

Social-emotional learning and academic achievement in middle school: Implications for early programming

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Introduction

Studies of how early education programs influence children's social-emotional, behavioral, and academic development over time promote a better understanding of how to allocate resources and design programming in early childhood.

Pre-adolescence is a key period for evaluating the effectiveness of such programs because of its importance for social-emotional and academic development (Albert et al., 2013).

Evidence from an RCT of INSIGHTS indicated short-term positive impacts on math and reading achievement (O'Connor et al., 2014).

Following up with the original INSIGHTS sample, we investigate the intervention's long-term impact on academic achievement.

Research Questions

- 1) What is the impact of INSIGHTS on middle school academic achievement?
- 2) Does the impact of INSIGHTS vary by levels of baseline risk?

Sample

Longitudinal data from the INSIGHTS efficacy trial for children in 22 low-resource elementary schools (N = 435; mean age 5 years, 6 months; SD = 8 months).

N = 194 (45%) remained in the sample through middle school (mean age = 12 years, 8 months; SD = 10 months).

Analytic sample (n = 114) includes:

- 87% free and reduced price lunch eligible
- 77% Black, non-Hispanic
- 20% Hispanic
- 2% White
- 1% Biracial
- 3% Dual Language Learners
- 56% in INSIGHTS condition
- 44% in Read Aloud control condition

Methods

Intervention: INSIGHTS is a school-based preventive social-emotional learning intervention designed to help teachers and parents recognize a child's temperament and respond with warmth and appropriate discipline strategies. Three components:

- Child: 10 facilitator-led classroom sessions per year in kindergarten and first grade.
- Teacher: 10 teacher training sessions on the *INSIGHTS* curriculum.
- Parent: 10 session parent program.

Measures:

Academic Achievement: Children completed *Woodcock-Johnson III* (Letter-Word Identification and Applied Problems) in kindergarten (baseline) and in middle school.

Baseline behavior: Kindergarten teachers completed *Sutter-Eyberg Student Behavior Inventory* (SESBI). SESBI: Intensity (36 items), alpha = 0.98.

Additional covariates: Child race/ethnicity, gender, free/reduced price lunch eligibility, dual language learner status, pre-k attendance, and special education enrollment in kindergarten.

Analysis: Multiple regressions with interaction terms to examine variation in treatment effects on academic achievement by baseline behavior or academic achievement.

Results

Research Question 1: Impact of INSIGHTS on Academic Achievement

Results from multiple regression analyses did not reveal any statistically significant main effects of INSIGHTS on middle school Letter Word Identification (as shown in Table 1) or Applied Problems.

	B	SE	t	95% CI
Treatment (A)	-3.47	2.07	-1.68	-7.57 .62
Baseline LWID (B)	4.94	2.17	2.27	.63 9.25
A*B	6.33*	2.78	2.28	.81 11.85
Child female	-1.25	1.43	-0.87	-4.09 1.59
Child Black	.99	2.36	.42	-3.68 5.68
Child Hispanic	-2.29	2.56	-0.90	-7.37 2.78
Dual language learner	-2.06	4.34	-0.47	-10.68 6.56
Attended pre-k	-0.28	1.68	-0.17	-3.61 3.06
Special education kindergarten	-0.67	7.52	0.09	-14.24 15.58
FRPL	-4.37*	1.92	-2.28	-8.17 -0.57
Constant	56.29*	11.16	5.04	34.16 78.43

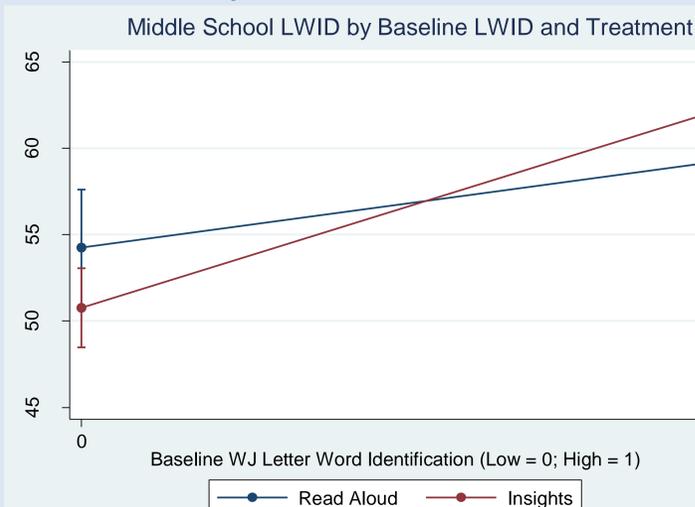
Note. N = 114; * p < .05

Research Question 2: Moderation by Baseline Risk

Results indicate a statistically significant interaction between baseline WJ-III Letter-Word and treatment was found, predicting middle-school letter and word identification abilities, $t(113) = 2.28$ SE = 2.78, $p = 0.03$. This interaction suggests that children with higher baseline reading ability benefited more from the treatment.

Baseline behavior problems was not predictive of later academic achievement.

No other significant interactions were found.



Discussion

Implications

Participating in an intervention may enhance the early academic achievement of students who begin school at a higher level.

Despite positive short-term impacts of INSIGHTS as well as other SEL programs (see Durlak et al. 2011 for a review), findings from the current study highlight the importance of conducting follow-up studies through pre-adolescence.

Investment in social-emotional interventions in early childhood may be more effective when extended with periodic booster sessions beyond the implementation period.

Limitations & Future Directions

Attrition was high though comparable to that of similar longitudinal studies.

Multiple Imputation necessary to address missing follow-up data in future analyses.

Additional research is necessary to examine potential long-term impacts of INSIGHTS across other domains (e.g. social-emotional skills and behavior).

References

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