

Understanding the Role of Poverty in Early Language Development

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Learner Outcomes

After completion of this presentation, you should be able to:

1. Define poverty and how it is theorized to affect child development.
2. Describe the connections between poverty and early language development.
3. Identify specific assessment issues for children living in poverty.
4. Identify available interventions that support language development for children living in poverty

What *is* Poverty?

What is Poverty?



Absolute/Extreme Poverty



”...a state in which income is insufficient to provide the basic needs *required to sustain life*” (Katz et al., 2007, p. 3)

What is Poverty?

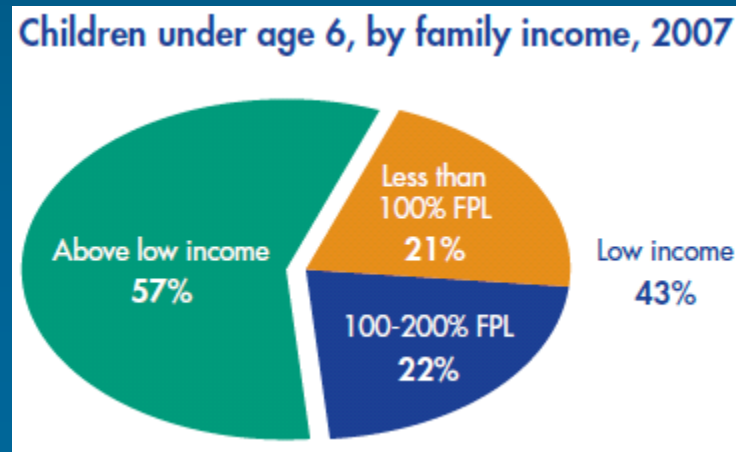


Relative Poverty

“...lack the resources to obtain the types of diet, participate in the activities, and have the living conditions and amenities which are customary, or are at least widely encouraged or approved, in the societies to which they belong” (Townsend, 1979, p. 31; in Katz et al., 2007, p. 3)

Low-Income Status: Birth to Age 6

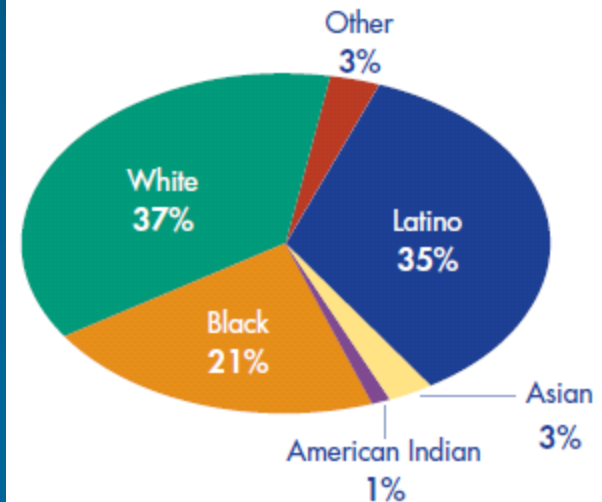
- Over 24 million children ages 0-6 in U.S in 2007
 - 10.6 million (43%) live in low-income families
 - < 200% FPL
 - 5.2 million (21%) live in poor families
 - < 100% FPL



Low-Income Status by Race/Ethnicity: Birth to Age 6

- Disproportion percentage of children from minority backgrounds represented
 - 65% of Native American children (0.1 million)
 - 64% of Latino children (3.8 million)
 - 64% of Black/African-American children (2.3 million)
 - 29% of Caucasian children (3.9 million)
 - 26% of Asian children (0.3 million)

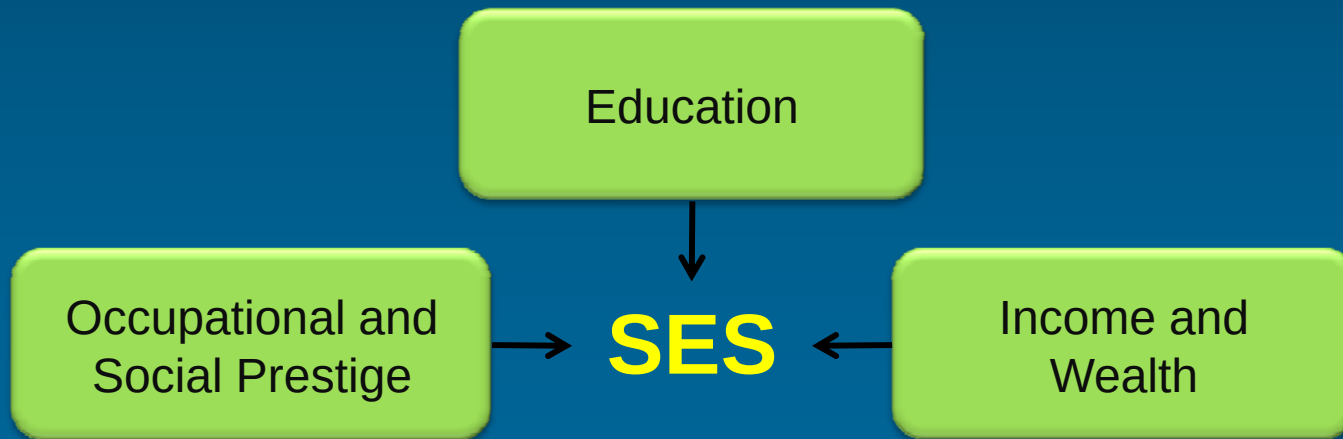
Children under age 6 living in low-income families, by race/ethnicity, 2007



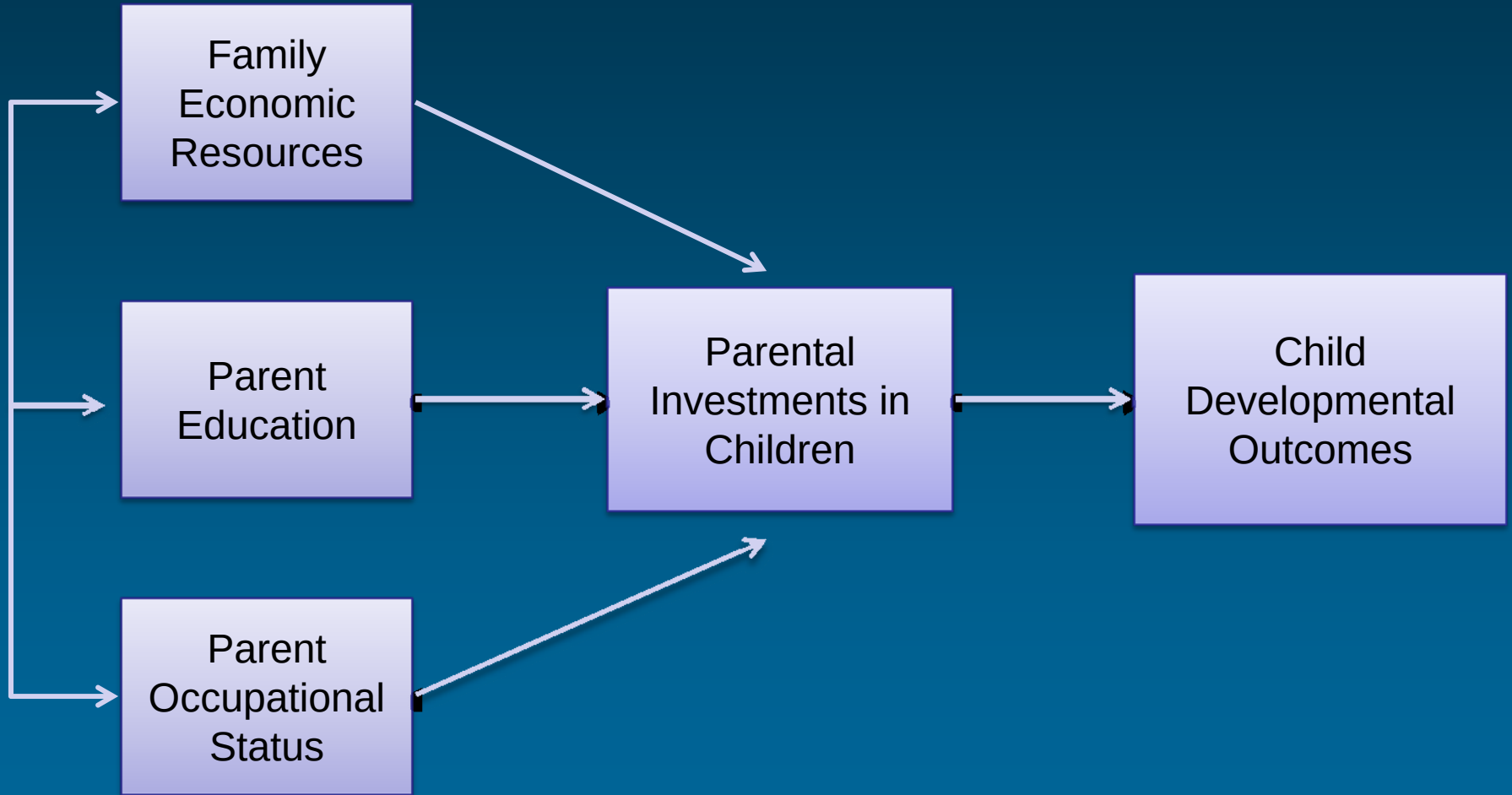
Connecting Poverty to Child Development

Socioeconomic Status

- Poverty is a multi-factor construct
 - Estimated via socioeconomic status (SES)
 - Global measure of standing in a socially stratified system
 - Access to resources



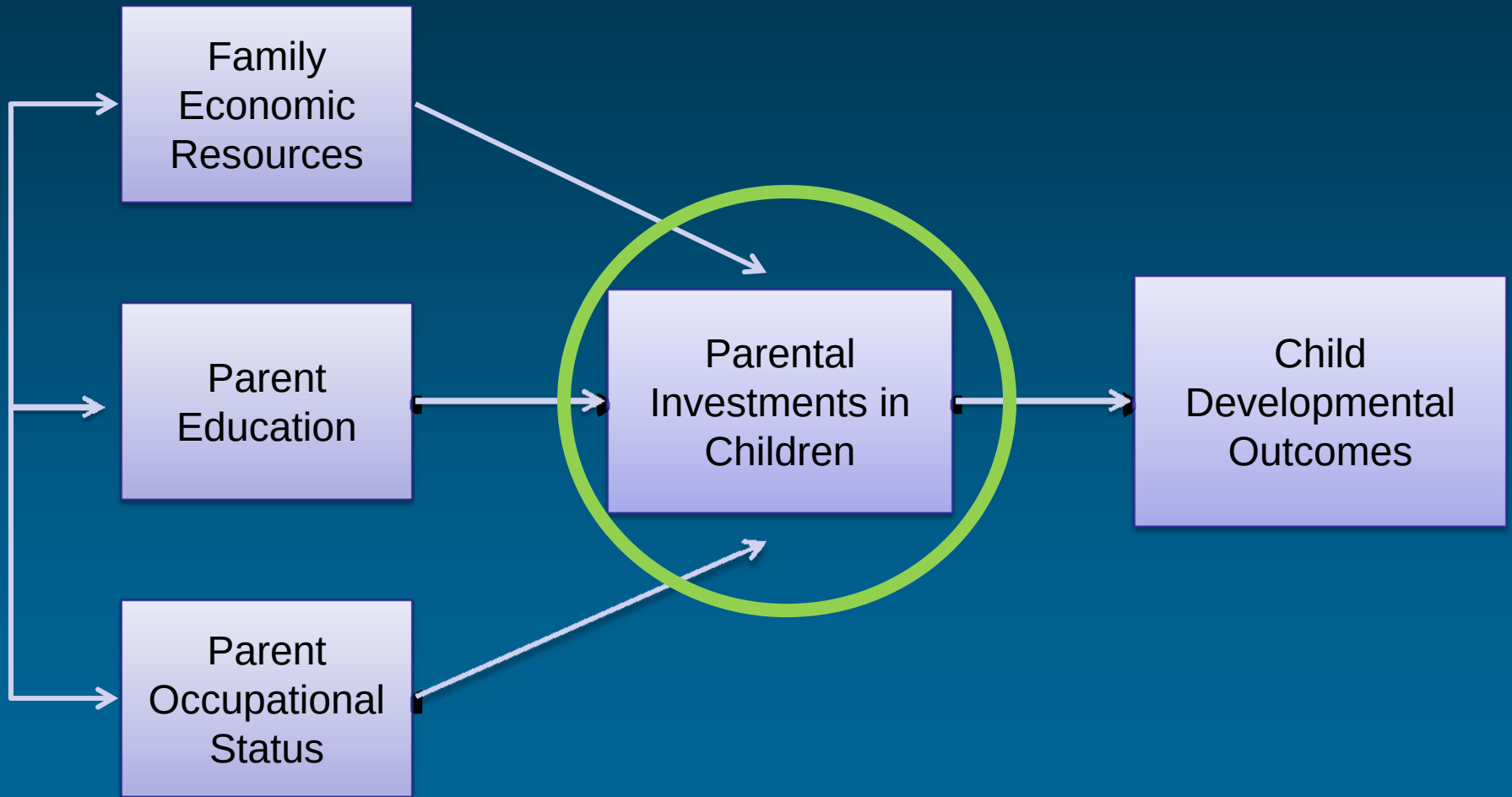
Social Causation Model



SES

Adapted from Congers & Donnellan (2007)

Social Causation Model



SES

Adapted from Congers & Donnellan (2007)

Parental Investments in Children

Material and Care Supports

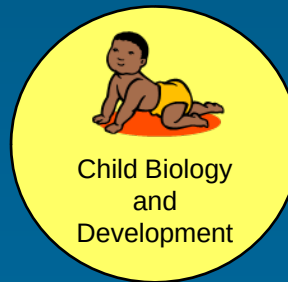


Parental Investments in Children

Developmental Supports

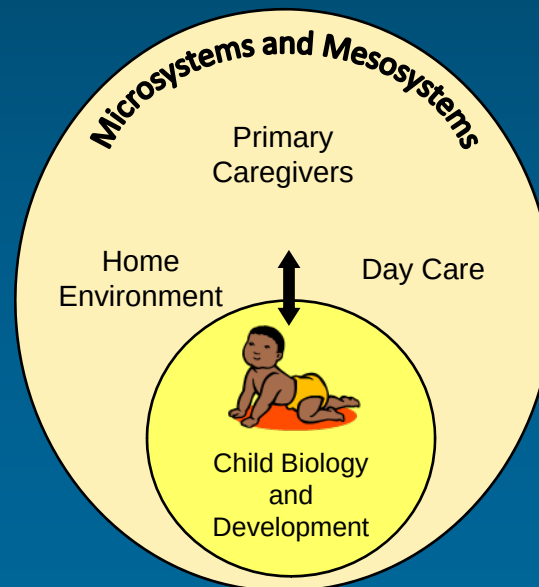


How Does Poverty Connect with Child Development?



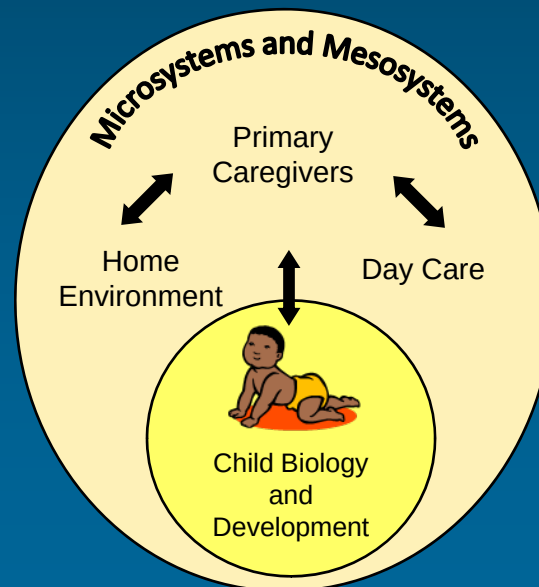
Time

How Does Poverty Connect with Child Development?



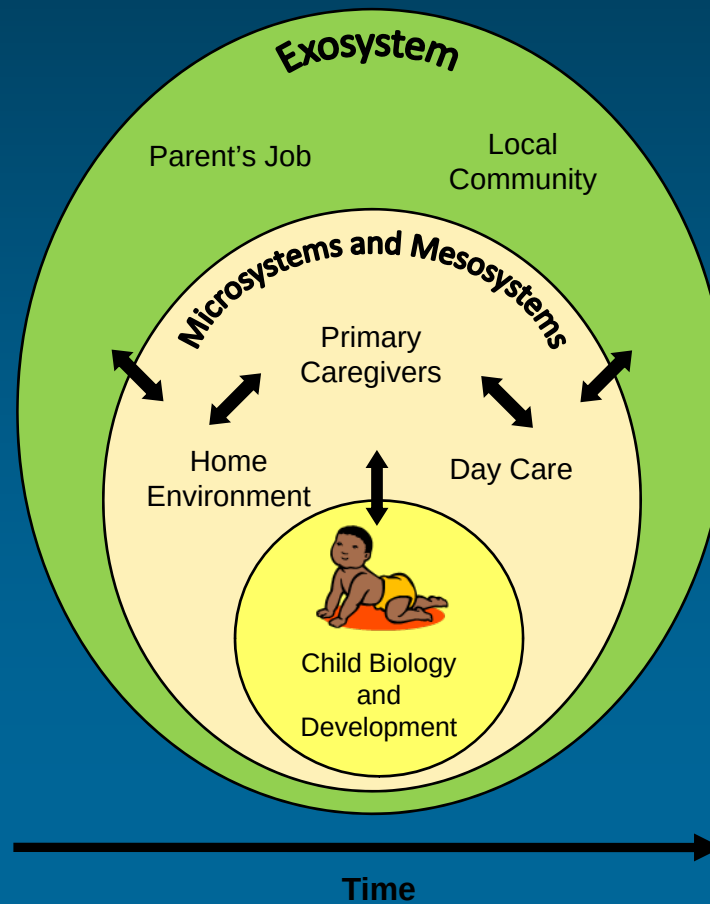
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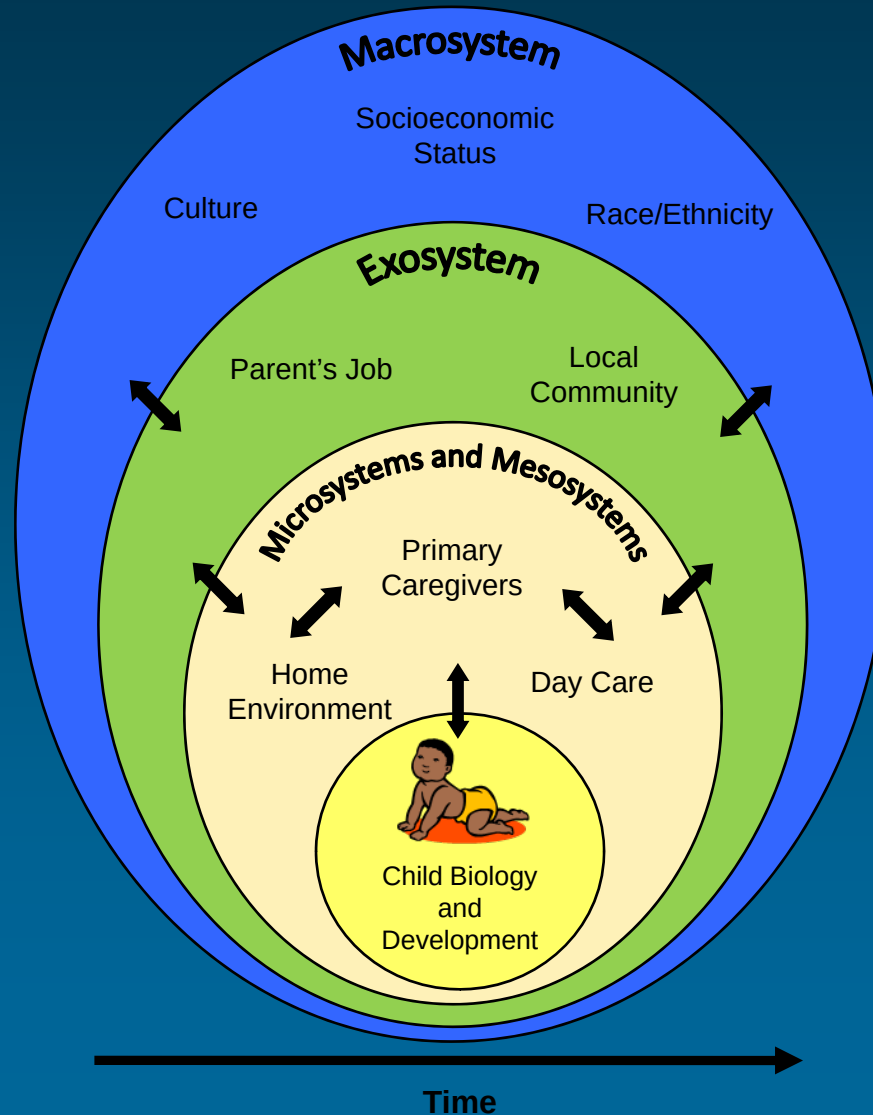


Time

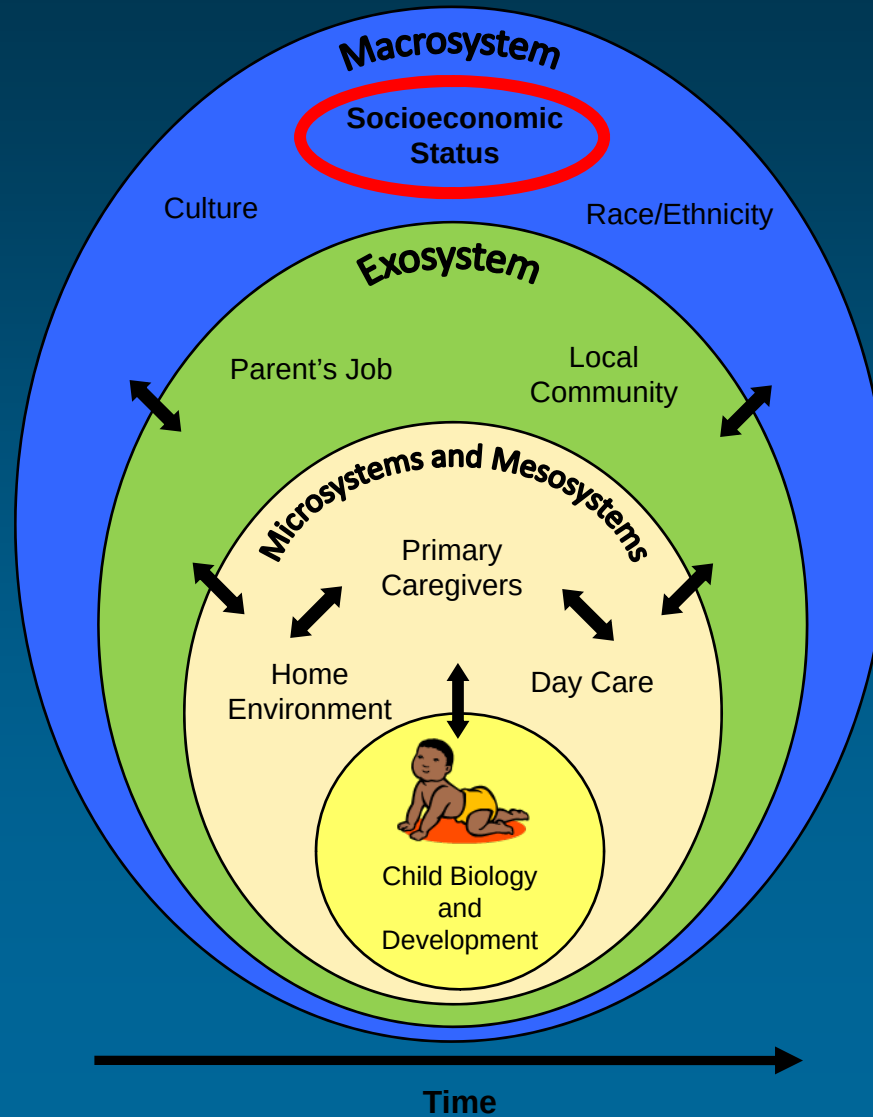
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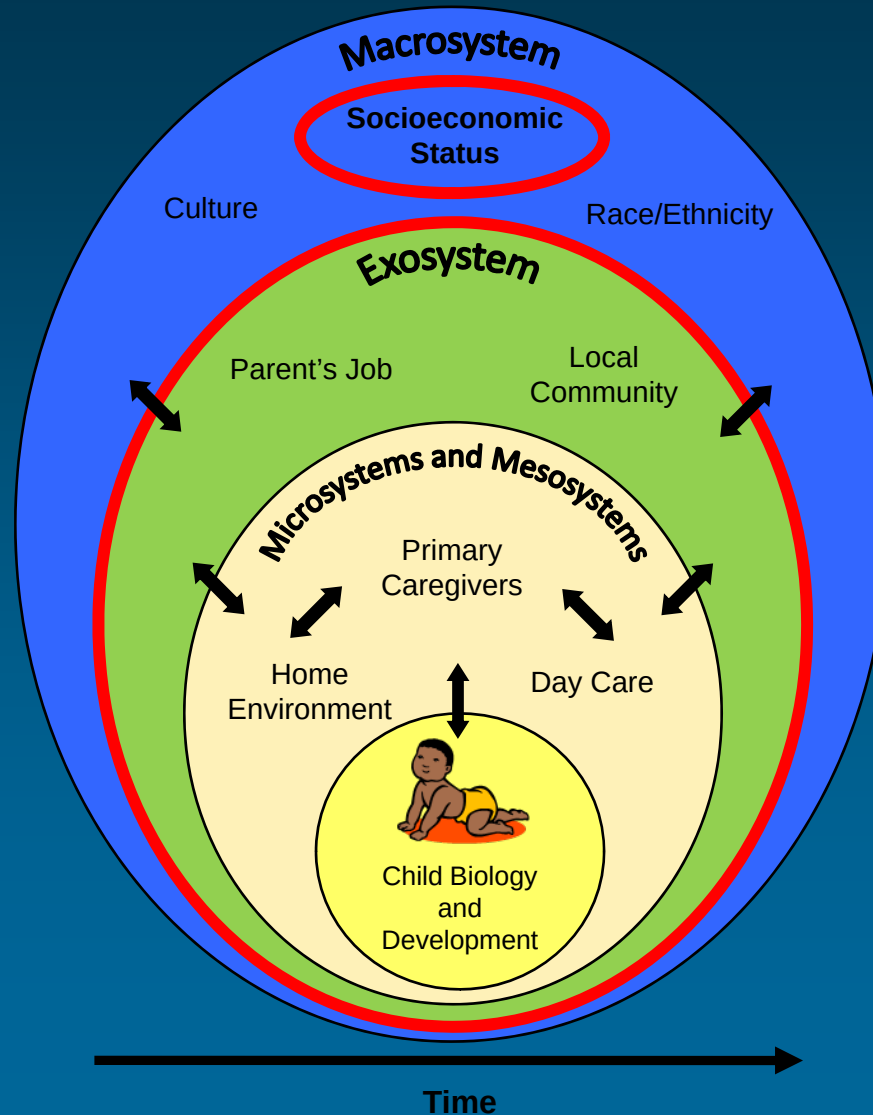
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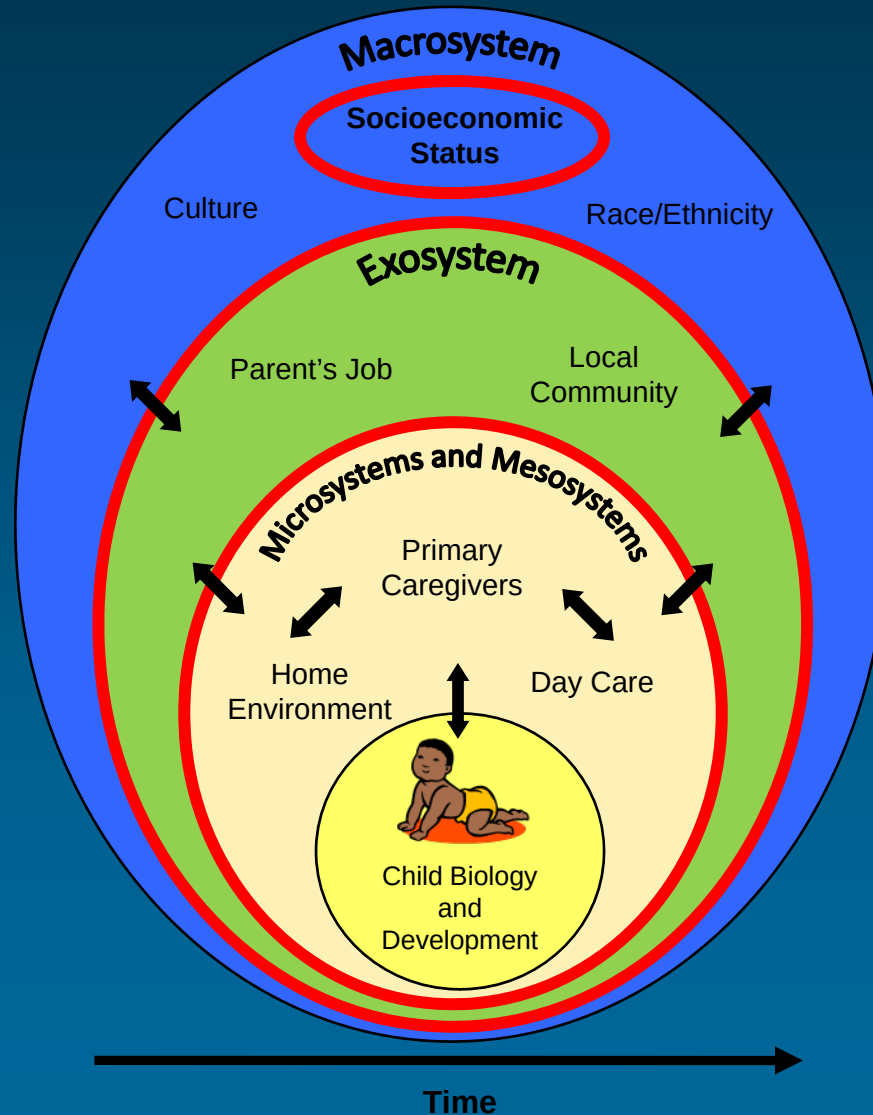
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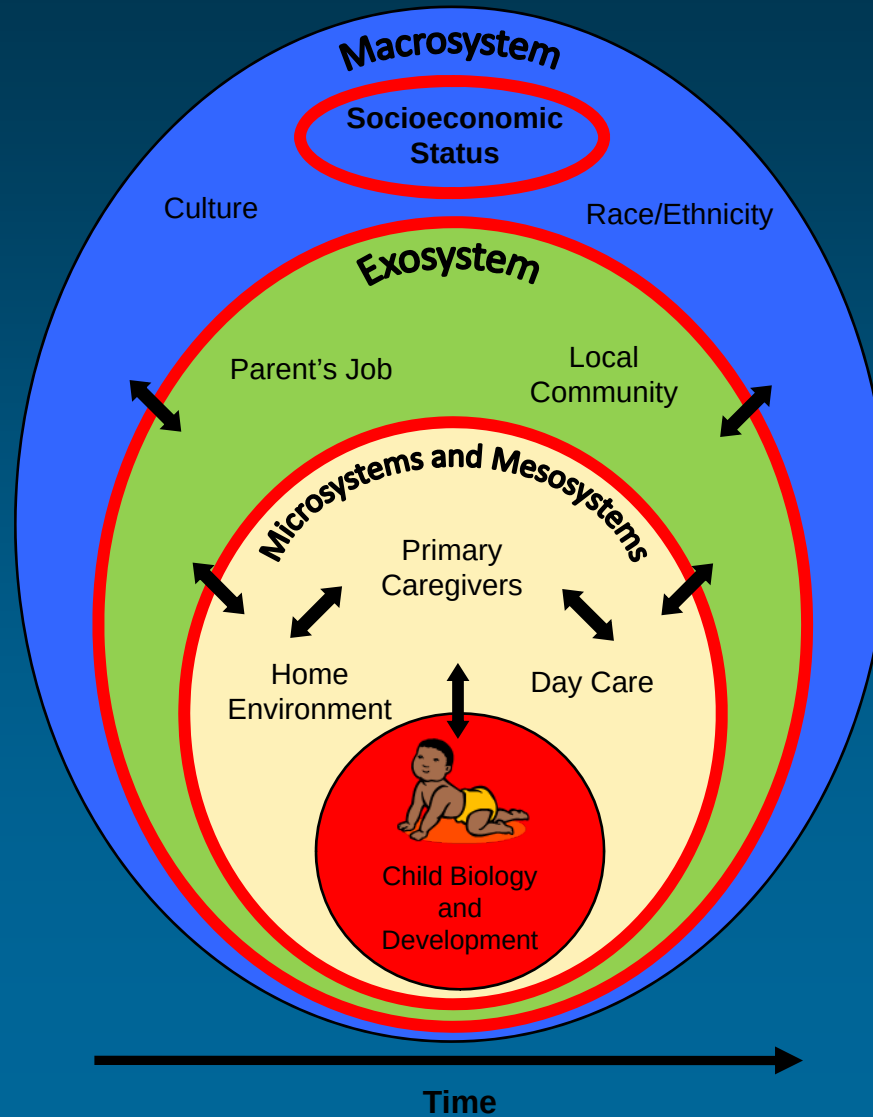
How Does Poverty Connect with Child Development?



How Does Poverty Connect with Child Development?



How Does Poverty Connect with Child Development?



Pathway of Risk for Development



Risks to Development Associated with Poverty

Parental financial instability

Low parent education

Inadequate prenatal care



Unsafe neighborhoods

Inadequate nutrition

Inadequate healthcare

Substandard housing

Teen and/or single parent

Parent stress and depression

Low-quality childcare and preschool

Long-Term Child Outcomes Associated with Poverty

- Increased risk of:
 - Lower achievement test scores
 - Grade-level retention
 - SPED placement
 - High school dropout
 - Fewer years of schooling completed
 - Lower wages as adult



McLoyd (1998)

Long-Term Child Outcomes Associated with Poverty

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 - Lower achievement test scores
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McLoyd (1998)

Parent Support of Language Development For Children Living in Poverty

Parent-Child Interactions in Poverty

- Quality and quantity of input differs across SES levels
 - Gesture types
 - Fewer different gestures produced by parents in low-SES homes¹
 - Word types
 - Less diverse verbal lexicon²

¹ Rowe & Goldin-Meadow (2009)

² Hart & Risley (1995)

Parent-Child Interactions in Poverty

- Quality and quantity of input differs across SES levels
 - Word tokens
 - 30 million fewer words spoken in “low-input” homes by age 3¹
 - Responsive parenting practices¹
 - More prohibitives
 - Fewer encouragements

¹ Hart & Risley (1995)

Parent-Child Interactions in Poverty

- Complexity of caregiver speech
 - Varies as function of maternal education levels¹
 - Changes across time are more significant in higher-SES homes
- Quantity of decontextualized language
 - Used less by low-SES caregivers
 - Daily living activities, play, and shared book reading with children²

¹ Huttenlocher et al. (2002)

² DeTemple & Beals (1991)

Parent-Child Interactions in Poverty

- Quantity of input consistent across time within families
 - Gesture types¹
 - Word types²
 - Word tokens³
 - Utterance and sentence tokens³

¹ Rowe & Goldin-Meadow (2009)

² Hart & Risley (1995)

³ Huttenlocher et al. (2002)

Related Parenting Factors

- Parenting knowledge
 - Relationship between child-directed speech and SES mediated by parent knowledge of child development¹
- Teaching agendas
 - Low-SES mothers incorporated fewer language goals into play^{2,3}

¹ Rowe (2008)

² Hammer & Weiss (1999; 2000)

³ Britto, Brooks-Gunn, & Griffin (2006)

Poverty and Early Language Development

Prelinguistic Communication

- No effect of SES
 - Development of canonical babbling¹
 - Quantity of elicited babble¹
- Differences across SES levels
 - Number of infant vocalizations during play²
 - Number of gestures in lexicon³

¹ Oller et al. (1995)

² Hammer & Weiss (1999)

³ Rowe & Goldin-Meadow (2009)

Semantic Development

- Differences in word/conceptual knowledge begin early and continue across childhood
 - Less diverse verbal lexicon¹
 - Smaller receptive vocabulary at age 3^{2,3}
 - Smaller expressive vocabulary at age 3³
 - ~500 vs. ~1000 words
 - Smaller child gesture lexicon at 14 mos. related to smaller receptive vocabulary at 54 months⁴
 - Differences remain until at least age 13²

¹ Horton-Ikard & Ellis Weismer (2007)

² Farkas & Beron (2004)

³ Hart and Risley (1995)

⁴ Rowe & Goldin-Meadow (2009); Rowe, Ozkaliskan, & Goldin-Meadow (2008)

Semantic Development

- No differences in performance on fast-mapping tasks¹
- No differences in word learning strategies²

¹ Horton-Ikard & Ellis Weismer (2007)

² Spencer (2009)

Morphosyntactic Development

- Early differences in types and tokens of complex sentences
 - 2- to 3-year-olds
 - Produce fewer types of complex sentences
 - Produce smaller number of complex sentences
 - No difference in the proportion of grammatically correct complex sentences produced

Morphosyntactic Development

- Some differences appear to resolve by school entry
 - 4-year-olds
 - Reduced comprehension of complex sentences
 - Produce smaller proportion of multi-clause sentences at home and school
 - 5-year-olds
 - No difference in sentence comprehension abilities on Test of Reception of Grammar (TROG)

¹ Huttenlocher et al. (2002)

² Noble, Norman, and Farah (2005)

Other Areas of Language

- Phonological development
 - No effect of SES on PCC for 3-year-olds¹
 - Metaphonological skills affected²
- Narrative development
 - Narrative production differed based on degree of risk in home setting³
 - No differences on production of personal narratives for children from mid-SES and stable low-SES homes
 - Children from low-SES “disorganized” homes produced minimal narratives
 - Disorganized ordering and structure

¹ Dollaghan et al. (1999)

² Lonigan (2005)

³ Peterson (1994)

Addressing Poverty: The Role of Speech-Language Pathology

How Do SLPs Address These Developmental Trends?

1. Understand unique needs of this population
2. Provide appropriate assessment of language skills
3. Provide preventative intervention services

Issues with Language Assessment

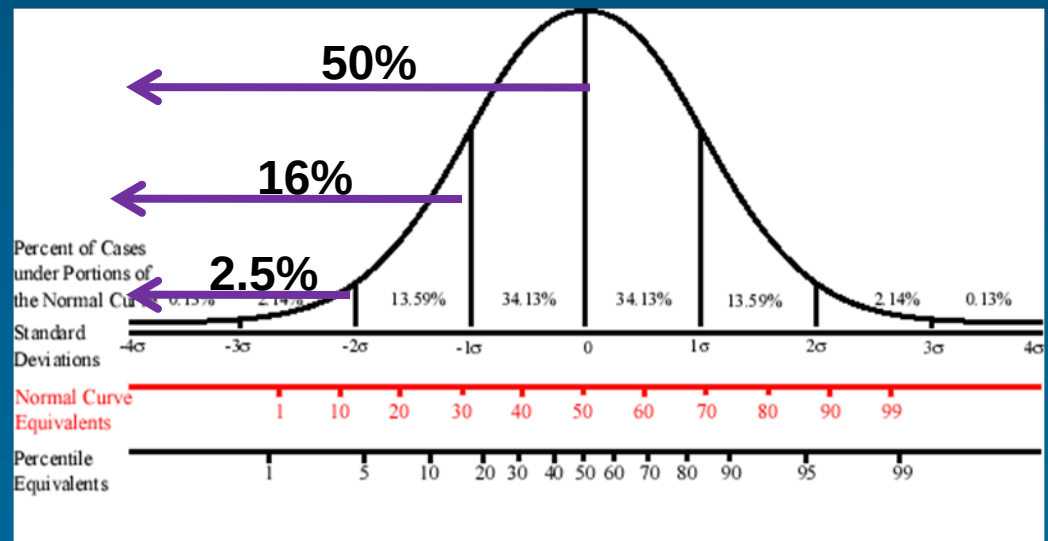
Formal Assessments

- Many language assessments allow for over-identification of low-income children as language disordered



Formal Assessments

- MacArthur-Bates CDI
 - Few low-SES children in norming population^{1,2}
 - 80% of low-SES toddlers score below 50th percentile³



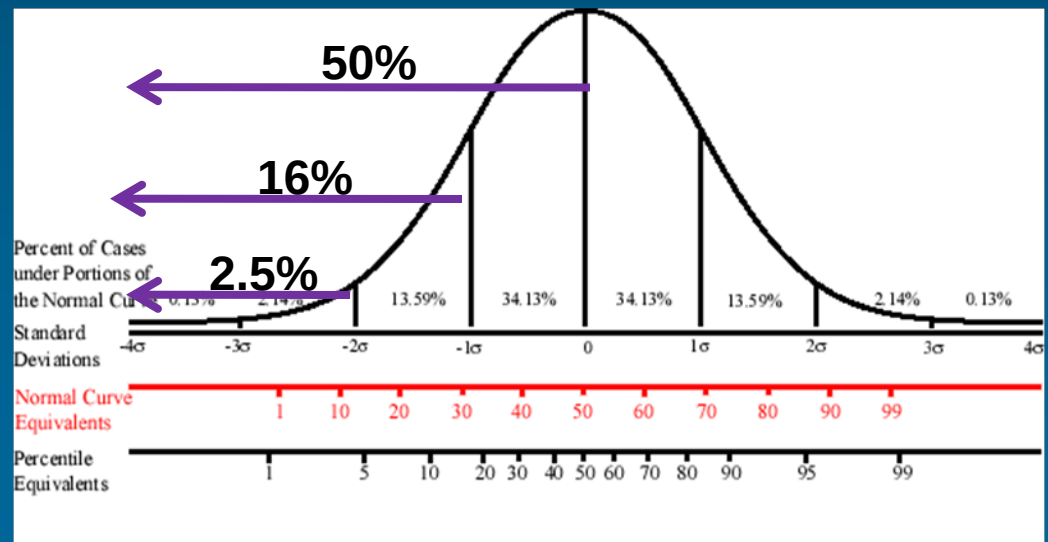
¹ Feldman et al. (2000)

² Fenson et al. (2000)

³ Arriaga et al. (1998)

Formal Assessments

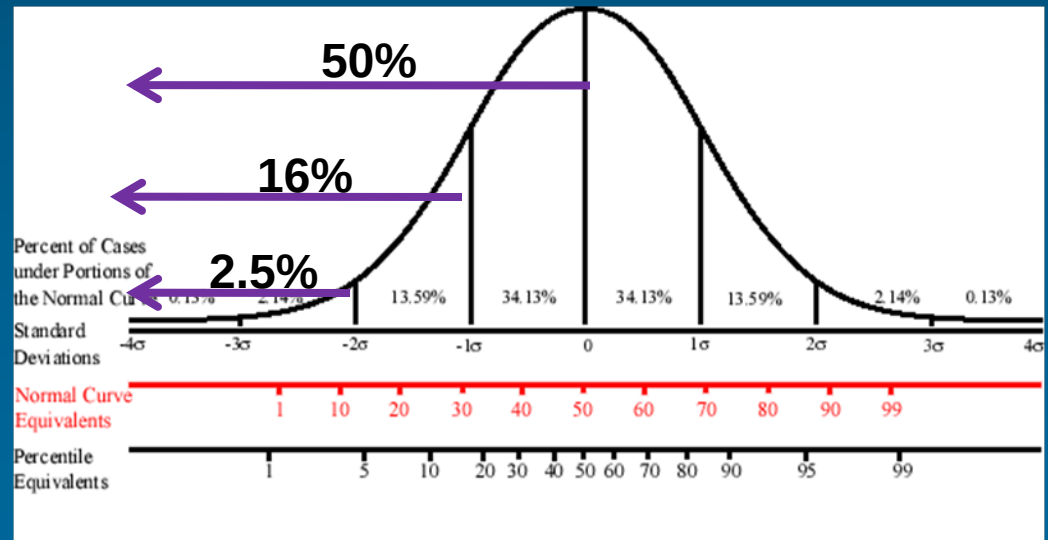
- PPVT-III
 - 93% of low-SES African-American children below mean
 - 29.5% scored >2 SD below mean



Qi et al. (2003)
Qi et al. (2006)

Formal Assessments

- PLS-3
 - 87% of low-SES African-American children >1 SD below mean
 - 10% >2 SD below the mean
 - 23.1% of low-SES European-American children >2 SD below mean



Qi et al. (2003)
Qi et al. (2006)

Informal Assessments

- Language sample analysis using standard developmental norms
 - Norming based on higher-SES children
 - Not sufficient for delineating issues of SES from language disorders^{1,2}
 - MLUm, TNW, NDW

¹ Dollaghan et al. (1999)

² Horton-Ikard & Ellis Weismer (2007)

Differential Diagnosis

- Important to differentially diagnosis late talker (LT) and SLI status from the effects of poverty
 - Prognosis
 - Treatment
- Evidence of below-average skills on standard assessments not sufficient

Differential Diagnosis

- Parent concern about child's language development
 - Limited conversational output
 - Less grammatically correct sentences
 - Limited variability in vocabulary use

Differential Diagnosis

- Performance on lexical processing and non-word repetition tasks
 - SES does not affect fast mapping or nonword repetition abilities
 - LTs and children with SLI have difficulties

Dollaghan (1987); Dollaghan (2008); Dollaghan & Campbell (1998); Ellis Weismer & Evans (2002); Engel, Santos, & Gathercole (2008); Horton-Ikard & Ellis Weismer (2007); Scheer-Cohen & Evans (2007)

Other Issues with Language Assessment

- Choose diagnostic assessments that are sensitive to SES
 - Language Development Survey¹
 - Normed with larger numbers of children from low-SES homes
- Use dynamic assessment procedures²
- SES differences don't remove child language and learning needs
 - Remember--Part C of IDEA covers *at-risk* status³

¹ Rescorla (1989)

² Gutiérrez-Clellen & Peña (2001)

³ Wrightslaw (2008)

Preventative Interventions For Low-Income Children and Families

Why Provide Preventative Interventions?

1. Almost half of the children in US identified as low-income.
2. Many children from low-SES homes end up on SLP caseloads later in development.
3. SLPs have extensive knowledge of language development.
4. ASHA says so!
 - Scope of Practice (ASHA, 2007)

Available Interventions

- Several evidence-based, small-scale language and literacy interventions for children from birth to age 6
 - Address child language development via caregivers
 - Home- or center-based interventions

Interventions with Low-Income Preschool Children

- Shared Book Reading (SBR)
 - Language facilitation (Dialogic Reading)¹
 - Decontextualized language²
 - Print knowledge³
 - Word learning^{4,5}
- Want more SBR info?
 - National Institute for Literacy (2009)
 - Meta-analysis of SBR and other emergent literacy interventions

¹Arnold et al. (1994)

²Morgan & Goldstein (2004)

³Justice & Ezell (2002)

⁴Justice et al. (2005)

⁵Senechal & Cornell (1993)

Interventions with Low-Income Preschool Children

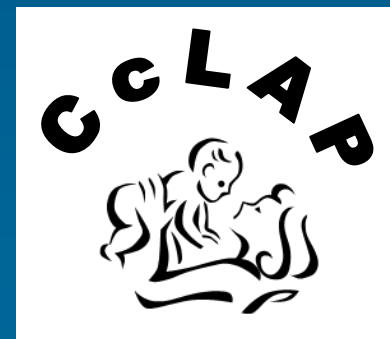
- Success in Parenting Preschoolers program
 - Fanning (2007)
 - Language facilitation, child behavior management, and parenting stress
- Preschool language curricula
 - Justice et al. (2008)
 - DOE's National Center for Education Research (NCER)
Preschool Curriculum Evaluation Research (PCER) Consortium

Interventions for Low-Income Children Under Age 3

- Dialogic Reading
 - Valdez-Menchaca & Whitehurst (1992)
- Tips About Talk
 - Oetting, Pruitt, & Roy (2006)
 - Focus on child language development and disorders
 - Specific discussions on teaching strategies
- Verbal Interaction Project
 - Mother-Child Home Program
 - Madden et al. (1976)
 - Home visitors model verbal interactions via toy play

Upcoming Intervention Research

- Caregiver-Child Language Apprenticeship Program (CcLAP)
 - Parent language stimulation program
 - Addresses 4 areas known to be affected by poverty:
 1. Parent knowledge of child development
 2. Parent language stimulation behaviors
 3. Parent responsivity to child communication attempts
 4. Promotion of language development in child's environment



Closing Thoughts & Questions

In poverty, as in certain propositions in physics, starting conditions are everything. There are no secret economies that nourish the poor; on the contrary, there are a host of special costs. (p. 27)

—Barbara Ehrenreich, in *Nickel and Dimed: On (Not) Getting By in America*

The issue of poverty is not a statistical issue. It is a human issue.

—James Wolfensohn, Former World Bank President

