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Handwriting Test for Preschool Children (HT-PRE): a new tool to assess the handwriting ability of preschool children aged 5–6 years old in Mainland China

PLOS One

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ABSTRACT

The Handwriting Test for Preschool Children (HT-PRE), which is a newly developed handwriting screening tool for preschool children aged 5–6 years old in Mainland China, has displayed a very good internal consistency, acceptable test-retest reproducibility, and good criterion-based validity, and has also shown good application prospects for handwriting difficulty screening in a clinical setting.

MATERIALS

A comfortable environment with adequate light and good ventilation was requested in order to ensure that the children were attentive to the tasks during the evaluation. While taking the test, children were separated by a sufficient physical distance to avoid copying. Moreover, the examiner confirmed that there were no language symbols in the classroom, such as alphabet posters. Tables and chairs of a suitable size were prepared. When the child was seated on the chair, their feet could be placed flat on the ground.

Tools included the test form, an HB pencil, stopwatch, and no eraser. To avoid any non-essential linguistic symbols, which may affect children's handwriting, no written instructions or requirements were specified in the test manual, and only non-verbal symbols (e.g., cartoon pictures) could be used to mark the page and number items.

Keywords: handwriting,
assessment, children,
preschool, simplified, Chinese,
reliability, validity

- 1 Before the test, parents completed the "Children's Basic Situation Questionnaire" so that necessary information about the participants could be gathered, including the child's age, gender, medical history, and trauma history.
- 2 The HT-PRE was then conducted one-on-one.
 - 2.1 Write the most familiar contents, including name, age, class, Arabic number (1-9) in sequence by memory.
 - 2.2 Write 10 two-digit numbers the numbers, which is randomly selected in the random number table by listening.
 - 2.3 24 alphabet letters (except O and I which are easily to be confused with the numbers), which are randomly arranged into two lines, are required to be copied sequentially.
 - 2.4 12 Chinese characters contained all the basic strokes and structures were selected from the 1st to the 4th volume of the primary school textbooks, and were requested to be copied in the same blank standard character grid.
- 3 "The Individual Record Form" was used to record all special behavior observed during testing.