

EVIDENCE BASED PRACTICES

REFERENCE

ABSTRACT

Achenbach, T. M. (1997). What is normal? what is abnormal? developmental perspectives on behavioral and emotional problems. In S. S. (Luthar, & J. A. (Burack (Eds.), *Developmental psychopathology: Perspectives on adjustment, risk, and disorder.*; *developmental psychopathology: Perspectives on adjustment, risk, and disorder* (pp. 93-114). New York, NY, US: Cambridge University Press.

This chapter presents an empirically based approach to distinguishing between the normal and abnormal in behavioral/emotional problems from early childhood to adulthood. To improve our ways of distinguishing between the normal and abnormal, a bootstrapping strategy is outlined that is conceptualized in terms of psychometrics, epidemiology, taxonomy, developmental changes, and cross-informant issues. This strategy has yielded a family of empirically based assessment procedures from which taxonomic constructs have been derived, including cross-informant syndromes and profile types that are scorable from parent, teacher, and self-ratings. The empirically based procedures provide standardized descriptions of problems and competencies for use by diverse workers under diverse conditions. Normative data enable users to judge how a child's scores compare with those of reference groups of peers, as rated by similar types of informants. Although it was originally prompted by the need for better assessment and understanding of childhood disorders, the empirically based approach has also been extended to young adulthood, where it has identified problem patterns that are strongly predicted by preadult syndromes.

Anastasiow, N. J. (1990). Implications of the neurobiological model for early intervention. In S. J. (Meisels, & J. P. (Shonkoff (Eds.), *Handbook of early childhood intervention; handbook of early childhood intervention* (pp. 196-216). New York, NY, US: Cambridge University Press. Retrieved March 17, 2005.

Provides a summary of neurological research findings that can help us understand development/evidence strongly supports the need for environmentally arranged experiences early in the child's life in order to facilitate development as well as to ameliorate risk conditions that are more difficult if not impossible to improve later

August, G. J., Lee, S. S., Bloomquist, M. L., Realmuto, G. M., & Hektner, J. M. (2003). Dissemination of an evidence-based prevention innovation for aggressive children living in culturally diverse, urban neighborhoods: The early risers effectiveness study. *Prevention Science*, 4(4), 271-286.

This study evaluated the effectiveness of the Early Risers "Skills for Success" Program when implemented by neighborhood family resource centers available to urban children and their families. Kindergarten and first-grade children (n=327) enrolled in 10 schools were screened for aggressive behavior, and randomized to two model variations of the Early Risers Program or a no-intervention control condition. The full-strength model (CORE + FLEX) included child and parent/family components whereas the partial model (CORE-only) offered only the child component. The intervention was delivered over two continuous years. CORE + FLEX children showed higher levels of program attendance than their CORE-only counterparts but no differences on outcomes measures were observed between models. When both program models were collapsed and compared to controls, program children showed significant gains on measures of school adjustment and social competence, the most aggressive program children showed reductions in disruptive behavior, and program parents reported reduced levels of stress.

Bailey, D. B., Burchinal, M. R., & McWilliam, R. A. (1993). Age of peers and early development. *Child Development*, 64(3), 848-862.

Examined the developmental trajectories (DTs) of 59 children (aged 21-67 mo) randomly assigned to same- or mixed-age childcare groups. Ss were assessed at 6-mo intervals with the Battelle Developmental Inventory. The authors computed individual and group growth curves for overall development and development within 5 domains: communication, cognitive, motor, adaptive, and personal-social. Group assignment affected the DTs for communication, cognitive, motor, and overall development, with mixed-age Ss showing a quadratic trajectory and same-age Ss a linear trajectory. For adaptive and personal-social development, however, the trajectories were similar. Across all domains, mixed-age Ss tended to score higher than same-age Ss at the younger ages, but these average differences decreased over time and disappeared by age 5 yrs.

Baker, B.L., Feinfield, K.A., (2003). Early intervention. *Current Opinion in Psychiatry*, 16(5), 503-509.

Focuses on papers published between January 2002 and March 2003 on early childhood intervention. Literature reviews, program descriptions, and empirical studies in two areas of early intervention are considered: for children with developmental disabilities, and for children considered at risk for developmental problems. Results show that comprehensive early intervention programs can be quite effective for young children with developmental disabilities, as well as for children who are at risk due to biological or environmental factors. It is concluded that there is a need for additional development and evaluation of evidence-based treatment, as well as a further understanding of mediators and moderators of treatment outcome.

Barnett, D. W., Bell, S. H., Bauer, A., Lentz, F. E. J., Petrelli, S., & Air, A. et al. (1997). The early childhood intervention project: Building capacity for service delivery. *School Psychology Quarterly. Special Changing teacher and staff behavior to benefit children*, 12(4), 293-315. Retrieved March 17, 2005.

Presents the evaluation design and case study outcomes for 28 children (aged 3-5 yrs) from the 1st 3 yrs of the Ohio Early Childhood Intervention (ECI) project. The ECI project was designed to help build the capacity of professionals for intervention design. Capacity building refers to preparing educational systems for change and, specific to this report, providing valid conceptual and procedural guidelines for early intervention. The foundations of the ECI project are ecobehavioral analysis, ecological consultation, and naturalistic intervention design. The acronym PASSKey (Planned Activity, Strategic Sampling, Keystone behavior) describes 3 major aspects of the assessment-intervention guidelines. Validity evidence for the guidelines is based on single case quasi-experimental (accountability and case study) designs documented by comprehensive early childhood case portfolios. In addition, estimates were obtained of the consultants' time spent in problem solving.

Beard, K. Y., & Sugai, G. (2004). First step to success: An early intervention for elementary children at risk for antisocial behavior. *Behavioral Disorders*, 29(4), 396-409.

The increased prevalence and seriousness of antisocial behavior displayed by today's youths have become serious concerns for parents, educators, and community members. Antisocial behavior has a developmental course that starts with minor offenses in preschool (e.g., whining, teasing, noncompliance) and develops into major offenses (e.g., vandalism, stealing, assault, homicide) in older children and adolescents. Research results suggest that if interventions are implemented in the early elementary years, the likelihood of preventing future antisocial behavior is improved. Furthermore, interventions are said to be more successful if family members and teachers are involved. The purpose of this study was to examine the effects of an early intervention strategy, First Step to Success, involving (a) teacher-directed and (b) a combination of teacher- and parent-directed strategies on the behaviors of elementary school children at risk for antisocial behavior. The results suggest that interventions involving teachers and parents were associated with decreases in problem behavior in the classroom that maintained over 1 academic school year after intervention. Implications and recommendations are presented based on the outcomes and limitations of this study.

Beeghly, M. et al. (1995). Specificity of preventative pediatric intervention effects in early infancy. *Journal of Developmental and Behavioral Pediatrics*, 16(3), 158-166.

The efficacy of 2 contrasting short term preventative interventions administered to a heterogeneous sample of new mothers during the perinatal period was evaluated. The first was infant-centered and used the Brazelton Neonatal Behavioral Assessment Scale as a method of highlighting newborn behavior to new mothers. The second was mother-centered and consisted of an in-depth interview focused on the mothers' concerns about parenting. Mothers were administered an intervention by experienced clinicians at 3 days in the hospital and again at 14 and 30 days at home. Effects of the intervention on maternal reports of parenting stress, mother-infant interactive behavior, and infant developmental quotient were evaluated at 4 months infant age. Both infant- and mother-centered interventions were beneficial to specific groups of new mothers. The efficacy of each intervention was mediated by parity, maternal risk, and type of outcome measure.

Blair, C., Peters, R., & Lawrence, F. (2003). Family dynamics and child outcomes in early intervention: The role of developmental theory in the specification of effects. *Early Childhood Research Quarterly*, 18(4), 446-467.

The current study used developmental theory to articulate hypotheses that address one way in which a focus on the relationship between mother and child may be related to intervention efficacy. This study examined maternal control strategy and child compliance as a function of early intervention beginning at birth for low birth weight, preterm infants and their families and related these aspects of mother-child interaction to behavioral outcomes at age 3 (n=645). Overall, mothers receiving early intervention were no more likely to use a preferred control strategy, guidance orientation, in a structured compliance task than were mothers participating in a follow-up only condition. However, an association between early intervention and maternal guidance was observed among mothers of children who were consistently noncompliant during the task. As a result, maternal guidance as observed in the compliance interaction was associated with reduced externalizing and internalizing behavior at program end for children participating in the intervention but not the follow-up only condition. Findings highlight the value of focusing on the mother-child dyad and illustrate one way in which developmental theory can assist in the specification of treatment effects.

Brook, J. S., Brook, D. W., & Whiteman, M. (2003). Maternal correlates of toddler insecure and dependent behavior. *Journal of Genetic Psychology*, 164(1), 72-87.

The present study was designed to examine the relationship between characteristics of mothers and their toddler's insecure and dependent behavior. The authors studied 254 2-year-old toddlers and their mothers via a structured questionnaire administered to the mothers in their homes. The extent to which insecure and dependent behavior is related to the domains of maternal child rearing, maternal personality traits, parental marital relations, and maternal drug use was assessed. Using Pearson correlations and hierarchical multiple regression analyses, the authors found that the maternal child-rearing and maternal personality domains have a direct effect on the toddlers' insecure and dependent behavior. The maternal child-rearing domain also served as a mediator for the domains of the maternal personality attributes, parents' marital relations, and maternal drug use. There also was evidence suggesting an indirect effect of maternal personality attributes on the toddlers' insecure and dependent behavior, which is mediated by the domain of maternal child-rearing practices. Implications for the prevention of insecure and dependent behavior in toddlers are discussed.

Brown, W. H., Ragland, E. U., & Fox, J. J. (1988). Effects of group socialization procedures on the social interactions of preschool children. *Research in developmental disabilities*, 9(4), 359-376.

Investigated the effects of group socialization procedures on the social behavior of preschoolers. Study 1 involved 20 Head Start students (aged 4 yrs 6 mo to 5 yrs 7 mo) with 2 target Ss (a developmentally delayed girl and a normally developing boy). Study 2 involved 17 Ss (aged 3 yrs 8 mo to 5 yrs 5 mo) at risk for handicapping conditions with 2 target Ss (an autistic and an emotionally disturbed boy). Group socialization procedures consisted of teachers using antecedent and consequent events to promote social interaction during children's games. Social behavior was assessed during group game periods (i.e., intervention sessions) and nonintervention play periods (i.e., generalization sessions). In both studies, during group game periods after intervention, target Ss increased their rates of both prompted and unprompted social interactions with peers. In nonintervention play periods, target Ss improved both the rate and the duration of their social responding with peers.

Burchinal, M. R., Bailey, D. B., & Snyder, P. (1994). Using growth curve analysis to evaluate child change in longitudinal investigations. *Journal of Early Intervention*, 18(4), 403-423. Retrieved March 17, 2005.

Presents an overview of analytic methods for estimating growth curves or developmental trajectories from longitudinal data. Traditional models for studying change are contrasted with a new method, hierarchical linear models. Growth curve analyses of data from an early intervention project involving 84 1-4 yr olds demonstrate the strengths and weaknesses of the various analytic methods. Evidence is presented to show how hierarchical linear models can overcome some of the methodological limitations of other analytic techniques currently used to evaluate change.

Calkins, S. D., Gill, K. L., Johnson, M. C., & Smith, C. L. (1999). Emotional reactivity and emotional regulation strategies as predictors of social behavior with peers during toddlerhood. *Social Development, 8*(3), 310-334.

Observed 56 mothers and their 24-mo-old toddlers on 2 occasions in a series of laboratory procedures designed to assess relations between emotional functioning (emotional reactivity and emotion regulation) in an individual assessment and social behavior with a same-sex peer. Emotional reactivity was assessed using 2 frustration tasks designed to elicit distress. Emotional regulation was assessed by examining the child's behaviors (venting, distraction, focal-object focus, self-orientation, and mother-orientation) when confronted by the distress tasks. Peer play behaviors were coded for social participation and peer-directed conflict (aggressive) behavior. The results indicated that both emotional reactivity and emotion regulation were important predictors of conflict and cooperation. Distress to frustration, when accompanied by high venting or high focal-object focus, was significantly related to conflict with peers but not when accompanied by distraction, mother-orientation or self-focused behaviors. Findings are discussed in terms of the adaptive value of emotion regulation skills in early development, and the importance of identifying the causal relations between child regulation and early social competence.

Campbell, F. A., & Ramey, C. T. (1994). Effects of early intervention on intellectual and academic achievement: A follow-up study of children from low-income families. *Child Development. Special Children and poverty, 65*(2), 684-698.

Conducted a follow-up study, 4-7 yrs after the intervention ended of an experimental study of early childhood educational intervention for 111 children from impoverished families. Ss were randomly assigned to 1 of 4 intervention conditions: educational treatment from infancy through 3 yrs in public school (up to 8 yrs), preschool treatment only (infancy to age 5 yrs), primary school treatment only (age 5-8 yrs), or an untreated control group. Positive effects of preschool treatment on intellectual development and academic achievement were maintained through age 12 yrs. School-age treatment alone was less effective.

Carta, J. J., Greenwood, C. R., Luze, G. J., Cline, G., & Kuntz, S. (2003). Developing a general outcome measure of growth in social skills for infants and toddlers. *Journal of Early Intervention, 26*(2), 91-114. Retrieved March 17, 2005.

Proficiency in social interaction with adults and peers is an important outcome in early childhood. The development of an experimental measure for assessing growth in social skills in children birth to 3 years is described. Based on the general outcome measurement (GOM) approach (e.g., Deno, 1997), the measure is intended for use by early intervention practitioners to identify children having difficulty acquiring social interaction skills and to monitor children's progress during the course of interventions. Results from a sample of 57 infants and toddlers demonstrated the feasibility of 1 of 14 possible measures, positive verbal social behavior (PVSB), in terms of its sensitivity to growth over time, psychometric properties, and practicality for use by early interventionists. Implications for future research and practice are discussed.

Clarke-Stewart, K et al. (2000). Measuring difficult temperament the easy way. *Journal of Developmental & Behavioral Pediatrics, 21*(3), 207-220.

In this study, the authors introduce a new measure of infant temperament, the Pictorial Assessment of Temperament (PAT), and provide information about its psychometric qualities based on findings from a study of 132 mothers and infants. 97 fathers and 148 nonmaternal caregivers also participated. The children were observed at various times over 3 yrs. The PAT is a 10-item measure of "difficult" temperament that is quick and easy to use and avoids some of the inherent problems in existing paper-and-pencil measures of temperament (e.g., complexity of response choices, dependence on respondents' educational level and verbal skills). It has convergent validity with the Revised Infant Temperament Questionnaire and with observed behavior in a laboratory procedure, moderate reliability and stability over time, and moderate agreement between mothers' and fathers' reports of temperament. Predictive validity was demonstrated by significant associations with the children's later disruptive behavior, behavior problems, lack of sociability, and negativity in interactions with their mother. Parent characteristics (agreeableness, extraversion, neuroticism, sensitivity, depression) were not related to scores on the PAT, demonstrating its discriminant validity.

Conroy, M. A., & Brown, W. H. (2004). Early identification, prevention, and early intervention with young children at risk for emotional or behavioral disorders: Issues, trends, and a call for action. *Behavioral Disorders, 29*(3), 224-236.

Educators have frequently expressed concern about young children who are exposed to known environmental risk factors associated with the development of chronic behavior problems (e.g., poverty, domestic violence, child maltreatment). Nevertheless, a societal commitment to address these environmental risk factors by identifying young children who are at risk for or are demonstrating chronic problem behaviors and to provide effective prevention and early intervention services has not been forthcoming. Although researchers have developed a number of effective early identification, prevention, and early intervention strategies, several significant barriers to the widespread implementation of those practices remain. The authors discuss these issues as they affect children who have emotional or behavioral disorders. They argue for societal action to change current policies and practices for young children.

Cyr, C., & Moss, E. (2001). The role of mother-child interactions and the maternal depression during the preschool period in the prediction of the attachment of the child at school age. *Canadian Journal of Behavioural Science, 33*(2), 77-87.

Examined the contribution of mother-child partnership and maternal depression during the preschool period to the prediction of the child's attachment classification at early school-age in 91 French-Canadian children. Mother-child interactions were observed during a collaborative task using a scale measuring synchronized and reciprocal social-affective exchanges in the mother-child partnership (age 3-5 yrs). Maternal depression was assessed during the same lab visit using the Beck Depression Inventory. At a second lab visit (age 5-7 yrs), attachment classifications were assigned on the basis of reunion behaviour. A discriminant function analysis showed that reciprocal mother-child partnerships in the absence of maternal depressive symptom predicted security of attachment two years later, whereas failed reciprocity in the presence of maternal depressive symptoms predicted both insecure disorganized and ambivalent attachment. Quality of prediction is high for secure, ambivalent and disorganized children, although ambivalent and disorganized children cannot be distinguished from each other. Results support the importance of mother-child interactions and maternal depression as preschool variables associated with security and insecurity of attachment at early school-age.

Dieterich, S. E., Hebert, H. M., Landry, S. H., Swank, P. R., & Smith, K. E. (2004). Maternal and child characteristics that influence the growth of daily living skills from infancy to school age in preterm and term children. *Early Education & Development, 15*(3), 283-303.

Research findings. Growth across 6 months to 8 years of age, assessed at seven time points, for daily living and cognitive skills was compared for term ($n = 122$), very low birth weight (VLBW) children of low ($n = 114$) and high ($n = 73$) medical risk and lower socioeconomic status (SES). Dramatic declines in daily living skills were found for all children, while cognitive skills were stable across this age range. By 8 years, daily living skills were in deficient ranges for all groups with both VLBW groups showing lower levels in both skill areas across all ages compared to term children. Relations between child and parenting factors and daily living skill growth were examined in order to better understand this decline. Early maternal general stimulation and directiveness predicted slower declines in daily living skills while higher parental developmental expectations predicted higher levels in daily living skills. Practice. These results demonstrated the negative impact of lower SES and biological risk on children's growth in daily living skill. The findings highlighting several parenting factors that are important in understanding individual differences in children's daily living skill development have implications for early intervention.

Domitrovich, C.E. & Greenberg, M.T. (2004). Preventive interventions with young children: Building on the foundation of early intervention programs. *Early Education & Development. Special Prevention Interventions with Young Children, 15* (4), 365-370.

This special issue was initiated to highlight the latest innovations in prevention research with young children. This special issue of *Early Education and Development* includes articles that focus on two aspects of prevention science. In the first article Boyce et al examine the natural behavior of Latina mothers and their children when interacting with books. The findings provide important information about vocabulary development in young Latino children and potential strategies for future culturally sensitive interventions that promote cognitive development. The second article by Brotman et al. present findings regarding the multiple risk factors associated with conduct problems and social competence in a sample of preschool-age children with older, adjudicated siblings. The third article by Izard et al. evaluates the impact of the Emotions Course curriculum, a universal program that is delivered by teachers. The final article by Seifer et al. describes the perspectives of individuals using the curriculum and some of the implementation challenges encountered when conducting the program in the school setting with elementary age children. The collection of articles in this special issue represents some of the most recent advances in prevention science with young children.

Fantuzzo, J., Bulotsky, R., McDermott, P., Mosca, S., & Lutz, M. N. (2003). A multivariate analysis of emotional and behavioral adjustment and preschool educational outcomes. *School Psychology Review*, 32(2), 185-203.

The study examined the multivariate relationship between dimensions of preschool emotional and behavioral adjustment assessed at the beginning of the year by the Adjustment Scales for Preschool Intervention (ASPI) and multiple learning and social competencies at the end of the year with an urban Head Start sample. This study also examined the differential pattern of emotional and behavioral problems for children identified to receive services by Head Start staff. Results indicated that overactive dimensions at the beginning of the year predicted socially disruptive problems in the classroom at the end of the year. Underactive problem dimensions were associated with disengagement in play and poor emergent literacy and classroom learning outcomes. Findings indicated that Head Start staff underidentified children with emotional/behavioral problems as a group, with a pattern toward identifying children with overactive needs. Children with underactive needs were least likely to be detected by the staff and were most at-risk for active poor school readiness outcomes. Implications for policy, practice, and future research are discussed.

Forness, S.R., Serna, L.A., Kavale, K.A., & Nielsen, E. (1998). Mental health and head start: Teaching adaptive skills. *Education & Treatment of Children: Special Severe behavior disorders of children and youth*, 21(3), 258-274.

Primary prevention of behavioral disorders has recently focused on early detection and universal interventions for high-risk children. Head Start has been a particular focus; yet the nature of effective mental health intervention for preschool children is not entirely clear. Since most professionals would agree that skill-building approaches are critical, the use of a self-determination curriculum would seem to offer definite advantages. The curriculum has a number of critical adaptive skill domains including (a) social skills, (b) self-evaluation, (c) self-direction, (d) networking or friendship, (e) collaboration or support seeking, (f) problem-solving and decision-making, and (g) dealing with stress and conflict. Examples of lessons are presented, and the use of this curriculum in the context of mental health intervention for Head Start children is discussed.

Fox, L., Dunlap, G., & Powell, D. (2002). Young children with challenging behavior: Issues and considerations for behavior support. *Journal of Positive Behavior Interventions. Special Section on Urban Issues*, 4(4), 208-217.

The critical importance of intervening early to promote the social and emotional development of young children is a recurring theme in several reports commissioned by national organizations and leaders. There is an increasing awareness that social-emotional difficulties and problem behaviors in young children are highly likely to continue in school. In addition, young children who show the most chronicity and stability of problem behavior are more likely to be members of families who experience marital distress, parental depression, and poverty. Young children in urban environments who have problem behavior are likely to also face challenges in health, poverty, and access to quality childcare and other services. In this article, the complexity of the urban context is described with a focus on the lives of young children and their families. The authors present a discussion of appropriate practices and research that provides a foundation for the development of effective early intervention programs for young children affected by environmental and developmental challenges. The emphasis of program recommendations is on comprehensiveness in the design of family-centered behavioral support options.

Fox, N.A. & Henderson, H.A. (1999). Does infancy matter? Predicting social behavior from infant temperament. *Infant Behavior & Development*, 22(4), 445-455.

Argues that infant temperament, defined as behavioral styles that appear early in life as a direct result of neurobiological factors, plays a significant role in the development and expression of social behavior. Temperament may be studied using a typological or dimensional approach and the relations between early temperament and later behavior can be examined in terms of homotypic or heterotypic continuity. The implication of each of these approaches for understanding the influence of infant temperament on social development is examined. The authors suggest that under certain circumstances one can predict social behavior by identifying two temperament types in infancy. These types are high reactive/high negative infants and high reactive/high positive infants. A significant proportion of the high reactive/high negative infants display behavioral inhibition and social reticence through the preschool years, whereas a significant proportion of the high reactive/high positive infants display exuberance and positive social interaction through the preschool period.

Fraser, M. W., Day, S. H., Galinsky, M. J., Hodges, V. G., & Smokowski, P. R. (2004). Conduct problems and peer rejection in childhood: A randomized trial of the making choices and strong families programs. *Research on Social Work Practice, 14*(5), 313-324.

This article discusses the effectiveness of a multicomponent intervention designed to disrupt developmental processes associated with conduct problems and peer rejection in childhood. Compared with 41 children randomized to a wait list control condition, 45 children in an intervention condition received a social skills training program. At the same time, their parents participated in an in-home family intervention. Compared with control group children, intervention children demonstrated significant improvements on five of six outcome measures. Differences between the experimental and control groups suggest the programs strengthen children's prosocial behavior, promote their ability to regulate emotions, and increase social contact with peers. Intervention also was associated with significant improvements in classroom comportment and decreases in relational aggression, a measure of coercion in peer relationships. The findings are consistent with those of other programs effective in interrupting risk processes associated with conduct problems in childhood and early adolescence.

Gagnon, S. G. (2001). Relationships between peer interactive play and school success in four year-old at-risk children. *Dissertation Abstracts International: Section B: The Sciences & Engineering, 62* (5-B), 2530.

The purpose of this study was to examine the relationships between peer interactive play and school success in a sample of four year-old children identified as at-risk for problems in school. Forty-three males and 42 females, ranging in age from 50 to 66 months ($M = 57.74$), participated in the study. Subjects were primarily Caucasian. Ratings of peer interactive play were collected from parents and teachers on the Penn Interactive Peer Play Scale (PIPPS; Fantuzzo, Coolahan, Mendez, McDermott, & Sutton-Smith, 1998; Fantuzzo, Mendez, & Tighe, 1998). Social-emotional functioning was assessed by the Vineland Social-Emotional Early Childhood Scale (SEEC; Sparrow, Balla, & Cicchetti, 1998), which was administered to parents and teachers. School success variables included measures of cognitive ability, including two subtests from the Differential Ability Scales (DAS; Elliott, 1990) and the School Readiness Composite from the Bracken Basic Concepts Scale, Revised (BBCS-R; Bracken, 1998). Simple correlations, canonical correlations, and multiple regression analyses were computed to analyze the data. Significant correlations were found between parent and teacher ratings on the PIPPS and their corresponding scores on the SEEC. Two scales on the teacher PIPPS correlated significantly with student scores on the DAS. Significant mean differences were found between parent and teacher ratings on the PIPPS. Findings are discussed with regard to situation specificity and interrater differences. Implications of these findings include the important contributions play makes to children's development of cognitive and social-emotional development. These findings provide evidence for the psychometric integrity of the PIPPS and suggest that psychologists should add measures of play to their assessment batteries with young children. Rating scales such as the PIPPS contribute to the ecological validity and multifaceted nature of preschool assessments. In addition, the utility of the PIPPS was extended beyond the initial standardization sample to include a sample of primarily Caucasian children living in a more rural area.

Gagnon, S. G., & Nagle, R. J. (2004). Relationships between peer interactive play and social competence in at-risk preschool children. *Psychology in the Schools, 41*(2), 173-189.

Relationships between peer interactive play and social competence in a sample of preschool children ($N = 85$) considered at risk for academic difficulties were examined. Ratings of peer interactive play and social emotional development were collected from parents and teachers on the Penn Interactive Peer Play Scale and Vineland Social-Emotional Early Childhood Scale. Multivariate techniques revealed significant correlations between parent and teacher ratings on the measures. Results are discussed within the context of conducting multifaceted, ecological assessments of preschool children. Implications for school psychologists are noted with regard to the important associations between peer interactive play and social-emotional development. The psychometric integrity of the PIPPS is further validated and extended beyond the initial standardization sample to include a sample of primarily Caucasian children living in a more rural area.

Geeraert, L., Van den Noortgate, W., Grietens, H., & Onghena, P. (2004). The effects of early prevention programs for families with young children at risk for physical child abuse and neglect: A meta-analysis. *Child Maltreatment: Journal of the American Professional Society on the Abuse of Children*, 9(3), 277-291.

In this article, a meta-analysis is presented on 40 evaluation studies of early prevention programs for families with young children at risk for physical child abuse and neglect with mostly nonrandomized designs. The main aim of all programs was to prevent physical child abuse and neglect by providing early family support. For the meta-analysis, a multilevel approach was used. A significant overall positive effect was found, pointing to the potential usefulness of these programs. The study demonstrated a significant decrease in the manifestation of abusive and neglectful acts and a significant risk reduction in factors such as child functioning, parent-child interaction, parent functioning, family functioning, and context characteristics.

Greenspan, S. I. (1990). Comprehensive clinical approaches to infants and their families: Psychodynamic and developmental perspectives. In S. J. Meisels & J. P. Shonkoff (Eds.), *Handbook of early childhood intervention* (pp. 150-172). New York, NY: Cambridge University Press.

Psychodynamic perspectives emphasize that the infant and child in the family should be studied in the context of their cultural and social patterns / this chapter will elaborate on this perspective through a review of some important developments in the field of infant and early childhood intervention / it will also present a theoretical and clinical discussion of work with multirisk families and their infants, as well as with infants with unique developmental challenges in families that are coping relatively well / the developmental structuralist approach (Greenspan, 1979, 1981) will be presented as a model that integrates psychodynamic, developmental, and emerging empirical perspectives in infants, children, and families who are at risk for environmental and/or biological factors.

Halpern, R. (2000). Early intervention for low-income children and families. In J. P. Shonkoff, & S. J. Meisels (Eds.), *Handbook of early childhood intervention* (2nd ed.); *handbook of early childhood intervention* (2nd ed.) (pp. 361-386). New York, NY, US: Cambridge University Press. Retrieved March 17, 2005.

This chapter examines historical experience, recent developments, and ongoing issues facing the field of early childhood intervention for low-income children and families. The discussion includes an assessment of the evidence for the effectiveness of particular approaches; lessons learned and continuing questions about program design; and an assessment of progress made toward the development of coherent early childhood intervention systems at local and state levels. The chapter also examines early childhood intervention in the context of larger trends in the human services. It focuses principally on services for families with children birth to age 3, whose primary objectives are enhanced child rearing and child development, and in some cases improved maternal well-being and child health.

Hinshaw, S. P. (2002). Intervention research, theoretical mechanisms and causal processes related to externalizing behavior patterns. *Development & Psychopathology*, 14(4), 789-818.

Intervention research with children and adolescents has suffered from a dearth of relevant theoretical grounding and from the lack of a reciprocal 'feedback' mechanism by which clinical trials can inform relevant theorizing and conceptualization. The key issue I discuss is how intervention studies can yield information about developmental and clinical theory as well as mechanisms related to psychopathology. Specific research examples in the field, particularly those emanating from the Multimodal Treatment Study of Children with attention deficit/hyperactivity disorder (MTA study), reveal that probes of moderator and mediator variables can clearly enhance our knowledge of relevant processes and mechanisms. It would be overzealous to make premature claims regarding etiologic variables from intervention research, as treatment studies typically address variables that are causally far 'downstream' from primary causal factors and most clinical trials have statistical power that is barely sufficient for main outcome questions, much less mediational linkages. Overall, the field has severely underutilized experimental intervention research to subserve the dual ends of improving the lives of youth and advancing theoretical conceptualization regarding development and psychopathology.

Kochanska, G., & Aksan, N. (2004). Development of mutual responsiveness between parents and their young children. *Child development, 75*(6), 1657-1676.

A randomized experiment was conducted to test the effects of the Comprehensive Child Development Program (CCDP), a two-generation program that employed case management and home visiting to ensure multi-risk, low-income preschool children and their parents a range of education, health, and social services to meet the complex needs of disadvantaged families. The evaluation of 21 CCDP projects, which followed 4,410 families for five years, found no statistically significant impact on CCDP families when they were compared with control families in either child outcomes (cognitive and socio-emotional development, and health) on parent outcomes (parenting, family economic self-sufficiency, or maternal life course). Since the intervention failed to change parenting behavior or family economic status, the two hypothesized pathways to affecting the well-being of the children, not unexpectedly there were no significant impacts of CCDP on children. The study suggests that the combination of case management and parenting education, delivered through home visits, is not an effective means of improving developmental outcomes for low-income children.

Laible, D. J., & Thompson, R. A. (2002). Mother-child conflict in the toddler years: Lessons in emotion, morality, and relationships. *Child development, 73*(4), 1187-1203.

This comprehensive study of mutual responsiveness examined 102 mothers and 102 fathers interacting with their children at 7 and 15 months. Responsiveness was studied from developmental and individual differences perspectives, and assessed using macroscopic ratings and microscopic event coding. The latter captured parents' reactions to children's negative, positive, and physical bids, and children's reactions to parents' social-interactive bids, mood regulation attempts, and influence attempts. Responsiveness depended on bid type and child age, and reflected developmental changes in children, parents, and relationships. Mothers were more responsive than fathers; children were equally responsive to both parents and coherent in their responsiveness. Ratings revealed dyadic mutuality and longitudinal continuity of responsiveness. Parent-child responsiveness from 7 to 15 months was consistent with assumptions of a parent-driven process.

Laucht, M., Esser, G., & Schmidt, M. H. (2001). Differential development of infants at risk for psychopathology: The moderating role of early maternal responsivity. *Developmental Medicine & Child Neurology, 43*(5), 292-300.

Sixty-three mother-toddler dyads took part in a 6-month prospective study that examined how differences in the frequency and nature of early mother-toddler conflict related to individual differences in children's subsequent socioemotional development. When the children were 30 months, mothers and children participated in a series of laboratory tasks and in a 1.5-hr unstructured home observation. All episodes of verbal conflict between mothers and their children were identified from these sessions, transcribed, and coded for certain elements (e.g., strategy, discussion of emotion, and resolution). At 36 months, children participated in measures of emotional understanding, social competence, and early conscience development. Mothers' use of justification, resolution, and mitigation in conflict at 30 months predicted high levels of socioemotional development at age 3 years. These findings suggest that conflict may be an important context for children's socioemotional development.

Laucht, M., Schmidt, M. H., & Esser, G. (2004). The development of at-risk children in early life. *Educational & Child Psychology. Special At-Risk Children From Birth to Elementary School Age: Research Findings and Reflections on Intervention from an International Perspective, 21*(1), 20-31.

Studied the role of early maternal responsive caregiving in the development of behavior problems among infants born with biological risk (low birth weight) and psychosocial risk (disadvantaged family). Psychosocial risk factors included parental low education, psychiatric disorder, broken home/delinquency history, marital discord, unwanted pregnancy, early parenthood, 1-parent family, poor social integration and support, severe chronic difficulties, poor coping skills and overcrowding. 347 children were examined at the ages of 2, 4.5 and 8 yrs. Results of the Mannheim Parent Interview and observations of mother-child interactions indicate that infants at psychosocial risk exhibited more externalizing and internalizing problems across ages than infants not at psychosocial risk, while there were no overall differences between normal and low birth weight groups. With 1 exception, no interactions between biological and psychosocial risk factors emerged. Maternal responsivity did moderate the effects of low birth weight on hyperkinetic and internalizing problems, and influenced the consequences of family disadvantage on total problems. These findings emphasize the importance of early parenting in the behavioral development of at-risk children.

Lehman, E. B., Steier, A., Guidash, K. M., & Wanna, S. Y. (2002). Predictors of compliance in toddlers: Child temperament, maternal personality, and emotional availability. *Early Child Development & Care*, 172(3), 301-310.

The impact of early childhood risk factors on developmental outcome was investigated in a prospective longitudinal study from birth to preschool age. Motor, cognitive and social-emotional functioning was assessed in a sample of 350 children, at the ages of three months, two years and four-and-a-half years, born with different risks. Organic (obstetric complications) and psychosocial risks (family adversity) were varied in a two-factorial design. Results indicated that the sequelae of early risk factors remained evident up to preschool age. Biological and psychosocial risk factors had equally adverse effects, but were specific to the functional areas they affected. Family adversity primarily influenced cognitive and social-emotional functioning, while the impact of pre- and perinatal complications was concentrated in motor and cognitive functioning. In general, the cumulative effect of organic and psychosocial risks was found to be additive. These findings stress the importance of preventive strategies to reduce the impact of multiple adverse factors on multiple outcomes.

Lynch, K.B., Geller, S.R., Schmidt, M.G. (2004). Multi-year evaluation of the effectiveness of a resilience-based prevention program for young children. *Journal of Primary Prevention*, 24(3), 335-353.

This article describes the results of a multi-year, multi-state evaluation of the effectiveness of an early childhood prevention initiative that translates resilience research into practice. Targeted to children in preschool through the early elementary grades, the intervention comprises teacher training, a year-long classroom curriculum, original materials and music, and a companion parent education program. The evaluation methodology evolved from pre-experimental to true experimental design and encompassed multiple program replications. Child outcome data indicate that the intervention is effective in both: (a) strengthening children's social-emotional competence and positive coping skills and (b) suppressing the development of antisocial, aggressive behavior. The systematic process and outcome evaluation of this prevention initiative fills a gap by providing hard evidence of the effectiveness of a developmentally appropriate, research-based intervention for young children.

Mahoney, G., Robinson, C., & Powell, A. (1992). Focusing on parent-child interaction: The bridge to developmentally appropriate practices. *Topics in Early Childhood Special Education*, 12(1), 105-120. Retrieved March 17, 2005.

Contrasts the differences between the educational philosophy and procedures used in early childhood education (ECE) and early childhood special education (ECSE). ECE emphasizes child-directed instruction based on children's choices and interests and is embedded in children's play. ECSE emphasizes teacher-directed activities promoting the acquisition of specific developmental skills. There is insufficient evidence to claim that the ECSE model is essential to the developmental functioning of children with disabilities. Rather, research on parent-child interaction points to the potential benefits of ECE procedures by promoting cognitive, language, and social development. Suggestions are made on how the ECE model can be adapted to meet the needs of children with disabilities.

Mathiesen, K. S., & Sanson, A. (2000). Dimensions of early childhood behavior problems: Stability and predictors of change from 18 to 30 months. *Journal of abnormal child psychology*, 28(1), 15-31.

Fifty-one mother-toddler (aged 15-31 mo) dyads participated in a study on the predictors of compliance. Mothers completed 2 questionnaires: the Multidimensional Personality Questionnaire (A. Tellegen, 1982), a measure of maternal personality, and the Toddler Behavior Assessment Questionnaire (H. H. Goldsmith, 1987), a measure of child temperament. A free play period in the laboratory provided the observations for scoring the quality of the mother-toddler interactions with the Emotional Availability Scales (Z. Biringen et al, 1993). The following clean-up task in which children were asked to help put the toys in the basket provided the observations for scoring compliance with maternal directives. Emotional availability was the strongest predictor of compliance, especially the maternal variables of sensitivity and structuring. Child temperament was also implicated, with high compliance toddlers perceived by their mothers to be less socially fearful and less prone to anger than their less compliant peers. The results are discussed in terms of the contribution of the mother-child emotional climate to the development of compliance.

McFadyen-Ketchum, S. A., Bates, J. E., Dodge, K. A., & Pettit, G. S. (1996). Patterns of change in early childhood aggressive-disruptive behavior: Gender differences in predictions from early coercive and affectionate mother-child interactions. *Child development*, 67(5), 2417-2433.

Examined the prevalence, structure, stability, and predictors of change in early behavior problems in a population-based sample of 750 Norwegian children at 18 and 30 mo of age. A clear factor structure involving 4 dimensions emerged at both assessment times: 2 factors were characterized by externalizing behaviors and were labeled Social Adjustment and Overactive-Inattentive; 1 factor tapped internalizing problems and was labeled Emotional Adjustment; and the 4th, related to general immaturity, was labeled Regulation. Specific patterns of child and family risk factors were associated with stability and change over the 2 time points for each factor. Children with stable problems had the most problematic characteristics on all significant predictors, followed by children with problems at 1, but not both, time points. The data suggest that it is possible to identify risk factors for stable problems at 18 mo, allowing some prediction of those children whose problems will persist over early childhood. Since specific risk factors emerged for specific types of behavior problems, the results may provide some much-needed guidance to early intervention efforts.

McLean, Mary E; Snyder, Patricia; Smith, Barbara J; Sandall, Susan R. (2002). The DEC recommended practices in early intervention/early childhood special education: Social validation. *Journal of Early Intervention*. Vol 25(2), Spr 2002, pp. 120-128.

Results are reported from the field survey of the DEC Recommended Practices as one part of a national effort by the Division for Early Childhood (DEC) of the Council for Exceptional Children (CEC) to develop evidence-based practices for Early Intervention/Early Childhood Special Education (EI/ECSE). Surveys were received from 388 respondents consisting of practitioners, parents, and administration or higher education personnel. The respondents supported all of the practices as recommended practice. Additional information was obtained from the respondents about the extent of current use of the practices.

National Center for Clinical Infant Programs, Arlington, VA (US). (1994). *Diagnostic classification: 0-3: Diagnostic classification of mental health and developmental disorders of infancy and early childhood*. Arlington: National Center for Clinical Infant.

"DC: 0-3" is the product of an 8-yr effort by a multidisciplinary group of clinicians and researchers [for diagnosing emotional and developmental problems in the 1st 3 yrs of life]. "DC: 0-3" identifies and describes disorders not addressed in other classification systems and the earliest manifestations of problems described in other systems. "DC: 0-3's" multi-axial system is designed to focus the clinician's attention on all key aspects of very young children's experience--the infant's relationships with caregivers; individual differences in motor, sensory, language, cognitive, and affective development; the young child's capacity to organize experience; family patterns; and psychosocial stressors in the environment as [they] affect the infant or young child.

NICHD Early Child Care Research Network, Rockville, MD (US). (2004). Affect dysregulation in the mother-child relationship in the toddler years: Antecedents and consequences. *Development & Psychopathology*, 16(1), 43-68. Retrieved March 11, 2005.

The purpose of this study was to examine child, maternal, and family antecedents of children's early affect dysregulation within the mother-child relationship and later cognitive and socioemotional correlates of affect dysregulation. Children's affect dysregulation at 24 and 36 months was defined in the context of mother-child interactions in semistructured play and toy cleanup. Dyads were classified as dysregulated at each age based on high negative affect. Affect dysregulation was associated with less maternal sensitivity and stimulation, more maternal depressive symptoms, and lower family income over the first 36 months of life. Children with early negative mood, lower Bayley Mental Development Index scores and insecure-avoidant (15 months) or insecure-resistant attachment classifications (36 months) were more likely to be in an affect-dysregulated group. Controlling for family and child variables, affect-dysregulated children had more problematic cognitive, social, and behavioral outcomes at 54 months, kindergarten, and first grade. The findings are discussed in terms of the early role played by parents in assisting children with affect regulation, the reciprocal nature of parent-child interactions, and the contribution of affect regulation to children's later cognitive.

Odom, S. L., & Wolery, M. (2003). A unified theory of practice in early intervention/early childhood special education: Evidence-based practices. *Journal of Special Education. Special What Is Special About Special Education?*, 37 (3), 164-173.

Over the last decade, the field of early intervention/early childhood special education (EI/ECSE) has emerged as a primary service for infants and preschool children with disabilities and their families. Systems for providing early intervention for infants and toddlers exist in every state, and all state Departments of Education are responsible for special education for preschool children. In EI/ECSE, a unified theory of practice has emerged and draws from a range of psychological and educational theories. A strong, evidence-based set of practices that service providers and caregivers use to promote the development and well-being of infants and young children with disabilities and their families underlies this theory of practice. The purpose of this article is to describe the tenets of this theory and identify evidence-based practices associated with each.

Odom, Samuel L; Strain, Phillip S. (2002). Evidence-based practice in early intervention/early childhood special education: Single-subject design research. *Journal of Early Intervention. Vol 25(2), Spr 2002, pp. 151-160.*

The purpose of this study was to examine the strength of scientific evidence from single-subject research underlying the Division of Early Childhood (DEC) Recommended Practices. From the 1990 to 1998 research literature, 184 articles met the inclusionary criteria for this review. In general, the literature provided positive, and in some cases very strong, scientific evidence for the effectiveness of practices from the Child-Focused Strand of the DEC Recommended Practices. Researchers most frequently used multiple-baseline, multiple-probe, alternating treatment, and a combination of designs. Treatment effects were replicated an average of 5.5 times per study, and treatments appeared to be implemented with a high degree of fidelity. Researchers less often provided evidence for maintenance, generalization, and social validity of treatments.

Olds, D., Pettitt, L. M., Robinson, J., Henderson, C. J., Eckenrode, J., & Kitzman, H. et al. (1998). Reducing risks for antisocial behavior with a program of prenatal and early childhood home visitation. *Journal of Community Psychology. Special Home Visitation II*, 26(1), 65-83. Retrieved March 17, 2005.

Risk factors for conduct disorder, antisocial behavior, and violence are reviewed and related to the known effects of a program of prenatal and early childhood home visitation. In the Elmira trial, 400 women in the Appalachian region of New York State, 85% of whom were either low income, unmarried, or teenaged, were recruited during pregnancy and followed through their child's 15th birthday. In the Memphis trial, 1,139 low-income women, 65% of whom were aged 18 or younger at registration, were assessed at the 28th and 36th wks of pregnancy and the 6th, 12th, and 24th mo postpartum. The program reduced 3 domains of risk for the development of problem behavior. The effects include: (1) a reduction in maternal substance abuse during pregnancy; (2) a reduction in child maltreatment; and (3) a reduction in family size, closely spaced pregnancies, and chronic welfare dependence. These factors, especially when they concur, have been shown to increase the risk for conduct disorder, delinquency, crime, and youth violence. There is increasing evidence that comprehensive prenatal and early childhood home visitation programs can affect these risks early in the life cycle and reduce conduct disorder and antisocial behavior among children and youth born into at-risk families.

Paul, A. S. (1992). Two decades of early childhood intervention. In T. G. Sticht, & M. J. Beeler (Eds.), *The intergenerational transfer of cognitive skills, vol. 1: Programs, policy, and research issues; vol. 2: Theory and research in cognitive science; cognition and literacy; the intergenerational transfer of cognitive skills; these volumes are based on papers commissioned for the conference on the intergenerational transfer of cognitive skills, (pp. 32-40).* Westport: Ablex Publishing.

Provides an important perspective for understanding the past 20 years of early childhood interventions / among the insights presented in this chapter are: (a) that positive outcomes occurred when evidence of institutional change was in conjunction with individual change; and (b) that need exists to bridge segmented components of this society's social structure (e.g., school and home) / believes that progress in cognitive skills development can be made with children from low-income minority families via early intervention programs / insists, however, that anthropological research findings can assist in designing more effective programs.

Powell, D. R. (1988). Challenges in the design and evaluation of parent-child intervention programs. In D. R. Powell (Ed.), *Annual advances in applied developmental psychology (Volume 3)*, (pp. 229-237). Westport: Ablex Publishing.

Provides a point of departure for future work in the development and evaluation of programs for parents of young children considered to be at development risk draws upon chapters in this volume to identify key challenges in the design and evaluation of parent-oriented early intervention programs.

Puura, Kaija et al. (2005) The Outcome of the European Early Promotion Project: Mother-Child Interaction. *International Journal of Mental Health Promotion Special: The European Early Promotion Project (EPPP)*. 7(1), 82-94.

Unsatisfying mother-infant interaction has long-term consequences for the child, affecting both child health and development. It would therefore seem reasonable to try to detect possible problems in the parent-infant interaction in early infancy, in order to intervene to try to ensure a better outcome for the child. In this study, a group of primary health care nurses were trained to support mothers with newborn babies and to intervene early should problems be detected in the parenting. These mothers formed the Intervention group, and were contrasted with a Comparison group of mothers; the latter were seen by primary health care nurses who had had no additional training and worked with the mothers as they would ordinarily. At the initial assessment the Intervention and Comparison groups for all countries were relatively well matched in their interaction, showing very few differences. At two years the whole intervention had significant positive effects, as predicted, on mother-child interaction. The clearest effects were seen in the Greek sample, where the Intervention mothers provided more variety for the child, used less punishment, had a better relationship with the child and were more involved and more facilitative than the Comparison mothers. In the UK Intervention mothers were more responsive towards their children, provided more appropriate play material, had a better relationship with the children, were more involved and used less control than the Comparison mothers. Although there was no evidence of beneficial outcomes in interactive variables in the other countries, Finland showed positive change on the HOME Inventory as a result of the intervention. This contributes to the overall findings which, taken together, suggest that the intervention had a positive effect on the mothers' ability to maintain positive interaction with their children.

Querido, J. G. (2004). Early intervention for child conduct problems in head start families. *Dissertation Abstracts International: Section B: The Sciences & Engineering*, 64(9-B), 4630.

Investigated mother-child interaction predictors of initial levels and changes in child aggressive and disruptive behavior at school from kindergarten through the third grade. Aggression-disruption was measured by annual reports from teachers and peers of 497 pre-kindergartners. Least-squares regression identified 4 aggression trajectories for each gender, high initial levels with increases in aggression (HI), high initial levels with decreases in aggression (HD), low initial levels with increases in aggression (LI), and low initial levels with decreases in aggression (LD). Mother-child interaction measures of coercion and nonaffection were predictive of initial levels in kindergarten for both sexes. However, for boys, high coercion and nonaffection were particularly associated with HI across elementary school years, while for girls they correlated with HD.

Ramey, C. T., & Ramey, S. L. (1998). Early intervention and early experience. *American Psychologist*, 53(2), 109-120. Retrieved March 17, 2005.

For 4 decades, vigorous efforts have been based on the premise that early intervention for children of poverty and, more recently, for children with developmental disabilities can yield significant improvements in cognitive, academic, and social outcomes. The history of these efforts is briefly summarized and a conceptual framework presented to understand the design, research, and policy relevance of these early interventions. This framework, biosocial developmental contextualism, derives from social ecology, developmental systems theory, developmental epidemiology, and developmental neurobiology. This integrative perspective predicts that fragmented, weak efforts in early intervention are not likely to succeed, whereas intensive, high-quality, ecologically pervasive interventions can and do. Relevant evidence is summarized in 6 principles about efficacy of early intervention. The public policy challenge in early intervention is to contain costs by more precisely targeting early interventions to those who most need and benefit from these interventions. The empirical evidence on biobehavioral effects of early experience and early intervention has direct relevance to federal and state policy development and resource allocation.

Ramey, C. T., Ramey, S. L., Lanzi, R. G., Cotton, & J. N. (2002). Early educational interventions for high risk children: How center-based treatment can augment and improve parenting effectiveness. Borkowski, John G. (ED); Ramey, Sharon Landesman (ED); et al. Parenting and the child's world: Influences on academic, intellectual, and social-emotional development. Monographs in parenting (pp.125-140). Mahwah, NJ, US: Lawrence Erlbaum Associates, Publishers.

Early educational interventions almost always include a parenting education component, and often attempt to alter parent-child interactions, the life course of young single mothers, and/or the perceptions among parents that they are doing a good job. In this chapter, the authors review the findings from 2 randomized controlled longitudinal studies--the Abecedarian Project and Project CARE--and illustrate some of the actual and theoretical connections between center-based educational treatment and the quality of parenting and the home environment. In addition, results from an 8-site randomized controlled replication trial of early intervention or low birth weight and premature infants is presented, with special focus on the benefits to the home environment as well as to the child's emerging intellectual and social-emotional skills. Key program elements addressed include that they were multidisciplinary, intergenerational, individualized, contextually embedded in local service delivery systems, and research-oriented, using a randomized controlled trial design.

Ramey, S.L., Ramey, C.T., (2003). Introduction: Understanding efficacy of early educational programs: Critical design, practice, and policy issues (pp. 35-70). Washington, DC: Child Welfare League of America, Inc.

In this chapter, the authors describe the philosophic and scientific history of the early intervention field. They note that the roots of the field came from studies documenting the tragic effects of environmental deprivation experienced by young orphan children in institutional care. This work and others provided the impetus for early preventive interventions in the first few years of life. The authors summarize the results of five of the most influential projects on model programs: the Consortium for Longitudinal Studies, Abecedarian Project and Project CARE, Perry Preschool, and the Milwaukee Project. All were university-based programs that included random assignment to intensive education and/or family services during at least one of the first five years of life. Together, these studies provide some of the best evidence that high-quality early childhood programs can impact not only the traditional outcomes of IQ and achievement test scores but also, and more importantly, the "real world" outcomes of educational attainment, employment, and reduced need for school remedial services. After discussing the evidence concerning the mediating mechanisms of effects and for whom services are most effective, the authors argue for targeted strategies of interventions for the highest risk children and families.

Reynolds, A. J. (1994). Effects of preschool plus follow-on intervention for children at risk. *Developmental Psychology*, 30(6), 787-804.

The effects of the Chicago Child Parent Center and Expansion Program were investigated for 6 social competence outcomes up to 2 yrs postprogram. A total of 1,106 low-income Black children were differentially exposed to school-based, comprehensive-service components for up to 5 or 6 yrs of intervention (preschool to Grade 3). Results indicated that the duration of intervention was significantly associated, in the expected direction, with reading and mathematics achievement, teacher ratings of school adjustment, parental involvement in school activities, grade retention, and special education placement. Analysis of 7 intervention and comparison groups revealed that participation in the follow-on intervention for 2 or 3 yrs significantly contributed to children's adjustment above and beyond preschool intervention and background factors. Both preschool and follow-on intervention meaningfully contributed to the cumulative effect of intervention.

Reynolds, A. J., & Ou, S. (2003). Promoting resilience through early childhood intervention. Luthar, Suniya S. (ED) Resilience and vulnerability: Adaptation in the context of childhood adversities (pp. 436-459). New York, NY, US: Cambridge University Press.

In this chapter, the authors review evidence about the effects of early childhood interventions in promoting resilience for children who have experienced high levels of social-environmental risk due to economic disadvantage. They address several contemporary issues including the measurement of resilience, interventions as protective factors, and the pathways through which the effects of interventions lead to positive developmental outcomes.

Ripple, C.H. (2004). Children, poverty, and the case for early intervention. *PsycCRITIQUES*, *nv*, np.

This volume, which consists largely of adaptations of articles that first appeared in two excellent 1995 issues of the David and Lucille Packard Foundation publication *The Future of Children*, is an important addition to the literature on early childhood care and education programs for children in poverty. Individual chapters cover an array of relevant topics, such as outcome data, program models, causal models, international comparisons, and welfare reform. Individual contributors are assembled from a variety of perspectives and disciplines, such as education, economics, demography, sociology, psychology, and family and human development. The particular strength of this book is that it argues the case in favor of funding affordable, high-quality early childhood programming from this variety of perspectives. The chorus of diverse voices lends credence to the argument. This volume should prove a valuable addition to the body of evidence in support of programs and effective policies supporting early care and education for low-income children and families. Academic readers should take the last chapter to heart by learning the language of policymakers and making sure that valuable data does not sit on the shelf.

Robinson, J., & Emde, R. N. (2004). Mental health moderators of early head start on parenting and child development: Maternal depression and relationship attitudes. *Parenting: Science & Practice*, *4*(1), 73-97.

The goals of the present study were to screen for behavior problems in preschool children enrolled in Head Start and to examine the feasibility of Parent-Child Interaction Therapy (PCIT) in a randomized, controlled trial of Head Start families of children at risk for the development of later antisocial behavior. Six hundred ninety-six children, ages 3 through 5, were screened for conduct problems. Results showed that on average, children were within the nonclinical range of conduct problem behaviors, with 15% of the children scoring within the clinical range on frequency of conduct problems. Twenty-six families of children who scored within the clinical range were randomized to receive either standard Head Start care or standard care plus PCIT. Results of our study showed that in families who received PCIT plus standard Head Start care, compared to families who received standard care only, parents effectively changed their interactional style with their children, and as a consequence, children's behavior changed dramatically from outside normal limits to within normal limits. Normative data for Head Start families on several measures collected during the pretreatment screening were reported to provide a relevant source of reference for examining PCIT outcome in this population. This study demonstrated the feasibility of PCIT for treating child behavior problems in Head Start families and its potential for buffering some of the adverse effects of poverty by developing parents' confidence in their parenting.

Schmidt, M. E., Demulder, E. K., & Denham, S. (2002). Kindergarten social-emotional competence: Developmental predictors and psychosocial implications. *Early Child Development & Care*, *172*(5), 451-462.

Objective. Interventions designed to help parents and infants living in poverty could show greatest positive impacts on those participants who have multiple risks. In this study, we examine 2 maternal mental health risks (depression and insecure attitudes toward relationships) that were assessed prior to random assignment as potential moderators of 2 Early Head Start (EHS) programs impacts on parent-child interaction and child development. Design. 309 women were randomly assigned to either EHS program services plus developmental screenings ($n = 158$) or community services as usual plus developmental screenings ($n = 151$) following an enrollment interview; 272 provided data at 1 or more follow-up assessment visits. Results. Impacts of EHS on dimensions of parent-child interaction repeatedly observed between 14 and 36 months of child age were concentrated among depressed women (for maternal hostility) and among mothers who were depressed and had insecure relationship attitudes (for maternal sensitivity and child involvement of parent in play). Positive impacts on child language were concentrated among children of depressed mothers. Impacts on cognitive development assessed at 14, 24, and 36 months were not significant.

Seifer, R., Dickstein, S., Sameroff, A. J., Magee, K. D., & Hayden, L. C. (2001). Infant mental health and variability of parental depression symptoms. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(12), 1375-1382.

49 children (mean age 46.36 mo) participated in a study of the predictors of social-emotional competence in kindergarten. This study longitudinally examined relations among child-mother attachment at age 3, family stress at ages 3, 4, and 5, and social-emotional outcomes in kindergarten. Attachment was measured using the Attachment Q-Set and family stress was determined using the Life Experiences Survey. At kindergarten age, mothers completed the Child Behavior Checklist/4-18, teachers completed the Preschool Socioaffective Profile, and focal children's peers completed a sociometric task to determine peer popularity. Results suggest that less secure children are more aggressive and less socially competent in kindergarten, and children who experience more family stress in their preschool years are more aggressive and anxious and less socially competent in kindergarten than their peers who experience less family stress in those same years. Teachers report that boys are more aggressive and anxious in the kindergarten classroom than are girls.

Seitz, V., & Provence, S. (1990). Caregiver-focused models of early intervention. In S. J. (Meisels, & J. P. (Shonkoff (Eds.), *Handbook of early childhood intervention; handbook of early childhood intervention* (pp. 400-427). New York, NY, US: Cambridge University Press. Retrieved March 17, 2005.

Focuses on what is currently known about how professionals can enable parents and other caregivers to support and facilitate the child's development / describes the types of intervention efforts that have been made, whether translated into programs or individual practice, and . . . analyzes the characteristics of those services that are effective / presents research evidence to support the expectation that children benefit when services are directed toward their caregivers address issues concerning how services might best be delivered, then . . . examine evidence concerning what is known about the effects of caregiver-focused programs.

Sigman, M., Mundy, P. (1987). Symbolic processes in young autistic children. *New Directions for Child Development*, 36, 31-36.

Summarizes 2 studies of cognitive, social, and emotional functions in 34 autistic children (mental age 16-38 mo) and equal numbers of normal and mentally retarded children matched on mental age. Developmental aspects examined included symbolic play, sensorimotor abilities, knowledge of object categories, preverbal communication skills, and social interactions. Data indicate that autistic Ss suffered from deficits in social understanding and symbolic representations of other individuals. The core deficit appeared to lie at the intersection of representational abilities and social experience (i.e., social cognition). Knowledge of nonsocial objects did not appear to be specifically delayed.

Smith, Barbara J; Strain, Phillip S; Snyder, Patricia; Sandall, Susan R; McLean, Mary E; Broudy Ramsey, Alison; Carl Sumi, W. (2002). DEC recommended practices: A review of 9 years of EI/ECSE research Literature. *Journal of Early Intervention*. Vol 25(2), Spr 2002, pp. 108-119.

Results are reported from an analysis of the research literature involving children with disabilities (age birth through 5), their families, personnel who serve them, and policies and systems change strategies related to the provision of services. The work reported in this article was part of a national effort by the Division for Early Childhood (DEC) of the Council for Exceptional Children (CEC) and several participating universities to develop a set of evidence-based recommended practices for the field. We reviewed research articles appearing in 48 peer-reviewed journals from 1990 to 1998. Analyses of the literature review database reveal trends in research methods used for studying particular topics and information about populations and settings studied during this time period.

Snyder, P., Thompson, B., McLean, M. E., & Smith, B. J. (2002). Examination of quantitative methods used in early intervention research: Linkages with recommended practices. *Journal of Early Intervention*, 25(2), 137-150.

Findings are reported related to the research methods and statistical techniques used in the 450 group quantitative studies examined as part of the literature review portion of the Division for Early Childhood Recommended Practices project. Twelve trained coders used an investigator-developed coding form to analyze studies across seven major dimensions: (a) sampling procedures, (b) variable selection, (c) variable definition, (d) measurement integrity, (e) treatment fidelity, (f) statistical analyses, and (g) magnitude-of-effect reporting. Results suggested that the methodological integrity of the quantitative research used to inform recommended practices was not uniformly convincing and compelling. Implications are offered related to the strength of empirical support for recommended practices and the conduct and reporting of future research.

- St Pierre, R. G., Layzer, J. I., Goodson, B. D., & Bernstein, L. S. (1999). The effectiveness of comprehensive, case management interventions: Evidence from the national evaluation of the comprehensive child development program. *American Journal of Evaluation, 20*(1), 15-34.
- Examines the course of mothers' depression symptoms in association with child and family functioning beyond that explained by diagnostic status. A longitudinal high-risk design with 16 months of course-of-illness follow-up was used. Data are reported for 123 families in which the children were 14 mo of age at recruitment and 113 families who were also available for the follow-up at 30 mo of age. Structured clinical and family interviews, direct observation of child social-emotional competence, and parent reports of child behavior problems were included. Parameters of maternal symptom patterns across time were associated with child and family functioning. Most of these effects remained when presence/absence of major depression diagnosis was covaried. The trajectory of symptoms over time is important to consider in studies of children at risk and may also help to inform how illness in infancy and early childhood is conceptualized.
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- Svanberg, P. O. G. (1998). Attachment, resilience and prevention. *Journal of Mental Health (UK), 7*(6), 543-578.
- Reviews research on attachment and developmental psychopathology and proposes a framework for primary mental health prevention and early intervention based on the attachment paradigm. Secure and insecure infant attachment patterns, and the effects of very early attachment and parenting on later secure attachment are discussed. The attachment paradigm is applied to primary prevention, based on followup studies of the predictive validity of attachment assessments at different ages. Insecure attachment, while not equated with psychopathology, is regarded as an important vulnerability factor. Evidence from effective interventions suggests that early secure attachment can support development of social competence and facilitate resilience for coping with adverse life events without developing psychological or psychiatric symptoms. Obstacles to secure attachment include parent or child vulnerabilities, child abuse, and restricted access to services. Action points (program components) are outlined for a comprehensive primary prevention strategy across the life cycle.
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- Toth, S. L., Maughan, A., Manly, J. T., Spagnola, M., & Cicchetti, D. (2002). The relative efficacy of two interventions in altering maltreated preschool children's representational models: Implications for attachment theory. *Development & Psychopathology, 14*(4), 877-908.
- A narrative story-stem task was used to evaluate the efficacy of two competing, developmentally informed preventive interventions for maltreated preschoolers and their mothers designed to modify children's internal representations of self and of self in relation to other. 122 mothers and their preschoolers served as participants. Maltreating families were randomly assigned to either the preschooler-parent psychotherapy (PPP), psychoeducational home visitation (PHV), or community standard (CS) intervention group at baseline. 35 nonmaltreating families served as comparisons. Narratives were administered to children at baseline and at the postintervention evaluation. Children in the PPP intervention evidenced more of a decline in maladaptive maternal representations over time than PHV and CS children and displayed a greater decrease in negative self-representations than CS, PHV, and NC children. The mother-child relationship expectations of PPP children became more positive over the course of the intervention, as compared to NC and PHV participants. Results suggest that an attachment-theory informed model of intervention is more effective at improving representations of self and of caregivers than is a didactic model of intervention directed at parenting skills.
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- Vaughan, A., Mundy, P., Block, J., Burnette, C., Delgado, C., Gomez, Y., Meyer, J., Neal, A. R. & Pomaes, Y. (2003). Child, caregiver, and temperament contributions to infant joint attention. *Infancy, 4*(4), 603-616.
- Little is known about variables that may contribute to individual differences in infant joint attention, or the coordination of visual attention with a social partner. Therefore, this study examined the contributions of caregiver behavior and temperament to infant joint attention development between 9 and 12 months. Data were collected from 57 infants using a caregiver-infant paradigm, an infant-tester paradigm, and a parent report of infant temperament. Nine-month measures of caregiver scaffolding and infant initiating joint attention (IJA) with testers were significantly related to 12-month infant IJA with testers. A temperament measure of positive emotional reactivity was related to 9-month IJA, and a measure of negative emotional reactivity was related to 12-month IJA. Temperament and caregiver scaffolding measures, however, were not associated with the development of infant responding to joint attention. These results further the understanding of the multiple processes that contribute to joint attention development in infancy, and support the hypothesis that initiating and responding measures tap different aspects of joint attention development.

Wilton, K., & Barbour, A. (1978). Mother-child interaction in high-risk and contrast preschoolers of low socioeconomic status. *Child development*, 49(4), 1136-1145.

Children's activities with their mothers and the techniques used by mothers while interacting with their child were examined in older (30-46 mo) and younger (12-27 mo) low socioeconomic status (SES) preschool children from high-risk (in terms of cultural-familial retardation) and contrast homes. The 10 Ss in each of the high-risk and contrast groups were subdivided, 5 each, into younger and older groups. Among the measures used were the Children's Activities Scale and the Interaction Techniques Scale. Older high-risk Ss interacted less often with their mothers and spent less time in "highly intellectual" activities than did the contrast Ss. The mothers of older high-risk Ss, in comparison with the contrast group, engaged less often in didactic teaching, showed less encouragement of their child's activities, and failed more often in their attempts to control their child's activities. The differences between younger high-risk and contrast groups, however, were nonsignificant. Implications for future home intervention programs for high-risk low SES children are discussed.

Wolery, M., & Bailey D. B. Jr. (2002). Early childhood special education research. *Journal of Early Intervention*, 25(2), 88-99.

On October 2, 2001, President George W. Bush issued Executive Order #13227 establishing The President's Commission on Excellence in Special Education. The authors were invited to submit written testimony and appear before the Commission to make oral testimony on April 18, 2002. The topic of their testimony was research in early childhood special education. This article is a copy of the written testimony. The authors have suggested research priorities in the following areas: 1) early identification and eligibility, 2) services, 3) outcomes, 4) infrastructure, and 5) the research funding process.