

The Mental Number Line for Bar Graph Comprehension

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Summary:

Bar graphs are ubiquitous feature of modern life. Nevertheless, the field lacks a comprehensive understanding of the cognitive processes and representations that people recruit during bar graph comprehension. The proposed research applied theories and experimental paradigms from numerical cognition to investigate whether people recruit magnitude representations to understand the numerical values depicted in bar graphs. We evaluated theory-driven predictions concerning the relative efficacy of vertical vs. horizontal bars and provide evidence that people recruit their mental number lines during bar graph comprehension.