

The Community Guide - Health Equity, Early Childhood Development

Summary Evidence Tables

Studies measuring the effect of early childhood development programs on cognitive, social, preventive health services, and family outcomes.

Author(s), Date	Design suitability, Quality	Intervention	Measure used (Sample size)	Measurement time (in years from intervention)	Effect size
Cognitive as measured by academic achievement tests					
Lazar et al., 1982 ¹	Greatest, Good	Various early childhood programs that were center-based, home-based, or combined but all served "at-risk" children	Math & reading achievement tests (range: 185–351, math; 249–447, reading)	Math: 3rd–6th grade; Reading: 3rd–6th grade	Math: .35; .22; .22; .02; Reading: .28; .12; .18; .04
Schweinhart et al., 1993 ²	Greatest, Good	Perry Preschool	California achievement tests (123)	2, 3, 4, 5, 6, 9 years	.33, .34, .37, .33, .14, .68
Ramey et al., 1991 ³	Greatest, Good	Carolina Abecedarian Project (earliest version, through age 8, of Campbell & Ramey 1994 ⁴ & 1995 ⁵)	WJ-R; CAT (96)	1–2 yr	WJ-R: .89, reading; .45, math; CAT: .74, reading; .81, math
Campbell et al. 1994 ⁴	Greatest, Good	Carolina Abecedarian Project (Study has 4 groups: EE, EC, CE, CC) data reported here are for preschool vs. no preschool only (age 12 follow-up)	WJ-R (96)	6–7 yr	.48 reading; .35 math; .41 writing; .61 knowledge
Campbell et al., 1995 ⁵	Greatest, Good	Carolina Abecedarian Project (same intervention as Campbell & Ramey, 1994 ⁴) (age 15 follow-up)	WJ-R (96)	10 yr	.44 reading; .44 math
Schweinhart et al., 1986 ⁶	Greatest, Good	High/Scope Preschool	CAT (54)	2 yr	.14
Eisenberg et al., 1966 ⁷	Greatest, Fair	Head Start	PPVT (781)	1 yr	.52
Howard et al., 1967 ⁸	Greatest, Fair	Head Start	PPVT (66)	1 yr	.48 (no preschool)
Lee et al., 1988 ⁹	Moderate, Good	Head Start	PPVT (969)	1 yr	.26 (no preschool); .40 (other preschool)
Lee et al., 1990 ¹⁰	Moderate, Good	Head Start (follow-up of 1988 study)	Cooperative primary test (969)	2 yr	Insufficient data to compute effect

Author(s), Date	Design suitability, Quality	Intervention	Measure used (Sample size)	Measurement time (in years from intervention)	Effect size
Copple et al., 1987 ¹¹	Moderate, Fair	Philadelphia Head Start	WRAT; CAT; Metropolitan Achievement test (10,125)	Various, from 1–5 yr	Insufficient data to compute effect size, no significant effects reported
Barnett et al., 1987 ¹²	Moderate, Fair	S. Carolina implementation of High/Scope preschool curriculum	BSAP (389)	1 yr	Insufficient data to compute effect size, positive effects for black students and boys reported
Bee, 1981 ¹³	Moderate, Fair	Head Start	Metropolitan Reading Test (120)	1 yr	–.61 (favored control group)
Hebbeler, 1985 ¹⁴	Moderate, Limited	Head Start	ITBS or CAT (1393)	Various, from 3–9 yr	Insufficient data to compute effect size, positive effects reported

Appendix continued

Cognitive as measured by IQ

Lazar et al., 1982 ¹	Greatest, Good	Various ECD programs	WISC	After 1 yr; after 3–4 yr	.43; .14
Ramey et al., 1991 ³	Greatest, Good	Carolina Abecedarian Project (age 8 follow-up)	WPPSI; WISC-R (96)	From 1–3 yr	.5 WPPSI; .46 WISC at age 6.5; .2 WISC-R
Campbell et al., 1994 ⁴	Greatest, Good	Carolina Abecedarian Project (age 12 follow-up)	WISC-R (96)	6–7 yr	.44
Campbell et al., 1995 ⁵	Greatest, Good	Carolina Abecedarian Project (age 15 follow-up)	WISC-R, age 15 (96)	10 yr	.35
Zigler et al., 1982 ¹⁵	Greatest, Good	Head Start	Stanford-Binet (84)	1 yr	.54
Schweinhart et al., 1986 ⁶	Greatest, Good	High/Scope preschool	Stanford-Binet from K–2nd grade; WISC at age 10 (54)	From 1–3 yr	2.2 (1 yr of preschool); 1.4 (2 yr of preschool); .9 (K); .8 1st grade; .36 2nd grade
Howard et al., 1967 ⁸	Greatest, Fair	Head Start	Stanford-Binet; PTI (66)	1 yr	.34 S-B; .43 PTI
Lee et al., 1990 ¹⁰	Moderate, Good	Head Start	Raven's Progressive Matrices (969)	1 yr	–.05 compared with no preschool
Sontag et al., 1969 ¹⁶	Moderate, Fair	6 mo of Head Start	Stanford-Binet (86)	1 yr	.32

Cognitive as measured by school readiness tests

Lee et al., 1990 ¹⁰	Moderate, Good	Head Start	California Preschool competency test (969)	1 yr	.34
Barnett et al., 1987 ¹²	Moderate, Fair	South Carolina preschool	CSAB (389)	1 yr	+6%

Author(s), Date	Design suitability, Quality	Intervention	Measure used (Sample size)	Measurement time (in years from intervention)	Effect size
Bryant et al., 1998 ¹⁷	Moderate, Fair	Smart Start	Kindergarten Teacher Checklist (311)	1 yr	.34 (Smart Start vs no preschool for children in poverty)
Sontag et al., 1969 ¹⁶	Moderate, Fair	Head Start	CPSI (86)	1 yr	.62
Handler, 1972 ¹⁸	Moderate, Limited	Head Start	CPSI (125)	1 yr	Subtest A: .16; Subtest B: -.14; Subtest C: .02; Subtest D: .14

Cognitive as measured by rate of retention in grade

Appendix continued

Lazar et al., 1982 ¹	Greatest, good	Various early childhood programs. Some center-based, others home-based, or combined; all served "at-risk" children	Retention rates (682)	Up to 5 yr	-5%
Schweinhart et al., 1993 ²	Greatest, Good	Perry Preschool program	High school graduation rates (123)	Up to 15 yr	-2%
Ramey et al., 1991 ³	Greatest, Good	Carolina Abecedarian Project (age 8 follow-up)	Retention (96)	Up to 1 yr	-21%
Campbell et al., 1994 ⁴	Greatest, good	Carolina Abecedarian Project (age 12 follow-up)	Retention rates (96)	Up to 7 yr	-21%
Campbell et al., 1995 ⁵	Greatest, good	Carolina Abecedarian Project (age 15 follow-up)	Retention rates (96)	Up to 10 yr	-23%
Copple et al., 1987 ¹¹	Moderate, Fair	Philadelphia Head Start & Get Set	Retention rates (10125)	Various	No data to compute
Bee, 1981 ¹³	Moderate, fair	Head Start	Retention (120)	Various, 1-2 yr	-25%
Hebbeler, 1985 ¹⁴	Moderate, Limited	Head Start	Retention rates (1393)	Various	No data to compute, and no significant difference reported

Cognitive as measured by placement in special education

Lazar et al., 1982 ¹	Greatest, Good	Various	Special ed placement (524)	Up to 10 yr	-15%
Berrueta-Clement et al., 1984 ¹⁹	Greatest, Good	Perry Preschool program	Special ed placement (123)	Up to 15 yr	-12%
Campbell et al., 1994 ⁴	Greatest, Good	Carolina Abecedarian Project (age 12 follow-up)	Special ed placement (96)	Up to 7 yr	-36%
Campbell et al., 1995 ⁵	Greatest, Good	Carolina Abecedarian Project (age 15 follow-up)	Special ed placement (96)	Up to 10 yr	-23%

Author(s), Date	Design suitability, Quality	Intervention	Measure used (Sample size)	Measurement time (in years from intervention)	Effect size
Barnett et al., 1987 ¹²	Moderate, Fair	South Carolina preschool	Special ed placement (389)	Up to 2 yr	-6%
Bee, 1981 ¹³	Moderate, Fair	Head Start	Special ed placement (120)	Up to 2 yr	-20%
Social as measured by behavioral assessment of social interaction					
Malakoff et al., 1998 ²⁰	Greatest, Fair	Head Start	Persistence at challenging task and intrinsic motivation (78)	Immediately following	.38
Lee et al., 1990 ¹⁰	Moderate, Good	Head Start	Schaefer Behavior Inventory (646)	1 yr	-.29
Sklerov, 1974 ²¹	Moderate, Fair	Head Start	Modification of Matching Familiar Figures test to measure latency in response time (32)	Immediately following	1.82
Social as measured by decreases in social risk behaviors					
Schweinhart et al., 1986 ⁶	Greatest, Good	High/Scope vs DISTAR	APL High (measure of social competence), and self-report of delinquent acts (54)	Through age 15	.35 (APL); .60 for delinquency scale
Berrueta-Clement et al., 1984 ¹⁹	Greatest, Good	Perry Preschool program	Employment status; teen arrests; teen pregnancies; welfare payment (123)	Through age 19	+27% -20% -49% -14%
Schweinhart et al., 1993 ²	Greatest, Good	Perry Preschool program	High school graduation; female employed; earnings >\$1000/mo; home ownership; use of social services	Through age 27	+17% +25% +30% +23% -21%
Health outcomes as measured by preventive services					
Hale et al., 1990 ²²	Greatest, Fair	Head Start	Record review of health screenings; dental exam (78)	+44% +61%	
Hale et al., 1990 ²²	Greatest, Fair	Head Start	Siblings of children in Head Start vs control for health screenings and immunization rates (78)	+11%	
Oyemade et al., 1989 ²³	Least, Good	Head Start	Mother H.S. graduate; father H.S. graduate; income above poverty; mother employed; father employed; receiving welfare (205)	+4% +3% +7.4% +21.6% +5.8% -11%	

Appendix continued

ECD, early childhood development; S-B, Stanford-Binet;

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