The Early Impact Program: An Early Intervention and Prevention Program for Children and Families At-Risk of Conduct Problems

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Abstract

The Early Impact (EI) program is an early intervention and prevention program for reducing the incidence of conduct problems in pre-school aged children. The EI intervention framework is ecological in design and includes universal and indicated components. This paper delineates key principles and associated strategies that underpin the EI program. Discussion emphasises the mutual interplay between the universal and indicated components of the intervention design and risk and protective factors associated with pre-school aged children and families at-risk of dysfunctional behavior. This preventative approach is consistent with the literature that emphasises the significance of early intervention and prevention strategies for children with conduct problems that are ecological in breadth and that target risk factors at the home and school level.
Keywords: Prevention, Conduct problems, Children at-risk

Conduct problems develop early in a child's life and can lead to more serious problems in adolescents and adulthood (Dadds, 1995; Kazdin, 1995). According to Kazdin (1995) the prevalence of conduct problems in children and adolescents falls between the range of 2% to 6%. Clinically diagnosed disorders such as Oppositional Defiant Disorder (ODD) and Attention Deficit Hyperactivity Disorder (ADHD) are known to develop in early childhood (Webster-Stratton, 1998). Conduct Disorder (CD) is often evidenced at a later stage in development, however, the onset of CD may occur in some children with research supporting the distinction between the onset of CD in childhood and its emergence in adolescence (Olson, Bates, Sandy, & Lanthier, 2000; Patterson, DeBaryshe, & Ramsey, 1989).

Child-onset CD classifies those individuals whose dysfunctional behaviors are evident in childhood. Such children usually exhibit behaviors indicative of ODD or ADHD and develop further behaviors associated with the diagnostic classification for CD. Contemporary models of maladjustment indicate that early onset of conduct problems significantly influences later dysfunction (Patterson, De Garmo, & Knutson, 2000).

The effects of conduct problems upon families, schools and other community settings have significant ramifications for society. Children with child-onset CD are at high risk for school failure, substance abuse, violence, and delinquent behaviors in adulthood (Webster-Stratton & Reid, 2003). According to recent reports by the Australian Government Attorney General's Department and the Australian Early Intervention Network for Mental Health of Young People, the development of early intervention frameworks, particularly for preschool aged children, is of vital importance (Sanders, Gooley, & Nicholson, 2000; Davis, Martin, Kosky, & O'Hanlon, 2000). Given that conduct problems develop early in an individual's life, there is a concern that many existing forms of treatment are often administered too late in the child's trajectory towards maladjustment. Clinic and school based treatments are often designed to reduce the symptoms of conduct problems rather than address influences in the child's world that are associated with the onset of dysfunctional behavior.

There is an emerging body of literature that supports the effectiveness of early intervention models in the treatment and prevention of conduct problems (August, Realmuto, Hektner, & Bloomquist, 2001; Frick, 1998; The Conduct Problems Prevention Research Group, 2002; Walker, Severson, Feil, Stiller, & Golly, 1998; Webster-Stratton, 1998). Current research has given priority to the development of early intervention and prevention frameworks for children and families at-risk, given the prevalence of

conduct problems in community populations (Greenberg, Domitrovich, & Bumbarger, 1999). Such frameworks allow for the early detection and treatment of dysfunction to prevent the individual from moving towards maladjustment.

Recent findings in the prevention literature also lend support to the significance of broader systems in the individual's world that influence the development of dysfunction (Frick, 2000; Snyder, McEachern, Schrepferman, Zettle, Johnson, Swink, & McAlpine, 2006). Where previous intervention frameworks have failed to encompass broader dynamics associated with the development of problem behavior, current models of treatment emphasise the significance of influences derived from multiple settings in the individual's world such as the home and school environment. The most promising forms of treatment target risk factors identified in both the individual's home and school setting as a means of facilitating more holistic intervention frameworks. The significant effects of multicomponent intervention designs emphasise the need for further research in prevention that acknowledges dynamics in the home and school settings that influence the onset and development of conduct problems (Cummings, Davies, & Campbell, 2000).

Risk Factors Influencing the Developmental of Psychopathology in Children

The identification of specific risk factors and their interplay with the individual's ecology provide significant insights into the dynamics associated with the onset of conduct problems and considerations necessary for tailoring intervention frameworks such as the EI program (Larmar 2002) to arrest the development of psychopathology. Various risk factors have been explored extensively in the literature to determine the significance of their interaction with the individual and can be categorised within the broader domains of characteristics associated with the child, family and educational setting.

The child's 'difficult' temperament has been known to influence the development of conduct problems later in life (Frick & Morris, 2004; Loeber & Farrington, 2000; Raine, 2002). The mutual interplay between the child's temperament and parental control in early childhood may also serve to increase the risks of later dysfunction (Bates, Pettit, Dodge, & Ridge, 1998; Olsen et al., 2000). Callous-unemotional (CU) traits evidenced in the individual with conduct problems also serve to increase the risk of maladjustment (Frick, Cornell, Barry, Bodin & Dane, 2003).

Moffitt and Caspi (2001) identify the personal and genetic dimensions as another factor influencing the child's susceptibility to the development of dysfunction. Genetic disposition is also a component known to influence the development of severe conduct problems and later delinquency (Rutter, 1989).

Another significant factor contributing to the emergence and maintenance of behavioral disorders in children is the influence of family. Prior investigations acknowledge interpersonal dynamics within the family as a major contributing factor to the development of conduct problems (Hollenstein, Granic, Stoolmiller, & Snyder, 2004; Patterson, 2002; Loeber, Drinkwater, Yin, & Anderson, 2000; Loeber, Farrington, Stouthhamer-Loeber, Moffitt, Caspi, & Lynam, 2001; Loeber, Green, Lahey, Frick, & Mc Burnett, 2000). Parent criminality (Reid, Eddy, Fetrow, & Stoolmiller, 1999), aversive parenting practices including negative reinforcement and coercion (Bor & Sanders, 2004; Jaffee, Caspi, Moffitt, & Taylor, 2004), dysfunctional interactions between the parent and child (Loeber, Farrington, Stouthhamer-Loeber, & Van Kammen, 1998; Shaw, Winslow, Owens, & Vondra, 1998), marital disharmony (Frick & Loney, 2002), and low socio-economic status (Keiley, Bates, Dodge, & Pettit, 2000; Loeber et al., 2001; Webster-Stratton & Hammond, 1998) are contributing factors to the onset of externalising disorders in children.

Another risk factor supported by the literature encompasses characteristics of the school environment (Frick, 2004; Kazdin, 1995). Such characteristics may include factors such as organisation, socio-demographic characteristics, class size and other dimensions of school culture (Rutter, Maughan, Mortimore & Ouston 1979). Peer rejection and the child's alliance with deviant peer groups in the school

setting can also contribute to the development of dysfunction (Dishion, Nelson, Winter, & Bullock, 2004; Snyder, Prichard, Schrepferman, Patrick, & Stoolmiller, 2004; Vitaro, Brendgen, Pagani, Tremblay, & McDuff, 1999).

Protective Factors

Protective factors that reduce the risk of individuals developing conduct problems have also been identified. Protective factors serve to ameliorate those risk factors present in the individual's life promoting resilience. Three categories of protective factors are outlined by Greenberg et al. (1999) including: personal attributes of the individual such as cognitive ability, social competence and the individual's temperament; the individual's interaction within their immediate and broader environment including a secure attachment to parents as well as other individuals who provide emotional and/or psychological support and who demonstrate pro-social values; and the interacting systems in the individual's world such as school and home relations, the quality of the educational system with which the individual is a part and regulatory activities.

The literature gives clear support to the association between the influence of risk and protective factors evident in multiple settings in the individual's world and the individual's trajectory towards psychopathology. Further, current research in early intervention and prevention indicates that intervention frameworks designed to arrest the onset of dysfunction in children must be multifaceted in order to target risk factors evident at the individual, familial, and educational levels. Cogent prevention programs require a dual focus on strategies that protect young children from risk factors that influence deleterious outcomes and encourage protective factors that serve to reduce the risks of ongoing dysfunction.

The EI Intervention

The underlying philosophy and associated strategies of the EI program serve to address identified risk and protective factors through a framework that is comprehensive, easily disseminable in regular community settings, and that targets individuals prior to the onset of conduct problems developing. The program includes both universal and indicated components at the home (parent training), school (social skills curriculum and teacher training in child management practices) and child level (remedial assistance in acquiring social skills necessary to healthy adjustment). Further, an overarching emphasis of the EI program's multimodal design is to facilitate stronger partnerships between home and school that serve as a protective factor against the development of dysfunction.

Developmental Theory Underpinning the EI Program

The EI program is based on current advances in the psychology and educational literature. In the design of the EI framework particular consideration was given to the development of a comprehensive model of treatment that targets multiple risk factors associated with the development of psychopathology. The intervention's design was informed by developmental theory that acknowledges the interactivity of a range of factors that influence the development of conduct problems in children (Frick, 1998; Kazdin, 1995). Influences associated with the child's home environment such as child and parent interactions and socio-environmental factors were considered in the development of the program. Factors at the school level were also identified to inform the program's design including peer interactions and teacher engagement with the child. Finally, factors at the level of the individual were determined such as social competence, problem solving ability and emotionality to provide an intervention framework that targeted risk factors in the individual.

The intervention consists of three overarching components that consider the influences outlined above: the school component which includes a universal curriculum focussing on the teaching of social skills and teacher training in proactive strategies of management that can be readily applied in regular

classroom contexts; the individual component which includes remedial assistance in the teaching and acquisition of skills necessary for the child's psychosocial adjustment and; the home component which focuses on training and equipping parents in their capacity to engage positively with the child.

The EI Program Design

EI is built upon two overarching components, the school component and the familial component and is organised into two phases, the intensive phase and the extended phase. The school and familial components are complimentary in design and structure with each integrating strategies focussing upon adaptive adjustment in the target child. The implementation of strategies also serves to facilitate consistency across the home and school contexts in order to target potential risk factors evident in both the home and school settings. The intensive phase of EI is implemented over a period of ten weeks with an extended phase that provides 'booster treatments' for the remainder of the school year. It is intended that the intensive phase be implemented in the second term of the academic school year to allow for universal screening of children in first term.

As part of the school component, teachers involved in the intervention process are trained to implement screening procedures that serve to identify children at-risk for ongoing behavior problems. Further, the training equips teachers to apply specific strategies of management outlined within the EI program's framework to assist teachers to manage student behavior at the class level. The training is conducted by a program facilitator (usually a school counsellor or educational specialist working in the domains of psychology and/or education) who is drawn from the participating school and works in a consultative capacity to promote teacher participation and reduce teacher resistance. Training equips teachers and related school personnel to implement a school behavior management framework and complimentary curriculum.

An overarching intention of the EI program is that the curriculum and strategies of management be implemented in preschool to year two classes. The intervention is designed to 'catch' this population of students. Kazdin (1995) suggests that early intervention models of treatment must target children at the point at which the intervention will have the most significant impact. Research suggests that early intervention programs are most efficacious for at-risk students with an age range between four to seven years (Kazdin, 1995). The teacher's approach to the management of the child's behavior and the complimentary EI curriculum work in concert to promote protective factors and target those risk factors evident in the individual and their immediate peer group that impact upon the child's socio-educational needs.

Whereas the school component of EI combines a universal and indicated approach, the home component of the EI program is indicated in focus. Parents of children identified as at-risk are invited to participate in an intensive parent-training program that forms part of the broader intervention. The parent-training is conducted over six sessions and the design of this component was informed by contemporary practices in the field of child psychology (Sanders, Gooley, & Nicholsen, 2000). Individuals involved in the facilitation of the sessions receive a day of training with the program facilitator to equip them in the delivery of the parent-training component. The training of parents in specific strategies of management and overarching principles that facilitate a safe and supportive home dynamic serve to encourage protective factors in the home setting. Further, the strategies and content presented in the training also target specific risk factors associated with parenting practices, child and parent interactions and broader socio-environmental considerations that place the child at-risk.

The School Component

The implementation of the school component of EI includes teacher training in the implementation of specific strategies of management that can be universally applied to regular class groups. The strategies are delineated in the EI teacher's manual, *Encouraging Positive Behavior in the*

Classroom (Larmar, 2002). These strategies are underpinned by sound educational theory and encourage a framework of classroom management that is democratically focussed and that acknowledges the needs of both students and the classroom teacher (Greenberg, Domitrovich, & Bumbarger, 1999; Hoff, & DuPaul, 1998).

Recommended strategies identified within the program's framework include: setting of limits and boundaries; facilitating a classroom environment where both the teachers' and students' needs are acknowledged; establishing an inclusive and learning enhancing physical classroom space; positive teacher communication; strategies to redirect inappropriate behavior; the use of logical consequences including timeout; the facilitation of class meetings; and strategies to encourage cooperative partnerships between teachers and parents in order to strengthen the link between home and school.

The EI Curriculum titled *'The Early Impact Curriculum: A Program for Encouraging Positive Behavior in Young Children'* (Larmar, 2002) was formulated for the intensive and extended phases of the program. A number of teaching strategies are included to facilitate the delivery of the curriculum. Teaching strategies centre upon the concepts explored in the curriculum including: positive communication; friendship formation; social problem solving; developing self-control; and engaging in pro-social behaviors. The curriculum is organised into discrete modules, and is arranged around simple lesson plans for ease of interpretation and integration into the class' existing curriculum. The curriculum is intended to provide a flexible framework for the teacher, with suggested experiences of learning formulated to accommodate a range of teaching and communication styles and to ensure teachers are not enslaved to the program.

The EI teacher training process also includes training teachers to facilitate a simple screening process that allows for the early detection of children who are considered to be at greater-risk of dysfunction. The screening process includes a measure that provides a general descriptor outlining typical characteristics associated with a child with conduct problems and a classification framework that enables teachers to determine the degree to which children in a class group match the descriptor. Those children with a classification that closely matches the descriptor are considered to be more at-risk of conduct problems and so are targeted for inclusion in the indicated component of the EI intervention.

The Individual Component

As part of the indicated component of the program a behavior support specialist works in collaboration with the classroom teacher to provide additional support to children identified as more at-risk for ongoing behavior problems. The enlisted specialist is usually recruited by the classroom teacher who refers the identified child to the school's local support program. Specialists comprise school counsellors or specialist teachers who hold post-graduate qualifications in either education or psychology. The specialist receives a day of training in the program curriculum as a means of facilitating support that is congruent to the program's goals and philosophy. They also work in collaboration with the classroom teacher who provides supervision of this additional support process to ensure that the remedial assistance provided throughout the program facilitation aligns with the integrity of the program. Further, the classroom teacher and behavior support specialist liaise with the program facilitator to generate an individual management plan for the targeted child that includes discrete behavioural goals and complimentary strategies that serve to enhance the child's engagement in the program. It is intended that the regularity with which the specialist meets with the student be contingent on the severity of the student's behavior as well as the availability of the specialist to provide additional support (Barry, & Haraway, 2005). The behavior support specialist works for approximately one half hour session each week with the identified student throughout the intensive phase of the program. This additional support serves to identify and encourage pre-existing protective factors evident in the child's home and school environment and target risk factors that may be adversely affecting the child. The reduction of the specialist's involvement is negotiated with the classroom teacher and program facilitator towards the conclusion of the indicated component of the EI intervention.

The Home Component

The home component of the EI program consists of training parents in specific child management practices that can be implemented in the home setting. Key strategies and associated information about positive parenting practices are presented in the EI parent's manual, *Encouraging Positive Behavior in Young Children* (Larmar, 2002). These strategies and ideas are based on current advances in the psychological literature and are underpinned by sound principles drawn from the fields of early childhood and psychology (Cummings, Davies, & Campbell, 2000; Sanders et al., 2000). An underlying tenet of the home component of the program is to promote the parent's autonomy in managing their child's behavior. Therefore, the majority of incorporated strategies serve to increase and sustain parent self-direction encouraging generalisation of acquired skills into the home context. Such generalising strategies include exploiting current functional contingencies, training diversely and incorporating functional mediators (Osnes & Lieblein, 2003). Parents of children participating in the program are encouraged to attend a series of parent training sessions focussed on constructive approaches to managing young children. The training is facilitated over three 120-minute training sessions to promote access for all participants. However, this framework can be adapted to facilitate the parent training process over six 60–minute sessions. Parent trainers receive training in the facilitation of the home component of the EI program and initiate contact with all potential participants to provide parents with a comprehensive understanding of the program's intentions. This process also serves to ascertain any barriers to engagement as a means of reducing potential resistance that may lead to low treatment integrity (Cautilli, Riley-Tillman, Axelrod, & Hineline, 2005).

Each session of the parent- training program is designed to encourage participant interaction and trainers work collaboratively with the parent participants to explore the content presented in the program manuals. The parent-training framework focuses on behavioral principles of child management and emphasises key factors associated with proactive parenting. Further, as part of the home component the parent trainer also focuses on the provision of individual support and facilitates support networks amongst the group participants. In this way the parents can assist one another to overcome potential barriers to participation that may increase parental insularity through strategies such as: the coordination of care of dependent children during the training sessions; and/or the organisation of transportation to the training venue (Fernandez & Eyberg, 2005). The content presented throughout the parent training program includes: a parent's values, beliefs and experiences and the ways these factors influence the parenting role; parental authority; child development and influences underlying a child's behavior; positive communication; rule and limit setting; parent consistency; strategies to reinforce appropriate behavior; consequences and timeout; problem solving and problem ownership; exercising assertiveness; managing anger; quality time; and parent preservation. The strategies presented in the training sessions closely align with key strategies included in the school component that encourages teachers to employ similar strategies in the classroom setting. This serves to facilitate consistency for the child across the home and school contexts.

Treatment Integrity and Process Measures of Engagement

To maintain treatment integrity and quality control in the delivery of the EI intervention the program facilitator works in a consultative capacity with key personnel involved in the intervention including participating teachers, parent trainers and behaviour support specialists. O'Donohue and Ferguson (2006) assert that in order to sustain an intervention program's effectiveness, quality control mechanisms are essential. To ensure the fidelity of the EI intervention the program facilitator is equipped to assist in the provision of training and provide oversight of the facilitation of the program through specialised training with the EI program author. It is intended as part of the program design that the program facilitator works closely with key personnel involved in the implementation of the various program components throughout the intervention period to ensure that the intervention functions effectively and is sustainable within the school context. Further, the facilitator provides oversight of the

indicated children at post-intervention in order to coordinate the relevant school-based support infrastructures to sustain the intervention's affects.

Initial Findings of the EI Program Evaluation

Conclusions drawn from a recent evaluation of the EI program provide initial evidence to support its social validity and effectiveness in reducing the incidence of problem behavior in children. For a full description of findings drawn from the EI evaluation see Larmar, Dadds, & Shochet, 2006. The EI evaluation consisted of a randomised controlled trial involving 455 preschool aged children who were assigned to either control or experimental conditions. A chief aim of the evaluation was to determine the social validity of the EI program as evidenced by teacher, parent and behavior consultant engagement in the intervention. Findings at the post-intervention period revealed that teacher, parents and the behavior consultant were consistently engaged in the EI intervention and reported high levels of satisfaction with the EI program (Larmar et al., 2006). Such findings lend support to the social validity of the program in terms of consumer engagement. In particular, teacher, parent and consultant participants reported increased confidence in managing problem behavior in children at post-intervention. Further, teachers indicated that they had benefited from their involvement in the program and considered the EI program framework to be an easily disseminable design that could be facilitated in regular school contexts.

A second aim of the evaluation was to determine the effectiveness of the EI program as a means of reducing the incidence of problem behaviors in children. At the school level an intervention effect was found at post-intervention that revealed a significant difference in the behaviors of children who participated in the intervention compared with those who were designated to control conditions (Larmat et al., 2006). Data associated with child behavior at the school level indicated significant improvement in the children who participated in the EI program. Such findings reinforce the effectiveness of the EI program in reducing the incidence of problem behaviors in children at the school level and emphasise the significance of evaluating early intervention frameworks in order to develop a more comprehensive understanding of the variables influencing behavior change.

However, the home component of the EI program revealed no significant intervention effects at post-intervention (Larmar et al., 2006). Based on current advances in preventative research it would seem that the design of the EI program home component should serve to reduce the incidence of problem behavior. A possible explanation for the lack of significant change in the behavior in children at the home level could be that the majority of parents of indicated children attended only one third of the parent-training component of the program. This reduced dosage may have accounted for the lack of reported change in parenting practices. Further, limited changes in the parent's management of the child may have influenced the degree of behavior change in the child in the home setting.

Despite the findings of the home component of the EI evaluation, other recent intervention and prevention studies targeting children and families at-risk have reported lower incidences in problem behaviors for intervention groups compared to control groups at the home level (August et al., 2001; The Conduct Problems Prevention Research Group, 2002; Walker et al., 1998; Webster-Stratton, 1998). Such outcomes lend support to the significance of intervention frameworks in reducing problem behaviors in children in the home setting

Conclusions

This paper has provided a description of an empirically validated early intervention and prevention program for pre-school aged children and families at-risk of conduct problems. Initial discussion focussed on developmental pathways associated with the onset of conduct problems including risk and protective factors. Emphasis was given to the delineation of the EI program's comprehensive intervention design, including universal and indicated components, that serves to target risk and protective factors in young children and their families. Strategies included in the program design were identified and a summary of findings of an initial evaluation of the EI intervention was presented to

indicate the program's social validity and effectiveness in reducing the incidence of conduct problems in preschool-aged children.

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