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Children's Mental Health as a Primary Care and Concern:

A System for Comprehensive Support and Service

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Abstract

In response to the serious crisis in mental health care for children in the United States, this article proposes as a priority for psychology a comprehensive approach that treats mental health as a primary issue in child health and welfare. Consistent with the principles of a system of care and applying epidemiological, risk-development, and intervention-research findings, this approach emphasizes 4 components: easy access to effective professional clinical services for children exhibiting disorders; further development and application of sound prevention principles for high-risk youths; support for and access to short-term intervention in primary care settings; and greater recognition and promotion of mental health issues in common developmental settings and other influential systems. Integral to this approach is the need to implement these components simultaneously and to incorporate family-focused, culturally competent, evidence-based, and developmentally appropriate services. This comprehensive, simultaneous, and integrated approach is needed to achieve real progress in children's mental health in this country.

Keywords

children's mental health; mental health services; prevention; evidence-based practices

Children's mental health services in this country are in crisis.[1] Knitzer (1982) called attention to this unacceptable state more than 20 years ago in her landmark book *Unclaimed Children: The Failure of Public Responsibility to Children and Adolescents in Need of Mental Health Services*, but the problem has grown even worse recently, as documented by the U.S. Public Health Service (2000), the President's New Freedom Commission on Mental Health (2003), and numerous other studies and commissions, including the American Psychological Association's (APA) Working Group on Children's Mental Health (Tolan, Anton, Culbertson, Katz, & Nelson–Le Gall, 2001). Each of these groups' reports describes a large gap between the mental health needs of children and the supports and services that are available to meet those needs. Children's mental health continues to be neglected even with growing scientific evidence of the importance of mental health in children's development, of the value of early intervention, particularly within primary developmental systems such as pediatric care and school, and of the efficacy of interventions for children who are at risk of or exhibiting substantial mental health problems. Dramatic improvement is needed in the mental health support systems for children (Friedman, 1993;Schorr, 1997).

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[1]In this article and throughout this special section, the term *children* is used to refer to youths 0–18 years of age. In addition, it is implied that child mental health invariably involves families rearing children.

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Currently, most families with children, even those with substantial financial resources and a child with a demonstrated mental disorder, find it difficult to access services, particularly appropriate and effective services (U.S. Public Health Service, 2000).[2] Moreover, families with fewer financial resources and families of ethnic minority heritage face even greater impediments (U.S. Department of Health and Human Services, 2001). This troubling situation deteriorates further for families with children who are at risk but who do not yet exhibit clinical symptoms. The situation is also difficult for parents and others attempting to gain help for children's mental health issues and for programs and approaches that support healthy development and mental health among the upcoming generation (Knitzer, 2000). The reasons for this sorry state of affairs vary, but in general they spring from an underdeveloped mental health care system for children, a focus on only those with the most fully developed and the most severe mental health problems, and a lack of integration among treatment, prevention, and promotion. The level of need, the effects of children's mental health on society, and the scientific basis for a more concerted effort all attest to the need to approach mental health as a primary component of the health and welfare of children.

Making Child Mental Health a Primary Concern

The current state of affairs not only fails to take responsibility for the health and welfare of children, it also fails to recognize the costs and waste in economic and human potential. The result is unnecessary morbidity, which translates to lost productivity and functioning (Cohen, 1998; Gans, Alexander, Chu, & Elster, 1995). This shortfall extends beyond the children, hindering the functioning and well-being of the adults caring for the children (Holden, Friedman, & Santiago, 2001) and even extending to those who employ these parents and caregivers (Foster & Connor, 2003). The current mental health system also imposes substantial hidden costs on other health care, educational, and child welfare systems (Garbarino, 1988), a burden that can be prevented.

Two analogies characterize the glaring inattention to mental health care, the sobering magnitude of change that is necessary, and the extent to which potential improvement is possible. First, consider the high illiteracy rate 100 years ago in the United States among the labor force needed to serve the growing industrial and manufacturing markets. The public response was not a piecemeal, uncoordinated, private-sector approach that served only those failing most glaringly or those most able to afford it. There was no begrudging support for a brief, 12-session “program” for illiteracy prevention. Rather, the government supported universal access to 12 *years* of mandatory education for every child. Furthermore, public education grew to include additional tailored education for children with disabilities and special needs as well as new services that were attuned to the type and level of need for children with learning problems. This multitiered educational system emphasized universal delivery to promote strong capability overall, with additional services for high-risk children with learning problems and advice and consultation for parents in need of guidance about their child's education. This organized response is a model for children's mental health.

A second analogy is found in dentistry. One hundred years ago, this country faced a crisis in the health of its citizens because of the high prevalence of dental caries and tooth decay. Rather than dismiss such needed care as a luxury that would be treated only as a person's finances allowed, the country implemented a public health effort based on epidemiology and the efficacy of different interventions. The result was a comprehensive system, composed of policy

[2] *Appropriate and effective services* are defined by the APA Working Group on Children's Mental Health as developmentally appropriate, culturally competent, empirically tested, and family-focused services. There is an implicit assumption that services to children and adolescents should include attention to and reliance on the family for effectiveness even if services target other developmental influences or are directed to the child specifically. *Services* refers to a broad set of aid for mental health including but not limited to consultation, education, and direct or indirect preventive and treatment interventions.

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components (fluoride in water systems), universal ongoing preventive care (government campaigns to support use of toothpaste and daily brushing), and specialized care for particular needs (fillings to stop further decay, braces to straighten teeth). No one would contend that a 12-session training program on brushing teeth at age 5 should be adequate to prevent all future tooth decay. Nor would it be expected that only one of these strategies would be adequate to solve the problem. The focus was not on which one of these components was most important. Rather, the effort combined all approaches to address the public health problem while recognizing differences in need among the populace.

Regrettably, when faced with a similar crisis for children's mental health, the country has not followed these approaches, even though the savings and accrued benefits would be profound (Weissberg, Kumpfer, & Seligman, 2003). In fact, children's mental health has been only minimally acknowledged as a health care need (U.S. Public Health Service, 2000). The thesis of this article is that we must recognize that children's mental health is a primary health concern that has far-reaching influence on children's development and on society in general. It is time to declare children's mental health to be a primary concern that justifies interventions and policies.

A Comprehensive System of Mental Health Care for Children

Accordingly, we contend that it is time to put into place a comprehensive system of policies and practices that can adequately meet the mental health needs of children and, by doing so, improve children's social and economic well-being. As supported by the APA Working Group on Children's Mental Health (Tolan et al., 2001), we propose that a comprehensive primary system of mental health care be a central part of psychology's agenda.

Four emphases in action and policy seem essential to address the mental health needs of children and their families effectively. First, we must reform current systems of care to ensure access to appropriate, effective, and coordinated treatment when a *DSM-IV* (4th edition of the *Diagnostic and Statistical Manual of Mental Disorders*; American Psychiatric Association, 1994) disorder can be documented. Those children who exhibit substantial mental health problems and related functional impairment should have access to effective treatment. The systems-of-care principles first put forth by Stroul and Friedman. (1996) and implemented through wraparound services (VanDenBerg & Grealish, 1996) provide a guide toward realizing this goal. In addition to expanding access through coordinated care, it is necessary to provide access to effective and appropriate mental health intervention for children with disorders. Although adopting “best practices” is a growing trend among practitioners, the validity of any practice that has not been subjected to rigorous efficacy trials and tested in community-based effectiveness trials should remain suspect. “Best practice” without adequate evaluation and research is in itself an indictment of the inadequate research infrastructure in children's mental health. What is needed is practice that follows scientific evidence, that implements proven interventions consistently, and that differentiates interventions by disorder (Weisz, Sandler, Durlak, & Anton, 2005).

Second, children who exhibit signs of risk or prodromal symptoms of later disorder need access to effective, scientifically supported, preventive interventions (Coie, Lochman, Terry, & Hyman, 1992). Given the accumulating evidence of the effects and value of early intervention and prevention, these efforts should become regular, integrated, and substantial components of a child mental health system.

Third, we must dramatically increase society's capacity to serve periodic and subclinical-level child mental health needs within primary health and education settings. Primary health care providers and educational personnel need training, support, and a set of expectations that promote mental health issues. Parents need access to appropriate consultation, education,

guidance, short-term intervention, and referral when facing puzzling or challenging issues of mental health that may occur in the course of typical child development.

Finally, we must set in place infrastructure and policies to promote and support healthy psychological development as integral to health and development. Schools, child care settings, parents, and others who are intimately involved in our children's development need to be educated about the importance of mental health in child development and how to promote it and avert risk. The settings in which children develop should incorporate practices to support mental health.

Each of these four components of a comprehensive system of care is supported by the available research. Furthermore, evidence supports integrating all these components rather than selecting only one or two components. The futile and misdirected argument about which component is most useful or critical must be replaced with a focus on building a system that values the importance and the interdependence of each. This evidence includes empirical findings of the critical role that mental health plays in healthy development (Masten & Coatsworth, 1998); the prominence of mental health concerns among parents, teachers, and others with critical roles in child development (Dulcan et al., 1990); the burden that psychological symptoms impose on families and others (Holden et al., 2001); the degree to which child mental health needs confound the functioning of school, health care, and other societal systems (Armbruster & Lichtman, 1999; Weist, Paskewitz, Warner, & Flaherty, 1996); and how efforts in each area can improve mental health (see Black & Krishnakumar, 1998; Greenberg, Domitrovich, & Bumbarger, 2001; Hoagwood, Hibbs, Brent, & Jensen, 1995; Saile, Burgmeier, & Schmidt, 1988; Wandersman & Florin, 2003).

We begin by summarizing a rationale for such a system. This discussion is followed by a summary of important components and advances needed in the four areas. We conclude with recommendations to overcome current impediments.

Need for a Comprehensive Mental Health Care System for Children

The mental health needs of children vary dramatically across families and in total are substantial. Evidence shows that the rates of disorders are high, that substantial mental health issues go unrecognized when only disorder rates are considered, that access to quality services is limited, that important disparities exist in access to services, and that the cost burden of not addressing children's mental health is large.

Substantial Rates of Disorder and Related Functional Impairment

Currently we lack a full national assessment of the prevalence of disorders, risk, and related mental health issues among children and youths. However, existing epidemiological studies indicate that at any given time, approximately 20% of children experience the signs and symptoms that constitute a *DSM–IV* disorder, with approximately 7% evidencing extreme functional impairment (Costello et al., 1996). Evidence is also growing that mental health symptoms and issues are interrelated with other problems of youths, such as drug use, delinquency, and school failure (Mrazek, Biglan, & Hawkins, 2004). Community monitoring suggests that attending to one problem likely affects the prevalence of the other problems and that all should be considered in addressing children's mental health.

Limited Services Not Well Matched to Need, and Inequities in Access

This substantial need is not being met with adequate services. Only about one third of youths with a diagnosable psychiatric disorder obtain mental health services (Burns et al., 1995). Services are inaccessible for many families in need, and services that are available are often not well matched to need (Flisher et al., 1997; Tolan, Jaffe, & Ryan, 1988). A major reason

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for this service gap is the inadequate size of the provider workforce. Current estimates are that the workforce of mental health specialists is able to meet the need of only 10% of all children with mental health issues (Jenkins, 1998). Also, these specialists are often focused on those children with the most obvious or severe symptoms, without necessary coordination across a system of care (Huang et al., 2005; President's New Freedom Commission on Mental Health, 2003).

A major issue in matching services to need is that use of children's mental health services follows a pattern of racial and economic inequity (Huang et al., 2005). Services are less available in communities with a higher prevalence of child mental health problems, which are often minority and low-income communities (Leaf et al., 1996). For example, much higher service use rates are found for non-Hispanic Whites than for Hispanics and African Americans. Ringel and Sturm (2001) estimated that services meet the needs of 31% of nonminority children but only 13% of minority group children. This difference may exist for several reasons. It may be that the services that are accessible to ethnic minorities are ineffective for that group, and this reality might be known to those families. Many intervention practices were first developed with families living in different economic and social contexts and without sensitivity to cultural practices that influence the intervention. Even among empirically proven interventions, the transferability of those practices to other cultural groups is unknown. A second possibility is that the implementation of more effective approaches may lag in communities and sectors populated by ethnic minorities, making accessibility an issue. A third possibility is that effective services simply have not been marketed well within minority groups and within other sectors that make less use of mental health services. Successful marketing might involve modifying how interventions are offered, how the material and activities are introduced and described, and how the provider and recipient might relate (e.g., moving the location of the service out of the office and into the home, or incorporating a less “school-like” culture within the intervention session, or shifting the focus to the client's immediate concern and away from the practitioner's construction of the problem). A fourth possibility is that there are culturally related differences in the contributors to mental health, which should be more carefully considered in children's mental health efforts. Whether this means modifying approaches found useful for treating, preventing, and promoting mental health with one group or developing different interventions for different groups is one of the most immediate issues in advancing children's mental health care. In any case, it is clear that intervention designers, service providers, and policymakers must collaborate with local adapters to ensure effective mental health efforts for children and their families.

In addition, although service providers and mental health promotion programs increasingly recognize that cultural competence is critical to services and principles in child mental health, the incorporation of such understanding into practice and service-access research has been relatively limited (Pumariega, 2003; U.S. Department of Health and Human Services, 2001). Cultural competence sounds like an obvious requirement, but few studies have examined what is meant by this term, whether it is essential to service efficacy, how it can be taught, and whether training improves clinical outcomes (Stevenson, Winn, Walker-Barnes, & Coard, in press). Refining what is meant by cultural competence and determining how it can be taught, measured, and improved are essential to moving toward criteria that can be applied in research, practice, and policies related to children's mental health. Moreover, these challenges are particularly critical as the emerging field of translational research develops.

Mental Health Needs Extend Beyond Diagnosable Disorders

Mental health issues affect many more youths and families in forms other than those related to diagnosed disorder. Estimates are that 25% of the 150 million child visits per year for primary health care (non-mental-health and other specialties) have a psychological problem associated

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with the presenting problem (National Ambulatory Medical Care Survey; Woodwell, 2000). Further, more than 20% of such visits are prompted by mental health concerns (Horwitz et al., 2002). Families with children with mental health problems also use more than their share of pediatric services (U.S. Public Health Service, 2000). Mental health issues, concerns, and information are common and important reasons for families to seek primary health care services. This fact also means that mental health care is, even if by default, one of the most common activities of most frontline health care providers.

Mental Health Needs Are a Major and Underrecognized Health Care Cost

Mental health needs not only are a significant impetus for seeking health care, but they also account for a substantial portion of the health care cost burden. Failing to recognize or fully use appropriate and effective interventions probably elevates overall costs (Klinkman, 1998). It is estimated that mental disorders account for between 5% and 10% of the total cost and morbidity burden that is due to disease (Jenkins, 1998). Ringel and Sturm (2001) estimated that mental health care, including treatment for substance abuse, constitutes 7.8% of national health care expenditures. However, mental health care is disproportionately focused on adults. Of the $85.4 billion per year spent on mental health care, only $11.7 billion is spent on persons under age 21. Even among those under 21, expenditures are disproportionately distributed. More is spent on adolescents than on younger children, presumably because of a focus on disorders and cases with more severe and extended symptomatology and functional impairments. Stated differently, the country spends only $35 annually on mental health services per preschool-age child, $163 per school-age child, and $293 per adolescent. If child mental health were approached as a primary care concern, it is likely that it would result in a greater apportionment of mental health dollars to children and adolescents, more support for early intervention and promotion of healthy development, and more efficient use of limited health care funds.

Mental Health Needs During Childhood Are Not Merely Transient or Incidental

Child mental health problems often persist into adulthood, and most adult disorders are preceded by child mental health problems. For example, 69% of children and youths who currently use mental health services also used them in the past (Costello et al., 1996). Among adults with disorders, 75% report that their significant symptoms began in childhood or adolescence (Weisz, 1998). Child mental health symptoms and disorders deserve immediate and substantial attention not only because they enhance current functioning but also because they promote longer term healthy functioning. Coupled with the emerging evidence of considerable long-term benefits of evidence-based interventions and the value of stemming disorder and preventing later disorders, these findings are additional compelling testimony to the need to consider child mental health as a primary health concern. Mental health promotion and early, focused intervention, whether prevention or treatment, will likely reduce the overall health care burden and costs (Aos, Lieb, Mayfield, Miller, & Pennucci, 2004).

The importance of children's mental health is also clear from the effect of mental health problems on other important aspects of child development and on family health. Mental health problems and related disorders are associated with lower academic achievement (Greenberg et al., 2001), greater family distress and conflict (Flisher et al., 1997; Huang et al., 2005), and poorer social functioning during childhood and into adulthood (Kupersmidt, Coie, & Dodge, 1996). These empirical findings suggest that paying primary attention to mental health promotes better functioning across many areas of child development. These relations are often reciprocal. For example, children's mental health may be bolstered by adequately addressing children's educational and social functioning (Greenberg et al., 2003).

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The Basis for Making Care and Concern for Children's Mental Health Primary

Empirical Support for Treatment, Prevention, and Promotion Strategies

Efficacious interventions exist for most common disorders, but they are not routinely accessible or applied. During the past 20 years, a growing set of empirically tested interventions for the most common child mental disorders has emerged (see, e.g., Hibbs & Jensen, 1996, and Kazdin & Weisz, 1998, for compendiums of these interventions; see Weisz et al., 2005, for an overview). For example, treatments with demonstrated benefits in reducing symptoms and improving functioning have been developed for conduct disorder (Henggeler, Melton, & Smith, 1992), anxiety disorders (Beidel, Turner, & Morris, 2000), attention deficit disorders (Jensen & Cooper, 2002), and depression (Birmaher et al., 2000; Clarke, Rohde, Lewinsohn, Hops, & Seeley, 1999). Service characteristics that are important for access and effectiveness are being discovered and described (Horwitz, Leaf, Leventhal, Forsyth, & Speechley, 1992; Kroenke, Taylor-Vaisey, Dietrich, & Oxman, 2000). Prevention strategies for those at risk for these disorders are also emerging, with increasing evidence of a significant reduction in later prevalence (Durlak & Wells, 1997; Mrazek & Haggerty, 1994). Programs and practices that promote mental health are also being empirically validated (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002). As noted by Weisz et al. (2005), knowledge is increasing about effective preventive and treatment interventions for reducing mental disorders and related psychological problems among children. Yet, the translation and application of these potentially valuable interventions to widespread practice are quite limited (Glasgow, Lichtenstein, & Marcus, 2003; Schoenwald & Hoagwood, 2001). For example, a recent evaluation of current drug-use prevention practices in 1,795 schools indicates that more than 80% of school districts implement some form of drug-use prevention program, but only 17% of schools use efficacious, peer-interactive methods to deliver the program, and only 14% use efficacious content along with peer-interactive methods (Ennett et al., 2003). Thus, although empirically supported practices and intervention programs exist, they often go unused, or access to them remains limited.

Practitioners must be trained to interpret and to rely on empirical evidence; they must be encouraged to update their own knowledge by reading the research and to modify their practice based on findings. This orientation is a routine part of medical training and continuing education, and it must become part of psychology's training culture and standards. Admittedly, the robustness, depth, and specificity of empirical findings are limited in several important areas, but this state of the science means that modifying practice on the basis of new empirical findings should be even more important than in more established domains. Although not the major focus of this article, a key to advancing children's mental health is reorienting the training of psychologists working in this area (Tolan et al., 2001).

The Benefits of Serving Children's Mental Health Needs Are Extensive

Applying effective interventions for children with disorders not only will decrease the extent of morbidity from disorders and improve children's functioning at school and in their homes and communities, it will also aid parents and schools facing the challenges of rearing children with mental disorders. For example, between 64% and 71% of children with an anxiety disorder who received the Coping Cat program (Kendall et al., 1997) showed a substantial drop in symptoms, which is commonly referred to as a clinically significant benefit. Effects also extended to functional measures, such as school performance. Proximal gains in behavioral functioning and school performance, in turn, led to less use of professional services over time and less involvement in and lower costs for child welfare, juvenile justice, and other social services. Analyses consistently find that efficacious interventions yield favorable economic returns to the investment in intervention. For example, estimates suggest that every dollar invested in providing multisystemic therapy to delinquent adolescents (Henggeler et al.,

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1992)—an empirically tested intervention for youths and families with conduct problems—returns $7–$31 in savings across the life span (Aos et al., 2004). Similarly favorable economic returns have been found for other interventions (such as the Perry Preschool Project [Barnett, 1996] and the nurse-practitioner home visiting program for high-risk mothers [Karoly et al., 1997]).

Developmental Psychopathology Research and Theory Can Guide Effective Intervention

One of the most important contributions by the field of psychology in the past two decades has been the evolution of developmental psychopathology as a translational science. Its emergence has had an important effect on the conceptualization, design, and efficacy of interventions for children (Cicchetti & Hinshaw, 2002). This discipline emphasizes the importance of linking strong and specific understanding of typical development to the conditions and characteristics that predispose and precipitate risk and syndromes (Cicchetti & Toth, 1992). This perspective has become an organizing concept that links developmental patterns to deviant outcomes, relates ecological models of multilevel influences to patterns of mental health problems through risk and protective factors, maps transactions between child and developmental context in development or risk, and identifies important processes and conditions that mediate and moderate outcomes for children's mental health (Coie & Dodge, 1998; Tolan, Guerra, & Kendall, 1995).

This body of theory and research has helped to identify the centrality of family in children's mental health. Whether from its role as a risk factor, as a focus for effecting change in developmental trajectories, as a protective factor in risk, or as a venue for providing service and sustaining benefits of mental health promotion, prevention, and treatment efforts, the family is central in any mental health effort with children (see Levant, Tolan, & Dodge, 2002, and Tolan et al., 2001, for two of many examples of the centrality of family in child mental health).

From this conceptual view, a new coherence among longitudinal and other studies of risk and intervention has emerged, with empirical results feeding theoretical refinements (Cicchetti & Hinshaw, 2002). Emerging from the growing knowledge base is a consistent finding that most disorders are related to multiple risk factors, with risk accumulating during the course of development (Coie et al., 1992). A second important finding is that although there may be distinct contributors to some types of clinical syndromes, there is also continuity in predictors of subclinical, but serious, problems. In addition, advances in studying family processes and contextual influences have led to greater understanding of how and when risk is expressed as disorder and which interventions might be most effective (Cicchetti & Hinshaw, 2002). Prevention and early intervention strategies, based on developmental models of the etiology of disorders, are also emerging for high-risk children, with increasing evidence of significant effects on later prevalence (Durlak & Wells, 1997; Mrazek & Haggerty, 1994). Thus, this approach provides a conceptual framework for empirical tests of clinically useful models of child development, risk, and pathology (both its development and its treatment with intervention). Findings from studies using this perspective promote the view that successfully addressing child mental health requires a multipronged and integrated approach.

Two examples of the potential of interventions based in developmental psychopathology—The potential for empirically testing and applying a developmental, psychopathology-based understanding of risk and intervention is evident from two examples of child aggression and related behavior problems. The Fast Track program, based on a developmental model, is a comprehensive program to prevent conduct disorder in high-risk youths (Conduct Problems Prevention Research Group, 2004). The Metropolitan Area Child Study (MACS) is a multicomponent program targeting high-risk youths (e.g., those with

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elevated levels of aggression) living in high-risk communities (e.g., the inner city). This program is based on a developmental–ecological model (Metropolitan Area Child Study Research Group, 2002). Both programs have shown statistically significant, if modest, efficacy.

The Fast Track program uses empirically based screening to identify kindergarten children who are at high risk for adolescent violence and then delivers services to these children, their parents, teachers, and peers. These services are based on past empirical findings of the critical factors that contribute to conduct disorder, including ineffective parenting, peer social rejection, social–cognitive and academic skill deficits, and aspects of the developmental ecology that support aggressive behavior (Conduct Problems Prevention Research Group, 2004). Outcome evaluation has revealed that children randomly assigned to receive the Fast Track intervention displayed better social–cognitive and academic skills than did children in the control group. Their parents also displayed better parenting skills (Conduct Problems Prevention Research Group, 1999). Over time, they were less likely than control group children to be diagnosed and placed in special education (Conduct Problems Prevention Research Group, 2002). Thus, early and focused intervention is likely to prevent, or at least stem, disorders by limiting the chronicity or the severity of symptoms and functioning limits (Cicchetti & Toth, 1992). Furthermore, the evaluation was able to test developmental hypotheses in a way that also contributed to knowledge in developmental psychopathology (Conduct Problems Prevention Research Group, 2004).

In the MACS intervention, children and families randomly assigned to the full intervention condition (teacher classroom training, small-group social–cognitive intervention, plus family intervention) showed a significant decline in aggression compared with controls. However, the effects depended on the community characteristics. Program effects were evident for all children in poor urban communities, although for youths in the most distressed (inner-city) communities, the benefits were limited to those showing clinical levels of aggression prior to the intervention. Children assigned to intervention also improved academically compared with controls (Metropolitan Area Child Study Research Group, 2002). Teacher practices, child cognitive skills, and family practices related to the child's condition also improved as a result of the intervention; these proximal targets of intervention were theorized to mediate risk (Metropolitan Area Child Study Research Group, 2004; Metropolitan Area Child Study Research Group & Gorman-Smith, 2003; Tolan, Hanish, McKay, & Dickey, 2002).

These are but two examples of intervention research that suggest the value of a developmental psychopathology approach to child mental health. Evidence is emerging across a variety of domains of psychopathology that earlier intervention can improve prognosis and lessen the frequency and impact of subsequent episodes of dysfunction (McGlashon, Miller, & Woods, 2001). Further, evidence is emerging from education and psychology that helping teachers and others who are influential in children's lives to understand and recognize mental health issues and to improve their facility with child mental health principles can benefit youths (see, e.g., Greenberg et al., 2001; Webster-Stratton & Reid, in press). Similarly, considerable evidence is accumulating that training and consultation to increase attention to mental health needs and psychological aspects of other health care have positive effects (Black & Nabors, 2003). Each of these strains of empirical findings suggests that effective intervention can be implemented to treat disorder, prevent later problems, manage subclinical problems, and promote mental health as part of normal development.

Evidence of benefits of early prevention and promotion—Further, there is considerable evidence that widening the focus of prevention and promotion efforts will lead to reduced expenditures in later mental health and other care (Cohen, 1998). For example, the Visiting Nurse Program, which provides high-risk mothers with help in parenting, personal development, and child care, not only improved child functioning and lowered delinquency

but also aided maternal functioning, including employment. Cost–benefit analyses indicate that this support program returns $2.88 in cost savings for every $1 invested (Aos et al., 2004), or $25,000 in savings in future-related expenditures for every family targeted for intervention (Karoly et al., 1997). The Perry Preschool Project, a comprehensive intervention in early life for poor families, returns several dollars for every dollar invested (Barnett, 1996). Effective intervention—focused early in development to enable, support, and modify risk—can have potentially profound economic returns.

Principles to Guide a Comprehensive Primary System of Mental Health Care for Children

Given that the mental health needs of children play such an integral role in their well-being, and given the tremendous benefits that are likely to accrue from responding to mental health as a primary need, we turn to what is needed for a primary mental health care system for children. A comprehensive primary system of mental health care for children should emphasize appropriate services, ranging from efficacious treatment for those with diagnosed disorders, to early intervention and prevention for those at high risk, to education, consultation, and support for parents and others with mental health concerns about their children. It should also emphasize integrating mental health support and awareness into primary settings for children's development. Implementing and sustaining such a system will require considerable deliberation and significant shifts in current practice and policies. We do not presume that implementing this system is merely a matter of outlining the major components or characteristics of the needed effort. However, we focus here on some basic principles and related characteristics that are essential in the overall system. We refer the reader to the report of the Working Group on Children's Mental Health (Tolan et al., 2001) for more extensive discussion about an agenda for action for APA and to the report of the President's New Freedom Commission on Mental Health (2003; Huang et al., 2005) and the *Report of the Surgeon General's Conference on Children's Mental Health* (U.S. Public Health Service, 2000) for more extensive discussion of legislative and service organization actions.

We suggest four principles that can guide a comprehensive system that simultaneously promotes mental health within normal developmental settings, provides aid for emerging mental health issues for children, targets high-risk youths with prevention, and provides effective treatment for disorders:

1. Children and their families should be able to access appropriate and effective mental health services directly.
2. Child mental health should be a major component of healthy development promotion and attention in primary care settings such as schools, pediatric care, community programs, and other systems central to child development.
3. Efforts should emphasize preventive care for high-risk children and families.
4. More attention must be paid to cultural context and cultural competence.

Enhancing Access to Appropriate and Effective Mental Health Services

The first principle for change is that all children who display mental health needs should have access to appropriate professional services. Important components of improving this access include promoting greater recognition of mental health issues among the public and gatekeepers of mental health and shifting the organization of service from provider- or sector-based organization to child- and family-based organization. In addition, as with the other principles, this principle has important implications for the training of psychologists and other mental health professionals.

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For children to gain easy access to care, we must overcome the stigma associated with receiving mental health services and the related failure to recognize the importance of mental health. This goal can be achieved, in part, by placing greater emphasis on the importance of mental health and on appropriate and timely responses when training professionals and gatekeepers who work in settings that serve children, including schools, pediatric practices, day care centers, churches, community centers, and community organizations. Professional training should also create an understanding of the role of psychology in typical or competent development as well as signs of psychological maladjustment and the need for mental health care. Training, public information campaigns, and advocacy efforts should also rebut the contention that mental health is something to be considered only after other “essential concerns” are addressed. These efforts should help reduce stigma among both the general public and the gatekeeper community and improve access for youths. Of course, we do not contend that these efforts alone are sufficient to overcome current misconceptions and the underappreciation of the importance of children's mental health.

The Systems-of-Care Approach to Organizing Mental Health Service Delivery

A second important principle in promoting access in primary developmental settings is to follow the systems-of-care approach to organizing child mental health services. This approach can be applied at any needed level to any of the four areas outlined here (Stroul & Friedman, 1996). The systems-of-care approach evolved in community mental health settings across the country in the 1980s. Systems of care embodies four principles: (a) bringing the treatment to the child and family; (b) including the child and family in all stages of treatment design and planning; (c) “wrapping” services around the child rather than requiring the child to conform to the provider's culture and construal of care; and (d) including all service providers in a unified plan (also see Huang et al., 2005, and Pumariega & Winters, 2003, for more detail).

Too often, children's mental health care is delivered in unfriendly and difficult-to-access settings (such as the provider's office). Instead, systems-of-care services can be provided in primary care settings, including pediatric settings and schools, which can increase accessibility for parents and children. Locating services in such settings has the additional benefit of integrating mental health needs and care into the existing child development roles of those settings. Providers also must become more child- and family-centered in their approach to treatment. Too often, a single professional makes a treatment plan based on a diagnosis or specific clinical formulation without considering other systems in the child's and family's life and how those situations may affect care planning. In such cases, if the family objects to the plan or fails to follow it, the professional often concludes that the family was unmotivated or otherwise failed. In a systems-of-care model, family members (and even the child when able) are active partners in formulating the problems or tasks and the actions to be taken. This approach also encourages planning that is developmentally appropriate, culturally competent, and matched to the circumstances of the family.

For example, it makes no sense to organize an intervention for anxiety problems around individual therapy during school hours or in a way that leads to family discord about how and who will bring the child to the session. In addition, it is not beneficial to schedule interventions during times already used for productive activities (e.g., reading or tutoring time, during school, or during sports activities after school). Likewise, prescribing the father's involvement without the mother's consultation (and vice versa) may doom the entire effort. The family's participation in the planning can better ensure their acceptance of the plan and adherence to a treatment regimen. Family-centered and family-collaborative planning can help prevent these impediments to effective care.

Another essential ingredient in the systems-of-care model is the concept of wraparound, in which the services are planned and delivered around the child's needs. This concept differs

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from approaching each type of treatment as a specific sector. Many treatment programs are funded and planned as if there were “slots” into which children fit. Treatment is provided only when a slot becomes available, at a location that might be far away from the child's home and separated from other settings of care, and from a cultural perspective that may be foreign to the family or child. A better approach is to organize the services so that they are developmentally appropriate, are useful to the family, and incorporate social–ecological factors and other systems in the child's life. Once the provider considers that each child lives within a given ecology, a plan for services and their delivery can be organized or “wrapped around” the child's needs and resources. The likely effect of creating a family- and child-centered approach to services will be greater public acceptance of the concept of mental health services, greater motivation to use assistance among those in need, and more effective approaches with greater effects.

Children's Mental Health Must Be an Integral Component of Primary Care in Health Settings

Including mental health information and services within the existing primary care systems (primarily health care and education) rests on improving several features. A first step is to increase recognition of mental health symptoms and needs as a contributor to other health problems. Hand in hand with this task is the need to increase recognition of the prevalence of mental health issues in situations prompting parental contact with the primary care system, whether for normal pediatric care or for educational planning (Gans et al., 1995). Second, the repositioning of mental health care could be promoted by increasing service expectations and by ensuring reimbursement for care that addresses mental health concerns or that considers the psychological aspects of health problems (Lasker & Lee, 1994). For example, an average pediatric outpatient care appointment lasts 7–12 minutes, with the emphasis on minimizing contact beyond efficient diagnosis and treatment of the physical ailment (U.S. Public Health Service, 2000). This structure minimizes attention to psychological needs. It may also help explain the limited recognition of mental health problems by primary care practitioners (Richardson, Keller, Selby-Harrington, & Parrish, 1996).

Another component of making mental health a primary care matter is to increase awareness of, attention to, and expertise in mental health issues among primary health care providers. The effect of doing so will be to provide many parents with brief, helpful direction and to expedite early identification and appropriate care for children with developing problems (Black & Nabors, 2003).

A third critical aspect of repositioning mental health care is ensuring that the services delivered are scientifically based. Although scientifically supported interventions have been created and evaluated for numerous childhood disorders, the gap between that evidence and practice is still great. Both researchers and practitioners can take steps to lessen this gap (Levant et al., 2002; Weisz et al., 2005). Intervention scientists, for example, have failed to adequately consider the circumstances of service providers and families when designing their interventions. Most interventions have been developed apart from practice conditions, and most have had their efficacy demonstrated using highly trained, closely monitored providers and youths preselected for specific problems. It is unclear whether these characteristics are critical for efficacy, and therefore should become the model for practice, or whether more evaluation of interventions with more typical practice conditions is needed (Kazdin & Weisz, 1998). However, it does seem clear that evidenced-based programs are preferred over those that are untested or those that have failed to produce significant benefits. Moreover, rapprochement is needed between practitioners and researchers to improve information exchange and influence between the two groups.

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Preventive Care for High-Risk Children and Families

At present, little attention is given to universal prevention and indicated intervention for high-risk children, with the exception of a strain of demonstration and research programs. To help parents and others concerned with children showing prodromal symptoms and other risk factors for psychopathology, a shift is needed in how professional advice and short-term services are accessed. The prevailing situation requires evidence of a disorder to access services of a very limited kind. When a child mental health problem does not rise to the level of a diagnosed disorder, the family typically delays services in the hope that the problem is merely transitory, misleading, or not worthy of intervention. Even if recognized, intervention may be elusive given that insurance coverage is unlikely. This practice, although a relatively unchallenged mainstay of child mental health care, is the equivalent of limiting access to health care for cardiac concerns only to those who have documented heart disease with prior life-threatening episodes. This practice policy not only fails to address most of the problems, but it undercuts provider and consumer use of more cost-effective and health-inducing monitoring and interventions. It is analogous to undercutting opportunities for cardiac patients to learn about diet and lifestyle changes or blood pressure medication.

Thus, a major task is to broaden models that emphasize prevention by changing which professional services are reimbursed through health insurance and education funding. Accordingly, mental health professionals must be trained to recognize the need for such services and to provide or refer for such services. Parity in insurance reimbursement is needed not only for mental health treatment but also for mental illness prevention. In turn, when preventive services are available, helping parents, teachers, and others to understand how to access such services, the value of these services, and how best to use them will be important. In addition, a major step in implementing this aspect of a primary mental health care system is systematically making use of evidence-based prevention and early intervention for at-risk populations. In this regard, organizations such as APA could join with other professional and consumer groups to advocate for no longer differentiating mental health needs from other health care needs and for no longer overlooking mental health or underemphasizing it in routine health care and education settings.

Attending to Cultural Context and Influences

Cultural and social status affect child development, attitudes and beliefs about child development, risk processes, and intervention efficacy and utility (U.S. Department of Health and Human Services, 2001). In addition, disparities exist across racial–ethnic and socioeconomic groups in access to mental health services. However, the solution extends beyond simply changing funding patterns. For example, in many states, through the Children's Health Insurance Program (CHIP) and Medicaid, poor and marginally poor children may have greater access to mental health services than do working-class or middle-class children. It is important to remember that access to effective and appropriate care is inadequate overall. Clearly, funding is not the only cause of disparities by racial–ethnic and socioeconomic status. Disparities can also arise from insensitivity to cultural contexts. Mental health recognition, care, and effects occur within cultural contexts, and therefore mental health promotion, prevention, and treatment should be guided by methods that are “culturally competent” (Pumariega, 2003), that is, consistent with the cultural characteristics of those involved. An image endures of mental health services as culturally alien to many, as provided to those able to find and come to private offices, and as overreliant on “talk” therapies perceived to be appropriate only for those with the luxury to fret about such extra concerns. Cultural insensitivity and failure to connect the activity to the family's self-determined needs may ultimately impede experiences with mental health issues and services. In short, the field must lessen the misconceptions about interventions and improve their sensitivity to and appropriateness for the cultural and social niche of the child and family.

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Although not yet well defined, the concept of cultural competence highlights the importance of understanding the historical, political, and social dynamics of power, the variations in beliefs and practices, and the values about mental health within which services occur. One response to this recognition has been to promote training in cultural competence. However, it is yet unclear what the components of such training should include or what effect it would have on intervention use and outcomes. Such an understanding should have the highest priority in future research.

Important questions remain about whether and how scientifically supported interventions should be shaped to meet the needs of particular cultural groups. An intervention that is effective for one group may or may not be successful with others. When adapting interventions in new settings, local practitioners commonly reshape the program in ways that have intuitive appeal to local citizens. It is unclear, however, whether these changes enhance or hinder targeted outcomes. A major research question is the extent to which group-specific interventions are more effective than interventions applied to all client groups without variation.

Another challenge for the designers of interventions is to articulate which components of an intervention are essential to the theory guiding the program and which can be altered to suit local situations. Further, it is unclear which differentiation of groups and intervention procedures is critical. For example, arguments can be made for more or fewer distinctions between subgroups on the basis of ethnicity, immigrant status, residence, income level, and family makeup. How and when these distinctions are critical has received little empirical attention (U.S. Public Health Service, 2001). What is clear, however, is that local adaptation will occur. For example, Ennett et al. (2003) found that school counselors regularly altered evidence-based classroom curricula in substance-use prevention to meet the needs of their students. However, the effects of these variations on student outcomes are unknown. Clearly, more research is needed to understand the importance of adapting interventions on the basis of cultural and social–ecological distinctions, the relative benefits of interventions focused on specific groups, and the balance between universality and specificity in service approach, delivery, and utility.

Psychology's Role in Bringing the Recommended Reforms to Scale

Admittedly, the reforms and advances being proposed are daunting and will require much more than the rhetoric of this article to be implemented and brought to scale. Analyses of social reform movements (Schorr, 1997) and processes of cultural change (Gladwell, 2002) point to several crucial steps needed to succeed in changing course, and several fall within psychology's potential purview. However, our intent has been to stress the importance of improving children's mental health as an agenda for psychology and the value of psychology acting in a leadership role with other groups and professions to advance it. An expanded statement on the role that psychology can and should play in advancing children's mental health can be found in the report of the APA Working Group on Children's Mental Health (Tolan et al., 2001). This work has been followed by a second task force chaired by Barry Anton that focused on implementing some of the strategies recommended in the initial report. A third group, composed of representatives of many APA divisions focused on children and families, is further examining how they might implement the recommendations of that task force. We offer here some areas of work we believe are essential if psychologists are to make children's mental health a primary concern within our society and to improve the quality of our children's mental health.

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Psychologists Must Educate the Public

First, psychologists must work with other advocates, scientists, and educators to help the public begin to embrace the proposed reforms. Although to psychologists these ideas and their advantages may seem obvious, to legislators and other policymakers who face difficult funding and priority choices, and to a public that is bombarded with "causes," the connection may be less clear. Children's mental health is certainly not on any radar screens as a high priority. High-profile reports, such as the *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda* (U.S. Public Health Service, 2000), the report of APA's Working Group on Children's Mental Health (Tolan et al., 2001), and the report of the President's New Freedom Commission on Mental Health (2003), contain the necessary rationale and components for realizing the reforms, but without additional effort, they will have little impact on policymaking. These reports are simply a base for advocacy that can lead to awareness and eventual support.

Preventing and treating children's mental illness and promoting it as a primary concern face particularly thorny challenges in capturing the public's heart for two reasons: the stigma of mental illness and the dissociation of child mental health from child development and social functioning. Thus, it is critical not only to uncover and discuss the dramatic impact of mental illness on children and their families but also to raise appreciation for mental health support as part of our social responsibility for children. That said, interest is increasing in addressing stigma, increasing awareness, and reducing misunderstanding at the federal and state levels. APA and psychologists can partner with the National Institutes of Health, the Substance Abuse and Mental Health Services Administration, other professional groups, and consumer groups to fashion campaigns that show how common and how readily addressed mental health issues for children are and how vital it is that they be given due consideration.

Children's Mental Health Issues Must Be Reframed

Issues of children's mental health must be publicly reframed in a way that simultaneously reduces stigma and increases public support for scientifically based and multifaceted advances. Several aspects of this reframing must be considered. First, the magnitude of the problem and the possibility that it could, or does, hit close to home must be made obvious. Both compelling statistics and emotion-grabbing case examples should be used in marketing campaigns. Second, the causes and the existence of effective treatments must be disseminated. One problem is the current unchallenged idea that mental health stems solely from an individual's character or a family's adequacy ("The parents are responsible for taking care of children's needs and thus are the cause of mental illness."). On the other hand, mental illness is also sometimes cast as a random affliction beyond the control of intervention ("It could happen to anyone, just like hurricanes."). These misconceptions or oversimplifications affect the public's readiness to blame the victims or provide needed support. The public may withhold support from families that appear to merit blame for their difficult plight, whereas the public regularly provides sympathy and financial support to blameless victims of natural disasters. Finally, the tangible positive outcomes that could accrue from public support must be made clear. In all of these domains, psychological research could enlighten the public's perspective if these findings were communicated in an accessible fashion. Advocacy and public education based on the scientific advances could be used by psychology to help the public embrace the primary importance of child mental health.

Another challenge is the iterative bootstrapping that must be part of any reform movement. The public will not support a reform unless it believes that the changes will "work" in solving a problem, but the success of reforms likely depends on public support levels. The history of reforms in mental health suggests that premature wide-scale implementation of innovation can sometimes lead to adverse consequences. The community mental health center movement of

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the 1960s brought services out of the psychiatric hospital and into the community (excellent principles), but the naïve expectation that severely impaired persons with schizophrenia could be responsible for their own medication and treatment adherence led to the adverse consequence of large numbers of homeless persons and a backlash against professional psychology and community psychiatry at the close of the 20th century. It seems wise to learn from that and other single-principle reform movements and instead embrace a strategic plan that organizes multiple critical and related components.

Psychology Must Embrace a Strategic Plan to Improve Children's Mental Health

To avoid the path of many other calls for reform, the reforms proposed here must be integrated with a sound strategic plan for their broad implementation. The APA Working Group on Children's Mental Health and subsequent children's mental health work groups are good first steps in such strategic planning (Tolan et al., 2001). Relying on scientific findings and integrating what is known to provide best direction seems critical to avoid simply blaming or shifting resources. Working as a profession to increase awareness and to overcome the continued relegation of mental health needs to the health care sidelines will help ensure that such efforts can be realized and sustained. Integrating developmental sensitivity, cultural competence, and family-focused approaches should help to address reluctance and suspicion among advocates that might undermine work toward the shared interest in improving children's mental health. Clearly, there is an established base for effective approaches to child mental health. Although much certainly remains unknown and controversy continues, the scientific basis for and the profound impact of child mental health must become more widely recognized and understood. To achieve this outcome, psychology must increase the emphasis on evidence-based practice and integration of child development and other important areas of knowledge in working to advance child mental health.

Implications for Psychology Education, Clinical Practice, Scientific Research, and Public Policy

To push for the culture shift we are advocating, the psychology community and academia must also shift their training, their practices, their perception of the role of research, and their approach to policy in this area. As noted, the answer is not simply training more professionals to meet the needs. The solution also does not seem to lie in simply training another generation of PhD psychologists to provide direct clinical services. Rather, we must develop training models that emphasize organizing services, using evidence-based practice, and working with other professionals in prevention, consultation, education, and other areas in addition to direct treatment. We must also develop models that enable midcareer incorporation of new approaches, through models that organize and create incentives to use such services as appropriate for the needs of a given child and family. These two shifts are important enough to engaging psychology in advancing children's mental health that they merit careful deliberation through a task force or work group, with the goal of producing standards and policies to realize these contributions. For psychology training, it may be that a focus within APA is needed. For the midcareer training, it may be more useful to collaborate with other professions given that the issues are not limited to psychology.

Professional Training in the Practice of Science

In many APA-approved doctoral training programs in psychology, a bifurcation exists between scientific research and clinical practice. There is also a dominance by adult psychopathology, after-the-fact assessment and treatment of disorders, passive reliance on the client to initiate contact, and an overreliance on treatment from a therapist's office. The next decade of doctoral training must assert the need for a new breed of public health psychologist, one who

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understands epidemiology, developmental psychopathology, preventive and mental health promotion approaches, and evaluation procedures along with the more typical skills.

Clinical practice, too, must shift to a new role for the psychologist, from one that is a therapist to individuals with disorders to one that is more a prevention scientist and a developmental psychopathology practitioner. Psychologists must not only serve individual children at risk, but they must also forge innovative, communitywide approaches to screening, triaging, and serving children at early stages in the development of psychopathology. For example, prenatal clinics, pediatric practices, preschools, and schools are all potential sites for universal screening. All such efforts need psychological expertise to be effective and useful.

Of course, more emphasis on research as the tool for developing the field is needed. In most fields, research and development constitute a more substantial portion of the expenditure for training, as they are considered an expected investment cost. Grissmer (2000) has noted that our nation spends approximately 2% to 3% of its gross domestic product for research and development, counting both public and private sectors. This proportion varies dramatically across sectors of the economy, however. In health, transportation, and energy, the proportion is about 3%. In pharmaceuticals and integrated circuits, the proportion is nearer 20% (and a wise investment). Current estimates show that we spend less than 0.3% of expenditures for research and development on education and all other aspects of child development. This is clearly only minimal investment and is terribly low compared with other sectors of health. It is as if we, as a society, believe that “grandmother's wisdom” is sufficient to direct health care spending. With such a weak scientific base, it is no wonder that interventions with children lag in credible success. It is time to invest in a science of children, which will provide a stronger basis for the public allocation of resources to children.

Psychology Must Become a Public Policy Science

Finally, psychology can help shape public policy itself in a fundamental way. Although we might achieve some immediate success in gathering support for children's programs simply by appealing to a view of children as weak, defenseless victims, long-term success will be achieved only by demonstrating the value of scientific research and the scientific method in guiding public policy. The practice of public policy must become the practice of psychological science. Currently, economics, political science, and politics have the strongest impact on public policy. A new approach is needed, one that attends not only to matters of economics and political science but also to the moral basis of a concern for children and the ethics of justice and one that places the evidence from psychological science in the foreground when making public decisions. Such a reform will yield a more permanent influence on how public policy is shaped (Tolan et al., 2001; U.S. Public Health Service, 2000).

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