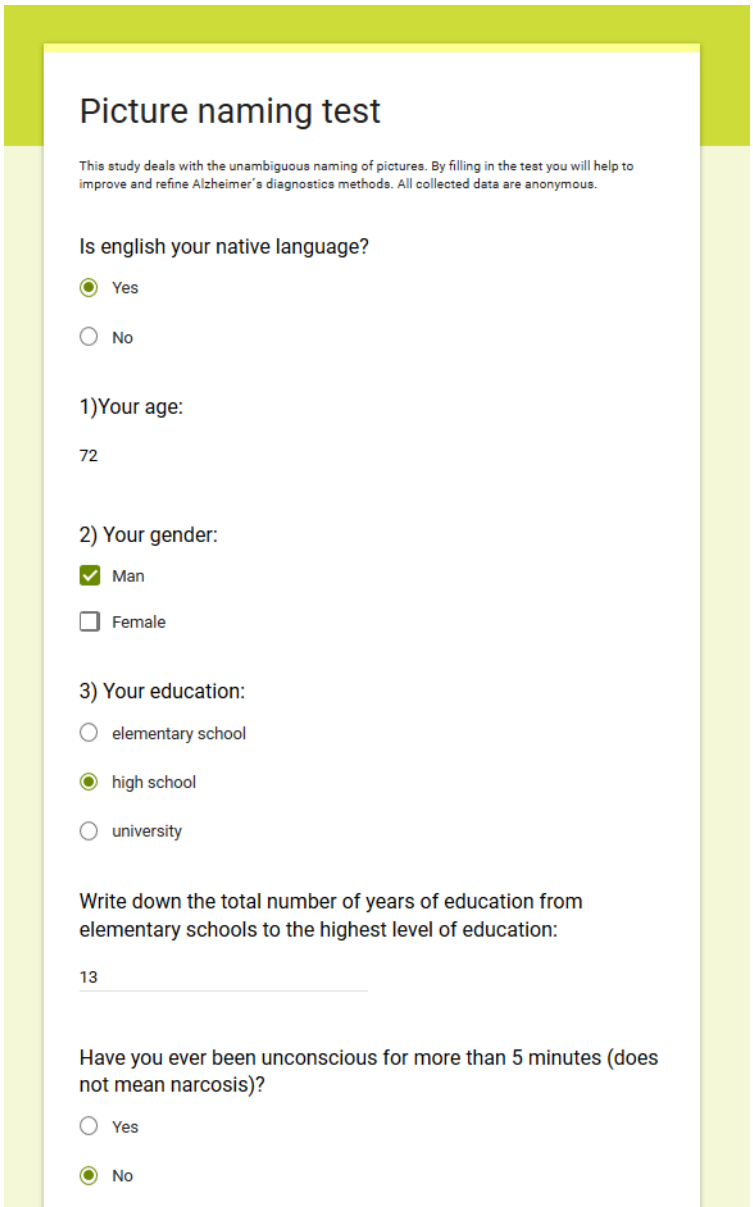
Results:

All the pictures had name agreement above 85 % and 66 of them had name agreement higher than 90 %. The name agreement was influenced mostly by existence of multiple names for certain pictures due to abbreviations or dialect. Name agreement was also influenced by gender, age and education, but this influence was mild and was only seen in some specific items. The correlation with word frequency was low, but significant.

Conclusion:

The prepared set of pictures has very good name agreement and can be used for diagnostic or therapeutical purposes**.** Pictures are valid for all regions of the Czech Republic without the naming differences.

Fig.1 English version of the online picture naming form



Picture naming test

This study deals with the unambiguous naming of pictures. By filling in the test you will help to improve and refine Alzheimer´s diagnostics methods. All collected data are anonymous.

Is english your native language?

- (•) Yes
- ( ) No

1)Your age:

72

2) Your gender:

- [x] Man
- [ ] Female

3) Your education:

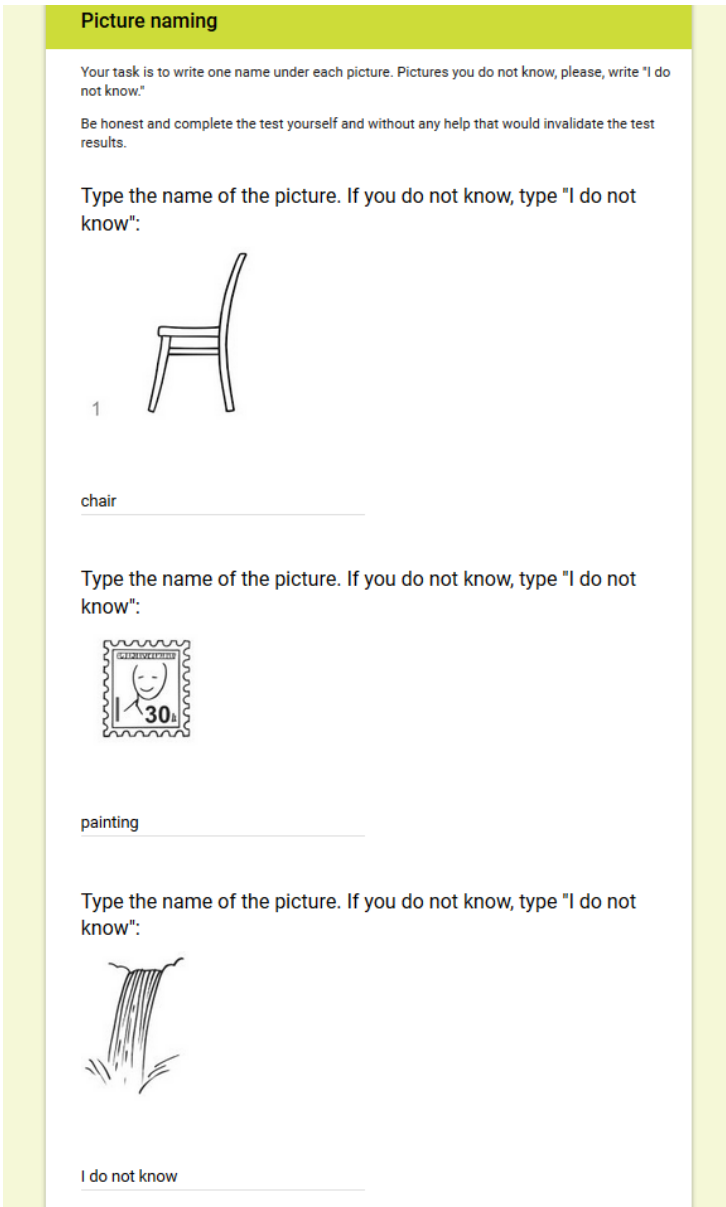
- ( ) elementary school
- (•) high school
- ( ) university

Write down the total number of years of education from elementary schools to the highest level of education:

13

Have you ever been unconscious for more than 5 minutes (does not mean narcosis)?

- ( ) Yes
- (•) No



Picture naming

Your task is to write one name under each picture. Pictures you do not know, please, write "I do not know."

Be honest and complete the test yourself and without any help that would invalidate the test results.

Type the name of the picture. If you do not know, type "I do not know":

1

chair

Type the name of the picture. If you do not know, type "I do not know":

painting

Type the name of the picture. If you do not know, type "I do not know":

I do not know

NAMES OF PICTURES
1 chair

2 painting (instead of stamp)
3 I do not know (instead of waterfall)

Scoring of the example performance:

- ***Correct: chair***
- ***Naming error: painting***
- ***Not named: waterfall***