

**PREVENTING MENTAL DISORDERS IN
SCHOOL-AGE CHILDREN:
A Review of the Effectiveness of Prevention Programs**

EXECUTIVE SUMMARY

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The Issue

In the last decade the prevention of mental disorders in children has become a growing priority for federal agencies in regards to policy, practice, and research. This priority is reflected in the recent reports of the Institute of Medicine (IOM, 1994) as well as the National Institute of Mental Health (NIMH, 1993; 1998). Interest in the prevention of mental disorders in children is also reflected in the goals set for our nation's health; an objective of Healthy People 2000 is to reduce the prevalence of mental health disorders in children and adolescents (DHHS, 1991). This objective shows the nation's growing concern that increasing numbers of children and adolescents are having difficulty managing the challenges of development. It is estimated that between 12% and 22% of America's youth under age 18 are in need of mental health services (National Advisory Mental Health Council, 1990). In addition to the personal suffering experienced by children with emotional or behavioral problems and their families, it is estimated that the yearly U.S. cost of mental illness is greater than 80 billion dollars.

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Goals of the Report

The goals of this report were to:

- ◆ identify critical issues and themes in prevention research with school-age children and families,
- ◆ identify universal, selective and indicated programs that reduce symptoms of both externalizing and internalizing disorders,
- ◆ summarize the state-of-the art programs in the prevention of mental disorders in school-age children,
- ◆ identify elements that contribute to program success, and
- ◆ provide suggestions to improve the quality of program development and evaluation

Developmental Research as the Bedrock of Prevention Research

Public health models have long based their interventions on reducing risk factors for disease or disorder as well as promoting processes that protect against risk. Just as successful prevention models for both heart and lung disease have focused on reducing risk factors and increasing protective factors, research on developmental processes has focused the field of preventive mental health on understanding how risk and protective factors operate, and can be modified, to alter the incidence and prevalence of mental disorders in childhood.

Research on the development of mental disorders has led to the following conclusions. First, development is complex and both disorder and competence are multiply determined: it is unlikely that there is a single cause of, or risk factor for, any disorder (disruptive disorders, depression or other affective disorders). Second, risk factors include biological, social, and ecological factors in the child, the family, and other social contexts. Thus, it is doubtful that most childhood behavioral disorders can be eliminated by treating causes that are purported to reside in the child alone. Third, it is apparent that many developmental risk factors are not disorder-specific, but may relate instead to a variety of maladaptive outcomes. Fourth, a focus on increasing protective factors may lead to both lower incidence of mental disorder as well as improving the overall competence of children.

The understanding of “generic” risk factors related to maladaptive child outcomes has led to a strategy of targeting multiple factors simultaneously in prevention models. As a result, prevention efforts that focus on reducing risk factors and increasing protective factors may have direct effects on diverse outcomes. Such interventions may have the dual goals of reductions in mental disorders and the promotion of healthy developmental outcomes.

Criteria and Scope of Program Evaluation

The scope of interest for this review included prevention programs for children ages 5 to 18 that produce improvements in specific psychological symptoms or in factors directly associated with increased risk for child mental disorders. Programs were excluded if they produced outcomes solely related to substance abuse, sexuality or health promotion or positive youth development. Other recent federal reports review prevention programs that focus on promoting positive youth development and substance abuse prevention (Catalano, Berglund, Ryan, Lonczak, and Hawkins, 1998; Tobler Research Associates, 1998).

To be included as effective programs in this report, evaluations required well-structured study designs, clear specification of participants, a written manual that specified the intervention procedures, and outcome effects on measures related to mental disorder.

Given the quality-assurance inherent in the peer review process, the search primarily focused on refereed professional journals. However, government reports, meta-analyses, reviews, annotated bibliographies, websites, and relevant books were also reviewed. The review led to the identification of over 130 programs. Of those, 34 met the criteria discussed above and thus are included in this report.

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Summary of Findings

This review concludes that there is clear evidence that important and meaningful progress has been made in preventive intervention with school-aged children during the last decade. Thirty-four different programs were found to reduce psychological symptoms or related behaviors in school-aged children. This good news shows the potential promise of widespread prevention programs to reduce mental disorders in childhood in a manner similar to what our nation has done to reduce heart disease and cancer. Advances in theory, program development, and scientific evaluation have led to important new findings showing the promise of preventive approaches.

Universal Programs. This review found fourteen effective universal prevention programs (i.e., programs that were addressed to broad populations of children, families, and schools). These universal programs produced positive outcomes in either (a) specific symptoms of psychopathology such as aggression, depression or anxiety, or (b) commonly accepted risk factors associated with psychopathology such as impulsiveness, cognitive skill deficiencies or antisocial behavior.

The universal programs identified as effective in this review had a number of important characteristics. First, they focused on teaching cognitive strategies that improve social and emotional competence. Second, they created changes in the school and/or family ecology that support the use of these new skills. Third, successful programs had the necessary duration (usually one or more school years) and intensity (regular use) needed to alter attitudes and behavior.

Programs that target children already at risk for conduct disorders. Disorders of conduct are among the most prevalent and stable of child psychiatric disorders. Many of our most costly and damaging societal problems (e.g. delinquency, substance use, and adult mental disorder) have their origins in early conduct problems. Conduct disorder is difficult to remediate because it is often supported in multiple contexts, its risk factors tend to cluster together, and each risk factor tends to set the stage for increased risk in the next phase of development.

The review found ten programs that have successfully reduced the risk for conduct problems, nearly all of which have reported their findings since 1990. These programs can be classified into those that work with children alone, with parent-child relationships, or in multiple contexts. Although child alone and parenting alone prevention models have shown limited effectiveness, a new generation of multi-component models provides the promise of greater impact. Following from developmental models of risk and protection, interventions that target multiple environments (child, school, family, neighborhood) and multiple socialization agents (parent, teachers, peers) over extended developmental periods are probably necessary to alter the developmental trajectories of children who live in high-risk environments and are already

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showing early problem behaviors. In contrast, less intensive, short duration programs which operate in only one environment have shown modest effects that tend to fade over time.

Recently, there has been significant interest in the provision of adult support to youth to build protection against adolescent problem behavior. This has included recreation programs, after-school programs, and mentoring. With the exception of one successful, multi-site study of mentoring, there has been little controlled evaluation research to indicate whether such programs can reduce psychological symptoms or protect children from mental disorders.

Programs that target children already at risk for internalizing disorders. The prevalence of depressive and anxiety disorders ranges between 5 and 8% in U.S. adolescents. Further, there is new evidence of the stability of these early difficulties for adolescent and adult mental disorder. In spite of this knowledge, relatively few prevention trials have targeted children at risk for depression or anxiety. Our review found ten programs with demonstrated effects on children already at risk for internalizing problems, including two programs that have successfully reduced depressive symptoms, one that has reduced symptoms of anxiety, and one that has reduced risk for suicide. These effective programs focused on teaching children and youth how to alter and utilize more effective cognitive and behavioral coping strategies and to more effectively use the support of others in times of stress. In addition, five programs were identified that successfully impacted children experiencing the childhood stress, often related to divorce or childhood bereavement, as well as two programs which demonstrated secondary effects on internalizing problems.

Best Practices in Prevention Programming. Over time, researchers, practitioners, and policy makers have developed a more realistic perspective on the necessary intensity and comprehensiveness of programming to prevent psychopathology and promote positive development, especially with children and adolescents growing up in high-risk environments (Panel on High-Risk Youth, National Research Council, 1993). The following conclusions can be made regarding validated programs.

- Short-term preventive interventions produce time-limited benefits, at best, with at-risk groups whereas multi-year programs are more likely to foster enduring benefits.
- Preventive interventions may effectively operate throughout childhood when developmentally-appropriate risk and protective factors are targeted. However, given the resistance to treatment of serious conduct problems, ongoing intervention starting in the preschool and early elementary years may be necessary to reduce morbidity.
- Preventive interventions are best directed at risk and protective factors rather than at categorical problem behaviors. With this perspective, it is both feasible and cost-effective to target multiple negative outcomes in the context of a coordinated set of programs.
- Interventions should be aimed at multiple domains, changing institutions and environments as well as individuals.

- Prevention programs that focus independently on the child are not as effective as those that simultaneously “educate” the child and instill positive changes across both the school and home environments. The success of such programs is enhanced by focusing not only on the child's behavior, but also the teacher's and family’s behavior, the relationship between the home and school, and the needs of schools and neighborhoods to support healthy norms and competent behavior.
- There is no single program component that can prevent multiple high-risk behaviors. A package of coordinated, collaborative strategies and programs is required in each community. For school-age children, the school ecology should be a central focus of intervention.
- In order to link to other community care systems and create sustainability for prevention, prevention programs will need to be integrated with systems of treatment. In this way, communities can develop common conceptual models, common language, and procedures that maximize the effectiveness of programs at each level of need. Schools, in coordination with community providers, are a potential setting for the creation of such fully-integrated models. It is surprising that few comprehensive interventions have been developed and evaluated that combine school-wide primary prevention together with secondary prevention and treatment.

Future Directions

The past decade has brought to fruition well-designed studies that demonstrate the potential of preventive intervention in reducing harmful symptoms for children and youth. However, given the need for effective research in this field there are numerous issues for future research, policy, and practice.

- Few studies meet the criteria for fully-validated program models. Of most concern are the lack of replication of program effects by independent investigators and the absence of long-term follow-up to examine stability of program effects.
- One of the weaknesses in present research efforts is the lack of comprehensive follow-up data to chart the developmental processes of program participants in the years after receiving interventions. As a number of programs show stronger impacts at follow-up, than they did at post-test, it is likely that the effects of prevention programs are underestimated at present; examining distal outcomes is critical.
- There has been greater attention to preventive interventions that have been focused on externalizing disorders. As such, we still know little regarding effective prevention models for internalizing disorders. Further, as many children show risk for, or co-morbidity of internalizing and externalizing problems, intervention projects should examine the differential effects that interventions might have on those that have risk or early symptoms of co-morbidity. Further, outcome measures should include assessment of both externalizing and internalizing symptoms.

- A broader point is that there is significant inter-individual variability in program effects. There has been little focus on what factors in the child (e.g., gender, ethnicity) or environment (e.g., quality of home or school environment) might moderate the impact of intervention. It is necessary to know more regarding for whom specific programs are most likely to be effective.
- With few exceptions, there has been little exploration of how the quality of implementation affects outcomes. There is a need for greater attention to both the measurement of dosage as well as the quality and fidelity of the intervention delivery, especially as empirically-validated prevention programs begin to “go to scale.”
- Due in part to the categorical nature of funding, programs often assess quite narrow outcomes (e.g., only substance abuse, psychological symptoms, positive adaptation). As programs often focus the intervention on modifying common risk factors for multiple problem behaviors as well as promoting competence, measures of multiple dimensions of outcome are necessary.

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Summary

There have been advances in the theory, design, and evaluation of programs, and there are a growing number of programs with documented efficacy of beneficial impact on the reduction on psychiatric symptomology in middle childhood. These research findings are also beginning to influence public policy as federal, state, and local governments are now calling for the utilization of empirically validated, effective models of intervention for children and families. This report provides details on the types of successful programs and points the way to future directions in research, programming, and policy.

The full text of the report, “*Preventing Mental Disorders in School-Aged Children: A Review of the Effectiveness of Prevention Programs*” is available via the internet at:

<http://www.psu.edu/dept/prevention>

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