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Title: Cognitive training and plasticity: Theoretical perspective and

methodological consequences.

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**Abstract:** Purpose. To provide an overview of cognitive plasticity concepts and findings from a lifespan developmental perspective. Methods. After an evaluation of the general concept of cognitive plasticity, the most important approaches to study behavioral and brain plasticity are reviewed. This includes intervention studies, experimental approaches, cognitive trainings, the study of facilitating factors for strategy learning and strategy use, practice, and person-environment interactions. Transfer and durability of training-induced plasticity is discussed. Results. The review indicates that methodological and conceptual advances are needed to improve the match between levels of behavioral and brain plasticity targeted in current developmental research and study designs. Conclusions. The results suggest that the emphasis of plasticity studies on treatment effectiveness needs to be complemented by a strong commitment to the grounding of the intervention in a conceptual framework.

[ABSTRACT FROM AUTHOR]

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