

IDEALS White Paper (01)

Poverty and Unmarried Female-Headed Single-Parent Families

The Background

Data indicates that the overall poverty rate for children has increase in the past decade. The most affected by this increase are minorities. According to Census data, Black and Latino children are more likely to be in poverty than White children, 35.4% and 28.6% respectively (U.S. Department of Commerce, 2011). The number of single-parent families is highly correlated with high poverty rates.

Poverty is related to many personal, social, cultural, and economic factors, including family instability, violence, poor housing, poor living conditions, lack of social support, less parental supervision, chaotic communities, and poor childcare options. Perhaps the most devastating effects are on the brain, especially among the autonomic, immune and cardiovascular systems. While the bidirectional aspect of stress on these systems can be beneficial in the short-term, they related to long-term deregulation of these interactional systems (McEwen and Gianaros, 2010).

Recent discoveries in neuroscience have made the debate of nature versus environment passé. Instead, development is looked at as an ongoing interaction of biology and ecology. Research demonstrates that fetal exposure to maternal stress can result in a postnatal response to stress. The conclusion is that the environmental context modulates the expression of the genotype. Experiences play the role of promoting certain responses and limiting other

responses. Consequently, researchers are attempting to understand this process so that prevention or treatment can be effective (Shonkoff, Garner, Siegel, Dobbins, Earls, et al., 2012). Researchers point out that stress activates the “hypothalamic-pituitary axis and the sympathetic-adreno-medullary system” (p. 239). This activation stimulates other concomitant events, such as the inflammatory response and the parasympathetic nervous system. If this response is frequent and continuous, emotional and physical dysfunction can occur. The process of balancing these processes and returning to normal is referred to as allostatic load.

In sum, research in neuroscience concludes that early experiences are wired physiologically in the body which limit the ability to balance stress and return to normal resulting in compromised development. This kind of toxic stress over the lifespan affects cognitive development, health, and emotional stability.

The effects of poverty on children can be devastating, *reducing the quality of life throughout the lifespan*. Much of the negative effects can be traced to poor educational outcomes and poor health coverage. Cognitive development deficits show up as early as two years of age and continue into adulthood. Poverty as a consequence of the family income may be the least of the effect on children academic and social development. Other factors, such as the mother’s behavior during pregnancy may account for long-term effects on children.

School readiness. Children in poverty score lower on standardized tests. A recent study matched low and middle income children on a number of variables and assessed their scores on intelligence tests (Farah, *et al.*, 2006). The researchers specifically wanted to find associations between the tests and brain functioning. The findings included differences in the “Left perisylvian/Language and Medial temporal/Memory systems” (p.166), which directly impact

learning and the use of language. A recent review of studies that used various methods including brain scan imaging revealed that children in poverty consistently have lower performance in language and logical processing and differences as noted in brain imaging even when no difference is found in performance (Hackman, Farah, and Meany 2010).

Recent studies on child health have confirmed a link between early life experiences and later life illness. One path this connection takes is by laying down developmental interruptions early in life which can cause illness many years later. Children in poverty experience more of these developmental blocks. Another pathway for later life illness emanates from an accumulation of detrimental experiences over time that are expressed later in illness (Shonkoff, Boyce, & McEwen, 2009). Researchers in cognitive development of children assert that the context or environmental atmosphere in the early years account for the disparities note in children in academic performance. Researchers have found that about 20% of the variance in IQ scores in children is explained by poverty or SES status (Gottfried, O'Doherty, and Dolan, 2003).

Many children are not ready for school, especially those born into poverty. Children in poverty not only begin school behind other children but tend to fall even farther behind in later grades. For example, the gains that impoverished children make in preschool programs like Head Start tend to fade in grade school and the gap widens. Children who are not ready for the first grade will not be as successful as they move through the educational systems and are more likely to not graduate from high school or go to college. The prospects for self-sufficiency in adulthood decrease for children who suffer academic failure.

Researchers in cognitive development of the brain have demonstrated that the brain develops in a prescribed fashion. Initially, the brain is developing at an enormous pace of approximately 700 neural connections per second, which is followed by a pruning process. Vision and hearing and other sensory connections are next to develop. As brain connections build on one another, language and cognitive circuits are next to development as pruning occurs to allow greater efficiency (Shonkoff, *et al.*, 2009).

Researchers have found that the home learning environment accounts for much of the differences in children's early IQ scores (Nisbett *et al.*, 2012). In assessing the home learning environment through a scale Home Observation for Measurement of the Environment (HOME), researchers found that the home learning environment is closely associated with acquiring early reading skills. The HOME scale, consisting of 45 items, measures the amount of intellectual stimulation and support the child receives from parents. It consists of six subscales: 1) education of responsively of the primary caregiver; 2) avoidance of restriction and punishment; 3) organization of the temporal and physical environment; 4) provision of appropriate play materials; 5) Parental environment with the child; and 6) opportunities for variety in daily stimulation. The scale has been used for over 30 years and was most recently updated in 2001 (Totsika and Sylva, 2004) and includes both observational and interview items. The HOME scale has been widely used in research and consists of two classifications of variables: proximal, referring to direct effects on the child, and distal, variables such as the mother's IQ which indirectly affect the child (see Totsika and Sylva, 2004). The underlying theoretical basis for the measure is ecological theory and the primary ecosystem is the microsystem of child and primary caregiver. Three basis constructs are evaluated by the scale:

the developmental needs of the child, the environment of the child and parenting effectiveness. While this measure was the most predictive of IQ scores before the age of three, it does not predict changes of IQ over time. Rather research tends to favor the strong influence of environmental variables to explain the changes in IQ over time. The frequent use of the HOME measure over the past 30 years by researchers has established a number of irrefutable findings. The HOME measure is significantly correlated with other cognitive measures and this correlation improves with age. For example, the correlation is stronger for children over three years of age than those younger.

Behavioral effects. Researchers have found that a poor postnatal environment can affect the functioning of the hypothalamic-pituitary-adrenal (HPA) axis resulting in mood and anxiety disorders. Two genes, CRHR1 and FKBP5, appear to be involved when the environment for the developing child is abusive (Fernald and Gunnar 2009). The HPA interaction with the amygdala or limbic brain systems is involved in emotional learning and response to emotional stimuli. When the child experiences trauma in early development, this brain complex is activated which lead to problems in regulating and maintain a steady emotional state.

The impact of the family is enormous in understanding the effects of poverty on children and can have direct or indirect influence on children. Direct effects occur because families have greater interaction with young children than do nonfamily members. Because children learn from both imitation and observation of their parent, parents who have limited relationship skills do not provide effective models to imitate. What children may witness when parents lack basic relationship skills is poor impulse control and externalizing and blaming

others for their own shortcomings. Consequently, children grow up with an external locus of control and feel like victims.

Parents who lack relationship skills tend to parent more harshly than parents who have high competency in relationship skills. For example, low SES is related to more punitive parenting and less supportive and nurturing behavior. Lower SES parents have less knowledge of child development, including knowledge of developmental readiness. Lacking this basis knowledge, they are more likely to punish children for age appropriate behavior. The toddler who says “no” to parental directions or has a temper tantrum when a parent puts away a toy may be punished for behavior that is normal and expected. Not only do children not learn appropriate self regulation skills from such parenting they have more difficulty in establishing trust and forming a deep and abiding bond with parents.

Parenting methods of lower SES parents tend to use direct interventions, such as spanking or other means of taking control of children. Direct punitive methods tend to stop the behavior, but require more force in the future to get the same results. What is missing from lower SES parents’ repertoire in parenting interventions that build the relationship and see the parent/child relationship as bidirectional. Moreover, the use of indirect methods which build relationships skills as opposed to control method are less often used by low SES parents. Indirect methods, such as storytelling or paradoxical interventions, referred to as second-order parenting (Roberts, 1994), are rarely used.

Engle and Black (2008) discuss how the family in poverty can also have moderating and mediating effects on outcomes with children. For example, a moderating effect is when parents lack good relationship skill and cannot insulate their children from the devastating effects of

poverty. These parents do not spend as much time in activities such as reading or other cognitive enhancing activities (Bradley, Whiteside, and Mundfrom, 1994, as cited in Engle and Black, 2008). In addition, the parents' attitude might be a moderating effect in that even in poverty parent who have mature and positive attitude may contribute to children well-being.

The mediating model is expressed through dysfunctional family relationships (Engle and Black, 2008). For example, the accumulation of stress in the family can lead to chronic stress which reduces effectiveness in completing tasks and in relationship development. The presence of chronic stress reduces the ability to deal with normal everyday events and activities.

The lack of emotional regulation coincides with corticotrophin releasing hormone (CRH), which activates the secretion of adrenocorticotrophic hormone (ACTH) from the pituitary gland followed by secretion of cortisol from the adrenal glands. Researchers have shown a link between the activation of this complex and SES. Children raised in poverty are, therefore, more vulnerable to poor responses to stress which affects cognitive and emotional development (Cohen, Doyle, and Baum, 2006). In addition, maternal depression has been linked as a moderating variable for the development of this HPA/CRH axis. Depressed mothers of lower SES provide inconsistent attention and care for the infant and fail to meet the age-appropriate development. They provide fewer toys for children to play with, limited use of language in communication, and less exposure to extra familial stimulating outings (Bradley, Corwyn, McAdoo, & Garcia-Coll, 2001). Parents of lower SES do not read as often to their children or engage in other verbal activities, such as storytelling. Because of the increased stress level, the overall quality of the emotional relationship is less supportive (Belsky and Jaffee, 2006).

Attachment. Research has definitively linked specific parenting interactions, namely sensitive and responsive care giving, with secure attachment in children. On the other hand, insensitive and unresponsive or inconsistent interactions are highly linked with the development of insecure or disorganized attachment. Initially, researchers identified three styles of attachment: secure, insecure-resistant, and insecure-avoidant. Researchers note that secure children do not seem affected by distance from the mother while children with insecure-resistant attachment are both distressed by distance from the mother and display angry resistive behavior in close proximity to her. These insecure-resistant children must use other strategies to cope with stress. Children with insecure avoidant style attachment will show little reduction of stress in the presence of the mother (Main, 1990).

More recently researchers have found that children from the three categories of attachment may respond to stress through disorganized and anxious behavior, which may represent a significant change from their usual attachment style behavior (Hesse and Main, 2006). There are also children that display disorganized attachment without any overt link to other attachment behavioral styles. Some researchers assume that the disorganized attachment style develops from the child's extreme fear of the attachment figure. Children with disorganized style attachment are in a catch 22, namely they need and desire the caregivers presence and support, but are simultaneously repelled because of their fear of the caregiver. The quality of the parent/child relationship is severely compromised by the harsh, inconsistent and unresponsive behavior of the parent. Consequently, these children are never able to resolve their fears and conflicts.

Researchers have demonstrated that rough or insensitive parenting is the most likely cause of disorganized attachment in children (Hesse and Main 2006). Maltreating parents are not able to protect their children from intense fear. Some researchers have suggested at least three pathways from which the disorganized style may develop (van IJendoorn and Bakermans-Kranenburg, 2003). First, sexual or physically abusive parents create a dilemma that children cannot resolve. Second, chaotic family or institutional environments in which children do not receive appropriate attention from caregivers and are left on their own devices are prone to develop disorganized attachment styles. Third, children who witness domestic violence may experience fear that cannot be subsided through contact with the parent.

Attachment has been investigated through the use of the HOME scale. Researchers found that securely attached 36 month-old children were more likely to have mothers who scored high on sensitivity and responsiveness on the HOME scale and insecure avoidance children were more likely to have mothers with low scores (NICHD Early Childcare Research Network, 2001 as cited in Totsika and Sylva, 2004). Other researchers have found comparable evidence that poverty is closely related to higher rates of insecurity or disorganized/disoriented attachment in poverty families of children 12 and 18 months of age (Shaw and Vondra, 1995). Additionally, children with insecure or disorganized attachment who are high risk for social dysfunction caused by poverty will have later behavioral problems (Lyons-Ruth, 2008). These findings are based on two underlying characteristics, insensitive care giving and high risk social environment, such as poverty.

Mansfield and Novick (2012) attempted to answer the question of why there is a link between poverty and poor health in children. In their study in North Carolina, they wanted to

find out why children in poverty tend to have more health related issues than other children. In analyzing data from all counties in North Carolina, they found a high correlation between mortality rates and poverty and a low correlation between mortality rates and counties that with high incomes. The total environments and social context of the children contributes to the increased mortality and diseases.

Over the past several decades researchers have generally concluded that one of the greatest effects on the developing child is maternal depression. Because maternal depression tends to be linked with poverty, reducing depression among young mothers has been a focal point for intervention. The greatest danger associated with maternal depression on the developing child is in social emotional development (Maughn, Cicchetti, Toth and Rogosch, 2007). Researchers have struggled to understand the mechanism of just how maternal depression, affects children.

One area of research to understand better how depressed mothers affect various developmental domains is cognitive appraisal. Researchers, controlling for verbal ability, gave 5-year old children false belief task whose mothers had been diagnosed with major depression during the first 20 months after the birth. Results indicated that when compared to a control group, children of depressed mothers were significantly less likely to understand false beliefs (Rohrer, Cicchetti, Rogosch, Toth, and Maughan, 2011).

Researchers believe that maternal depression initiates a process of developmental risk in the children that involves negative outcomes in a number of developmental domains (Toth, Cicchetti, Rogosch, and Sturge-Apple, 2009). Development is viewed as a series of interlocking stage tasks that become more distinguished across time in which subsequent stages

incorporate earlier one. Consequently, dysfunction in one domain sets in motion dysfunction in other domains. Researchers have concluded, however, that there is variability in both the mother's experience of depression and the concomitant affect on the child.

One of the most important developmental domains is the emergence of a sense of self during toddlerhood. Viewing themselves as a distinct entity means that toddlers can understand how they affect specific events around them. Researchers have found that the degree of maternal depression was associated with the level of insecure attachment at both 20 months and 3 years which predicts negative self and prenatal representations at age four (Toth, Cicchetti, Rogosch, and Sturge-Apple, 2009). In addition, "the findings demonstrate that the degree of attachment insecurity at age three mediated the relation between early maternal depression and emerging negative representational models of parents by age four" (p. 204).

Environmental factors related to poverty and children. A major factor affecting children in poverty is being more susceptible to diseases than children not in poverty. Moonie, Sterling, Figgs, and Castro (2006) found that children from impoverished backgrounds, such as inner city children, miss more days from school and have more severe episodes of asthma than other children. Studies have also demonstrated that the higher risk for diseases included not only the family income level but is relevant across the social class spectrum, which includes income, education, living conditions, community, and support (Chen, Martin, and Mathews, 2006). As socioeconomic status increases across spectrums such as higher income, education, and living conditions, the incidences and severity of childhood diseases decrease (Chen et al., 2006). While many children of lower SES do not have health insurance, this increased risk for

health problems is not affected by having or not having health insurance (Bauman, Silver, and Stein, 2006).

The incidences of asthma are more severe and occur more often with children of poverty. A recent research study using poverty Hispanic and Black children eight to 17 years of age found that maternal smoking *in utero* was correlated with greater incidences and management of symptoms (Oh, Tcheurekjian, Roth, Nguyen, Sen, S., *et al.*, (2012). In addition, children with asthma have higher rates of depression, anxiety (Gillaspy *et al.*, 2002 as cited in Molzon, Hullmann, Eddington, and Mullins, 2011) and their quality of life is lower. Not only are there differences in severity and incidences of asthma related to SES, disparities also exist in interventions and treatment. Crowder and Broome (2012) suggest that to address this cultural disparity in treatment interventions, a cultural model is needed to guide the intervention. The lack of a cultural sensitivity to treatment modalities is a significant contributor to poor outcomes in treatment. In a recent study designed to determine the effects of depression on self-management treatment of asthma, which is a popular intervention approach, researchers found that depression alters the effect of the intervention and self-management treatment with urban teens (Guglani, Havstadt, Johnson, Ownby, and Joseph, 2012).

Exposure to lead is another environmental hazard that affects poverty level children more than other children. Persons in poverty are more like to live in old houses with lead based paint and lead plumbing. Studies have demonstrated that lead affects cognitive development and other central nervous system disorders. In a recent study of 154 children 6 months to 6 years of age the Wechsler Preschool and Primary Scale of Intelligence–Revised was given (Jusko, Henderson, Lanphear, Slechta, Parsons, and Canfield, (2008). Researchers adjusted for a

number of confounding variables, including the IQ of the mother and the home environment. The researchers concluded that IQ scores for children with high lead blood concentrations were 4.9 points lower than children with average lead concentrations.

Family Structure. The family structure and social environment that children are reared in can have a major impact on the short- and long-term effects on their well-being. The home environment which includes the type and quality of parenting, the presence of both parents in the home, the immigration status of parents, and the language spoken in the home are all factors in the well-being of children (Kennedy and Bumpass, 2008). These factors are important because they are directly related the amount and quality of resources available to the family.

One of the major risks factors in families for poor child well-being is the female-headed single-parent family. This family structure has been increasing for the past several decades and the number of children born to unwed mothers compared to married mothers has almost doubled since the 1980s (Kennedy and Bumpass, 2008). As many as 40% of children are currently born out of wedlock. Approximately 60% of the out of wedlock births are to mothers in their 20s and only about 20% are born to teenage mothers, which has dropped in recent years.

While births to unwed mothers have increased overall, unmarried women with a college degree have the lowest incidences. On the other hand, women with little education past high school have the highest rates of unwed pregnancies and concomitantly the highest rates of poverty. In fact, women in poverty who have a child out of wedlock are approximately five times the poverty rate of women with a college degree.

Marriages rates have decreased significantly since 1960 when approximately 94% of persons married to 59% in 2010. What this means is that the percentage of children born to two parent families also took a nosedive during this same period. Because marriage rates declined and the number of children born to unwed mothers increased many more children are at risk for living in poverty with reduced resources. In 2010 the out of wedlock births to single mothers was at 40.8%. Consequently, there is more reliance on government to support the role that two parent families provided in the past. The decrease in children born to two parents in marriage escalated after the Johnson Administrations War on Poverty initiative in the 1960s. Researchers have found that children born out of wedlock have greater social/emotional problems and lower cognitive scores (Bzostek and Beck, 2008). Children who live with both biological parents who share in child care and economic resources for the family have better outcomes than children living in a single-parent family (Cherlin, 2004)

From the above discussion it could be concluded that the structure of single-parent families leads to the decreased well-being of children. However, the systems/dialectical approach would necessitate that an opposing view be evaluated. An opposing view might begin by asking a simple question: Is there a difference in being raised in an unmarried single-parent family and experiencing trauma related to family instability? In other words, does family structure at birth account for the higher risk factors in these families or do significant events post birth account for them? If the unit of analysis is family changes over time rather than the structure of the family the child is born into, does a different picture emerge for child outcomes? If stability is found as a factor, the structure of the intact family may be less

significant than stability of the family and, therefore, the underlying factors for the differences noted (Waldfogel, Craigie, and Brooks-Gunn, 2010).

Structure and stability have close relations in that changes in structure are often the prelude for changes in stability (Magnuson and Berger, 2009). Some studies addressing the factors of single-parent status and stability have found that children in single-parent families have poorer well-being than children in intact families irrespective of stability (Carlson and Corcoran, 2001). In addition, being unmarried at birth is related to greater instability and less well-being in children than being a single-parent family following divorce (Fomby and Cherlin, 2007). Recent research demonstrates that stability is a strong factor, but also even when distinguishing stable and unstable single-parent homes, the well-being of children in intact two parent families was better. Moreover, the well-being of children born to single-parent mothers, stable or unstable, is worse than that of children born in intact families (Waldfogel, Criagie, and Brooks-Gunn, 2010).

One concern in the stability of female single-parent families the involvement of the biological father. In many single-parent families the father no longer has a relationship with the mother. Nonresident fathers may have a greater role in outcomes with children than generally thought because they reduce some of the stress experienced by the mother which, helps to improve her parenting behaviors. On the other hand, non-resident fathers who have no relationship with the mother, or who have a negative relationship may increased the stress of the mother and decrease her parenting quality. Fathers who live with the single mother have a key role in the well-being of their children (Waldfogel, Craigie, and Brooks-Gunn, 2010).

A compelling argument for the differences in intact versus single-parent families is limited resources of single-parent families, a sizable number of which are below the poverty level (McLanahan, Knab, and Meadows, 2009). The argument from this position would be that the financial limitations of these families in addition to increasing stress reduce their ability to openly participate in society due to their poverty status. In addition to financial resources, family members invest personally through emotional support and time spent with children. Single-parent families generally have less of these resources than other families. Typically single-parent mothers who work lack time and energy for family responsibilities. Consequently, even routines may be missing since most things are accomplished in a hit or miss fashion (Sigle-Rushton and McLanahan, 2002). While cohabiting couples have two persons present in the home, the roles they play tend to diverge from the intact two-parent households. The cohabiting fathers and “social fathers”, live-in boyfriends of the mother, are generally less emotionally supportive and spend little time in parenting.

In single-parent homes in which the father is nonresidential, there is typically limited contact. What may start as frequent involvement tends to decrease with time (Carlson and McLanahan, 2009). Research generally concludes that the father’s involvement, either residential or non-residential and that of the social father, is an important variable in well-being outcomes for children. Overall, children have less behavioral and emotional problems and display greater social and cognitive development when the father is involved with them whether residential, nonresidential, or social. Research indicates that non-cohabiting unmarried mothers will be unlikely to ever have a cohabiting partner for her child(ren).

Some efforts have been made to increase marriage and improve relationship skills among non-married and/or cohabiting couples. The question remains as to whether improving relationship quality will also increase relationship stability. The Building Strong Families Project (Wood, McConnell, Moore, Clarkwest, and Hsueh, 2010) resulted in some positive relationship skills among African American couples although stability in marriage was not one of the findings. To date there has been little study of relationship enhancing programs that have been often used for married couples applied to non-married or cohabiting couples Reinhold (2010). These programs need to be altered to fit the needs of fragile families because many of these families are poor and lack sufficient education. Seen in its totality, non-married cohabiting families are both a cause and an outcome of family instability (Cowan, Cowan, and Knox, 2010). They frequently lead to periods of families comprised of single mothers and their children in which the father is less involved with children and when coupled with the mother seeking another partner, greater stress and instability.

Statement of the Problem

From the above discussion this author concludes that: 1) unmarried single-parent mothers are at high risk for poverty and reduced possibility of establishing a stable on-going partnered relationship; 2) Children in unmarried female-headed single-parent families have greater risks of cognitive and developmental delays; 3) Parenting in unmarred single-parent families lacks consistency and tend to be harsh and lacking in support; 4) Mothers are stressed and depressed which affects the child's development; 5) Mothers in unmarried single-parent families tend to have low educational status; 6) Mothers in unmarried single-parent families have limited skills

for adequate employment; 7) Mothers in unmarried single-parent families lack knowledge of healthy living, including nutritional needs, health, and safety for children.

Intervention Proposal

- Improve educational level – Provide childcare services for mothers for educational training or work.
- Provide a stipend to aid in educational expenses.
- Provide guidance in acquiring non-intrusive parenting skills through modeling of play, reading storybooks and interaction with the child.
- Provide material on parenting and child development milestones to mothers.
- Link with university or community college child development programs to set up internships in which students could provide the main interaction with mothers and their children and receive course credit.
- Provide support for daily healthy living.

References

- Bauman, L.J., Silver, E.J., & Stein, R.E.K. (2006). Cumulative social disadvantage and child health. *Pediatrics, 117*(4), 1321-1328.
- Belsky, J., & Jaffee, S. (2006). Multiple determinants of parents. In D. Cocchetti and D. Cohen (Eds.), *Developmental Psychopathology: Risk Disorder, and Adaptation* (2nd ed., Vol. 3, pp.38-83). New York, Wiley.
- Bradley R.H., Corwyn, R.F., Burchinal, M., McAdoo, H.P., Garcia-Coll, C, (2001). The home environments of children in the United states. Part 2: Relations with behavioral development through age 13. *Child Development, 72*, 1868-1886.
- Bzostek, S., & Beck, A. (2008). Family structure and child health outcomes in fragile families. Center for Research on Child Wellbeing Working Paper WP08-11-FF.
- Carlson, M.J., & Corcoran, M.E. (2001). Family structure and children's behavioral and cognitive outcomes. *Journal of Marriage and Family, 63*, 779-792.
- Carlson M., & McLanahan, S. (2009). Fathers in fragile families. In M. E. Lamb (Ed.). *The role of the father in child development*.(5th edition). New York: Wiley and Sons.
- Chen, E., Martin, A.D., & Matthews, K.A. (2006). Socioeconomic status and health: Do gradients differ with childhood and adolescence? *Social Science and Medicine, 62*(9), 2161-2170.
- Cherlin, A.J. (2004). The deinstitutionalization of American marriage. *Journal of Marriage and Family, 66*, 848 – 861.
- Cohen, S., Doyle, W.J., Baum, A. (2006). Socioeconomic status is associated with stress hormones. *Psychosomatic Medicine 68*(3), 414-420.

- Cowan, C.A. , Cowan, C.P., & Knox, V. (2010). Marriage and fatherhood programs. *Future Child*, 20(2), 205-230.
- Crowder, S. J., & Broome, M. E. (2012). A framework to evaluate the cultural appropriateness of intervention research. *Western Journal of Nursing Research*, 34(8), 1002-1022.
- Engle, P.L., & Black, M.M. (2008). The effect of poverty on child development and educational outcomes. *Annals of New York Academy of Science*, 1136, 243-256.
- Farah, M.J., Shera, D.M., Savage, J.H., Betancourt, L., Giannetta, J.M., Brodsky, N.L., Malmud, E.K., &Hurt, H. (2006). Childhood poverty: Specific associations with neurocognitive development. *Brain Research*,110(1), 166-174.
- Fernald, L., & Gunnar, M.R. (2009). Effects of poverty-alleviation Salivary cortisol in very low-income children. *Social Science Medicine* 68(12), 2180-2189.
- Fomby, P., & Cherlin. A.J., (2007). Family instability and child wellbeing. *American Sociological Review* 72, 181-204.
- Gottfried, J.A., O'Doherty, R., & Dolan, R.J. (2003). Encoding predictive value in human amygdala and orbitofrontal cortex, *Science*, 301, 1104-1107.
- Guglani, L., Havstadt, S.L., Johnson, C.C., Ownby, D.H., & Joseph, C.L.M. (2012). Effects of depressive symptoms on asthma interventions in urban youth. *Annals of Asthma, Allergy and Immunology*, 109(4), 237-242.
- Hackman, D.A., Farah, M.J., & Meany, M.J.(2010). Socioeconomic status and the brain: Mechanistic insights from human and animal research. *Nature Reviews Neuroscience*, 11, 651-659.

- Hesse, E., Main, M. (2006). Frightened, threatening, and dissociative parental behavior in low-risk samples: Description, discussion, and interpretations. *Development and Psychopathology, 18*, 309-343.
- Justo, T.A., Henderson, C.R., Lanphear, B.P., Croy-Slechta, D.A., Parsons, P.J., & Canfield, R.A. (2008). Blood lead concentration < $\mu\text{g-dL}$ and child intelligence at 6 years of age. *Environmental Health Perspective, 116*(2), 243-248.
- Kennedy, S., & Bumpass, L. (2008). Cohabitation and child living arrangements: New estimates from the United States. *Demographic Research 19*, 663-692.
- Lyons-Ruth, K. (2008). Contributions of the mother-infant relationship to dissociative, borderline, and conduct symptoms in young adulthood. *Journal of Infant Mental Health, 29*, 203-218. Doi: 10.1002/imhj.20173
- Magnuson, K., & Berger, L.M. (2009). Family structure states and transitions: associations with children's well-being during middle childhood. *Journal of Marriage and Family, 71*, 575-591.
- Main, M. (1990). Cross-cultural studies of attachment organization: Recent studies, changing methodologies, and the concept of conditional strategies.
- Mansfield, C., & Novick, L.F. (2012). Poverty and health: Focus in North Carolina. *North Carolina Medical Journal, 73*(5), 366-373.
- Maughan, A., Cicchetti, D., & Toth, S.L. (2007). Early occurring maternal depression and maternal sensitivity in predicting young children's emotional regulation and socioemotional difficulties. *Journal of Abnormal Child Psychology, 35*(5), 685-703.

- McEwen, B.S., & Gianaros, P.J. (2010). Central role of the brain in stress and adaptation: Links to socioeconomic status, health, and disease. *Annals of the New York Academy of Science, 1186*, 190-222.
- McLanahan, S., Knab, J., & Meadows, S. (2009). Economic Trajectories in Non-Traditional Families with Children. Working Paper 09-10-FF. Center for Research on Child Wellbeing; Princeton: Sep, 2009
- Molzon, E.S., Hullmann, S.E., Eddington, A.R., Mullins, L.L. (2011). Depression, anxiety, and health related quality of life in adolescents and young adults with allergies and asthma. *Journal of Asthma and Allergy Educator, 2*(6), 288-294.
- Moonie, S.A., Sterling, D.A., Figgs, L., & Castro, M. (2006). Asthma status and severity affects missed school days. *Journal of School Health, 76*(1), 18-24.
- Nisbett, R.E., Aronson, J., Blair, C., Dickens, W., Flynn, J., Halpern, D.F., & Turkheimer, E. (2012). Intelligence: New findings and theoretical developments. *American Psychologist, 67*(2), 130-159. doi 10.1037/a0026699
- Oh, S.S., Tcheurekjian, H., Roth, L.A., Nguyen, E.A., Sen, S., et al., (2012). The effects of secondhand smoke among black and Latino children. *The Journal of Allergy and Clinical Immunology, 129*(6), 1478-1483.
- Reinhold, S. (2010). Assessing the link between premarital cohabitation and marital instability. *Demography, 47*(3), 719-733.
- Roberts, T.W. (1994). A systems perspective of parenting: The child, the family and the social network. Pacific Grove, CA: Brooks/Cole.
- Rohrer, L. M., Cicchetti, D., Rogosch, F. A., Toth, S. L.; Maughan, A. (2011)

- Developmental Psychology*, 47(1), 170-181. doi: [10.1037/a0021305](https://doi.org/10.1037/a0021305)
- Shaw, D.S., & Vondra, J.I. (1995). Attachment security and maternal predicitions of early beavjior problems: A longitudinal study of low-income families. *Journal of Abnormal Child Psychology*, 23, 335-356.
- Shonkoff, J.P., Boyce, W.T., & McEwen, B.S. (2009). Neuroscience, Molecular biology, and the childhood roots of disparities: building a new framework for health promotion and disease prevention. *The Journal of the American Medical Association*, 301, 2256-2259.
- Shonkoff, J.P., Garner, A.S., Siegel, B.S., Dobbins, M.F., McGinn, L., Pascoe, L., Wood, D.L. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1), 232-246.
- Sigle-Rushton, W., & McLanahan, S. (2002). The living arrangements of new mothers *Demography*, 39(3), 415-433.
- Toth, S.L., Cicchetti, D., Rogsoch, F.A., & Sturge-Apple, M. (2009). Maternal Depression, Children's Attachment Security, and Representational Development: An Organizational Perspective. *Child Development*, 80(1), 192-208.
- Totsika, V., & Sylva, K. (2004). The home observation for measurement of the environment. *Child and Adolescent Mental Health*, 9(1), 25-35.
- U.S. Department of Commerce (2011). How the Census Bureau measures poverty. The U.S. Census Bureau. Washington, D.C.
- Van IJzendoorn, M.H., Bakermans-Kranenburg, M.J. (2003). Attachment disorders and disorganized attachment: Similarity and different. *Attachment and Human Development* 5, 313-320..

Waldfogel, J., Craigie, T.L. & Brooks-Gunn, J. (2010). *Fragile Families and Child Wellbeing*.

Future of Children, forthcoming.

Wood, R.G., McConnell, S., Moore, Q., Clarkwest, A., Hsueh, J. (2010). *The building strong families project: Strengthening unmarried parents' relationships: The early impact of building strong families*. The Office of Planning, Research, and Evaluation, Administration for Children and Families. Princeton, NJ: Mathematica Policy Research.