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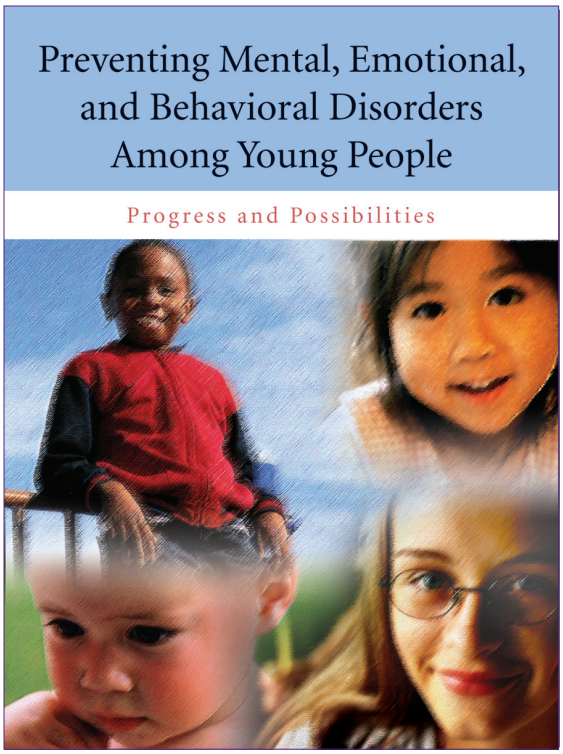
REPORT BRIEF FOR **RESEARCHERS** • MARCH 2009

Preventing Mental, Emotional, and Behavioral Disorders Among Young People

PROGRESS AND POSSIBILITIES



Mental, emotional, and behavioral (MEB) disorders—which include depression, conduct disorder, and substance abuse—affect large numbers of young people. Studies indicate that MEB disorders are a major health threat and are as commonplace today among young people as a fractured limb—not inevitable but not at all unusual. Almost one in five young people have one or more MEB disorders at any given time. Among adults, half of all MEB disorders were first diagnosed by age 14 and three-fourths by age 24.

Many disorders have life-long effects that include high psychosocial and economic costs, not only for the young people, but also for their families, schools, and communities. The financial costs in terms of treatment services and lost productivity are estimated at $247 billion annually. Beyond the financial costs, MEB disorders also interfere with young people's ability to accomplish age and culturally appropriate developmental tasks, such as establishing healthy interpersonal relationships, succeeding in school, and making their way in the workforce.

Recent decades have seen an explosion in research related to the prevention of MEB disorders. Significant results of this research include improved understanding of the origins of MEB disorders and advances in methodological approaches that strengthen the causal inferences drawn from evaluations of preventive interventions and enable tracking of effects over multiple years. Many interventions have been tested in multiple randomized trials and show long-term reductions in MEB disorders and related problem behaviors, such as aggression, high-risk sexual behavior, and substance use, as well as such

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positive outcomes as improved grades and higher self-esteem. Neuroscience research promises to contribute to the future identification of specific young people at risk for MEB disorders and to the refinement of specific, targeted interventions. Related research has identified opportunities to change environments in ways that might influence the expression of specific genetic or biological predispositions, for both current generations and their offspring.

A recent report by the National Research Council and the Institute of Medicine describes the broad range of relevant research and concludes that it is critical to shift the focus to advancing health and preventing disorders from occurring in the first place rather than waiting until a disorder is well established and has done considerable harm. The report calls on national, state, and local leaders to make the prevention of MEB disorders and the promotion of mental health among young people a priority.

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The report identifies the need for a coordinated, systematic approach to research across federal and other agencies with common concerns and identifies opportunities to improve the applicability of research. It recommends that the National Institutes of Health develop a 10-year research plan in conjunction with other funders of prevention research. It also calls on research funders to establish parity between prevention and treatment research. The report emphasizes that although effective treatment has important preventive aspects, prevention research should be distinguished from treatment research.

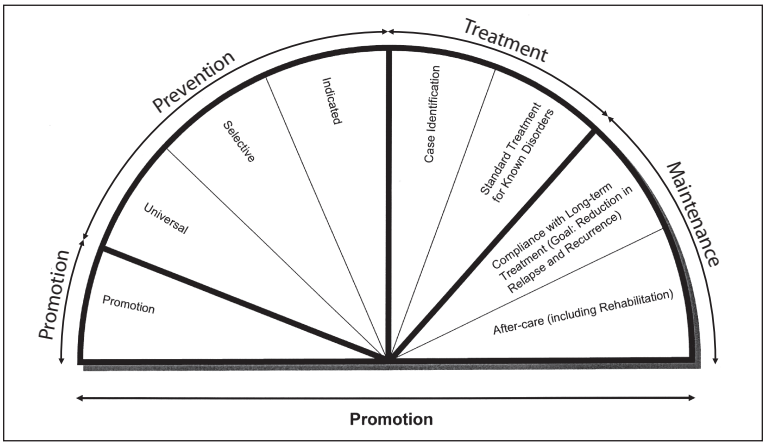
The report reinforces a typology that specifies three types of prevention:

- ***Universal prevention***, targeted to the general population,
- ***Selected prevention***, targeted to a subgroup that has a significantly higher than average probability of developing an MEB disorder, and
- ***Indicated prevention***, targeted to high-risk individuals.

The report emphasizes the value of promoting mental health and considering mental health within a developmental framework.

Mental Health Is More Than the Absence of Disorder. Mental health among young people includes gradually developing social, emotional, cognitive, and other competencies. Healthy development builds young people's sense of self-mastery, self-esteem, and social inclusion, as well as their capacity to cope with adversity. The mental health research spectrum should include not just the prevention of MEB disorders, but also a focus on wellness—the promotion of mental health. Research on the developmental pathways leading to competencies and common strategies for measuring competencies will move this area of research forward.

Mental Health Is Developmental. Failure to reach developmental milestones can be one of the first signs of an MEB disorder—as well as one key to the interventions that can redirect the negative patterns that contribute to disorder. Development is a



Source: Committee on Prevention of Mental Disorders and Substance Abuse Among Children, Youth, and Young Adults, 2009

TABLE 1
ILLUSTRATIVE HEALTHY DEVELOPMENT MILESTONES AND FACTORS THAT ENCOURAGE THEM

Individual	Family	School and Community
• Self regulation • Communication and learning; cumulative mastery of school subjects, appropriate behavior at school • Making friends and getting along with peers • Healthy physical development and habits • Intellectual development—life, school, and vocational skills; cultural knowledge and competence • Psychological and emotional competence—e.g. self esteem and mastery, responsibility, morality and values, social development • Self sufficiency and identity exploration, independent decision-making, future orientation	• Healthy physical environment • Nurturing relationship with caregiver adequate socioeconomic resources • Parental education and cognitive stimulation • Extended family support and positive parenting • Physical and psychological safety • Appropriate structure and limits • Opportunities to belong • Opportunities for skill building • Positive social norms • Balance of autonomy and relatedness to family	• Availability of high quality child care • Nurturance and support for early learning • Access to supplemental services • Regulatory systems that support high quality care • School environment that supports positive development, e.g. high teacher/academic expectations, effective classroom management; partnerships between school and family • Positive social norms • Opportunities for skill building • Opportunities for exploration in work and school • Connectedness to adults outside the family

function of complex interactions among genetic, biological, psychological, and social processes. Disruption in any of these areas—which may include inherited vulnerability, family stress, or failure to develop psychological or social competencies—impedes healthy development. Good prevention and mental wellness promotion interventions are grounded in research on the interrelationships among the principal milestones of healthy development and the family, school, and community factors that are associated with them.

Because risk factors tend to come in clusters and to be associated with more than one disorder, a focus on prevention and wellness can have far-reaching benefits that extend beyond a specific disorder.

NEW DIRECTIONS

Several decades of research have pointed to the value of systematic application of what is known. Future research should strive to guide implementation of effective interventions, refine and develop new improved interventions in both the prevention and promotion areas, and make useful connections between research and policy.

Collaboration Between Neuroscience and Prevention Science. Recent advances in neuroscience have contributed significantly to understanding of the factors that influence mental health, the pathogenesis of specific disorders, and the ways intervention strategies might operate. Environment

and experience have powerful effects on brain development at all stages and genetic and neurobiological factors contribute to the development of mental disorders.

Researchers who study prevention and wellness and developmental neuroscientists have not traditionally collaborated. The design of prevention strategies should reflect the theories of pathogenesis developed by neuroscientists, and prevention trials should be used to inform and evaluate the hypotheses about causal mechanisms the neuroscience suggests. Greater collaboration between these two fields—specifically the testing of hypotheses across the disciplines—will yield both theoretical and practical advances in prevention. For example, improved means of integrating structural and functional brain imaging data could provide valuable insights into the etiology of many disorders. Research on the interaction between neuropsychiatric factors and interventions are also needed to increase understanding of the effects and limits of preventive interventions.

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Collaboration Across Agencies. Many MEB disorders have common developmental pathways, and many preventive interventions address co-occurring outcomes. Yet many research funders focus on a single disorder. The report recommends consideration of opportunities for cross-disciplinary and multi-agency research to streamline funding of interventions that reflect a comprehensive developmental perspective.

A Focus on Implementation and Dissemination. Implementation and dissemination studies are a critical frontier for future research. The focus has only recently begun to shift from efficacy trials (conducted in a laboratory or research setting) toward effectiveness trials (conducted in real-world settings) and studies of implementation approaches. Interventions tested in efficacy trials alone do not always have the same results in real-world environments. Research has demonstrated the complexity of implementation. Future research needs to identify core elements of interventions, essential aspects of implementation, and alternative approaches to dissemination and implementation.

Community Relevance. Interventions are unlikely to be implemented, or implemented with fidelity, if they are not responsive to community needs and priorities. Communities often have substantial expertise and professional wisdom but have developed approaches that are not supported by empirical evidence. Researchers and communities need to develop partnerships to evaluate interventions that have both a solid theoretical grounding and are responsive to community needs. Increasing relevance to a community also calls for consideration of such other issues as:

- ***Adaptation.*** The effectiveness of evidence-based interventions may be significantly facilitated or impeded by aspects of the ethnic, linguistic, and cultural environment in which they are implemented. Research is needed to identify the specific factors that influence effectiveness and the adaptations that are needed to serve different populations.
- ***Screening in conjunction with intervention.*** Screening can be done in a number of ways and for a variety of risk and early symptoms. Community acceptance, parental endorsement, and the capacity to respond to needs that are identified are critical to its value. Research on the effectiveness of linking screening with evidence-based intervention is needed.
- ***Economic analyses.*** Decisions about program funding are increasingly made in an environment of decreased resources. Evidence of the economic benefits of preventive interventions is a critical policy tool. Yet, many research designs do not even include information about the costs of an intervention against which a

community could weigh the benefits. Even fewer include cost-effectiveness analyses. Guidelines for conducting this type of analysis, as well as incentives for researchers to conduct it are necessary.

Strengthening Research. The methodological rigor of prevention science is substantial. Methods are available to design and test new approaches that could improve the availability of evidence-based interventions. As new interventions are designed, refined, and tested, studies should also consider the following:

- a focus on long-term results across multiple outcomes (disorders, academic outcomes);
- applicability to different racial, ethnic, or cultural groups;
- replicability in multiple trials and by other researchers;
- core elements of interventions that might facilitate implementation; and
- use of the media to extend the reach of interventions.

Preventing MEB disorders among young people may be one of the soundest investments a society can make: the benefits include higher productivity, lower treatment costs, less suffering and premature mortality, and more cohesive families, as well as happier, better adjusted, and more successful young people. The research community has an important role to play in ensuring that scientific information is available to support such investments. Especially in an environment of limited resources, research must continue to demonstrate that interventions are effective, cost-effective, implementable, relevant to the priorities and concerns of specific communities, and that they build on the substantial research base already available.

RECOMMENDATIONS FOR RESEARCHERS

- Research and interventions on the prevention of MEB disorders should focus on interventions that occur before the onset of disorder but should be broadened to include promotion of mental, emotional, and behavioral health.
- Researchers should broaden the range of outcomes included in evaluations of prevention programs and policies to include relevant MEB disorders and related problems, as well as common positive outcomes, such as accomplishment of age-appropriate developmental tasks (e.g., school, social, and work outcomes). They should also adequately explore and report on potential iatrogenic effects.
- Researchers should include analysis of the costs and cost-effectiveness (and whenever possible cost-benefit) of interventions in evaluations of effectiveness studies (in contrast with efficacy trials).
- Researchers and community organizations should form partnerships to develop evaluations of (1) adaptation of existing interventions in response to community-specific cultural characteristics; (2) preventive interventions designed based on research principles in response to community concerns; and (3) preventive interventions that have been developed in the community, have demonstrated feasibility of implementation and acceptability in that community, but lack experimental evidence of effectiveness.

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FOR MORE INFORMATION ...

Copies of the report, *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities,* are available for sale from the National Academies Press at (888) 624-8373 or (202) 334-3313 (in the Washington, DC metropolitan area) or via the NAP homepage at www.nap.edu. Full text of the report and a free pdf copy of the Summary are also available at www.nap.edu. The study was funded by the Substance Abuse and Mental Health Services Administration, National Institute of Mental Health, National Institute on Drug Abuse, and the National Institute on Alcohol Abuse and Alcoholism.

This policy brief is one in a series of three briefs with highlights from the report.

This study is a project of the Board on Children, Youth, and Families (BCYF) within the Division of Behavioral and Social Sciences and Education of the National Research Council and the Institute of Medicine.

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