Florida HIPPY Parents Successfully Prepare Their Children for School

HIPPYUSA®
Home Instruction for Parents of Preschool Youngsters
FLORIDA

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Acknowledgements

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Mission

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HIPPY partners with parents to prepare their children for success in school.

#HIPPYworks

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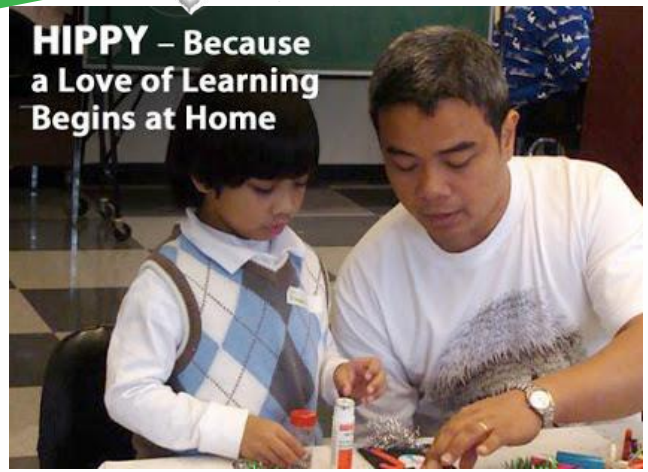

Background

A meta-analysis (Goldstein, 2017) using international research from the last five decades estimates effects of the HIPPY program on children's:

- language (*d*=.64)
- behavior (*d* =.62)
- cognitive growth (*d* =.52)
- math skills (*d* =.50)
- Positive effects found up to five years later on children's 3rd grade reading and math standardized tests

Five Decades of HIPPY Research: A Preliminary Global Meta-Analysis and Review of Significant Outcomes

Final Report

Keith Goldstein

March 1, 2017

Background

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- Brown and Lee (2017) found evidence that children enrolled in Head Start and HIPPY were better prepared for school than children who only participated in Head Start alone.
- Nievar, Brown, Nathans, Chen, & Martinez-Cantu (2018) found long-term effects of HIPPY on academic achievement through the fifth grade
- Nathans, Nievar, & Tucker (2019) found significant associations between HIPPY home visiting and mothers' reports of parenting self-efficacy, parent-child closeness, and parent engagement.

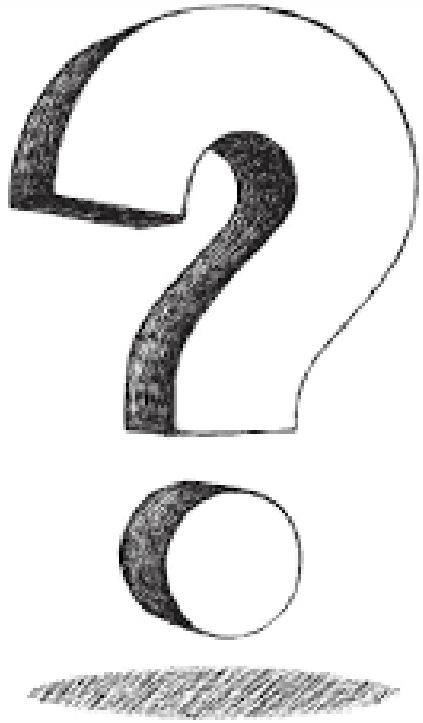
Statement of Purpose

Given the lack of published empirical data on the implementation and impact of HIPPY programs in Florida, this study examines the effects of HIPPY for a different and more diverse population of participants than those included in previously conducted research.

Research Questions

1. Does participating in a Florida HIPPY program increase the likelihood of children from low-income households passing the Florida Kindergarten Readiness Screener?

2. Does participating in a Florida HIPPY program increase the likelihood of children from low-income households being promoted to the first grade?



Methods: Data Sources

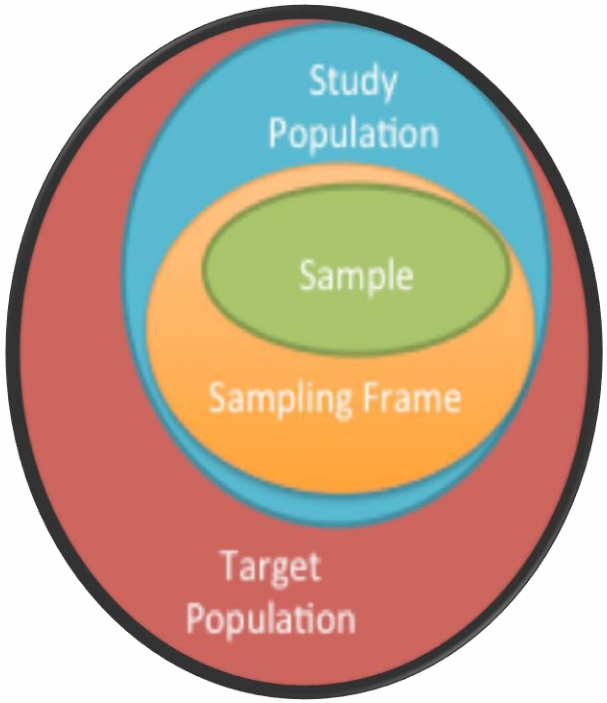
Parents/guardians consent or dissent to participate in the Florida HIPPY Longitudinal Study, approved by the USF IRB and Florida Office of Early Learning.

An administrative dataset is provided by the Florida Department of Education to authorized representatives at USF. This dataset contains HIPPY participants by name per the consent given by the parent/guardian and thousands of de-identified children from which the comparison group can be drawn.

Methods: Study Design

Quasi-experimental design to compare the outcomes of children who had formally participated in HIPPY to a matched sample of children who had not participated in HIPPY (i.e., the comparison group).

Because students were not randomly assigned to the groups, the propensity score method was used to control for initial differences across multiple background characteristics and baseline variables.



Methods: Participants

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Table 1
Description of sample ($N = 730$).

	HIPPY ($N = 379$)	Comparison group ($N = 351$)	Full sample ($N = 730$)
Age at kindergarten entry	5.45($SD = 0.35$)	5.48 ($SD = 0.33$)	5.47 ($SD = 0.33$)
Gender (male)	187 (49%)	171 (49%)	358 (49%)
Race and ethnicity			
Other[a]	14 (3%)	6 (2%)	20 (3%)
White	44 (12%)	42 (12%)	86 (12%)
African American	146 (39%)	143 (41%)	289 (39%)
Hispanic	160 (42%)	153 (43%)	313 (43%)
Asian	15 (4%)	7 (2%)	22 (3%)
Eligibility for reduced or free lunch	379 (100%)	351 (100%)	730 (100%)
Academic year 2013	379 (96.6%)	339 (96.3%)	64 (96.4%)

Methods: Outcomes & Predictors

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Outcome Measures

- Florida Assessment for Instruction in Reading - Kindergarten (FAIR-K)
- Early Childhood Observation System (ECHOS)
- Kindergarten Readiness
- Promotion to the First Grade
- Attendance

Predictor Variables

- Group
- A variable that identified the group was the independent variable of interest.
- Covariates
- Age at the beginning of the academic year
- Gender
- Race and ethnicity

Methods: Analytic Approach

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- **Chi-square tests of significant differences** between proportions of children in each condition who (1) passed the ECHOS, (2) met the conditions for kindergarten readiness, and (3) were promoted to first grade.
- **Analysis of variance (ANOVA) tests of significant differences** between mean scores of children in each condition on the FAIR-K.
- **Multivariate logistic regressions were used to calculate odds ratio** to estimate the likelihood of being promoted to first grade and being kindergarten ready for each predictor.

Results

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- **FAIR-K**: Passing = 67% or above. Children who participated in HIPPY scored significantly higher than the comparison group; HIPPY explained almost 7% of the variation in children's likelihood of reading success.
- **ECHOS**: Children who participated in HIPPY were twice more likely than the comparison group to pass the Early Childhood Observation System (OR = 2.03, $p < .05$).
- **K-READY**: Passing both the FAIR-K and ECHOS = K-Ready. Children who participated in HIPPY were between 1.5 and 2 times greater than for the comparison group (OR = 1.67, $p < .05$).
- **FIRST GRADE**: The odds of being promoted were five times greater for children who participated in the HIPPY program (OR = 5.0, $p < 0.5$).

Group Differences on FAIR-K

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Table 2
Summary of multiple regression analysis for FAIR-K probability of reading success ($N = 689$).

Variable	*B*	*SE B*	*β*
Group	7.86*	1.91	0.15
Child age	1.45	2.91	0.02
Child gender	−4.22*	1.91	−0.08
Child race[a]			
White	9.19	6.34	0.12
African American	1.22	5.92	0.02
Hispanic	−5.86	5.90	−0.11
Asian	4.16	7.98	0.03

Note.

[a] The reference group for race is other race and ethnicity.

* $p < .05$.

$R^2 = .069$.

Group Differences on ECHOS

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Table 3
Summary of multivariate logistic regression analysis for ECHOS ($N = 647$).

	B	Wald $\chi^2(1)$	OR	95% CI
Age	−0.61	2.20	0.54	[0.24, 1.22]
Gender	−0.82	8.28*	0.44	[0.25, 0.77]
African American**	−1.07	4.49*	0.34	[0.13, 0.93]
Hispanic	−1.12	5.01*	0.33	[0.12, 0.87]
Group	0.71	6.43*	2.03	[1.17, 3.51]

Note. OR = odds ratio; CI = confidence interval.

* $p < .05$.

** The reference group for race is White, Asian, and other race and ethnicity.

Group Differences on K-Readiness

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Table 4
Summary of multivariate logistic regression model for kindergarten readiness based on both ECHOS and FAIR-K ($N = 730$).

	B	Wald $\chi^2(1)$	OR	95% CI
Age	−0.03	0.02	0.97	[0.61, 1.55]
Gender	−0.41	6.82*	0.67	[0.49, 0.90]
African American**	−0.89	12.87*	0.41	[0.25, 0.67]
Hispanic	−1.39	32.09*	0.25	[0.16, 0.40]
Group	0.51	10.86*	1.67	[1.23, 2.27]

Note. OR = odds ratio; CI = confidence interval.
* $p < .05$.

Group Differences on Promotion & Attendance

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Table 5
Summary of multivariate logistic regression model for first grade promotion status ($N = 710$).

	B	Wald $\chi^2(1)$	OR	95% CI
Age	−0.79	4.36*	0.46	[0.22, 0.95]
Gender	−0.42	2.57	0.66	[0.40, 1.10]
African American**	0.44	1.74	1.55	[0.81, 2.98]
Hispanic	0.73	4.51*	2.07	[1.06, 4.05]
Group	1.61	28.11*	5.00	[2.76, 9.08]

Note. OR = odds ratio; CI = confidence interval.

* $p < .05$.

Limitations

LIMITATIONS	FUTURE STUDIES
Parent characteristics were not included	Look at relationship between parent change and child outcomes
Participants self-select into study	True RCT would assign volunteers to conditions
Informed consent protocol leads to possible group contamination	
Additional early childhood experiences were not included	
Exposure was not included (dosage and quality of implementation)	
Poverty variable: FRL too broad	

Summary

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- Prior research has shown positive effects by participation in HIPPY, but none included effects by the Florida HIPPY program.
- The current study shows significant differences between children from low-income families whose parents enrolled in HIPPY as compared to a matched sample.
- Children who participated in the HIPPY program prior to kindergarten were found to be more likely to pass the school readiness assessments and to be promoted to the first grade.
- For children living in low-income households, not only is the HIPPY model an effective strategy for preparing children for school, but the model also demonstrates that effects are replicable and scalable.

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