Preschoolers with Externalizing Behavior Problems Have Delays in Fine Motor Skills



PRESENTER: Atefeh Karimi

@AtefehKarimi12

BACKGROUND:

- Fine motor skills are an indicator of kindergarten readiness and predict later academic achievement.
- Externalizing behavior problems (EBPs) also impact the kindergarten transition and school performance.
- Research Question: Do delays in fine motor skills contribute to poor school readiness and later academic deficits in children with EBP?
- We mapped the prevalence of fine motor deficits in manipulation and writing in preschoolers with EBP.

SAMPLE:

- 137 preschoolers were referred to a summer treatment program for clinically significant behavior concerns (i.e., EBPs) between 2016 and 2019.
- 80% of families were living below the poverty line.
- The sample was 71% male and 91% Black.

FINE MOTOR SKILLS ASSESSMENT:

- Fine motor skills were assessed at program entry using two subscales from the Learning Accomplishment Profile – Diagnostic 3e (LAP-D).
- Fine Motor: Manipulation (FM) has 28 items that capture the level of children's manual dexterity through the manipulation of different objects.
- Fine Motor: Writing (FW) has 31 items that capture children's writing ability through the completion of writing and drawing tasks.
- Children were tested individually by trained observers. Test order was random.

Supported by a grant from the Children's Trust to KCH and a FIU University Graduate School Presidential Fellowship to AK.

One-third of preschoolers with EBPs have

significant deficits in manipulation and writing.



LAP-D Fine Motor: Manipulation (FM) T-Score





INTERPRETATION:

- Children with t-scores 1.5 SD below the mean were classified as having a significant deficit.
- Children with t-scores 1 SD below the mean were classified as having a borderline deficit.

RESULTS:

Missing Data

• 122 had data for FM and 118 had data for FW.

LAP-D Raw Scores

Subscale	Range	м	SD
LAP-D FM	11-28	22.16	3.22
LAP-D FW	2-31	20.13	6.20

M = mean. SD = Standard Deviation.

Distribution of t-scores into significant deficit, borderline deficit, and average or above average performance.

Subscale	Significant	Borderline	Average or
	Deficit	Deficit	Above Average
			Performance
LAP-D FM	40 (34%)	32 (26%)	50 (40%)
LAP-D FW	36 (31%)	25 (21%)	57 (48%)

Significant Deficit = 27-35. Borderline Deficit = 36-40. Average or Above Average Performance = > 40.



FM and FW were significantly correlated, r=0.63, p<.05.

A. Karimi¹, K. Contino¹, B. Poznanski², H. Flores¹, K.C. Hart¹ and E.L. Nelson¹

¹Florida International University ²Children's Hospital of Philadelphia