

Prevention and Intervention With Young Children's Challenging Behavior: Perspectives Regarding Current Knowledge

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ABSTRACT: Challenging behavior exhibited by young children is becoming recognized as a serious impediment to social-emotional development and a harbinger of severe maladjustment in school and adult life. Consequently, professionals and advocates from many disciplines have been seeking to define, elaborate, and improve on existing knowledge related to the prevention and resolution of young children's challenging behaviors. Of particular concern for the field of behavioral disorders is the lack of correspondence between what is known about effective practices and what practices young children with challenging behavior typically receive. To increase the likelihood that children receive the best of evidence-based practices, the current analysis was conducted to provide a concise synthesis and summary of the principal evidence pertaining to the presence and impact, prevention, and intervention of challenging behaviors in young children. A consensus building process involving review and synthesis was used to produce brief summary statements encapsulating core conclusions from the existing evidence. This article presents these statements along with descriptions of the strength of the supporting evidence. The discussion addresses directions and priorities for practice and future research.

■ In the past ten years, professionals from various disciplines have expressed alarm regarding the implications of serious challenging behaviors exhibited by young children (e.g., Shonkoff & Phillips, 2000). Increasingly, it is understood that serious and persistent challenging behaviors in early

childhood are associated with subsequent problems in socialization, school adjustment, school success, and educational and vocational adaptation in adolescence and adulthood (e.g., Campbell 1995; Dodge, 1993; Kazdin, 1985; Reid, 1993). As a result, numerous authors, as well as official reports (e.g., New Freedom

Commission on Mental Health, 2003), have noted the importance of identifying, preventing, and resolving challenging behaviors in young children as early in their development as possible. Unfortunately, there remains limited understanding across professionals, disciplines, and service systems regarding what is known about early challenging behaviors and what can be done with respect to prevention and intervention.

Part of the professional reticence pertaining to challenging behaviors is that many behavioral topographies (e.g., tantrums) that are considered challenging in elementary school students are developmentally typical in early childhood. Without a clear delineation of the window during which more mature topographies are expected to emerge, it can be difficult to distinguish serious problems from typical developmental progressions. Still, the growing acknowledgment that early challenging behaviors can have serious long-term consequences has led to more concerted efforts to define and resolve early challenging behaviors. Working from existing definitions (e.g., Division for Early Childhood of the Council for Exceptional Children, 1999), Smith and Fox (2003) recently defined challenging behavior as "any repeated pattern of behavior, or perception of behavior, that interferes with or is at risk of interfering with optimal learning or engagement in pro-social interactions with peers and adults" (p. 5).

In addition to the complexities associated with defining and identifying challenging behaviors, there are similar difficulties in understanding what can be done to prevent challenging behaviors from developing in the first place and, once identified, what can be done via intervention to divert the challenging behaviors to more socially adaptive developmental trajectories. Although important research on prevention and intervention has been conducted, a clear message is lacking regarding what is known and what can be done. Moreover, there is a regrettable disparity between what is known about prevention and intervention and the typical service

delivery experienced by young children with challenging behavior (Shonkoff & Phillips, 2000). It is our contention that correcting this disparity begins with a concise, coherent, and strong set of messages from the field.

In the past few years, a number of federally funded projects¹ have been established to help guide the process of developing and disseminating effective prevention and intervention practices for young children with challenges in social, emotional, and behavioral development. For instance, the Center for Evidence-based Practice: Young Children with Challenging Behaviors (Dunlap, Fox, Smith, & Strain, 2002) was created as a national consortium of research, training, and dissemination efforts focused on enhancing the knowledge base pertaining to challenging behaviors. The center, via its web site (www.challengingbehavior.org) and journal publications, has disseminated a framework for conceptualizing prevention and intervention efforts (e.g., Fox, Dunlap, Hemmeter, Joseph, & Strain, 2003) as well as a number of articles summarizing portions of the empirical literature (e.g., Conroy, Dunlap, Clarke, & Alter, 2005; Joseph & Strain, 2003; Powell, Dunlap, & Fox, 2006). The center's dissemination agenda has been greatly facilitated by a network of national associations² that has functioned to spread a unified message about evidence-based practices and challenging behaviors. In pursuing widespread dissemination, however, it has become increasingly apparent that a need exists for concise, clear, and empirically based statements regarding the current state of knowledge related to challenging behaviors, with an explicit focus on both prevention and intervention concerns. This article describes an effort undertaken by the center to address these issues. The purpose was to establish a concise, data-based summary of the most prominent features of current knowledge as they relate to the presence and impact and, in particular, intervention with and prevention of young children's challenging behaviors. The approach included reviews of the existing literature and a consensus building process intended

¹Examples of federally funded projects include the Center on the Social and Emotional Foundations of Early Learning, funded by the Department of Health and Human Services, Head Start Bureau and Child Care Bureaus; and the Center for Evidence-based Practices of the Orleans-Hawk Puckett Institute, funded by the Office of Special Education Programs, U.S. Department of Education.

²Primary dissemination partners of the center include the Division for Early Childhood (DEC) of the Council on Exceptional Children; National Association for Bilingual Education (NABE), National Association for the Accreditation of Young Children (NAEYC), National Association of Child Care Resource and Referral Agencies (NACCRRA), National Black Child Development Institute (NBCDI), and National Head Start Association (NHSA).

to synthesize current knowledge into brief summary statements that could prove useful for promoting increased awareness across multiple audiences, including researchers, advocates, policy makers, and professionals from diverse disciplines.

Approach

General Approach

The current analysis was undertaken to develop summary statements of existing knowledge that are based on empirical research and valid from the perspectives of various consumers (e.g., policy makers, families, researchers) concerned with conceptualizing, organizing, and delivering prevention and intervention services. Therefore, the focus of the information gathering and consensus building procedures was on practical descriptive, experimental, and quasi-experimental research that has undergone peer review. As research findings were reviewed and integrated into a larger picture, the data were examined across the dimensions of replicability, generality, and utility. The strength of support for observed phenomena was weighed in relation to internal validity, external validity, and social and ecological validity. To the greatest extent possible, the statements were considered in relation to cultural, ethnic, geographic, and economic representativeness. The approach involved reviewing the existing, peer-reviewed literature and developing summary statements through a process of consensus building.

The participants in the process included principal faculty, research associates, and training associates of the center. Participants represented primary collaborators with the center from the University of South Florida, University of Colorado at Denver, University of Kansas, Lehigh University, University of Florida, University of Illinois, Tennessee Voices for Children, and Pyramid Parent Training of New Orleans. Before initiating the review and consensus building process, participants agreed on a number of defining parameters.

Focus of concern. The focus of this examination was on the challenging behaviors of young children. Three content areas were identified: presence and impact; prevention; and intervention. The definition of challenging behavior presented earlier in this article (Smith & Fox, 2003) served as a general guide; however, it was recognized that the data sources used

to describe the empirical knowledge often relied on different definitions. Similarly, many of the studies considered in the analysis did not focus on challenging behaviors per se, but addressed correlates of challenging behavior such as disruptions and deviances in social-emotional development. "Young children" was defined as children from birth through age five; however, most of data on challenging behaviors were obtained from studies of prevention and intervention for children three years of age and older. The analysis was limited to social, environmental, educational, therapeutic, and interactional variables that have been examined and described in peer-reviewed dissemination outlets. We did not consider medical and biological interventions in the analysis.

Degrees of evidence. In establishing criteria for empirically based knowledge related to prevention and intervention, we relied on the definition of evidence-based practices offered by Dunst, Trivette, and Cutspec (2002): *Practices that are informed by research, in which the characteristics and consequences of environmental variables are empirically established and the relationship directly informs what a practitioner can do to produce a desired outcome.* This definition allows for knowledge to be derived from studies involving a variety of methodologies and research designs. We incorporated data from experimental, other correlational, and descriptive investigations, recognizing that research designs are constrained by the nature of the research questions as well as ethical considerations. Our primary concerns regarding the presence of evidence were the credibility and magnitude of the data sources and the extent to which a preponderance of data clearly and consistently supported a discernable message related to the content areas.

Literature Review and Consensus Building Procedures

Reviews of the literature. The first step in developing summary statements involved reviewing and synthesizing existing knowledge. We conducted exhaustive reviews of certain aspects of the literature and examined existing, authoritative documents that described reviews, positions, and consensus statements related to challenging behaviors of young children. Center faculty prepared three comprehensive syntheses of

knowledge. These are available on the center's website (www.challengingbehavior.org), and portions have been published in books and peer-reviewed journals (Conroy et. al., 2005; Joseph & Strain, 2003; Powell et. al., 2006). We also incorporated related reviews (e.g., Shonkoff & Phillips, 2000) and pertinent empirically based consensus documents (e.g., Sandall, Hemmeter, Smith, & McLean, 2005).

In general, the procedures for conducting the literature reviews involved the following steps. First, we searched data bases (ERIC, PsycINFO, Medline) using a variety of keywords pertinent to the areas of interest (e.g., prevention, intervention, challenging behavior, maladaptive behavior, discipline, social-emotional development, social skills). We then conducted hand searches using reference sections from source documents and perusing each issue of journals likely to include articles related to challenging behavior and young children (see Conroy et. al. [2005] and Smith & Fox [2003] for lists of these journals). As a final check to guard against oversights and omissions, we used internet search engines (e.g., Google) to identify web sites that might include more recent research data and references, and we sent summaries of our findings to authorities in the field with a request that they point out any sources we may have overlooked.

Consensus building. To come to a group consensus on key statements specific to the presence and impact of challenging behavior, prevention of challenging behavior, and intervention with challenging behavior, we followed the following four-part process. Portions of the consensus building process took place during a center retreat in August 2004, with 16 participants in attendance. First, based on their own prior substantive work, their familiarity with literature reviews, and their current research interests and endeavors, center participants were asked to self-select one content area as their primary focus. Three content area teams were formed, consisting of four to six participants per team. Second, teams were asked to generate three to five summary statements for their content area. Specifically, teams were charged with capturing summary statements that could be supported by the most robust data available, by prior seminal review papers (e.g., *From Neurons to Neighborhoods*, Shonkoff & Phillips, 2000) and by prior consensus documents (e.g., Sandall et. al., 2005). Third, summary statements were independently reviewed by the other

two teams. The instructions to "reviewers" asked that they edit statements for clarity and accuracy, mark statements that were considered to be inadequately supported by peer-reviewed data, and insert recommendations for additional statements that summarize important data-based knowledge. After all teams had reviewed and edited the summary statements, group meetings followed in which edits, additions, and deletions were discussed, and the entire group of participants eventually agreed that the statements accurately and completely represented their understanding of the pertinent literature.

Summary Statements

The statements produced by the three teams, and finalized by the full group, are listed in *Table 1* and discussed in the following pages. The three sections correspond to the main content areas: presence and impact; prevention; and intervention. The statements are accompanied by explanation, citations designed to illustrate evidence and identify a sample of key sources, and some description of the strength of the supporting documentation.

Presence and Impact of Challenging Behaviors

For well over four decades, researchers from a number of disciplines have conducted longitudinal and retrospective studies concerning the impact of challenging behavior on children's behavioral trajectories. It is noteworthy that these studies have been based on a wide variety of theoretical orientations and have used a wide variety of measurement methods and data analytic procedures. By and large, the data linking early appearing problem behavior to later developmental and social adjustment difficulties are correlational in nature. As such, appropriate caution should be taken when interpreting these data. Notwithstanding these differences and cautionary note, consistent findings have emerged, as evidenced by the major consensus statements that follow.

- (1) *When children with significant problems are neither identified in a timely way nor given appropriate education and treatment, their problems tend to be long lasting, requiring more intensive services and resources over time. Moreover, when the*

TABLE 1
Demographic Information of Participants

<i>Summary Statement</i>	<i>Type of Empirical Support</i>
<i>Presence and Impact of Challenging Behaviors</i>	
1. When children with significant problems are neither identified in a timely way nor given appropriate education and treatment, their problems tend to be long lasting, requiring more intensive services and resources over time. Moreover, when the challenging behavior of young children is not addressed in an appropriate and timely way, the future likelihood increases for poor academic outcomes, peer rejection, adult mental health concerns, and adverse effects on their families, their service providers, and their communities.	This statement is derived from an aggregation of extensive peer-reviewed descriptive and correlational data pertaining to the prevalence of challenging behaviors and longitudinal outcomes.
2. Although some systems and tools for early identification of children with challenging behaviors are available, the actual identification of these children and provision of appropriate services are very low.	Descriptive data from state and federal service programs, and peer-reviewed articles describing service utilization.
<i>Prevention of Challenging Behaviors</i>	
1. Children and their families who access mental and physical care are less likely to have behavioral and social problems.	Peer-reviewed program evaluations and follow-up analyses of early childhood support programs.
2. Nurturing and positive parenting is associated with children who have healthy relationships and reduced challenging behavior.	Program evaluations of large-scale child care and home visiting services
3. High quality early education environments and caregiver interactions are associated with fewer behavior problems and the development of social competence.	Extensive peer-reviewed program evaluation data and longitudinal analyses of social outcomes.
<i>Intervention with Challenging Behaviors</i>	
1. Interventions based on a functional assessment of the relation between the challenging behaviors and the child's environment are effective for reducing challenging behaviors of young children.	Aggregation of descriptive, quasi-experimental, and experimental peer-reviewed studies using single-subject designs.
2. Teaching procedures have been demonstrated to be effective in developing children's skills and reducing challenging behaviors.	Aggregation of descriptive, quasi-experimental, and experimental peer-reviewed studies using single-subject designs.
3. Interventions involving alterations to features of the child's activities and the child's social and physical environment have been demonstrated to reduce challenging behaviors.	Aggregation of descriptive, quasi-experimental, and experimental peer-reviewed studies using single-subject designs.
4. Multicomponent interventions implemented over time and across multiple relevant environments can produce durable, generalized increases in prosocial behavior and reductions in challenging behaviors.	Aggregation of descriptive, quasi-experimental, and experimental peer-reviewed studies using single-subject designs.
5. Family involvement in the planning and implementation of interventions facilitates durable reductions in challenging behaviors of young children.	Quasi-experimental and experimental analyses, including single-subject and randomized control group designs. Numerous qualitative studies have supported this statement as well.

challenging behavior of young children is not addressed in an appropriate and timely way, the future likelihood increases for poor academic outcomes, peer rejection, adult mental health concerns, and adverse effects on their families, their service providers, and their communities.

On a day-to-day basis, it would appear

that children who engage in severe challenging behaviors represent the population of youngsters who are of greatest concern to primary caregivers and service providers (Strain & Timm, 1999). Of this larger group, those labeled as disruptive, noncompliant, aggressive, defiant, or oppositional predictably find their way to the top of the service provider's list of referrals, other placements, and "most

troubling." As Hobbs (1975) so aptly put, not everyone may agree that these children are disturbed, but their physical aggression, destruction of property, lying, and defiance indeed make them *disturbing*. That is not to diminish or discount their risk of school failure and, more significant, their risk of marginalized adult lives characterized by violence, abuse, loneliness, and anxiety (Coie & Dodge, 1998; McCord, 1978; Olweus, 1991). Perhaps there may be no other group of children for whom the "nontreated" or "poorly treated" developmental course is so certain and negative (Lipsey & Derzon, 1998; Patterson & Fleishman, 1979). For example, in a longitudinal post high school follow-up of students who had received special education services, the National Longitudinal Transition Study-2 (Wagner, Cameto, & Newman, 2003) reported the following results: (a) When children with the range of disability categories were compared, those with severe behavior disorders had the lowest grade point average. (b) Approximately 50% of the participants with severe behavior disorders in the NLTS study reported that they failed one or more courses in their most recent school year. (c) More than 66% of those participants failed the competency exam for their grade level. (d) Only one third of those participants completed high school. (e) And this subgroup had the highest dropout rate of any disability category. Moreover, abundant data suggest that there may be powerful, cross-generational patterns of severe problem behavior (Tremblay, 2000; Wahler & Dumas, 1986).

What is our current state of the knowledge related to the development and remediation of these severe behavioral problems? First, early appearing behavior problems in a child's preschool career are the single best predictor of delinquency in adolescence, school dropout, gang membership, adult incarceration, and early death (Loeber & Farrington, 1998; Reid, 1993). Consistent with these long-term data, the stability of challenging behavior in young children over a decade is equal to that for intelligence, with cross-year correlations of 0.80 (Kazdin, 1987). If challenging behavior toward others and property is not altered by the end of the third grade, it appears that it should be treated as a chronic condition, hopefully kept somewhat in check by continuing and ever more costly intervention (Dodge, 1993). It is also apparent that children with challenging behaviors who come from families characterized by coercive interactions are the most likely subgroup to grow into a life course

of antisocial behavior (Moffitt, 1993; Patterson, 1986).

These outcomes enumerated above clearly speak to the compelling national need for the widespread use of effective and sustainable prevention and intervention tactics. In fact, the national costs of unchecked challenging behavior are nearly impossible to calculate accurately because of its pervasive nature. For the child who engages in persistent challenging behavior and to all those with whom he or she interacts (family, peers, educators), the costs include (a) early and persistent peer rejection (Coie & Dodge, 1998; Strain, 1984), (b) mostly punitive contacts with teachers (Strain, Steele, Ellis, & Timm, 1982; Wehby, Symons, Canale, & Go, 1998), (c) family interaction patterns that *all* participants find to be unpleasant (Patterson, 1986; Patterson & Fleishman, 1979), (d) predictable school failure (Kazdin, 1985; Tremblay, 2000), and (e) lack of community integration (Carr et al., 1999; Lucyshyn, Dunlap, & Albin, 2002; Schalock, Baker, & Croser, 2002).

Although it is tempting to attribute (almost exclusively) the many long-term negative outcomes of challenging behavior to the children themselves, challenging behavior does not occur in a social vacuum. As enumerated earlier, macrolevel variables of poverty, community violence, and maternal depression can all play a large role in the genesis and stability of challenging behavior. For example, at the more micro school level, we know that students with severe challenging behaviors (a) are seldom praised for appropriate behavior (Wehby et al., 1998), (b) are seldom afforded effective academic instruction (Walker, Severson, & Feil, 1995; Wehby, Lane, & Falk, 2003), and (c) are often subject to ineffective, reactive, and punitive interventions from teachers (Shores, Gunter, & Jack, 1993).

(2) *Although some systems and tools for early identification of children with challenging behaviors are available, the actual identification of these children and provision of appropriate services are very low.*

Important progress has been made in the field's ability to identify children with and at risk for challenging behaviors (e.g., Bricker, Shoen Davis, & Squires, 2004; Squires & Nickel, 2003; Walker et al., 1995). There remains, however, very little actual identification and intervention for preschool children with challenging

behaviors. To be sure, a wide variety of factors contribute to the relative underidentification and lack of intervention for young children experiencing challenging behavior. Today, the best estimates indicate that 10% to 20% of the preschool population experiences significant challenging behaviors (Campbell, 1995; Lavigne et. al., 1996; Webster-Stratton & Hammond, 1998). In all probability the rather large proportional differences in incidence rates can be attributed to different assessment methods and sample populations.

What is the evidence to support underidentification? Consider the following:

- Although Medicaid screening is mandated for more than nine million eligible young children, fewer than one third receive a full EPSDT (Early and Periodic Screening, Diagnostic and Treatment), and even fewer receive a screen that includes behavioral health (Powell, Fixsen, & Dunlap, 2003; U.S. General Accounting Office, 2001b).
- More than one half of the states report that few or no behavioral health services are being offered under Medicaid (U.S. General Accounting Office, 2001a).
- Pediatricians, who are the primary and usually the first available point-of-contact for young children with challenging behavior, generally have neither the time nor the expertise to effectively detect and refer for behavioral issues (Holden & Schuman, 1995; Reikert, Stancin, Palermo, & Drotar, 1999).
- A number of studies following Head Start children suggest that there may be a bias against identifying children with behavioral problems (Fantuzzo et. al., 1999; Forness et. al., 1998; Sinclair, 1993).
- Child mental health utilization data suggest that only 1%–2% of preschoolers access any mental health services in a year (Sturm et. al., 2001).
- Longitudinal research on children with special needs age birth through 2 years indicates a wide discrepancy between caregivers' rating of behavioral issues and eligibility based on social/behavioral concerns (Hebbeler et. al., 2001).
- Underuse of mental health services is exacerbated by race and ethnicity (Kochanek & Buka, 1998; Sontag & Schacht, 1993; U.S. Department of Education, 2001).

Prevention of Challenging Behaviors

A growing body of evidence supports the contention that a variety of child and family risk factors contribute to early onset conduct disorders which lead to more recalcitrant and intractable problem behavior as the child develops (Campbell, 1995; Huffman, Mehlinger, & Kerivan, 2000; Qi & Kaiser, 2003; Webster-Stratton & Taylor, 2001). Some of those risk factors include lack of prenatal care, low birth weight, maternal depression, early temperament difficulties in infants, developmental disabilities, early behavior and adjustment problems, and inconsistent and harsh parenting (see research summaries in Campbell, 1995; Huffman et. al., 2000; Qi & Kaiser, 2003). In response to these findings, researchers have developed and demonstrated that prevention efforts that give families at risk with access to physical and mental health care reduce child social adjustment and behavior problems. The data specific to prevention are decidedly mixed, including some well-designed, randomized trials as well as correlational studies. From this research, we can determine the following:

- (1) *Children and their families who access mental and physical care are less likely to have behavioral and social problems.*

For example, data from a randomized study by the Nurse–Family Partnership (also known as the Nurse Home Visitation Program) show that the provision of prenatal and early intervention services until the child turned two years had the most impressive results with single, poor mothers who enrolled in the program. In this program, nurses made home visits with mothers, supporting parents in improving their health during pregnancy, providing nurturing care to their infants, and accessing assistance for improving economic self-sufficiency. A follow-up study conducted 15 years after intervention indicated lowered rates of child abuse or neglect and less reliance on public assistance by mothers. Moreover, children at age 15 had fewer instances of running away and fewer arrests and convictions (Olds et. al., 1998). These findings have been replicated in the delivery of the program within other communities (Barnard et. al., 1988; Kitzman et. al., 1997; Larson, 1980). Research from these programs offers strong evidence that early intervention programs that offer early health

