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Abstract

This study aimed to systematically review evidence of the association between learning disorders, motor function, and primitive reflexes in preschool children. Seven databases were systematically searched (EMBASE, CINAHL, Academic Search Complete, Medline, PsycINFO, ScienceDirect, and Cochrane) with no restrictions. Inclusion criteria were full text peer-reviewed articles reporting new empirical data, assessing any two of three phenomena in preschool children: learning disorders, motor function, or primitive reflexes. Intervention studies or studies examining congenital, chromosomal or acquired neurological, or pathological conditions and prematurity were excluded. Included papers ($n = 27$) were assessed for methodological quality by the Hoy et al. Risk of bias tool. Learning and motor function were assessed in all except two articles and

motor deficits found to be associated with speech/language and executive function as well as several areas of academic performance. Three studies included primitive reflexes, with high levels of the asymmetrical tonic neck reflex positively correlated with fine motor skills, “school readiness” and “impulsivity, hyperactivity and inattention.” Caution must be used when interpreting the review results due to significant study heterogeneity. Further research is needed to further understand common underlying mechanisms that may inform earlier diagnostic methods for these three phenomena. PROSPERO: CRD42021265793

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