

Natural language quantifiers are exclusively linked to exact number skills

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Abstract: Knowledge of natural language quantifiers (like all, some, many) correlates with number acquisition (i.e., counting abilities). At the same time, number acquisition and approximate number skills are closely linked. These findings raise the question whether quantifier comprehension is exclusively related to exact number skills like counting or whether the relationship also extends to approximate number skills. To find out, we tested 3- to 6-year-old German speaking children on a quantifier comprehension task and on two counting tasks ('how-many task', 'give-a-number task'). Additionally, we assessed children's approximate number skills (ANS acuity) in a non-symbolic number comparison task. Quantifier comprehension was found to correlate with exact number skills even when age was controlled for. However, no significant correlation between quantifier comprehension and ANS acuity was obtained. Our findings support the notion of two distinct number systems: Only exact number skills appear to benefit from quantifier comprehension, whereas approximate number skills do not.