11. Reliability and Validity of Numerical and Non-numerical Ordinality Processing, and its Relationship to Arithmetic Fluency
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A growing body of evidence has indicated a link between individual differences in processing numerical order (e.g., deciding whether numbers are arranged in an ascending/descending order or in a mixed-order) and arithmetic achievement. The reliability of this association as well as its validity in relation to non-numerical (i.e., letters) order processing is currently unknown. This study aimed to fill this gap by investigating differences and commonalities of numerical and non-numerical order processing as well as their relationship to arithmetic fluency.

We invited 36 adults twice (within a time period of 6-9 days) to our laboratory to perform three order tasks on a computer, consisting of Arabic-digits, dot-arrays and letters of the alphabet. Participants judged whether stimuli were arranged in an ascending/descending order (e.g., 2 3 4; B C D) or in a mixed-order (e.g., 3 6 4; C F D). Arithmetic fluency (addition, subtraction and multiplication) was measured with a paper pencil test.

Results of the study demonstrated reliable reaction time differences between all conditions. Furthermore, reliable associations between arithmetic test scores and reaction times of the Arabic-digit and letter condition were observed, however, not so for dot-arrays. A performed hierarchical regression analysis showed that judging the order of Arabic-digits explained a significant amount of unique variance in arithmetic fluency, over and above dot-arrays and letters.

12. Relations Between Teacher's Perception of Nature-Nurture Question, Neuromyths, and Metaphorical Conception of Teaching Students with Learning Disorders
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Misunderstanding about brain function and development also relates to teacher's opinions on issues such as learning disorders and so, in turn may influence outcome of students with these disorders" (Howard-Jones, 2014, p. 817). To more fully examine this issue we investigated mentioned relations using quantitative and qualitative study design. 98 primary school teacher in inclusive education participated in the study. A questionnaire consisting of three parts was designed. (1) series of items selected from a survey of neuroscience literacy adapted from Howard-Jones (2009) and focusing on statements on brain plasticity, e.g. "Learning problems associated with development differences in brain function cannot be remedied by education". (2) Walker and Plomin's survey about teacher's perception how education, genes, and home contribute to educational outcomes of students with LD. (3) In addition, metaphor analysis technique was applied for gaining deeper and more profound insight into teacher's beliefs, implicit theories and tacit knowledge regarding their teaching of students with LD, which may determine classroom practice. Participants were prompted to complete the sentence "Teaching students with learning disorders is like ..... because .....". Subsequent qualitative data analysis used the methodology of inductive thematic analysis. Obtained results have practical application in raising teachers' neuroscience literacy and improving their teaching of students with LD.