

The AHEMD-IS as a tool for predicting developmental outcomes: A review



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**BACKGROUND/METHODS**

- The Affordances in the Home Environment for Motor Development Infant Scale (AHEMD-IS) is a questionnaire for evaluating opportunities for motor development (**movement and play**) that the family/home makes available for infants 3-18 months.
- Parents answer questions about **physical space, variety of stimulation, and play materials.**



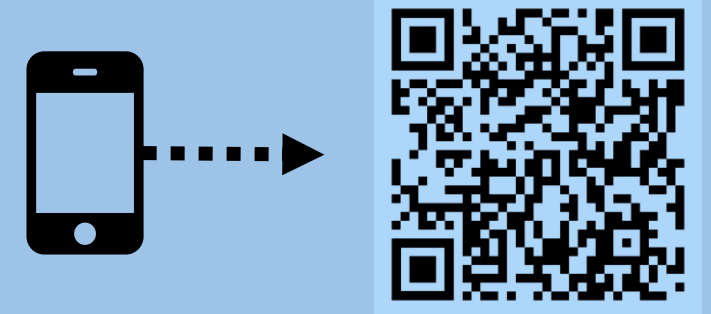
Trains, cars, animals, or other toys that can be pulled and pushed. How many of these toys do you use to play with your infant at home?

- More motor opportunities may lead to more advanced skills with or across domains- a concept called **developmental cascades.**
- We tested this cascades hypothesis by reviewing research that utilized the AHEMD-IS as a predictor of developmental outcomes.
- Papers citing the AHEMD-IS were identified and screened using **PRISMA** guidelines. Final inclusion criteria was the AHEMD-IS must have been tested as a predictor of outcomes in *at least one domain: motor, language, cognition, social.*

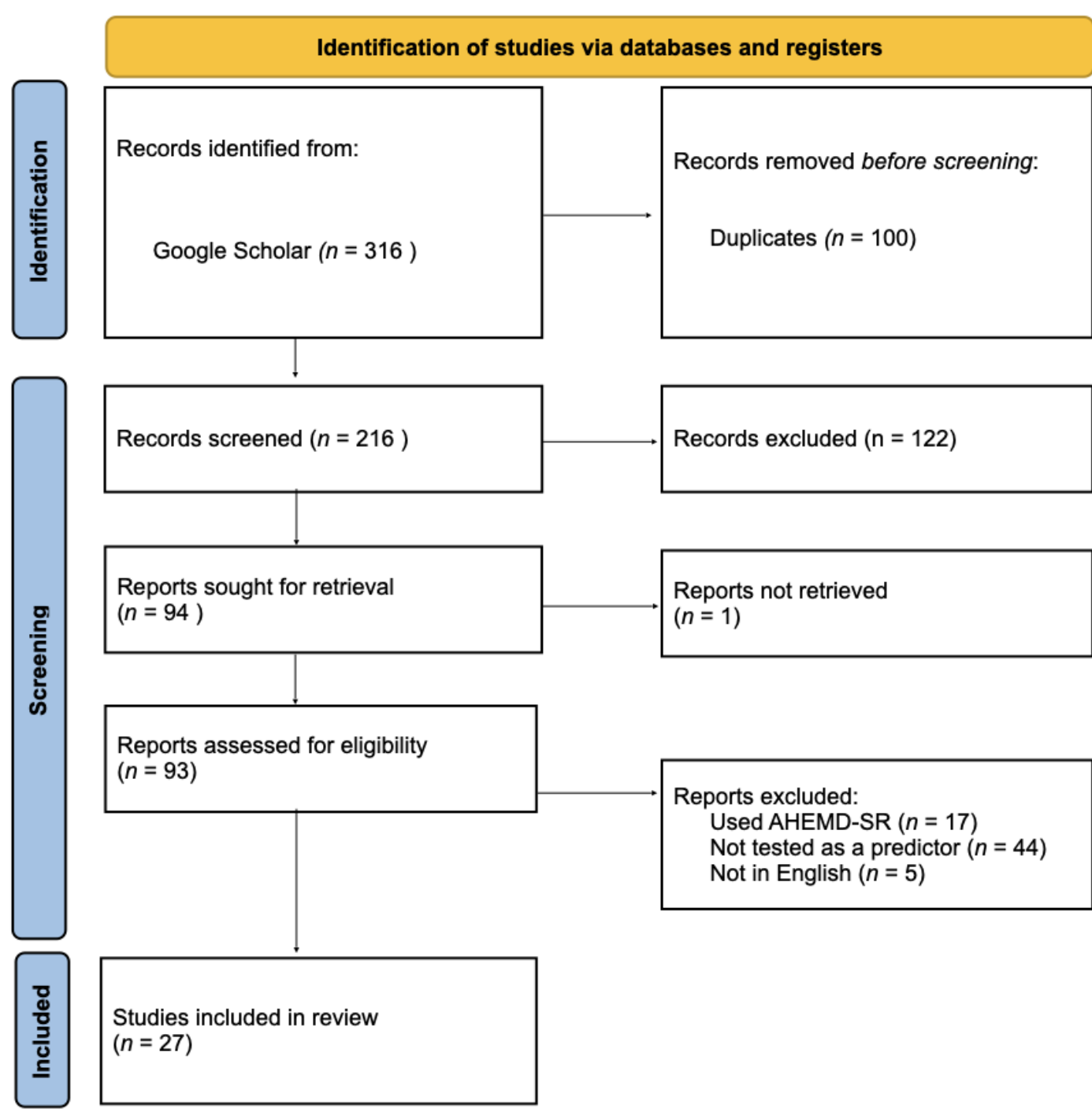
# Motor opportunities predict infants' motor skills

Source	N	Age (mo.)	Developmental Outcome Domains			
			Motor	Language	Cognition	Social
Saccani et al. (2013)	561	0-18	+	NR	NR	NR
Naçcimento et al. (2014)	86	3-18	+	NR	NR	NR
Pereira et al. (2016)	49	3-18	None	None	+	None
Pereira et al. (2016)	49	3-16	+	None	+	None
Aruajo et al. (2017)	77	8-10	+	+	+	None
Dornelas et al. (2017)	19	0-12	+	NR	NR	NR
Cunha et al. (2018)	14	6-9	+	NR	NR	NR
Kynchala et al. (2018)	16	3-18	+	NR	NR	NR
Aruajo et al. (2020)	259	8-10	+	+	+	None
Murthy et al. (2020)	200	6-30	+	NR	+	NR
Righetto et al. (2020)	1	3	+	NR	NR	NR
Valentini et al. (2020)	176	3-14	+	NR	NR	NR
Cao et al. (2021)	1850	3-11	+	None	+	+
Defilipo et al. (2021)	37	3, 6, 9, 12	+	NR	NR	NR
Kavousipor, et al. (2021)	370	3-18	+	NR	NR	NR
Lovison et al. (2021)	104	6-15	+	NR	NR	NR
Midon et al. (2021)	29	3-16	+	NR	NR	NR
Miquelote et al. (2021)	32	3-18	+	None	None	NR
Pereira et al. (2021)	74	6-18	+	NR	NR	NR
Silva et al. (2021)	15	3-18	None	None	None	None
Lima et al. (2022)	74	6-18	+	NR	NR	NR
Kaur et al. (2022)	460	3-18	None	+	+	+
Rodrigues (2022)	26	3-18	+	NR	NR	NR
Santos et al. (2022)	12	9-12	+	None	+	NR
Babik et al. (2023)	112	7-16	+	+	+	+
Fransisco et al. (2023)	48	3-12	+	NR	NR	NR
Novakoski et al. (2023)	64	6-18	+	NR	NR	NR

Positive link denoted by +  
Negative link denoted by -  
None = No significant link found  
NR = Not Reported



**PRISMA FLOW CHART**



**RESULTS**

- AHEMD-IS predicted **motor** outcomes in **24 of 27** studies.
- AHEMD-IS scores also predicted **language, cognition, and social** outcomes, although most papers did not report on these developmental domains, and some found no links.

**CONCLUSION**

- Opportunities in the home for motor development largely **predict** infant motor outcomes.
- More research is needed to examine whether motor affordances in the home also predict cascading abilities in non-motor domains.

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