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The Counseling Psychologist 2007; 35; 493
DOI: 10.1177/0011000006291411

The online version of this article can be found at:
http://tcp.sagepub.com/cgi/content/abstract/35/4/493

Published by:
SAGE Publications
http://www.sagepublications.com

On behalf of:
Ψ17
Division of Counseling Psychology of the American Psychological Association

• **Major Contribution**

Best Practice Guidelines on Prevention Practice, Research, Training, and Social Advocacy for Psychologists

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Preventive interventions have been shown to successfully aid the development of children, youths, and adults and avert maladjustment in individuals at risk for negative outcomes. Continued scientific advancement of preventive interventions is crucial to further the health of U.S. children, youths, and families. This article presents 15 best practice guidelines on prevention practice, research, training, and social advocacy for psychology. These guidelines articulate clear standards and a framework for moving the profession toward improving the well-being of a greater number of individuals and communities. The guidelines are intended to assist psychologists in evaluating their preparation for engaging in prevention work and in furthering their understanding through increased knowledge, skills, and experience in prevention.

The efficacy of preventive interventions in reducing psychological symptoms and related behavior has been clearly demonstrated in the literature

After the first two authors listed above, the remaining authors of this article are listed in alphabetical order. We wish to express our deepest gratitude to *The Counseling Psychologist* editor, Robert T. Carter, and the anonymous reviewers who provided valuable feedback in the process of revising this Major Contribution. Correspondence concerning this article should addressed to Sally M. Hage, Teachers College, Columbia University, Counseling and Clinical Psychology Department, Box 102, 426A Horace Mann, New York, NY 10027; e-mail: hage@tc.columbia.edu.

THE COUNSELING PSYCHOLOGIST, Vol. 35, No. 4, July 2007 493-566
DOI: 10.1177/0011000006291411

(Durlak & Wells, 1997; Greenberg, Domitrovich, & Bumbarger, 2001; Institute of Medicine, 1994). Preventive interventions have been shown to enhance the development of children, youths, and adults and to avert maladjustment when individuals are at risk for mental disorders or other negative outcomes (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002). Successful preventive programs are theory driven, socially and culturally relevant, delivered across multiple contexts (e.g., individual, family, school, community), and connected within systems providing both primary and secondary preventive intervention services (Kiselica, 2001; Nation et al., 2003); include interventions that contain sufficient dosage; and target several behaviors.

The advancement of preventive interventions is essential to furthering the health and well-being of the U.S. population. Recent examinations of the status of youths and families in the United States have concluded that our nation is in the midst of a "health crisis" (Satcher, 2000). A number of social factors indicate that children and youths are at significant risk with regard to substance abuse, violence, and school dropout rates and that access to quality services is limited (Weissberg, Walberg, O'Brien, & Kuster, 2003). For instance, 30% of 14- to 17-year-olds report involvement in multiple high-risk behaviors that jeopardize their potential for successful development (Dryfoos, 1997). In addition, about 20% of youths experience mental health problems annually, yet 75%-80% do not receive appropriate interventions (Ringel & Sturm, 2001; U.S. Department of Health and Human Services, 1999).

The cost burden of not addressing children's and families' mental health is enormous. Early and focused interventions have been shown to limit both the chronicity and severity of symptoms as well as functioning limits (Cicchetti & Toth, 1992). Therefore, expanding prevention efforts significantly reduces the costs of later mental health and other types of care (Cohen, 1998; Conduct Problems Prevention Research Group, 1999; Tolan & Dodge, 2005). For example, in a Visiting Nurses Program, an intervention with high-risk mothers, providing help in parenting, personal development, and child care, resulted in improvements not only in child functioning and lowered delinquency but also in maternal functioning, including employment. Cost–benefit analyses indicated that this program returned $2.88 in savings for every $1 invested (Aos, Lieb, Mayfield, Miller, & Pennucci, 2004), or $25,000 in savings in future-related expenditures for every family targeted for intervention (Karoly et al., 1997). In summary, accumulating evidence of the value of early intervention and prevention points to the need for preventive interventions to become "regular, integrated, and substantial components" of our nation's mental health system (Tolan & Dodge, 2005, p. 603). This vision is consistent with the recommendation of the President's New Freedom Commission on Mental Health (2003), which has called for expansion of

early intervention services and supports that emphasize prevention, early identification, and intervention to maximize positive outcomes.

This article presents 15 best practice guidelines on prevention that are meant to provide both clear standards for the profession of psychology and a vision, moving psychologists toward improving the health and well-being of a greater number of individuals and communities, as well as providing systemic and political action for social justice (see Table 1 for a summary of the guidelines). The guidelines are also meant to assist psychologists in evaluating their own preparation for engagement in prevention work and in furthering their education and training through increased knowledge, skills, and experience in the area of prevention. Although the best practice guidelines were written by counseling psychologists, they are applicable to other specialty areas of psychology, and suggestions to broaden the impact of these guidelines across the profession of psychology are discussed after the presentation of each guideline. Furthermore, these guidelines follow American Psychological Association (APA) principles related to the development of practice guidelines for psychologists (APA, 2005). In its document, APA defines *guidelines* as "statements that suggest or recommend specific professional behavior, endeavor, or conduct for psychologists" (p. 976). APA suggests that guidelines be written in response to legal and regulatory issues, to benefit the public, and to provide professional guidance. Best practice guidelines are necessary in the field of prevention given the increasingly important role of prevention science in psychology, the interface between public policy initiatives and preventive practices, and the need to educate psychologists about the complexities of prevention practice research, training, and social advocacy.

Specific Goals of Best Practice Guidelines

The specific goals of these best practice guidelines are to provide psychologists with (a) a professional framework for prevention work with individuals, families, and communities; (b) a rationale for addressing prevention in education, training, research, practice, and social advocacy; (c) information, relevant terminology, and current research from psychology and related disciplines that provide support for the guidelines; and (d) a set of principles to enhance ongoing education, training, research, practice, and social advocacy. These best practice guidelines build on, and are consistent with, the general principles (e.g., justice and respect for people's rights and dignity) of APA's (2002) *Ethical Principles of Psychologists and Code of Conduct* and other APA documents such as the *Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists* (APA, 2003); and *Guidelines and Principles for*

TABLE 1: Summary of 15 Best Practice Guidelines on Prevention

1. Psychologists are encouraged to seek ways to prevent human suffering through the development of proactive interventions.
2. Psychologists are encouraged to select and implement preventive interventions that are based on theory and supported by research evidence.
3. Psychologists are encouraged to use culturally relevant prevention practices that are adapted to the specific context in which they are delivered and that include clients and other relevant stakeholders in all aspects of prevention planning and programming.
4. Psychologists are encouraged to develop preventive interventions that address both the individual and the contextual/systemic factors that contribute to psychological distress and well-being.
5. Psychologists are encouraged to implement interventions that seek to reduce risks as well as promote strengths and well-being across the life span.
6. Psychologists are encouraged to carefully attend to the relevance and scope of their prevention research within the current progression of prevention science.
7. Psychologists are encouraged to be competent in a variety of research methods used in prevention research.
8. Psychologists are encouraged to conduct research that is relevant to environmental contexts.
9. Psychologists are encouraged to consider the ethical issues involved in conducting prevention research.
10. Psychologists are encouraged to consider the social justice implications of prevention research.
11. Psychologists are encouraged to develop knowledge of prevention concepts and research, as well as skills in the practice and scholarship of prevention.
12. Psychologists are encouraged to foster awareness, knowledge, and skills essential to prevention in psychological education and training.
13. Psychologists are encouraged to design, promote, and support systemic initiatives that prevent and reduce the incidence of psychological and physical distress and disability.
14. Psychologists are encouraged to design, promote, and support institutional change strategies that strengthen the health and well-being of individuals, families, and communities.
15. Psychologists are encouraged to engage in governmental, legislative, and political advocacy activities that enhance the health and well-being of the broader population served.

Accreditation of Programs in Professional Psychology (American Psychological Association Committee on Accreditation, 2002). These prevention guidelines are meant to be aspirational and, thus, to promote a high level of professional practice by psychologists in their prevention work with individuals, families, and communities. The best practice prevention guidelines are not intended to be mandatory or exhaustive and may not be applicable to every professional and clinical situation. They are not definitive and are not meant to replace the professional judgment of psychologists. To date, these guidelines represent an initial effort to provide best practice prevention guidelines for psychologists.

Definition of Prevention

As we begin, it is important to define what is meant by the term *prevention*. The most commonly cited description of prevention is Caplan's (1964) definition, which delineates three dimensions of prevention activities: primary (i.e., stopping the problem before it occurs), secondary (i.e., delaying the onset of a problem), and tertiary (i.e., reducing the impact of a problem). However, some authors have noted that Caplan's definition was originally designed for physical disorders, and, as a result, fails to capture the complex etiology of social and psychological problems (Albee, 1983; Romano & Hage, 2000b).

In this article, we extend Caplan's (1964) definition to include efforts to enhance personal and collective well-being as well as initiatives that create social and political change aimed at improving environments where people live, learn, and work (Romano & Hage, 2000b). When referring to prevention in these guidelines, we mean efforts that result in one or more of the following: (a) stopping a problem behavior from ever occurring; (b) delaying the onset of a problem behavior; (c) reducing the impact of a problem behavior; (d) strengthening knowledge, attitudes, and behaviors that promote emotional and physical well-being; and (e) promoting institutional, community, and government policies that further physical, social, and emotional well-being (Romano & Hage, 2000b). Hence, prevention is conceptualized broadly in this article to include a "risk-reduction" focus (e.g., McWhirter, McWhirter, McWhirter, & McWhirter, 1995; Mrazek & Haggerty, 1994), a wellness or strength-based approach (e.g., Cowen, 2000), and a social justice perspective (e.g., Albee, 1986, 2000; Prilleltensky & Nelson, 1997).

Prevention and Counseling Psychology

Counseling psychology's historical commitment to the scientist–practitioner model (Gelso & Fretz, 2001) and current interest in evidence-based practice (Chwalisz, 2003) provide values, knowledge, and skills for promoting the practice of prevention. Prevention has long been recognized as a vital and unique aspect of the identity of counseling psychologists (Gelso & Fretz, 2001). Historically and philosophically, counseling psychologists have aligned themselves with the practice of prevention while demonstrating strong commitments to addressing major societal needs and taking an active leadership role in the area of multicultural issues (Heppner, Casas, Carter, & Stone, 2000; Sue, 2001). These unique specialty areas in counseling psychology make the field especially suited for providing leadership in the development of best practice guidelines aimed at fostering the knowledge, skills, and experience of psychologists across the discipline in the area of prevention.

Recent initiatives by counseling psychologists suggest that interest in prevention research, practice, and training is expanding (Albee, 2000; Romano & Hage, 2000b; Vera, 2000). Several publications by counseling psychologists focusing on prevention have recently appeared, including a major contribution with prevention as the focus (*The Counseling Psychologist*, November 2000) and a number of texts dedicated to prevention (e.g., Capuzzi & Gross, 1996; Conyne, 2004; McWhirter, McWhirter, McWhirter, & McWhirter, 2004). A movement promoting positive psychology has emerged from which several initiatives supporting prevention research and training have come into being: a Young Scholars Award, a Task Force on Teaching Positive Psychology, and a summer institute for advanced doctoral students and new faculty. In addition, special interest groups devoted to Prevention and Public Interest and Positive Psychology were formed in the Society of Counseling Psychology (SCP) and quickly became active Sections of the Society. Moreover, the most recent *Handbook of Counseling Psychology* includes several chapters highlighting prevention activities (e.g., Hesketh, 2000; Hill, Thorn, & Packard, 2000; Hoffman & Driscoll, 2000; Vera & Reese, 2000).

Alternatively, studies of the professional roles of counseling psychologists have revealed that despite growing interest in prevention, counseling psychologists' actual involvement in prevention activities appears to be limited and to have been diminished over time (Fretz & Simon, 1992; Goodyear et al., 2007). For example, a survey of randomly selected counseling psychologists by Goodyear et al. (2007) reported that only about one quarter of surveyed counseling psychologists ($n = 167$) engage in prevention/outreach activities (with about 28% of SCP members and 20% of SCP nonmembers reporting involvement in prevention activities). Among counseling psychologists who reported involvement in prevention in Goodyear et al.'s study, only about 10% of work time (i.e., 4 hr, assuming a 40-hr work week) was devoted to prevention activities. This level of involvement represents a decrease from Watkins, Lopez, Campbell, and Himmel's (1986) study conducted 15 years earlier, which found that more than one third ($n = 232$, 35.9%) of counseling psychologists participated in primary prevention activities, with an average of 8 hr devoted to primary prevention activities each week. It is interesting to note that while the mean age of the Goodyear et al.'s sample (50.35 years) was quite similar to that of Watkins et al.'s sample (50.0 years), clear differences existed across time in the gender compositions of the samples. In the Goodyear et al. study, 50.9% of respondents were women; 48.5% were men. Fifteen years earlier, nearly three fourths of the sample had been men in Watkins et al.'s study. Similarly, whereas 10.6% of the Goodyear et al. sample was racial or ethnic minorities, only 5% of the sample was racial or ethnic minorities in Watkins et al.'s study.

Counseling psychologists' lack of reported involvement in prevention activities is not surprising given the almost complete absence of formal training in prevention research, practice, and social advocacy in psychology training programs (Matthews, 2003, 2004; McNeill & Ingram, 1983). Without such training as part of their general course of preparation, counseling psychologists may be reluctant to initiate prevention activities, lacking the necessary knowledge and skills in this area of practice. They may also fail to identify how their work fits into a prevention framework because of a lack of awareness of prevention terminology and an understanding of what constitutes prevention practice and research. A recent article by Blustein, Goodyear, Perry, and Cypers (2005) discussed the historical and current institutional contexts of counseling psychology training programs, especially focusing on the vulnerabilities of the profession while offering suggestions to strengthen the profession in the future. Among the suggestions offered by the authors were increased involvement of counseling psychologists in K-12 schooling, especially as related to roles and activities that promote systemic changes for the development of children and adolescents, and curricula adjustments that prepare counseling psychologists for roles in public policy development as well as implementation and social advocacy. These areas of expertise are germane to a prevention perspective in counseling psychology.

In addition, some theorists argue (e.g., Conyne, 2004) that counseling training programs already give students much of what they need to do the work of prevention, including skills in effective communication, problem solving, theoretical models of change and development, group work, research, and evaluation. Hence, the change that needs to take place in the field of counseling psychology, and in psychology in general, is that of emphasis and perspective; that is, giving greater emphasis to a prevention viewpoint. Part of the change in emphasis and orientation that is needed involves increased recognition of the importance of the complex social, physiological, biological, and psychological factors involved in mental or emotional problems (Bond, Belinky, & Weinstock, 1998). Such recognition means targeting both the social context (e.g., poverty, injustice, exploitation) surrounding mental or emotional problems and the organic, or biological, genetic explanations for these problems. The energy spent in debate between these two explanations for mental or emotional problems (i.e., the social contextual and the organic/biological) would be better spent on prevention because a prevention perspective is applicable to both biological and social bases of behavior. However, influencing the social climate (and impacting the political powers that establish and enforce policy) is an absolute necessity for prevention efforts.

Prevention must include efforts aimed at social justice, but because these efforts challenge the status quo, they too are often left off the agenda (Albee,

1995; Hage, 2005). As noted by Shore (1994) and cited by Albee (1996), some of the most important prevention initiatives have been the women's movement, social security, civil rights laws, and Medicare. Strategies need to be developed to ensure that psychologists' prevention work addresses the "causes of the causes" of injustice and not just the surface of the causes (Prilleltensky & Nelson, 1997). Such strategies ultimately aim at preventing the negative consequences of oppression for people of color and other marginalized groups who share unequal power in society because of their immigration, age, socioeconomic status, religious heritage, physical ability, or sexual orientation.

Development of the Best Practice Guidelines on Prevention

The best practice guidelines presented in this article were developed by members of the Prevention Section of SCP (APA's Division 17). The guidelines are built on the Call to Action that was previously issued by Romano and Hage (2000) and are aimed at giving prevention greater prominence and significance in the profession of counseling psychology. The Call to Action proposals received sanction at the 2001 Mid-Year Executive Board Meeting of Division 17, when they were presented by then *TCP* Editor Puncky Heppner (APA Division 17, 2002).

The scientific knowledge base that informs prevention practice has grown in recent years, in conjunction with increased discussion regarding the goals and agenda for prevention programming. Consideration of what constitutes best practice in prevention has been influenced by simultaneous developments across the field of psychology, such as positive psychology (Seligman & Csikszentmihalyi, 2000; Sheldon & King, 2001; Snyder & Lopez, 2002), applied developmental science (Cicchetti & Toth, 1992; Lerner, 2002), cultural competence (Castro, Barrera, & Martinez, 2004; Kumpfer, Alvarado, Smith, & Bellamy, 2002; Ponterotto, Casas, Suzuki, & Alexander, 1995), and the promotion of social justice (Goodman et al., 2004; Prilleltensky, 1997; Vera & Speight, 2003).

The development of these guidelines was built on a survey of recent literature, including books (e.g., Conyne, 2004; Gullotta & Bloom, 2003b; Weissberg, Gullotta, Hampton, Ryan, & Adams, 1997), book chapters (e.g., Vera & Reese, 2000), and journal articles (e.g., Goodman et al., 2004; Kaplan, 2000; Kenny, Waldo, Warter, & Barton, 2002; Luthar & Cicchetti, 2000; Romano & Hage, 2000a, 2000b) that served to elucidate current models and trends in prevention practice. Knowledge regarding the scientific basis for prevention was gleaned through this overview, as well as from a systematic search of APA's PsycINFO database to identify journal articles published during 2000 to 2005 that focus on prevention. Although this article is unique in offering a comprehensive set of guidelines that encompass

prevention practice, research, training and social advocacy, our efforts to identify best practices in prevention benefited from existing literature that has identified characteristics of effective prevention programs (e.g., Durlak, 2003; Greenberg, Domitrovich, & Bumbarger, 1999; Greenberg et al., 2003; Nation et al., 2003; Vera & Reese, 2000). The recent work of the APA Presidential Task Force on Prevention: Promoting Strength, Resilience, and Health in Young People, which published results from its literature review in the *American Psychologist* (Greenberg et al., 2003; Nation et al., 2003; Weissberg, Kumpfer, & Seligman, 2003), contributed to our knowledge of effective prevention practice and research.

The following 15 best practice guidelines were formulated after charting the findings that emerged across all of these sources and identifying and synthesizing common themes. The guidelines are organized into four sections: (a) practice issues, (b) research and evaluation, (c) education and training, and (d) social and political advocacy. Examples and discussion related to the specific implementation of the best practice guidelines across the profession of psychology follow the presentation of each guideline.

PREVENTION PRACTICE

Our guidelines for prevention practice reflect attention to the goals of prevention, as well as attention to the practices that have been found to be effective in reaching those goals. The development of the following five guidelines has been influenced by the conceptualization of prevention identified in the introduction to this article; namely, that prevention simultaneously encompasses risk reduction, enhances individual and community strengths, and promotes social justice. In addition, recent reviews of prevention outcome research (e.g., Durlak, 2003; Greenberg et al., 1999, 2003; Nation et al., 2003; Vera & Reese, 2000) provided an empirical knowledge base that guided our understanding of effective practice. Through systematic analysis of existing reviews of prevention research, we identified principles related to program effectiveness that emerged consistently across the literature and that were consistent with implications derived from developmental and ecological theories (e.g., Bogenschneider, 1996; Lerner, 2001; Luthar & Cicchetti, 2000) and social justice values (Prilleltensky, 1997). Through this process, we distilled the following five practice guidelines.

1. *Psychologists are encouraged to seek ways to prevent human suffering through the development of proactive interventions.*

Although psychological services that target identified psychological disorders are valuable and necessary for those persons who have already devel-

oped serious symptoms, moral and practical imperatives call for an increased focus on prevention. Proactive approaches to prevention may seek to reduce or eliminate factors that contribute to psychological stress and disorders, as well as to enhance factors that contribute to positive development (Conyne, 2004). Risk factors targeted for intervention may be present within the individual, family, school, or community. Others, such as poverty and discrimination, may be pervasive in the wider social environment. The intent is to improve the health and well-being of the populace by reducing unhealthy factors and enhancing healthy or growth-promoting factors.

Prevention seeks to reduce or eliminate the incidence of disorder before it occurs and thus offers the potential to reduce psychological distress and human suffering (Albee & Ryan-Finn, 1993; Conyne, 2004). On moral grounds, prevention can thus be more humane than an exclusive reliance on treatment or cure (Cowen, 1994; Prilleltensky, 1997). Although treatment is critically important in reducing distress after the occurrence of suffering, treatment does not reduce the incidence of new cases and thus has not served to eliminate any physical or mental disorder (Albee & Ryan-Finn, 1993).

On a practical level, a tremendous gap exists between the need for and the availability of mental health treatment services. By reducing the incidence of mental health problems, prevention offers a means to address this disparity (Albee & Ryan-Finn, 1993; Conyne, 2004). The U.S. Surgeon General's (1999) report on mental health, *A Report of the Surgeon General*, highlighted the disparity between the need and the availability of mental health services. According to that report, only 15%-20% of youths who experience symptoms of a mental disorder receive appropriate treatment. The supplemental report (U.S. Surgeon General, 2001) also noted that this gap is even larger among youths of color, who may experience mental health treatment as stigmatizing, and among the poor, who cannot afford costly treatments and may find it difficult to negotiate a fragmented social services system (Conyne, 2004). Because of the high and unfulfilled need for mental health services, availability and access to both treatment and preventive services warrant expansion (Albee, 1983, 1985; Gullota & Bloom, 2003b; U.S. Surgeon General, 1999). As noted by Vera and Shin (2006), prevention and outreach services are a critical supplement to therapy services as those who are most in need are often those least likely to access and enter therapy.

The proactive benefits of prevention are supported further by research indicating that it is more effective and less costly to promote positive development in the absence of a crisis than to intervene after a problem has developed (Albee & Ryan-Finn, 1993; Catalano et al., 2002; Durlak, 2003; Elias, 1997; Luthar & Cicchetti, 2000). Long-term evaluations of the

High/Scope Perry Preschool Project (Schweinhart & Weikart, 1988), for example, have documented educational and economic benefits. This project has followed 123 African American children from low-income families who lived in Ypsilanti, Michigan, between 1962 and 1967. Fifty-eight children were randomly assigned at ages 3 and 4 to a high-quality preschool program offering parent information and support. Another 65 children in the study were not assigned to a preschool program. Evaluation completed when the participants were 25 years of age (Barnett, 1993) revealed that program participants had higher levels of academic achievement, college attendance, and employment and earnings and lower levels of special education, antisocial behavior, incarceration, and teenage pregnancy in comparison with those not attending the preschool program. Estimated taxpayer savings were $30,000-$90,000 per participant. The continued benefits of the program have been documented through interviews with 97% of the study participants at age 40 (Schweinhart et al., 2005). In comparison with those who did not attend the program, preschool participants continued to demonstrate higher earnings, higher rates of home ownership and savings, and fewer arrests, with a societal return of $17 for every tax dollar invested in the program. Although the findings cannot be generalized to early intervention programs that do not offer the components of this program (e.g., highly trained teachers, home visits by teachers at least every 2 weeks, and low teacher–student ratios), the findings do suggest that high-quality early intervention can contribute to a foundation that supports adult success. Replication of these findings is needed to affirm effectiveness and cost/benefits over time in new settings. The evaluation is noteworthy for the random assignment of children to the program and no-program groups and for the long-term follow-up on multiple indicators with a low rate of participant attrition.

2. *Psychologists are encouraged to select and implement preventive interventions that are based on theory and supported by research evidence.*

Evidence suggests that effective prevention programs should be developed from a sound theoretical rationale, be based on accurate assessment, and be supported by empirical research (Durlak, 2003; Nation et al., 2003; Weissberg et al., 2003). As scientist–practitioners, applied psychologists strive to implement interventions that integrate theory and research-based evidence (Chwalisz, 2003; Gelso & Fretz, 2001). Accordingly, theory and research should be inseparably tied with prevention practice. Accountability to our client populations, funding sources, and policy makers demands that we adopt prevention practices that are consistent with scientist–practitioner principles and grounded in theory and research (Vera & Reese, 2000). Prevention programs should thus be selected and implemented based on current research

knowledge and should be evaluated to assess their effectiveness for the specific site and population with whom the intervention is being implemented. This guideline is consistent, furthermore, with the current mandate of the No Child Left Behind Act of 2001 for scientifically based practice in education (Greenberg et al., 2003). Accordingly, the U.S. Department of Education specifies that school-based preventive interventions should be based on theory, evaluated rigorously, validated in the field, and replicated in multiple settings (National Coordinating Technical Assistance Center for Drug Prevention and School Safety Program Coordinators, 2003).

Research knowledge that can be applied to inform prevention practice has increased substantively in recent years (Catalano et al., 2002; Greenberg et al., 2001; Weissberg et al., 2003). During the 1980s, the APA Task Force on Prevention, Promotion, and Intervention Alternatives in Psychology sought to identify effective prevention programs. After contacting 900 experts on prevention, the task force identified 14 model programs that were described in the book *Fourteen Ounces of Prevention: A Casebook for Practitioners* (Price, Cowen, Lorion, & Ramos-McKay, 1988). The second APA task force on prevention, which was formed in 1988 and titled Prevention: Promoting Strength, Resilience, and Health in Young People, encountered a much larger body of research, including meta-analyses and literature reviews. Its efforts in assessing and synthesizing the current status of prevention research and practice were published in a special issue of the *American Psychologist* in June/July 2003. The task force identified key findings and standards for evidence-based prevention practice for children and youths (Weissberg et al., 2003). Rather than repeating the work that was completed by the task force, we integrated its findings throughout our guidelines in an effort to combat what Kumpfer and Alvarado (2003) noted as a "slowness of . . . diffusion from research to practice" that has been "frustrating and costly to society" (p. 463). Greenberg et al. (2003) similarly noted that prevention research findings and evidence-based programs have not been widely used, despite their availability.

The results of the APA task force efforts are an important resource for psychologists seeking to select or implement prevention programs for children and youths. In an effort to determine "what works in prevention," Nation et al. (2003), for example, adopted a review-of-reviews method, surveying 35 comprehensive reviews of prevention research published between 1990 and 1999 that focused on substance abuse, risky sexual behavior, violence, delinquency, school failure, and dropout rates. From these reviews, Nation et al. identified 252 characteristics of effective prevention programs. The authors analyzed these characteristics to determine practices that were generalizable across the five problem areas. Through this process, Nation el al. identified 9 characteristics of effective prevention programs. Overall, effective programs were comprehensive, used varied

instructional methods, were of sufficient dosage or intensity to effect change, were based on theory, promoted positive interpersonal relationships, were appropriate for participants in terms of developmental level and culture, provided sound training for staff, and included meaningful program evaluation. Although this review did not detail the participant characteristics or geographic locales surveyed across all studies, and was limited to prevention programs with specific foci, it does provide a thorough and systematic analysis of a significant body of published findings that is worthy of attention by prevention practitioners.

As part of the APA task force initiative, Kumpfer and Alvarado (2003) sought to identify effective practice in family approaches for the prevention of youth behavior problems by reviewing two federal studies sponsored by the National Institute of Justice's Office of Juvenile Justice and Delinquency Prevention and the Center for Substance Abuse Prevention. Each of these prior studies had completed systematic analyses of rigorously evaluated family-based programs designed to prevent delinquency, substance abuse, or both. On the basis of their analysis of these prior studies, Kumpfer and Alvarado identified 13 principles of effective family-focused intervention. Although a number of these principles are specific to family interventions (e.g., strategies related to family communication and parental monitoring), other principles (e.g., tailoring for age, developmental level, and cultural traditions; providing sufficient treatment dosage and intensity to address risks) were highly consistent with the principles identified by Nation et al. (2003). Greenberg et al. (2003) reviewed meta-analyses and syntheses of research literature examining school-based prevention and youth development programs, identifying a number of effective strategies (e.g., designing comprehensive, multiyear programs that foster respectful relationships) that are also consistent with the Nation et al. recommendations (Weissberg et al., 2003). Cumulatively, these and other reviews (Catalano et al., 2002; Greenberg et al., 2001) provide an impressive body of research evidence that provides converging recommendations to inform the work of prevention practitioners.

Although the growing body of prevention research has elucidated practices that contribute to program effectiveness, many prevention efforts have not demonstrated efficacy. Because of the relatively limited number of well-designed prevention studies, it is difficult to determine whether some programs are not effective or just not properly assessed. After completing reviews of prevention programs, Greenberg and colleagues (2001), as well as Catalano et al. (2002), noted that many prevention programs lack an evaluation component or provide findings of limited usefulness. Catalano et al. suggested that evaluation research is needed to replicate the effects of model programs in new settings, to follow participants more comprehensively

and over a longer time period, to identify factors in the child and in the environment that influence outcome, and to assess factors related to program implementation that impact success.

Consumers of prevention research must also attend to findings identifying factors that limit program effectiveness, as well as potential negative effects of the intervention. In their review of community prevention efforts, Wandersman and Florin (2003) discussed insufficient monetary resources, systemic barriers, and lack of community readiness as factors that limit effectiveness. With regard to potential negative effects, Durlak and Wells (1997) completed a meta-analysis of research on 177 primary prevention programs for children and adolescents, 18 years of age or younger, that were delivered across school, home, clinic, and other settings. They then evaluated the meta-analysis results in comparison with a control condition. The studies included published manuscripts, dissertations, and presentations completed prior to 1992. The mean age of program participants across studies was 9.3, ranging from 2 to 18 years of age. Program participants in 25% of programs were White, 18% were not White, 9% were mixed. Forty-eight percent of the studies did not report ethnic/racial characteristics of participants. The meta-analysis revealed that both competence building and problem reduction programs were largely effective (59%-82% of participants in the primary prevention programs were doing better on the target criteria in comparison with the control groups), although 9 of the programs had some negative impact. Unfortunately, the detail provided in the studies reviewed by Durlak and Wells was not sufficient to provide insight into the source of negative effects. Although the studies reviewed in the Durlak and Wells meta-analysis are now dated and the negative effects were infrequent and small, the findings indicate, nevertheless, that psychologists need to remain vigilant in identifying program factors that may be harmful for the persons or settings in which they are working.

Prevention practice should be informed by theory as well as by research. Having a foundation in theory is 1 of the 13 principles of effective programs identified by Nation et al. (2003). Theories related to the etiological understanding of problem behaviors, to mechanisms or methods for change, and to cultural processes can guide prevention scientists in the design of their interventions, including the selection of participants, design of affective–motivational components, development of implementation procedures, and identification of expected outcomes and measures (Castro et al., 2004; Durlak, 2003; Nation et al., 2003). Prevention programs that are based in theory are considered more likely than atheoretical approaches to address the complex interactions of risk and protective factors that operate across multiple contexts (Black & Krishnakumar, 1998; Durlak, 2003; Maggs & Schulenberg, 2001; Nation et al., 2003).

However, no single theoretical perspective is mandated for prevention practice. The theoretical premises and interventions derived from positive psychology, positive youth development, applied developmental science, risk and resilience, health promotion, and competence enhancement, and wellness can be integrated in designing preventive interventions that will simultaneously prevent negative outcomes and enhance positive development (Bogenschneider, 1996; Lerner, 2001; Weissberg et al., 2003). Behavioral theories, social cognitive and social learning theory, and the health belief model have also been frequently applied in the development of successful prevention programs (Durlak, 2003). Ecological (Bronfenbrenner, 1979) and developmental contextual (Lerner, 2001, 2002) frameworks have been adopted by many prevention scientists because of their value in specifying the multiple contexts that contribute to mental health problems (Bogenschneider, 1996; Wandersman & Florin, 2003). Walsh, Galassi, Murphy, and Park-Taylor (2002), for example, described the usefulness of developmental contextual and ecological frameworks for counseling psychologists who seek to develop interventions in schools.

The GREAT Teacher Program (Orpinas, Horne, & Multisite Violence Prevention Project, 2004) is an example of a school-based program intended to prevent student aggression that combines features of ecological and social cognitive theories. Ecological theory provides an understanding of the variety of personal, sociocultural, policy, and physical–environmental factors within and beyond the school context that contribute to student aggression. Teachers' responses to students within the classroom are influenced by characteristics of the school climate and classroom environment, as well as by teacher and child characteristics. Teacher support groups are a component of the intervention designed to address contextual factors that limit teachers' capacities to apply their skills and knowledge in the classroom. Social cognitive theory informs that GREAT teacher intervention as teachers are helped to develop self-efficacy in their ability to prevent student aggression, to have positive outcome expectations regarding students' capacities to perform well academically and behaviorally, and to use emotional coping strategies to transform negative feelings toward students into more constructive attitudes. The GREAT Teacher Program is being implemented in middle schools in Illinois, North Carolina, Virginia, and Georgia. Students enrolled in the GREAT Teacher Program are being compared with students receiving no intervention, students receiving a family-focused intervention, and students receiving both the child and school (GREAT Teacher) interventions. The findings will be helpful in assessing the role of the school context in the prevention of aggression.

3. *Psychologists are encouraged to use culturally relevant prevention practices that are adapted to the specific context in which they are delivered and that*

include clients and other relevant stakeholders in all aspects of prevention planning and programming.

Cultures of the communities and of the various constituent groups that are impacted by a preventive intervention can vary enormously. Yet many prevention programs emphasize Western values and were developed and validated in middle-class communities (Kumpfer et al., 2002; Vera & Reese, 2000). Lack of cultural relevance has been identified as one factor that limits participation of ethnic families in prevention programs (Kumpfer et al., 2002). Reviews of prevention research (Durlak, 2003; Kumpfer & Alvarado, 2003; Lerner, 1995; Nation et al., 2003; Vera & Reese, 2000; Weissberg et al., 2003) consistently emphasize the importance of tailoring interventions to the specific context in which they will be implemented. Recommendations suggest that interventions should thus be carefully designed to meet the cultural, community, and developmental characteristics of the child, school, and community or other program participants (Castro et al., 2004; Durlak, 2003; Gottfredson, Fink, Skroban, & Gottfredson, 1997; Nation et al., 2003; Weissberg et al., 2003).

Cultural factors to consider include level of acculturation, acculturative stress, migration and relocation history, level of stress or trauma associated with relocation, language preferences, socioeconomic status, geographic location, education, religion and spirituality, extended family support, racial identity, relationship to nature, time orientation, and culturally specific risks and coping strategies (Kumpfer et al., 2002). In attending to these factors, recommendations indicate that cultural adaptations should go beyond superficial changes, such as using ethnically matched facilitators, including ethnic minorities in graphic materials, or addressing important cultural values and practices (Kumpfer et al., 2002). Those who seek to adapt and deliver programs with cultural sensitivity and awareness of cultural nuances need to be equipped with a high level of cultural competence (Castro et al., 2004).

Existing research suggests that preventive interventions that are culturally adapted to fit with the specific context are more successful in recruiting and retaining participants. Kumpfer et al. (2002), for example, compared the effects of a generic version of the Strengthening Families Program (SFP), a 14-session family intervention program, with culturally modified versions of the program. SFP was originally developed in 1982 as a 14-session program with parent and youth skills training and family components for children 6-12 years of age with parents who have abused drugs or alcohol. During the 1990s, culturally modified interventions were developed and evaluated in five separate studies: (a) rural African Americans in Alabama, (b) urban African Americans in Detroit, (c) Asian/Pacific Islanders in Hawaii, (d) Spanish-speaking Hispanic families recruited from

schools and community housing, and (e) Ojibway tribe Native Americans in Iowa. When the results of the culturally adapted interventions were compared with studies assessing the effects of the generic version of SFP, findings revealed levels of participation and retention that were 41% higher for the culturally modified interventions, with only slight improvements in outcome. The design of the program evaluations did not provide a means of determining why the culturally adapted programs were not more effective. The authors believe that a reduction in program dosage in three of the culturally adapted programs likely diminished program impact. The authors suggested that further research was needed to determine whether deeper cultural changes will more substantively enhance outcomes.

To ensure that prevention programs meet local norms, research reviews suggest that community-based participation in an ongoing process of planning, monitoring, and evaluation is critical (Bogenschneider, 1996; Nation et al., 2003; Weissberg et al., 2003). Including all constituent groups and service providers in all phases of program design, implementation, and evaluation can help to enhance the fit of a program with the local culture and community (Kumpfer & Alvarado, 2003; Nation et al., 2003; Weissberg et al., 2003). Reviews of prevention research also reveal that community involvement increases the likelihood that a program will be supported and sustained over time (Lerner et al., 2005; Reiss & Price, 1996; Vera & Reese, 2000) and that the benefits of prevention increase when all stakeholders work together collaboratively, rather than working in isolation (Weissberg et al., 2003).

Families, schools, community agencies, businesses, and policy makers represent potential partners or stakeholders who should be involved in the process from an initial needs assessment through program evaluation and adaptation. Walsh and colleagues (Kenny et al., 2000; Walsh, Andersson, & Smyer, 1999; Walsh, Brabeck, & Howard, 1999) documented the transformation of an urban public elementary school, in which 33% of students self-identified as Latino/Hispanic, 32% as Black, 16% as White, and 18% as Asian, into a community school offering a culturally responsive range of coordinated preventive services involving ongoing collaboration among school administrators, family members, local businesses, university partners, and representatives of community mental health and health agencies. With continual input from collaborative stakeholders, this partnership has been sustained for more than10 years and has been extended to engage community agencies. It also systematically links the services of the community and schools in providing a comprehensive and sustained network of support for children and their families (Kenny et al., 2000). The transformation into a community school has been accompanied by increases in student attendance and standardized test scores, although long-range student outcomes are still being assessed (Kenny et al., 2000).

Concern for program adaptation and fit with the local context should be completed with attention to our second guideline emphasizing the importance of a strong research base. Although empirically based interventions emphasize the importance of consistency in content and implementation, prevention practitioners often struggle in establishing an effective combination of program fidelity and adaptation (Castro et al., 2004; Durlak, 2003). Adaptations can be made to program content, location or means of delivery, or characteristics of persons delivering the program. To achieve true cultural relevance, an adapted program may be substantially different from the original (Reese, Vera, & Caldwell, 2006). In determining adaptations, experts recommend, however, that efforts be made to preserve integrity in core program elements and that program strength and dosage be sustained (Castro et al., 2004; Greenberg et al., 2003; Kumpfer et al., 2002). In their review of culturally based adaptations, Kumpfer et al. (2002) expressed concern that modifications that reduce dosage or eliminate core interactive elements can weaken the impact of the modified interventions. Castro et al. (2004) emphasized that cultural adaptations should be based on a culturally informed theory or framework, and developed and implemented in a systematic manner, with a rigorous evaluation process to ensure that the adapted program matches or exceeds the effectiveness of the original program. Only through such a process can prevention practitioners design and implement culturally relevant and effective preventive interventions.

4. *Psychologists are encouraged to develop preventive interventions that address both the individual and the contextual/systemic factors that contribute to psychological distress and well-being.*

Advances in prevention research and in developmental psychopathology research have contributed to awareness that prevention efforts that focus only on individuals and only on a single problem behavior are misguided and ineffective (Catalano et al., 2002). The importance of addressing both the individual and the context is derived from social imperatives as well as from research bases. From a social perspective, focusing only on individuals and the more proximal context of the family may place undue responsibility and blame on the individual, without recognizing the roles played by social institutions and structures in determining and sustaining human outcomes (Prilleltensky, 1997; Vera & Reese, 2000). A focus on individual change, while disregarding the need for social change, minimizes the important role of the community in personal development; ignoring social structures can serve to sustain existing inequities (Prilleltensky, 1997).

Advances over the past several decades in developmental theory and research on the etiology of mental disorders and problem behaviors affirm the importance of both individual and contextual factors in the development of psychopathology (Catalano et al., 2002; Greenberg et al., 2001). Research, for example, has identified an array of individual and contextual risk or vulnerability factors that heighten the probability for adjustment difficulties (Luthar & Cicchetti, 2000). Protective factors that serve to reduce the negative effects of risk factors have also been identified at the individual, family, and community levels (Luthar & Cicchetti, 2000). Examples of risk factors at the community level include exposure to community violence, racial injustice, and unemployment; examples of protective factors at the community level include high-quality schools and supportive relationships with adults at school or in community activities. Individual-level protective factors include well-developed cognitive skills, high self-efficacy, and social skills; individual-level risk factors include low impulse control, attention deficits, and emotional dysregulation (Greenberg et al., 2001; Luthar & Cicchetti, 2000). Individual and contextual risk factors may vary by culture, however, and cannot be assumed to operate similarly across ecological and cultural contexts (Yates & Masten, 2004).

Contemporary theory and research have also documented interrelationships among risk and vulnerability factors that contribute to negative developmental outcomes (Lerner, 2002; Luthar & Cicchetti, 2000; Walsh et al., 2002). According to the developmental contextual framework (Lerner, 2002; Walsh et al., 2002), cognitive, social, physical, and affective development are interrelated. A single risk factor, such as poverty, for example, may be related to multiple adverse outcomes such as obesity, academic underachievement, underemployment, and emotional difficulties. Numerous processes link poverty with poor developmental outcomes. As noted by Vera and Shin (2006), for example, poverty often limits access to high-quality child care and adult supervision when parents are at work and increases exposure to drugs, violence, and generally unsafe physical environments. The more risk or vulnerability factors that are present, the higher the probability that one or more negative outcomes will occur (Greenberg et al., 1999; Reiss & Price, 1996). Some risk factors also play a role in multiple disorders. Marital discord, for example, can contribute to behavior problems in children and affective disorders among women (Reiss & Price, 1996). Research reveals that many psychological disorders, such as depression or substance abuse, are multidetermined or have multiple causes (Greenberg et al., 1999). Individual vulnerability factors such as inhibited temperament might combine with contextual risks, such as peer rejection, marital discord, an unsupportive school environment, and neighborhood unemployment, to contribute to the expression of depressive symptoms.

The body of research documenting the role of risk factors in contributing to adjustment difficulties has major implications for the design of prevention programs, including the identification of program goals, the specification of the psychological processes through which individual change is expected to occur, and the foci of intervention (Yates & Masten, 2004). Given that problem behaviors are interrelated and are determined by multiple factors, prevention programs that focus on a single problem or single risk factor are inherently limited (Catalano et al., 2002). Although students who experience academic difficulties may also experience emotional, physical, and social difficulties (Roeser, Eccles, & Sameroff, 1998), a series of separate programs, intended to prevent academic failure, teenage pregnancy, drug abuse, and school violence, can often be found within a single school. A generic social competence or stress management program, however, can be offered to all students to strengthen skills that build protection from multiple negative outcomes (Greenberg et al., 2003; Romano, 1992). The knowledge that risk factors are prevalent across multiple social contexts also leads to awareness of the limitations of prevention programs that focus solely on changing individuals. Contemporary theory and research suggest that prevention programs are most effective when they address multiple causal factors across multiple contextual domains, such as the neighborhood, school, community, and social–political context (Durlak, 2003; Greenberg et al., 2001; Vera & Reese, 2000). Comprehensive approaches that address a range of problem behaviors and coordinate a range of services and activities across multiple contexts, such as the family, school, and community, are considered more desirable than a series of isolated and uncoordinated programs that focus on single problem behaviors (Greenberg et al., 2001; Weissberg et al., 2003).

Research has accrued to support the benefits of comprehensive multicomponent programs, particularly when they extend across a number of years and are offered at times that pose the greatest developmental risks (The Consortium on the School-Based Promotion of Social Competence, 1996; Durlak, 2003; Elias & Branden, 1988; Greenberg et al., 2003; Nation et al., 2003). The value of comprehensive and coordinated programs is highlighted in an evaluation completed by Greenberg et al. (2001). Greenberg and colleagues sought to evaluate school and family prevention research through analysis of school-based universal programs that were assessed with rigorous methods. They completed a thorough literature search to identify preventive interventions designed for children between the ages of 5 and 18 that focused on mental health outcomes, rather than on substance abuse, delinquency, or health promotion. One hundred thirty programs were identified through the literature review, but only 34 provided clear descriptions of the samples and used rigorous research designs, such

as randomized trials or quasi-experimental designs with an adequate comparison group and pretest and posttest data. Of the 34 programs that met the criteria for rigorous evaluation, most effective programs focused on multiple contexts of the child's life, rather than on the child alone. Many of these programs sought to improve home–teacher relationships and increase school, neighborhood, and family support for child competence, as well as changing child behavior. The Greenberg et al. review concluded that a focus on improving the school climate was related to positive benefits for school-aged children and that multiyear interventions produced more enduring results than brief interventions. These conclusions were derived from a reading of published literature and are limited by the relatively small number of programs that were evaluated using rigorous research methods.

Evidence suggests that community-based prevention efforts are also more effective when they extend across multiple life contexts. The Midwest Prevention Project (Pentz, 1998) is an example of a community-based substance abuse prevention program, which demonstrated efficacy in preventing adolescent substance abuse by addressing causal factors across individual and contextual domains. The multiple components of the Midwest Prevention Project, which began in fall 1984 in Kansas City and in fall 1987 in Indianapolis, included a parent communication skills program, a social skills training program for youths, a mass media campaign, and modifications in school and community policies regarding the availability of alcohol and tobacco (Wandersman & Florin, 2003). School programming began in Grade 6 as students entered middle school and continued over 5 years, with the school program being delivered in the 1st and 2nd years, community interventions and changes in tobacco and alcohol policy being instituted in the 3rd through 5th years, and mass media coverage taking place across all years. Longitudinal research with 8,500 students (70% White, 23% African American, and 7% other) in 57 schools in Indianapolis and 50 schools in Kansas City suggested that the combination of school and community programming contributed to larger and more enduring effects in preventing serious levels of drug use throughout the high school years than a program of school-based intervention alone. Eight of the 50 schools were randomly assigned to either the full prevention program or a delayed intervention control condition. The other schools were assigned to prevention and control conditions based on school scheduling and demographic matching. Although the findings suggested the superiority of interventions that extend across multiple contexts, further research is needed to understand the impact of each program component and to determine the optimal and most cost-effective combination of program components, frequencies, and duration in preventing substance use and abuse and in promoting positive educational outcomes.

It is widely recognized that contemporary prevention initiatives warrant attention to both individual and contextual factors. In response to national concern regarding the rise in childhood obesity, for example, the U.S. Congress authorized the Institute of Medicine to complete an extensive study of this growing national health crisis. As part of a comprehensive national strategy for obesity prevention published in the report *Preventing Childhood Obesity: Health in the Balance* (Institute of Medicine, 2005), the Institute of Medicine Committee on the Prevention of Obesity in Children and Youth presented a detailed prevention plan incorporating multiple ecological contexts, including families, schools, industry, communities, and government. The Institute of Medicine (2005) report suggested that school-based interventions seeking to increase children's knowledge about healthy food choice and the benefits of physical activity may fill an important preventive role. The report concluded, however, that classroom instruction is bound to have limited effects, unless efforts are simultaneously directed toward changing contextual risk factors, such as the nutritional quality and appeal of school lunch offerings, the sale of super-size portions in fast food restaurants, and the promotion of unhealthy foods in advertising (Institute of Medicine, 2005).

Although prevention efforts are needed to address contextual factors, individual factors continue to warrant consideration. Because social change is a slow and difficult process, preventive interventions might also seek to empower individuals in coping adaptively with maladaptive environmental conditions. The Young Warriors Program (Watts, Griffith, & Abdul-Adil, 1999), for example, was designed as a means of promoting affirmative identity, despite societal oppression, among young African American men. The program hopes to empower young men by building a sense of critical consciousness or awareness of the sociopolitical and individual factors that affect behavior. Qualitative evaluation of an eight-session program involving a group of 25 male African Americans who were high school sophomores attending an urban school in a large midwestern city reveals that the program was successful in increasing critical consciousness, although the behavioral impact of those gains still needs to be assessed. Similarly, the developers of the Tools-for-Tomorrow Program, a school-based intervention designed to increase school engagement and career development among urban adolescents, recognized the need to prepare students with skills to negotiate oppression (Kenny, Sparks, & Jackson, in press). The intervention helps students (approximately 60% Black, 28% Latino/Hispanic, 9% White, and 3% Asian) identify the natural resources and assets that exist in their home and local environments while they also gain an awareness of the structural barriers, including poverty and racism, that place obstacles in their paths to high school completion and further educational and career success. Because students would not have individual power to eradicate barriers

presented by racism, the program strives to prepare students to cope adaptively with the "opportunity structure" (Hartung & Blustein, 2002; Kenny, Sparks, et al., in press). Research to assess the relation between racial identity, career development, and school engagement is currently in progress, although a relation between career development and school engagement has already been documented (Kenny, Blustein, Haase, Jackson, & Perry, in press). Prevention programs can thus strive to directly enhance the competence and coping capacities of the individual, as well as seek to influence national and institutional policies and practices that further promote optimal development (Nation et al., 2003).

5. *Psychologists are encouraged to implement interventions that seek to reduce risks as well as promote strengths and well-being across the life span.*

Developmental theory and research now highlight the role of protective factors as well as risk factors as determinants of personal adjustment. Prevention science, however, grew out of a public health perspective that focused on reducing the risks or causes of psychological dysfunction (Albee & Ryan-Finn, 1993). An exclusive focus on risk has been criticized, however, for pathologizing entire groups, such as the poor and people of color (Vera, 2000). Many persons who have been exposed to multiple risks do not develop mental health problems, having benefited from protective factors that reduce the probability of a negative outcome (Kaplan, 2000; Vera, 2000).

In conjunction with the growing body of research examining the role of risk factors in development, research has also focused on the identification of individual and contextual factors that contribute to positive development outcomes despite exposure to significant adversity or trauma (Luthar, 2003; Luthar & Cicchetti, 2000). The construct of resilience refers to the processes or causal mechanisms that explain positive adaptation at a given point in time despite the presence of considerable risk. Resilience is influenced by transactional interactions between individuals and the environment and reflects developmental processes and outcomes that are not static over time (Yates, Egeland, & Sroufe, 2003). Resilience does not refer to individual characteristics nor does it imply a sense of individual responsibility and personal blame for poor developmental outcomes (Luthar & Cicchetti, 2000). Just as development research revealed that risk factors are often interrelated, research has also demonstrated an interrelationship among competencies (Yates & Masten, 2004). Promoting social competence or healthy nutrition and activity habits, for example, can have a positive impact on academic achievement (Institute of Medicine, 1995; Weissberg et al., 2003).

Based on research related to protective factors and resilience, prevention programs can be designed to increase protective factors that decrease the

likelihood of mental health disorders, as well as reduce or eliminate risk factors. A growing body of research supports a focus on malleable protective factors, suggesting that prevention is most effective when direct attempts to enhance health and competence are combined with efforts to reduce risks (The Consortium, 1996; Durlak, 2003; Eccles & Appleton, 2002; Elias, 1997; Vera & Reese, 2000; Weissberg et al., 2003). Focusing only on building competencies or only on preventing problems may not be as effective as addressing both (Catalano et al., 2002). Durlak and Wells's (1997) meta-analysis revealed that primary prevention programs developed for children and adolescents were effective in building competencies, such as communication skills and self-confidence, and in reducing emotional and behavioral problems and that they did this at a level of effectiveness comparable to other established treatments and prevention programs.

A focus on developing competencies is supported by knowledge that many high-risk behaviors, such as drug abuse and adolescent pregnancy, stem from weaknesses in common functions, such as gaining peer acceptance (Vera & Reese, 2000). Building interpersonal competencies can thus serve to prevent a range of problem behaviors, as well as foster success across multiple life domains (Vera & Reese, 2000). Individual strengths or protective factors, such as socioemotional skills, interpersonal connection, ethical decision making, work readiness skills, or civic engagement, are often selected as foci of interventions based on their malleability and their relevance to daily life (Eccles & Appleton, 2002; Nation et al., 2003; Weissberg et al., 2003). Programs that include a focus on developing educational, social, and vocational competencies can empower individuals by equipping them with skills to direct their lives (Schorr, 1997; Smith, 2006). Interventions focused on enhancing individual competencies can also capitalize on and incorporate the natural sources of strength and healing that reside within families and local communities (Yates & Masten, 2004). In attending to the risks that are prevalent in low-income communities, prevention practitioners should not overlook the many sources of protection and nurturance that can be found in these communities (Vera & Shin, 2006). Nevertheless, consistent with our fourth guideline, interventions should not be limited to individuals but should seek to enhance the strengths and competencies of families, communities, and the broader society (Yates & Masten, 2004).

An emphasis on simultaneously reducing risks and developing competencies is consistent, furthermore, with recent research concerning the foundations of positive youth development (Catalano et al., 2002; Greenberg et al., 2003; Pittman, Irby, Tolamn, Yohalem, & Ferber, 2001). The study of resilience stimulated interest in positive development because of its emphasis on promoting competence throughout development (Yates &

Masten, 2004). The focus on positive development stems from both an awareness that protective factors serve to reduce the likelihood of maladaptive outcomes and the recognition that freedom from risk is not equivalent to preparation for life (Catalano et al., 2002; Lerner, 2001; Pittman et al., 2001). Young people, for example, need to know more than how to avoid pregnancy or resist drugs. Knowing how to participate and succeed in school, work, and leisure are critical factors that determine access to future opportunities (Pittman et al., 2001). The development of competencies thus serves the dual functions of offering protective factors that decrease problem behaviors and building foundations for healthy development across the life span (Greenberg et al., 2003).

Whereas the concept of protective factors retains a focus on reducing risk, positive youth development theory acknowledges that youths need strengths or assets for a successful life. By definition, protective factors operate only under conditions of risk, whereas assets contribute to positive developmental outcomes independent of the level of risk (Yates & Masten, 2004). Close parental monitoring and behavioral restrictions may, for example, serve as a protective factor for young adolescents who live in dangerous neighborhoods but may not have the same developmental benefits for adolescents living in safe neighborhoods (Yates & Masten, 2004). High-quality schools, relationships with caring adults, and connection with prosocial organizations may, however, benefit all youths (Benson, 1997). Positive youth development programs are generally delivered as universal programs, available to all youths in a particular community, rather than being targeted to a group considered at risk for a specific problem. The benefit of universal programs is that all youths are offered supports in developing competencies to thrive and enhance life success.

Catalano et al. (2002) presented research support for positive youth development programs by reviewing 161 programs that focused on developing youth competencies or assets such as positive relationships with adults, positive peers, school, community, or culture; social, emotional, cognitive, behavioral, and moral competence; prosocial norms; identity development; self-efficacy; adaptive coping; spirituality; and belief in the future. Of those 161 programs, 77 included methodologically sound evaluations and sufficient detail describing the intervention, participants, and evaluation measures to warrant further consideration in Catalano et al.'s review. Among the 77 programs with sound evaluations, 25 programs were identified as effective in promoting varied positive outcomes, as well as in reducing problem behaviors. Consistent with findings of other reviews (e.g., Greenberg et al., 2001), programs that were most effective were carried out over a longer period of time (9 months or more) and used structured materials to facilitate consistency in delivery. The review also provided support

for extending interventions across multiple contexts. The programs had been delivered in one or more contexts, including school, family, and community settings. Only 8 of the 25 effective programs, however, focused on only one context, with the other 17 effective programs being implemented in either two (usually school and family) or three contexts (community, school, and family). Community resources were sometimes used to enhance the interventions offered in the school or family. All of the effective programs were directed toward strengthening social, emotional, cognitive, or behavioral competencies and standards for healthy social behavior within the family and community. Seventy-five percent of the effective programs sought to build healthy relationships between youths and adults, increase opportunities for youth involvement in prosocial activities, and provide recognition for prosocial involvement.

The Teen Outreach Program (Allen, Philliber, Herrling, & Kuperminc, 1997) is an example of a positive youth development program that focused on the school and community contexts. This program was deemed effective by Catalano et al. (2002). Teen Outreach developed as a collaborative program between the Association of Junior Leagues International, local Junior League chapters, and school districts across the United States. The program was designed to prevent teenage pregnancy and school failure, as well as foster prosocial norms, positive identity, self-determination, and belief in the future by involving high school students in volunteer service in their communities and by involving them in school-based activities that were focused on self-management and life skills, decision making, and adaptive coping. An experimental design in which 695 students from 25 schools nationwide were randomly assigned to either Teen Outreach or a control condition was used to assess program effectiveness. Participants were enrolled in 9th-12th grades (mean grade = 10.1), with 86% female students and 14% male students. Racial and ethnic identification of students participating in Teen Outreach was 17% Caucasian, 67.7% African American, 12.9% Hispanic, and 2.4% of another ethnic identity. The control group was 20.4% Caucasian, 66.6% African American, 9.6% Hispanic, and 3.4% of another ethnic identity, with 83.3% female students and 16.7% male students. The adolescents who participated in Teen Outreach evidenced lower rates of pregnancy, school failure, and academic suspension in comparison with teens assigned to the control condition. These findings provide support for the effectiveness of the Teen Outreach Program specifically and, more generally, for the benefits of volunteer service in promoting positive development as an alternative to problem-focused intervention. Teen Outreach is an excellent example of a theoretically driven, strength-based prevention program that has been evaluated using a rigorous experimental design. Long-term follow-up data are needed to determine whether program effects last

over time. The effectiveness of the programs for male students in promoting academic achievement and engagement is also not clear, given the preponderance of female students in the program and study.

The APA Task Force on Prevention: Promoting Strength, Resilience, and Health in Young People recommends that primary prevention encompass the simultaneous goals of reducing problems related to psychological and physical health and of promoting health and social competence (Weissberg et al., 2003). The position that prevention should include the promotion of strengths and positive development has not always been accepted, however. The Institute of Medicine Committee on the Prevention of Mental Disorders, in a 1994 report (Mrazek & Haggerty, 1994) prepared for the National Institute of Mental Health, recommended that health promotion be distinguished from prevention based on the belief that they represent different models or paradigms (Weissberg et al., 2003). Current research and policy now converge in recommending both risk reduction and strength promotion as vehicles for prevention activity.

PREVENTION RESEARCH AND EVALUATION

6. *Psychologists are encouraged to carefully attend to the relevance and scope of their prevention research within the current progression of prevention science.*

As much as any area in psychology, research is essential to progress in prevention (Biglan, Mrazek, Carnine, & Flay, 2003; Romano & Hage, 2000b). Because financial support for prevention is limited, it is critical that prevention efforts be accurately targeted, efficiently executed, and rigorously evaluated (Faenza & Mcelhaney, 1997; Guterman, 2004; Price et al., 1988; Sandler & Chassin, 2002; Weissberg et al., 2003). In 1991, the term *prevention science* was coined at a National Institute of Mental Health–sponsored prevention conference. Both the term and the conference proceedings suggested that prevention should be a research discipline focused on the systemic empirical study of risk and protective factors affecting health and psychological dysfunction (Bloom, 1996; Coie et al., 1993).

Responsible prevention research addresses the multifaceted contexts in which risk and protective factors occur (Kellam & Van Horn, 1997). These contexts can be categorized as biological, psychological, and sociocultural levels (National Institute of Mental Health, 1998). Within each of these levels, additional contextual variables, such as developmental level, gender, and ethnicity, play critical roles. Examples of biological risks and protective factors include genetic predispositions, substance and alcohol abuse, nutrition, exercise, environmental toxins, and psychopharmacology. Examples of psychological risk

and protective factors include traumatic experiences, neglect, locus of control, self-esteem, and self-efficacy. Sociocultural risk and protective factors include family dysfunction, poverty, prejudice, religion, social networks, and community resources. Understanding risk and protective factors at each of these levels can inform prevention research.

Prevention research can also be categorized according to the function being studied as follows: preintervention epidemiology, preventive intervention, and prevention service delivery system (National Institute of Mental Health, 1998). Preintervention research examines the natural development and relations between risk and protective factors. Preventive intervention research also examines primary prevention interventions that have universal applications intended to prevent problems from occurring, secondary prevention interventions targeted for selectively at-risk populations or populations indicated as having disorders to limit the duration and extent of problems, or tertiary prevention interventions targeted for populations indicated as having problems to prevent development of comorbid problems, disability, or both. Prevention services delivery system research examines the organization, effectiveness, and efficiency of systems for delivering prevention services.

The levels (biological, psychological, and sociocultural) and functions (preintervention, preventive intervention, and prevention services) described previously rightfully form a matrix for categorizing prevention research (see Table 2; Waldo & Schwartz, 2003). The levels and functions categorized in the matrix can guide researchers toward literature that they need to examine prior to conducting studies and help them identify future directions for research based on their findings. Each category of research is informed by and informs the others. The interactive process among the categories offers a logical progression for prevention science and can guide systematic prevention research (National Institute of Mental Health, 1998). Knowledge of epidemiology guides preventive intervention innovation and evaluation. When viable interventions have been identified, research can turn to examination of service delivery systems. In turn, the efficiency and effectiveness of prevention service delivery systems can be assessed by examining their impact on epidemiology. Two critical questions that can help determine the value of studies on epidemiology, preventive interventions, and service delivery are the following: What is the public health significance of the study? and What extent does the study maximize scientific opportunity? Examples of prevention research relevant to psychology in each of these categories are offered below, which are followed by a description of systematic prevention research guided by the matrix (Waldo & Schwartz, 2003).

TABLE 2: Prevention Research Matrix

Multicultural context (e.g., gender, race, ethnicity, socioeconomic status, and sexual orientation)	Preintervention (epidemiology, understanding relations between variables and causes)	Prevention intervention (primary universal, secondary selective/indicated, tertiary indicated)	Services (dissemination, implementation, effectiveness, health economics)
Biological development: Risk and protective factors (e.g., genetics, physiology, nutrition, exercise, and psychopharmacology)			
Psychological development: Risk and protective factors (e.g., personality, locus of control, attitude, and motivation)			
Sociocultural development: Risk and protective factors (e.g., family, affiliations, school, work, and community)			

Preintervention Epidemiological Studies

Examples of research examining causes, prevalence, and relations between risk and protective factors include empirical studies and reviews that have attempted to identify the multiple etiological risk and protective factors for drug and alcohol use and abuse (Newcomb & Bentler, 1989; Newcomb & Felix-Ortiz, 1992; Stein, Newcomb, & Bentler, 1987). Albee's (1985) incidence formula is an excellent example of epidemiology research. It provides an equation to examine the reciprocal relation between risk and protective factors. Muehlenhard and Linton (1987) used a similar approach to examine the interaction of risk and protective factors and sexual aggression or rape incidents in dating relationships. They surveyed 635 students (341 women—mean age 18.8 years, and 294 men—mean age 19.5 years; no information was provided on participants' ethnicity) at a southwest public university, assessing their dating behavior, drug and alcohol use, sex role orientation, and

attitudes toward violence and rape. These factors were compared with participants' experiences of sexual aggression or rape while dating. Muehlenhard and Linton found that traditional sex roles, adversarial attitudes toward relationships, alcohol and drug use, greater acceptance of interpersonal violence, and belief in rape myths were risk factors for aggression and rape. The authors acknowledged that the correlational nature of the study precluded definitive conclusions regarding causation. They did use their findings to generate suggestions for preventive interventions, clearly demonstrating the developmental link between epidemiological and preventive intervention research efforts. Research on preventive interventions that reduce the risk factors and increase the protective factors identified in this study could demonstrate a causal relation between risk and aggression and rape, overcoming one of the limits of epidemiological research—the inability to prove causation.

Preventive Intervention Studies

Preventive intervention studies include studies of primary prevention interventions aimed at promoting protective factors for widespread or universal populations, secondary prevention interventions focused on enhancing protective factors for selected populations that are indicated to be at risk or suffering, and tertiary preventive interventions targeted at limiting dysfunction for populations who have chronic disorders.

An example of primary prevention research is assertiveness training conducted with a group of elementary students with no identified interpersonal problems (Rotheram-Borus, 1988). This intervention is based on epidemiological data suggesting that assertion is linked to positive self-esteem and adjustment in elementary school. An assertiveness training program was conducted 2 hr a week for 12 weeks in elementary school classes. The assertiveness training intervention was based on social learning theory (Bandura, 1977) and followed a manualized treatment of didactic presentation and behavioral practice with feedback. The program's effectiveness was evaluated with a sample group of 343 fourth to sixth graders at a predominately White middle-class school (no information was given on the gender, age, or geographic location of the participants) who were assigned to three conditions: assertiveness training, a no-treatment control, and an alternative treatment (self-confidence-training simulation game). The results indicated that participants in the assertiveness training program demonstrated more assertive responses to problem solving, initiated more contacts with teachers, showed less problem behavior in the classroom and had higher academic achievement at a 1-year follow-up when compared with the control and comparison groups. A noted limitation of the study was the lack of diversity in the sample, which limited the generalizability

of an intervention that may be based on dominant group social norms. Significant strengths of this program are the utilization of control and comparison groups as well as assessment at 1-year follow-up.

Another example of primary prevention research is a manual-guided group intervention for preventing dating violence among college students with no history of dating violence (Schwartz, Russell, Griffin, & Dupuis, 2004). This intervention was based on epidemiological data suggesting that poor communication skills, exaggerated entitlement, and poor anger management skills are risk factors for dating violence. Four 1.5-hr group interventions were conducted with 28 undergraduates (16 women and 12 men; 14 White, 8 African American, 4 Hispanic American, 1 Native American, and 1 who identified as other ethnicity; the average age was 20 years; and the participants came from a medium-sized southern university) who were compared with a control group that did not receive the intervention. The intervention was based on group process and theory as well as specific interventions designed to elicit change in risk and protective factors related to dating violence. The intervention resulted in statistically significant increases in anger management skills, healthy entitlement, and improved communication skills for the experimental group. A limitation of the study was the small sample size, with the authors noting a need for replication with a larger more representational sample.

Pierson's (1988) Brookline Early Education Project is another example of primary prevention intervention research. This project was based on epidemiological data suggesting that meeting early academic and health development needs and increasing parental involvement are related to higher levels of social and academic success. The project targeted children from birth to kindergarten. Two hundred families were originally enrolled in the program. The program provided parent education and support, diagnostic monitoring of the child, and early childhood programs. By using direct observation and teacher reports, Pierson evaluated participants in kindergarten and second grade. One hundred thirty-two participants were available for assessment at the kindergarten evaluation, and 169 participants were available at the second-grade evaluation. The participants were from urban areas of Massachusetts. Thirty-nine percent of the participants were minorities, and 18% did not speak English **(**no information on gender was provided). A quasi-experimental design was utilized in which demographically similar comparison samples were assembled for the kindergarten and second-grade assessments. Children who completed the Brookline Early Education Project demonstrated higher social outcomes in kindergarten and higher academic outcomes, particularly in reading in kindergarten and second grade when compared with the comparison group. Strengths of this program include Pierson's team having conducted a long-term follow-up and its effort to recruit a diverse sample, which

increased the generalizability of results. A noted limitation of this intervention was the resources required to effectively replicate the multiple facets of the intervention and the need for follow-up interventions to maintain positive changes.

Given the success of the assertiveness, prevention of dating violence, and parental support programs described previously, the next research question remains, "How can these preventive interventions be widely delivered in an efficient and effective manner?" The three programs are potentially relevant to much larger populations (e.g., all elementary students). Identification of affordable delivery systems that can reach large numbers of children in the target populations is essential if the programs are to have a meaningful impact. Because the programs target students, it is possible that teachers could help with implementing the interventions (as was done in Pierson's program). Research with other programs suggests that teachers are an excellent resource for delivery of educational primary prevention interventions (Kenny et al., 2002). Studies using teachers to deliver these programs could be a logical next step.

An example of secondary prevention research is The Prenatal/Early Infancy Project (Olds, 1997). This program was initiated in response to epidemiological data suggesting that prenatal and infancy problems are associated with low-income single mothers, health problems during pregnancy, and lack of parental responsiveness. This project was designed to improve pregnancy outcomes, quality of parental caregiving, and maternal life course development. It included a home visitation program based on human ecology theory, self-efficacy, and attachment theory. The participants consisted of 400 first-time mothers before their 30th week of pregnancy. Eighty-five percent of the participants were low income, unmarried, or teenagers. Eighty-nine percent of the participants were Caucasian. The participants all resided in and around Elmira, New York. At the 4-year follow-up assessment, the researchers found improvement in the outcomes of pregnancy, early childhood outcomes, and families' economic self-sufficiency (Olds, 1997). A limitation of the study was the difficulty in accessing resources to maintain the essential elements of the program and extend the intervention to other settings.

Another example of a secondary prevention intervention is Brand, Lakey, and Berman's (1995) evaluation of social skills development training with individuals reporting low levels of social support. Epidemiological studies have repeatedly shown that lack of perceived social support is associated with poor social skills and negative cognitions about self. Fifty-one single participants from the Detroit metropolitan area (no other demographic information was provided) were assigned to a 13-week intervention or to a wait-list control group. Participants received training in social skills and cognitive reframing focused on self and social relations. Participants

who received training perceived increased support from their families, showed increased self-esteem, and reported increased frequency of self-reinforcement in comparison to the wait-list control group. A noted limitation of this study was the lack of follow-up data to ascertain if changes were maintained over time.

The results from the secondary prevention studies described previously validate principles identified in previous epidemiological research and are promising examples of the effectiveness of preventive intervention programs. Nevertheless, it is unlikely the prevention programs will be able to fulfill their potential for universal, positive impact unless relevant and efficient service delivery systems are clearly identified. One possibility is that talented participants in the programs, who successfully completed them and are interested in sharing the benefits they received with others, could be trained to provide the interventions in the future (Waldo, 1989).

An example of tertiary prevention research includes a study on reducing the debilitating effects of continuous stress on emergency medical service workers (Kagan, Kagan, & Watson, 1995). This study is particularly interesting because it used physiological, coping, and interpersonal psychoeducational approaches to stress reduction. Three hundred seventy-three Houston emergency service employees (371 were men; 66% White, 19% Black, 11% Hispanic, 3% Asian, and 1% other; the mean age of participants was 32) participated in one of the three psycho-educational approaches or a combination of approaches. No control group was used because the researchers believed withholding treatment might alienate participants. Results suggested that psychoeducational approaches to reducing stress among emergency service personnel are effective, that their benefits are sustained over time, and that there was a tendency for certain combinations of approaches (physiological, coping, and interpersonal) to be more effective than basic strategies alone. Limitations included the lack of control group and the possibility that interaction among participants in different groups resulted in diffusion of treatment effects. The authors concluded that the treatments were not additive, but instead interactive, with certain combinations more compatible than others. For example, skill training and personal processing resulted in lower emotional exhaustion. Further research is needed to assess which combinations of treatment are most effective for which participants among a more diverse group of emergency service employees.

A second example of tertiary prevention is a parenting skills intervention for caregivers of children diagnosed with attention deficit hyperactivity disorder (McDonnell & Mathews, 2001). Previous research found that caregivers of children with attention deficit hyperactivity disorder have reported difficulties with personal functioning, parental functioning, and family relationships. Sixty-five caregivers and their children (10 men and 55 women;

44 Caucasians, 20 African Americans, and 1 Hispanic; the mean age of the participants was 35; no location was given) participated in a group intervention designed to enhance parenting skills, address the emotional impact of caregiving a child with attention deficit hyperactivity disorder, and teach problem-solving skills. Participants reported that training resulted in improved relationships with their children. Limitations of this study included the lack of both a control group and an observational assessment of changes in parents' and children's behavior.

In both of the tertiary prevention studies described previously, skill training made sense because epidemiological data suggested that skills serve as protective factors for persons experiencing occupational or family stress. Similar to the primary and secondary interventions discussed earlier, perhaps the next important question is how these services can be efficiently provided in a manner that is relevant and effective for participants.

Prevention Service Delivery System Studies

Studies in this area examine dissemination, implementation, efficiency, effectiveness, and economics of prevention service delivery systems, as opposed to specific interventions. An example would be assessing the efficacy of paraprofessionals' delivery of relationship skills workshops (Waldo, 1989) instead of professionals leading the same workshop. When positive results are found for service delivery systems, the next step is to assess the impact those systems have on the epidemiological factors that have been demonstrated to be associated with the problem, thus completing the conceptual links between preintervention epidemiology, preventive interventions, and service delivery systems.

Phelps, Sapia, Nathanson, and Nelson (2000) offered an example of research on the effectiveness of an eating disorder preventive intervention delivery system. Epidemiological studies (Phelps, Johnston, & Augustyniak, 1999) and findings from other settings (Sapia, 2001) suggested that resilience could be enhanced and risk reduced through a program of structured education about eating disorders that included interactive lessons, problem solving, and cooperative exercises. Phelps et al. (2000) assessed the efficacy of delivering the program in middle and high school classrooms with teachers helping provide the intervention. In a study with 530 female middle school students (ages 11-15 years) and 312 female high school students (ages 13-16 years; the ethnicities and geographic location of participants were not reported), they found that the program did increase female students' acceptance of appropriate body images and decreased their intent to use dysfunctional eating behaviors. Despite the positive outcomes, Phelps et al. noted

some drawbacks to the delivery system they used, including the potential for teachers to become too didactic and authoritative in their presentation of material as well as problems in facilitating discussion in groups larger than eight students. Limitations of the study included lack of random assignment of participants to conditions and lack of follow-up assessment. The authors concluded that further research examining the delivery system with more diverse participants (including male students) over longer periods of time is warranted.

Systematic Prevention Research

Given the number and complexity of variables that impact prevention, systematic research is needed to advance knowledge. Like the bubble hypothesis (Gelso & Fretz, 2001), which suggests that limitations in any single research design require use of a number of designs to address the same problem, research on prevention will progress through systematic examination of prevention contexts and functions.

Kenny et al. (2002) described an example of systematic prevention research that addressed biological, psychological, and sociocultural variables in preintervention, intervention, and service delivery studies of barriers to learning for high school students. In a preintervention study, 127 students (36% female students, 52% male students, and 12% unidentified; 51% Hispanic, 34% Anglo, and 15% other; 26% 9th grade, 26% 10th grade, 33% 11th grade, 15% 12th grade; ages were not reported) at a high school in the Southwest were asked what problems pose barriers to their learning and what resources they have for overcoming those problems (Grau, Waldo, Garcia-Vazquez, & Steiner, 2001). High percentages of students reported that biological problems (e.g., trouble sleeping or staying awake, 70%), psychological problems (e.g., depression, anger, anxiety, or stress, 64%), and Sociocultural problems (e.g., uncomfortable with people or loneliness, 31%) posed barriers to their learning. Cluster analysis revealed associations among problems (e.g., trouble sleeping, depression, loneliness). There were no significant differences in report of problems between male and female students, ethnic groups, or grade levels. Most students reported receiving no help with the problems they were experiencing (e.g., 61% reported receiving no help with their depression, anger, anxiety, or stress; 61% reported receiving no help in overcoming being uncomfortable with people or loneliness), despite the fact that 59% of the students said they wanted more help and 73% said they would use more help if it were available. Students reported that the professionals they most frequently received help from were teachers (64%). The study was limited to self-report data. However, the results did suggest that there are biological, psychological, and sociocultural barriers to students' learning that

they are receiving little help in overcoming and that teachers are the professionals in the best position to assist students in overcoming these barriers.

In response to the results described previously, primary and secondary preventive interventions were designed and implemented by counseling psychologists with preservice and in-service teachers. The primary preventive intervention was intended to help preservice teachers at a southwestern university develop interpersonal skills for establishing positive relationships with students and developing an accepting atmosphere in their schools (Arizaga, Bauman, Waldo, & Castellanos, 2005). Fifty-five preservice teachers (91% women, 9% men; 45% Hispanic, 45% White, and 10% other; mean age 25.6 years, with a range from 18 to 49 years) were randomly assigned to experimental or wait-list control groups. The experimental group participated in small-group, culturally relevant relationship skills training. Significant improvement in communication skills was found for the experimental group in comparison to a wait-list control group, suggesting that training improved preservice teachers' ability to relate to students and parents who had different cultural backgrounds than their own. A limitation of this study was that the preservice teachers' actual interaction with students and parents was not assessed.

The secondary preventive intervention was intended to help in-service teachers in New Mexico identify students who showed signs of experiencing mental health problems and refer those students to appropriate services (Kaczmarek, Waldo, Mayfield, & Steiner, 2004). Ninety-three school personnel (86% women, 14% men; 72% Anglo, 25% Hispanic, and 3% other; ages were not reported) participated in 90-min workshops led by counseling psychologists who focused on identification and referral. Pre–post testing on knowledge of disorders and referral procedures revealed significant gains for the participants. Limitations of this study include the lack of a control group and the lack of follow-up assessment of the teachers' use of knowledge gained in the workshops to refer students for assistance.

Having achieved some success using workshops to improve teachers' communication, identification, and referral skills, researchers focused on identifying efficient and effective service delivery systems for providing workshops for in-service teachers (Kenny et al., 2002). A "train-the-trainers" model was used that involved psychologists preparing teachers to offer workshops on preventive interventions for colleagues in their New Mexico schools. In 1 year, 115 educators (age, gender, and ethnicity of participants were not reported) received 5 days of training that included coverage of barriers to students' learning, cross-cultural communication skills, classroom management, overcoming the impact of poverty, identification and referral of troubled students, and workshop leadership. These leaders then returned to their schools and offered workshops on these topics for teachers and other

school professionals. This delivery system resulted in more than 1,000 school personnel participating in peer-led workshops that focused on prevention. More than 90% of participants rated the interventions as useful. Estimates suggest that the school personnel who attended the workshops will have significant contact with at least 60 students a year, resulting in a preventive impact on more than 60,000 students. Had the psychologists applied the same amount of time to actually leading the interventions in the schools, they would not have been able to reach one tenth as many school personnel and students. The evaluative research on this program was very limited. In particular, the impact teachers' participation in workshops had on how they support students' learning has not yet been assessed. Given the potentially pervasive impact of this prevention program, a logical next step is to conduct research on how the program affects the epidemiology of barriers to students' learning.

There are a number of problems with the systematic preservice, preventive intervention, and service delivery systems research described earlier. In many cases, the measures used were designed for the specific study in which they were employed and lacked previous reliability or validity assessments. Experimental procedures were not always used. Most important, the final step in the systematic research sequence of assessing the impact of the service delivery system on barriers to students' learning has not been completed.

While the content and levels matrix presented in Table 2 can guide programs of systematic prevention research, it is not possible or necessary for all prevention researchers to systematically address all of the contexts and functions depicted in the matrix in their studies. It is important, however, that prevention research be informed by previous studies addressing contexts and functions, current studies' contributions to illuminating contexts and functions are clear, and holes in understanding contexts and functions that can be addressed through subsequent research be identified. In this way, the matrix can provide a guide allowing different research teams in different locations at different times to contribute to systematic understanding of prevention.

7. *Psychologists are encouraged to be competent in a variety of research methods used in prevention research.*

Research goals differ depending on the phase and focus of prevention programs. Prevention researchers must be knowledgeable about different types of research methods and designs to conduct all phases of prevention research. For example, secondary prevention would involve an initial assessment of high-risk individuals targeted for the intervention. In addition, a prevention

researcher should be skilled in conducting needs assessment, program evaluations, and outcome research at the individual and institutional level (Romano & Hage, 2000b). Once a prevention program is established, researchers need skills to assess the ongoing efficacy of the program and to identify key components of the program through randomized trials to determine if the effects are sustained and can be generalized to other contexts (Pentz, 2004; Rogers, 2000). Sustained research in a specific area allows the cumulative gains in prevention science to be purposeful and systematic (Durlak & Wells, 1997; Guterman, 2004; Mrazek & Haggerty, 1994; Price et al., 1988). Only prevention programs that demonstrate sustained effectiveness over time in different contexts can be viewed as efficacious and beneficial for the consumer (Committee on Prevention of Mental Disorders, 1994; National Institute of Mental Health, 1998).

Research that examines processes that facilitate or impede social change often does not fit neatly into experimental or quasi-experimental quantitative designs (Prilleltensky & Nelson, 1997). Prevention researchers need to be skilled at conducting both qualitative and quantitative research. A significant advantage of qualitative approaches is that the perceptions and experiences of those frequently ignored within traditional scholarship (e.g., people of color, women of low social power) are highlighted. Qualitative approaches recognize the importance of understanding experience from the participants' point of view and regard each participant as an expert in naming her or his reality. Qualitative research could serve the dual purpose of facilitating a relationship, gaining a deeper understanding of the participants, and developing sensitivity to the cultural contexts in which the preventive intervention will be conducted (Ponterotto, 2002).

In addition, prevention researchers need to be able to collaborate with community members on research goals and methods and work as part of a multidisciplinary research team (Israel, Schulz, Parker, & Becker, 1998; Sullivan et al., 2001). Collaboration with researchers in other disciplines and fields is necessary to understand how different disciplines conceptualize and assess the variables under study. Collaborative action research is often conducted from a constructivist perspective and may also include a needs assessment based on individuals' perception of their interactions within the social context (Greenwood, Whyte, & Harkavy, 1993; Hunt et al., 2002). Participatory action research is one example of collaborative research recognizing that knowledge is coproduced through collaborative action with those who have traditionally been left out of the research process and whose lives are most affected by the research problem (Prilleltensky & Nelson, 2002).

8. *Psychologists are encouraged to conduct research that is relevant to environmental contexts.*

Psychologists conducting prevention research are encouraged to go beyond a focus on individual target behaviors and to examine the context in which those behaviors occur. At all stages of the research process, the dynamic interaction between the environment and the individual behavior must be addressed (Albee, 1996). For example, research on the etiology of a maladaptive behavior should examine multiple potential determinants, including intrapersonal, interpersonal, community, and societal risk and protective factors. Research solely examining intrapersonal factors ignores the context in which the behavior occurs and could result in incomplete conclusions (National Institute of Mental Health, 1998). On the other side of the prevention spectrum, research that evaluates the effectiveness of a prevention program should address how adaptive behavior changes promoted by the program are valued or viewed within different cultural contexts. Changes in targeted behaviors that are desirable within one social context could be highly maladaptive in another cultural environment (Pope, 1990). For example, a study examining three Native American tribes found unique correlates of suicidal ideation among each tribe consistent with its culture, suggesting that suicide prevention interventions must be adapted to each tribe (Novins, Beals, Roberts, & Mason, 1999).

Similarly, it is important that psychologists who are conducting prevention research take into account the social ecology of the community in which they are working (Bronfenbrenner, 1979). Prevention programs affect multiple individuals and contexts. Prevention practitioners may design and evaluate programs by using criteria from their own communities' cultural perspectives and worldviews (Shinke et al., 1988; Trickett, 1992, 1998; Trickett & Levin, 1990). Cultural encapsulation (Wrenn, 1962) in research may miss important contextual factors that contribute to the success or failure of preventive interventions within specific communities and cultures (Turner, 2000). A prevention program that was successful in the ecological context of one community may have a very different and potentially negative impact on the ecological structure of another community. It is the responsibility of prevention researchers to assess the differential impact of specific programs on specific communities. Community investment through involvement of major stakeholders in prevention program research is a dynamic approach to ensuring that prevention research is culturally relevant (Caplan & Caplan, 2000; Conyne, 2004; Nation et al., 2003; Reiss & Price, 1996). This ecological perspective examines the power dynamics between the prevention researcher and the community and facilitates safeguarding clients' autonomy (Trickett, 1992). A community collaborative action research model is an example of an approach in which programs are developed to meet the community's specific needs (Weissberg & Greenberg, 1998). Prevention research that involves the community in determining the research goals and methods can also have an

empowering effect on the community (Hatch, Moss, Saran, Presley-Cantrell, & Mallory, 1993; Richards et al., 2002).

9. *Psychologists are encouraged to consider the ethical issues involved in conducting prevention research.*

Prevention research is typically conducted with numerous participants and has individual, systemic, and societal implications (Bloom, 1993; Pope, 1990), thus raising unique ethical issues (Bond & Albee, 1990; Waldo, Kaczmarek, & Romano, 2004). Several ethical issues related to conducting prevention research merit further consideration, including negative impact, competency, informed consent, and protective factors.

In prevention research, it is important to evaluate the possible negative impact that a preventive intervention has on the individual, his or her significant others, the community, and society (Bloom, 1993; Caplan & Caplan, 1994). For example, conducting preventive research that identifies a stigmatized group could be harmful (Bloom, 1993). Concerns about stigma may underscore the need to safeguard confidentiality in all steps of the research process (Bloom, 1993; Conner, 1990; Pope, 1990). In addition, targeted behaviors may serve a purpose for the individual and community, and extinguishing those behaviors without attention to their significance may lead to harmful consequences. For example, targeting an adaptive response to extreme poverty, such as child labor, may increase risks to children rather than reduce them (Pope, 1990). Prevention programs may have unintended consequences, which should be investigated by the researchers (Conner, 1990). For example, a program to prevent sexual abuse found that it unexpectedly increased older children's discomfort with being touched (Taal & Edelaar, 1997). Ethical research must assess the impact of new or promoted behaviors before, during, and after the intervention. It is particularly important to evaluate the long-term effects of preventive interventions. A number of preventive interventions have demonstrated short-term success, but long-term follow-up has shown regression to and below the initial mean (Kuffel & Katz, 2002; Van de Ven, 1995). Long-term evaluation is needed to assess whether preventive interventions lead to lasting changes (Brown & Liao, 1999).

Prevention researchers need to be competent in every aspect of the research process (Chalk & King, 1998; Committee on Prevention of Mental Disorders, 1994). Incompetent research can lead to multiple harmful outcomes, including faulty interpretations, wasted resources, and ineffective prevention interventions. In addition, incompetence in the research process can lead to neglect or harm of participants. Establishing the empirical efficacy of a prevention program involves research designs that compare the new program to an existing program or other viable treatment and placebo conditions. Important ethical issues to consider are informed consent to

participants, equitable selection (random assignment), and researcher bias toward the treatment (Conner, 1990).

Informed consent is a critical and complicated issue in prevention research. To make truly informed and autonomous decisions about participation in prevention research, participants need to know what assumptions and theoretical questions are being addressed (including inherent cultural biases and worldviews) and what prior research suggests are the risks and benefits of participation. Involving community members in the design of the prevention project and in establishing informed consent will assist in this process. Furthermore, because preventive interventions may affect participants' interpersonal relationships and sometimes entire communities, informed consent should be sought not just from those who directly participate in the research but also from those who are likely to be indirectly affected or the community at large. The collaborative approach used in participatory action research offers a model for how informed consent of participants and representatives of their communities can be incorporated into research from the earliest stages of conceptualization through reporting (Prilleltensky & Nelson, 2002).

Finally, prevention research programs should not focus solely on measuring reduction in negative outcomes but should also focus on the enhancement of positive outcomes (Romano & Hage, 2000b; Weissberg et al., 2003). This focus is consistent with positive psychology (Seligman & Csikszentmihalyi, 2000). Researchers should examine risk and protective factors that have the most benefits for clients. Prevention interventions are most beneficial when they attempt to enhance strengths and protective factors as well as reduce risks (Vera & Reese, 2000).

10. Psychologists are encouraged to consider the social justice implications of prevention research.

Psychology has a strong commitment to social justice that is served by prevention efforts and prevention research (Ivey & Collins, 2003). Prevention and social justice are inextricably linked (Price & Behrens, 2003; Romano & Hage, 2000b; Vera, 2000). The reduction of social injustice (e.g., addressing prejudice to reduce the negative implications of discrimination) is essential for preventing the myriad problems that injustice spawns. In addition, preventing problems among oppressed populations that lack resources for remediation promotes social justice. Prevention researchers can promote social justice by identifying the causes and effects of oppression in society and by exploring how oppression and its consequences can be prevented. Examples include studies on preventing intimate partner violence (Hage, 2006; Wolfe et al., 2003), preventing bigotry against gay and lesbian high school students (Van de Ven, 1995), and promoting career development for female adolescents

(O'Brien, Friedman, Tipton, & Linn, 2000). In each case, a lack of social justice constitutes a risk factor affecting a specific population. Research on the promotion of social justice is prevention research.

It is important for psychologists to take into account the social justice implications of their research when planning studies and disseminating findings. For example, it is possible for even the most well-intended prevention research to yield findings that result in victims being blamed for problems that have resulted from their oppression (Berrenberg & Rosnik, 1990; Ryan, 1971). Studies that focus exclusively on the pathology of battered women inappropriately suggest that the problem lies within the female victims, rather than acknowledging the impact of the social oppression they experience (Walker, 1984). It has been argued that for prevention efforts to have an impact, they must address societal issues of equal rights, oppression, discrimination, and exploitation (M. Perry & Albee, 1994). In addition, prevention efforts that lack empirical evidence may be based on moralistic assertions and agendas (Heller, 1996).

PREVENTION EDUCATION AND TRAINING

11. Psychologists are encouraged to develop knowledge of prevention concepts and research, as well as skills in the practice and scholarship of prevention.

Many observers have emphasized the inconsistent attention to prevention in graduate psychology training programs and professional journals (e.g., Albee, 2000a, 2000b; Cowger, Hinkle, DeRidder, & Erik, 1991; Ginter, 1991; Goodyear & Shaw, 1984; Hage, 2003; Hansen, 1981; Hanson, Skager, & Mitchell, 1991; Kiselica & Look, 1993; Kleist & White, 1997; Myers, 1992; Romano & Hage, 2000b). These observations have been supported by empirical evidence produced over two decades. After surveying training directors of APA-accredited and non-APA-accredited counseling psychology doctoral programs (72% response rate) and internship sites (62% response rate), McNeill and Ingram (1983) found that "such [prevention] training was found to be uniformly deficient in both APA and non–APA-accredited graduate training and internship programs" (p. 95). Twenty years later, Matthews (2003, 2004) found that few APA-accredited doctoral programs or Council for Accreditation of Counseling and Related Educational Programs (CACREP)–accredited master's or doctoral programs offered course work specific to prevention.

Matthews (2003, 2004) surveyed training directors or contact people from all APA-accredited counseling psychology programs (36% response rate) and all CACREP-accredited counseling programs (52% response rate). She found

that among counseling psychology programs, 74.1% indicated that their programs do not offer any prevention-specific courses; 14.8% indicated that they regularly refer students to prevention courses in other programs or departments; and only 11.1% indicated that they do offer courses that specifically address prevention. The counselor education programs offered a little more in terms of prevention training, but not much. Two thirds (68.5%) of the programs indicated that they do not offer prevention courses, 24.7% indicated that they offer prevention courses only or primarily at the master's level, and 6.7% indicated that they offer prevention courses at the master's and doctoral level. When examined more closely, however, Matthews (2004) found that even these numbers seemed a bit inflated because, when asked to list the title of the course, most respondents reported course titles that seemed to reflect CACREP core courses, with only 7% mentioning prevention, wellness, or health in the course title.

Although many of the programs who responded to Matthews's (2003, 2004) survey infused some elements of prevention into other courses, such coverage was more likely to be general, addressing the various definitions of prevention and the relationship of prevention to professional identity. The more specific the skills were to prevention (i.e., applicable to the practice of prevention but less applicable to remedial counseling and therapy), the less likely they were to be covered in the curriculum. For example, general topics such as definition and history of prevention, the role of prevention in counseling or counseling psychology, and the role of counselors or counseling psychologists in prevention tended to be the ones that were frequently included in courses and linked more directly to prevention. Conversely, topics such as evaluating and selecting prevention program materials and creating prevention program materials, ethical issues specific to prevention, and political ramifications of prevention were rarely covered. In other words, students were more likely to be taught what prevention is rather than how to do it.

Matthews (2003, 2004) found, however, that most program training directors indicated that they believed prevention was important to the field of psychology (80.8%) and counseling (73.0%) and that the topic should receive increased attention in training (70.4% of counseling psychologists; 71.9% of counselor educators).

Professional journals represent an avenue for continuing education and an opportunity to fill gaps in training; however, recent reviews of major counseling journals found little attention given to prevention (Matthews, 2004; O'Byrne, Brammer, Davidson, & Poston, 2002), yet these same journals publish articles that describe prevention as integral to the field (e.g., Hage, 2003; Romano & Hage, 2000b). O'Byrne et al. (2002) conducted a 15-year content analysis of four major journals in which counseling psychologists

tend to publish: *The Counseling Psychologist*, *Journal of Counseling Psychology*, *Journal of Counseling and Development*, and *Journal of College Student Development*. They examined all full-length articles and brief reports for the period 1985 to 1999. They found that from a total of 4,028 articles published during that period, only 52 (1.29%) specifically focused on primary prevention. Matthews conducted a content analysis of *Journal of Counseling and Development* for the entire time in which the journal published under that title, 1984 to 2002 (Volumes 63-80). Matthews took a more inclusive approach than O'Byrne et al., including any article that addressed prevention in a meaningful way, whether or not prevention was the focus of the article. She found that of 1,712 articles published, 116 (7%) addressed prevention.

There are several steps that psychologists can take to develop competency in prevention (Conyne, 2004; Gullotta & Bloom, 2003a), including, but not limited to, (a) developing community partnerships in which faculty and students collaborate with community personnel to design, deliver, and evaluate prevention projects; (b) complementing the focus on remediation by continuing efforts to develop prevention-specific opportunities within the profession, such as Web sites and special interest groups; (c) incorporating components that address prevention concepts, practices, and experiences within existing courses; (d) disseminating prevention-focused research and practice activities; (e) seeking external funding for prevention projects by collaborating with personnel from related disciplines in which funding may be more available (e.g., public health, criminal justice); (f) connecting prevention with remediation rather than treating each as discretely separate approaches; (g) advocating for prevention-sensitive research, training, and practice within APA and other relevant professional associations (e.g., American Counseling Association, American School Counseling Association, National Association of School Psychologists, and National Association of Social Workers); and (h) educating the American population directly through popular media and community presentations about the everyday value of prevention in their lives.

These suggestions to increase professional competency in prevention are generally consistent with both the *APA Guidelines and Principles for Accreditation of Programs in Professional Psychology* (APA, 2005) and the CACREP *2001 Standards* (CACREP, 2001). For example, both the APA *Guidelines and Principles* and the CACREP *Standards* require training in such areas as theoretical foundations, assessment and diagnosis, research methodology, and multicultural competence, as well as practicum and internship experiences. Theories specific to prevention such as the health belief model, theory of reasoned action, and just society model could be incorporated into theory and method courses to complement the standard theories geared toward psychotherapy. Students could be taught how to do

group- and community-level assessments as well as individual assessment and research skills related to program evaluation. Albee's (1983, 1986) "just society" conceptualization of mental illness, with its concomitant approach to primary prevention, could be incorporated into multicultural courses. Sites that provide training in the practice of prevention, as well as remediation, could be sought out for practicum and internship experiences.

Yet it must be pointed out that accreditation standards are geared much more closely to traditional education and training in counseling psychology (i.e., clinically oriented, remedial applications). While these standards do not disallow prevention education and training, they do need to be flexibly adapted to recognize prevention research and practice as necessary competences for psychology (Romano & Hage, 2000b). An alternative exists—the accreditation standards themselves should be expanded to directly include prevention-sensitive education and training issues.

12. Psychologists are encouraged to foster awareness, knowledge, and skills essential to prevention in psychological education and training.

Although knowledge and skills important to the practice of prevention are taught in applied psychology training programs, it is important when providing this education to directly address the application of theory and skills to the practice of prevention (Conyne, 1997, 2004; Matthews & Skowron, 2004). Multicultural competence, group facilitation, ethics, research and program evaluation, and the personal attributes of the psychologist are as important to the practice of prevention as they are to remedial counseling practice. In addition, a number of specific domains have been identified as particularly important to prevention (Conyne, 1994, 1997, 2004; Commission on Positive Youth Development, 2005; Durlak, 2003; Felner, Felner, & Silverman, 2000; Lewis & Lewis, 1981; Lewis, Lewis, Daniels, & D'Andrea, 2003; Romano & Hage, 2000b). These domains include understanding the difference between a prevention perspective and a remedial perspective, developing and conducting educational programming, assessing community needs and designing programming to address them, implementing systemic intervention, taking an ecological orientation, collaborating with multidisciplinary teams and grassroots community organizations, developing marketing and grant-writing campaigns employing strategies for reduction of risk and promotion of strengths, paying attention to positive psychology and positive youth development, empowering individuals and their communities, and assessing the implications of local and national policy trends, as well as political influences.

Prevention also fits well with a social justice focus, which has been and continues to be integral to counseling psychology (Carter, 2003; Fouad et al., 2004). Albee has written extensively on the role of social oppression

as a contributing factor for mental illness and the role of social change in preventing problems (e.g., Albee, 1983, 1986, 2000a, 2000b; Kessler & Albee, 1975). Thus, graduate preparation programs need to incorporate community awareness and systemic approaches to theory, research, and practice, along with more traditional individual, illness-based approaches.

In terms of ethical codes, APA's (2002) *Ethical Principles of Psychologists and Code of Conduct* and the American Counseling Association's (ACA, 2005) *Code of Ethics* both attend to general principles/aspirations that are supportive of prevention education and training; to other more specific areas of particular relevance to prevention training, such as assurance of competence as well as the accuracy and appropriateness of education and training programs; and to the minimization of intrusions on privacy.

However, similar to the situation described earlier with regard to accreditation, while these ethical codes fully allow for the development and implementation of prevention training, they provide no specific ethical guidelines about it. In fact, consistent with accreditation standards discussed previously, the overall orientation and context for these ethical codes clearly fall within the remedial/therapeutic end of professional practice. For instance, APA's (2002) code includes a specific section on therapy, and the ACA (2005) code's section on teaching, training, and supervision is compatible in scope most clearly with clinical instruction, not with the system-based, before-the-fact work of prevention. Prevention education and training, as well as the delivery of prevention interventions and skills, would be well served by the expansion of accreditation standards and ethical codes to directly reference prevention-specific topics and issues.

Graduate preparation programs in counseling, as well as professional psychology journals and associations, play a vital role in providing training in such skills. The range of prevention course options for students needs to be expanded, beginning with offering new elective courses. Examples of new courses include those in preventive counseling, organization and system change, and social advocacy. In addition, students can be referred to other disciplines to take courses in such areas as social marketing, public health intervention, and community development. A combination of new course development and interdisciplinary course selection can be designed to create cognate areas of specialization for prevention in counseling psychology. In addition, it is important at the baseline level to infuse prevention-sensitive approaches within the existing curriculum.

Problem-Based Learning: An Innovative Pedagogical Strategy to Teach Prevention

Two innovative, current pedagogical methods that hold particular potential for teaching prevention are found in *service learning* (Delve, Mintz, &

Stewart, 1990; Hondagneu-Sotelo & Raskoff, 1994; Roschelle, Turpin, & Elias, 2000) and in *problem-based learning* (Duch, Groh, & Allen, 2001; King, 1993; Savin-Baden, 2000). In service learning, students are placed within real-world settings, not unlike practica or internships, but which can be predesigned to address prevention themes and have the advantage of being free from the rigors of clinical supervision.

Problem-based learning is an inquiry-based, student-centered approach that emerges from current theories of learning including constructivism, social constructivism, and situated cognition. In problem-based learning classrooms, students are presented with complex, real-world, ill-structured problems that have been carefully crafted to address course goals and objectives. Problem-based learning orients students toward meaning making as opposed to fact collecting. Students learn through working together individually and in small groups to solve contextualized problem sets and situations and to extract learning principles in accord with course objectives. Because the amount of direct instruction is reduced in problem-based learning, students assume greater responsibility for their own learning. The instructor's role becomes one of resource guide and task-group consultant. This arrangement promotes group processing of information rather than an imparting of information by faculty. The instructor's role is to encourage student participation, provide appropriate information to keep students on track, avoid negative feedback, and assume the role of fellow learner.

Problem-based learning sessions proceed through a general learning cycle that includes the following:

1. *Presentation of the problem*. Problems can be introduced in many ways. The instructor may distribute the problem and ask students to begin reading. In other situations, an instructor might engage the students in a hands-on activity, show a video, play a piece of music, read a newspaper or magazine article, ask a controversial question, or invite a relevant guest to class for discussion prior to distributing the actual text of the problem. In all cases, the problem is ill-defined and relatively unstructured, requiring students to collaborate to produce possible solutions.
2. *Team-based discussion*. Following the introduction, students read the problem text and begin their group discussions. They identify what they already know that might help them with their problem-solving task. The students then determine what they need to learn to be able to solve the problem. At this stage, students may also generate preliminary hypotheses about problem solutions. Skills in collaboration, interpersonal problem solving, and in-group dynamics are needed to function effectively in these team-based discussions.
3. *Student role assignment.* Instructors or group members may assign roles to students to facilitate the group's work.
4. *Research and investigation*. Students examine a variety of resources for information that may contribute to solving the problem. This research is

typically conducted on an individual basis; however, there may be situations in which group members conduct their research together. Electronic learning methods, such as Blackboard, can be helpful in this process.

5. *Team-based discussion*. Following the initial research phase, students meet with group members to discuss what they have learned. Information is analyzed and integrated as group members construct new understandings of the problem and possible solution hypotheses. As new questions arise, the cycle of conducting research and discussing findings is repeated. The instructor's capacity to assist with small-group dynamics can be very helpful at this point.
6. *Solving the problem*. Students' collaborative work results in a solved problem, completed task, and answered questions. In this phase, students may submit a finished product for grading or may present their findings to the class.
7. *Summing up*. As part of the problem-based learning process, many instructors choose to conclude work on problems with wrap-up activities such as minilectures or large group discussions. These experiences provide additional opportunities for students to think critically; that is, to apply, integrate, evaluate, analyze, and synthesize information.
8. *Peer and self-evaluation*. Reflecting on both one's learning and group experiences is an integral component of the problem-based learning process. While reflection on content and process occurs throughout the problem-based learning cycle, summative reflection on group member contributions enables students to develop their abilities to assess their own performance as well as those of their peers. Moreover, peer evaluations that affect one's grade may provide additional incentives for students to be active participants in the collaborative problem-solving process. Students may be asked to rate group members' performance on specific criteria identified on a peer evaluation form. In such cases, a student is given a summary of the comments made by other group members; however, the evaluators' names may be removed.

The following extracts are taken from a graduate course in preventive counseling (Conyne, 2005) that is based on using problem-based learning strategies. The extracts are included to provide a detailed example of how a prevention course syllabus can be designed to reflect this innovative approach. The extracts are as follows:

Course Objectives/Expected Outcomes

Historically, counseling has been taught and practiced primarily from a remedial perspective, despite its guidance roots in development, prevention, and social change. This course, which expresses the University of Cincinnati Counseling Program vision (ecological counseling with diverse and underserved populations), attempts to integrate these preventive origins with other models of prevention and with contemporary approaches that professional

counselors, and other professional helpers, can use to reach prevention goals. It will seek to present a balance between understanding prevention conceptually, which is still an issue of confusion in the mental health and educational fields, and studying some stellar illustrations of preventive practices that hold promise for counselors. By so doing, students will gain a better understanding of how professional counselors can help individuals and groups avert certain psychological, educational, and health problems through before-the-fact preventive counseling interventions. In addition, the class conference and final paper, both of which are an important part of this course, will be focused on the following theme: "Preventive Counseling Interventions and Research in the Healthy Schools and Families" Drop-Out Prevention Project.

Texts

Albee, G., & Gullota, T. (Eds.). (1997). *Primary prevention works*. Thousand Oaks, CA: Sage.
Conyne, R. (2004). *Preventive counseling: Helping people to become empowered in systems and settings*. New York: Brunner-Routledge.

In addition to assigned reading, several data sets will be helpful to you that are retrievable through reputable sources on the Internet:

http://www.ed.gov/nclb/landing.jhtml
www.surgeongeneral.gov; www.Fedstats.gov; http://www.Colorado.edu/cspv/blueprints;
http://modelprograms.samhsa; http://www.aecf.org/kidscount/databook
http://www.positivepsychology.org
http://www.mentalhealth.samhsa.gov/cmhs/
http://www.mentalhealth.samhsa.gov/links/default2.asp?ID=Prevention&Topic=Prevention http://www.mentalhealth.samhsa.gov/funding/
www.counseling.org
www.apa.org

Course Organization, Class Schedule, and Assignments

The course will emphasize discussion, activities, and classroom interaction as methods to learn, critique, and consider potential applications of the conceptual and programmatic materials. The instructor will present additional didactic information pertinent to assigned topics.

Team Project

The team effort revolves around the Healthy Schools and Families dropout prevention/retention grant that has been obtained from the U.S. Department

of Education. The project goal is to investigate and provide recommendations for a Summer Prevention Academy (SPA), whose features are based on local needs and best practices in prevention. This work will be conducted in teams of three and presented in a Class Poster Conference. As part of the Poster Conference, a Panel of Experts representing the Grant Project will judge and select the outstanding poster. The winning student group will receive a certificate and prize and its program proposal may be implemented in whole or in part within grant project schools this summer.

Individual Project

The student individual project is a 10- to 12-page paper emerging from the Summer Prevention Academy investigation, focusing on a specific aspect of SPA.

Problem-based learning, of course, is but one pedagogical approach that can be used for curriculum design and teaching, yet it does present some unique potential because of its emphases on contextualized, small-group-focused, collaborative, and inquiry-based strategies. In addition, a range of prevention-based literature is available to assist psychologists in adapting and creating new curricula; infusing prevention specific concepts into research, evaluation, group, and ethics course work; and developing learning environments that are more sensitive to systems intervention and social justice (Conyne, 1994, 1997, 2004; Matthews & Skowron, in press; Romano & Hage, 2000b).

Psychologists have as much of a responsibility to become proficient in prevention-related domains as in those more specific to remedial therapeutic activities. Remedial treatments by themselves are insufficient to meet the pressing mental health needs of the twenty-first century. Remediation and prevention must be seen as complementary to each other and necessary in the training and education of applied psychologists. The training of psychologists in prevention science is critically important if policy makers and health providers expect to make gains in improving the health status of the population.

SOCIAL AND POLITICAL ADVOCACY FOR PREVENTION

13. Psychologists are encouraged to design, promote, and support systemic initiatives that prevent and reduce the incidence of psychological and physical distress and disability.

Psychologists have much to offer in the design, promotion, and evaluation of systemic prevention initiatives that have the potential to impact larger

groups of people. While traditional psychology has focused on the individual, one-to-one crisis intervention model, psychologists operating within a prevention framework are encouraged to increase their emphasis on systemic interventions that improve the well-being of people within the system, thus reducing, over the long term, the need for individual remediation through counseling and psychotherapy. Examples of systemic interventions include parent- and family-based interventions that help parents and families learn effective child-rearing skills and strategies to strengthen child and parent relationships and that reduce child and adolescent problem behavior.

The Centers for Disease Control and Prevention (CDC) outline best practices for parent and family preventive interventions, especially related to youth violence prevention (Thornton, Craft, Dahlberg, Lynch, & Baer, 2002). Included in the CDC's best practices is the identification of parent and child populations at risk for violent behaviors, and therefore, potential groups for prevention interventions. Parental risk factors may include alcohol abuse, child neglect, and inconsistent discipline, and child risk factors include being a victim of abuse, living in neighborhoods with high rates of violence, delinquent behavior, and a history of school absenteeism. The earlier a preventive intervention occurs in the life of a child and in the child's family and environment, the greater the likelihood of reducing child and family risk factors and strengthening protective factors of the child (Smith, 2006). Therefore, systemic prevention programs that target expectant parents and young children are more likely to have a positive impact (Webster-Stratton & Hancock, 1998). The cultural and demographic context of participants should also be considered when designing systemic prevention interventions. According to the CDC, participants who share common characteristics (e.g., race, ethnicity, socioeconomic status) and live in close proximity to each other are more likely to develop cohesion and support among themselves beyond the prevention intervention. Therefore, selecting an appropriate community setting in which to deliver a prevention intervention is important. Finally, the development of prevention materials that are age and culturally appropriate is necessary in the delivery of systemic prevention programs.

Alcohol prevention programs that address community norms to reduce the incidence of alcohol use among children and adolescents and alcohol abuse among adults are other examples of prevention projects that focus on systemic change. One example, Project Northland (Perry et al., 1996), is a comprehensive community-wide adolescent alcohol prevention program that was implemented in several northeastern Minnesota communities that have a high incidence of alcohol-related problems compared with other areas of the state. The population of participating counties numbered 235,000 people from rural areas, who were primarily from lower-middle to middle-class

communities of primarily European ethnic backgrounds. The study took place over a 3-year period beginning when the adolescents were in the sixth grade, with additional interventions when the adolescents were in Grades 7 and 8. The first study cohort of sixth graders consisted of 2,351 students, with 94% Caucasian and 5.5% Native American students. The intervention components included parent education, behavioral curricula, peer participation, and community task force activities. Results showed high program participation rates over the three study periods, and reported alcohol use of the intervention group students was significantly less than students in a reference group not receiving the intervention. Among the other findings of the study, the intervention students reported less peer influence to use alcohol, significantly less combined use of cigarettes and alcohol, and more communication with parents about the consequences of drinking. However, aspects of the larger social environment such as access to alcohol in the community and consequences of drinking and driving were less affected by the intervention. Differences based on sex, socioeconomic status, and ethnicity were not reported. According to the authors, the study could have been strengthened by greater equivalency between intervention and reference groups, and while the study relied on self-report data, the authors concluded that based on additional statistical procedures, the results were not compromised by self-report data. The overall success of Project Northland in a rural, but high alcohol use, area has resulted in an urban version of the project in Chicago among more culturally diverse students (Komro et al., 2004). The project is currently in the initial phases of implementation.

The Early Risers "Skills for Success" Program (August, Realmuto, Winters, & Hektner, 2001) is a comprehensive drug abuse prevention intervention that targets at-risk young children with early onset aggressive behaviors, behaviors that may lead to more serious conduct problems and alcohol and other substance abuse as they develop. The program uses multifaceted prevention interventions that include a summer program of academic learning, social skills training, and creative arts, as well as a family program that includes parent training and parent–child interactive activity. Early Risers utilizes a community prevention collaboration of schools, community agencies, and university prevention specialists to provide direction, oversight, and accountability. The collaborative partnerships foster relationships among culturally diverse community groups and community services through advisory committees. The mission of the collaborative partnerships is to "develop culturally competent, family centered systems of care that provide a wide array of education, health, and social services for families of at-risk children" (August, Realmuto, Winters, et al., 2001, p. 142). Success of the collaborative partnerships requires interagency cooperation and service integration.

The Early Risers prevention intervention model includes CORE (a child-focused intervention) and FLEX (a family-focused support and empowerment program) components. CORE components, informed by social development theory, try to reduce child risk and strengthen child competencies. CORE components can be delivered for 2 or more years beyond kindergarten and include a summer program, school-based consultation during the school year, a family program, and an optional after-school program for urban participants. FLEX components are individually tailored to the unique needs of parents and families of children in the program. The FLEX components are designed to empower parents and families, build on their strengths, and provide support to parents and families. The effectiveness of the Early Risers "Skills for Success" Program has been empirically studied for several years (August, Egan, Realmuto, & Hektner, 2003; August, Realmuto, Hektner, & Bloomquist, 2001). Studies have reported that children in the program made significant improvements in academic competence and classroom behaviors compared with control groups, while both program and control children showed reductions in aggressive, impulsive, and hyperactive behaviors. After a third year of program implementation, program children showed additional gains in social competence (August, Hektner, Egan, Realmuto, & Bloomquist, 2002).

In a 1-year follow-up study of the lasting effects of the Early Risers "Skills for Success" Program, researchers found that gains of social competence remained, but gains in school adjustment and externalizing problems were not maintained (August, Lee, Bloomquist, Realmuto, & Hektner, 2004). The authors attributed the loss of gains at follow-up to several possible explanations including the following: (a) attrition and low participation rates of some children and (b) need for a longer period of program implementation beyond 2 years. The need for prevention interventions of longer duration is emphasized, as well as the need to reduce attrition and strengthen participation rates. It is critically important to consider the community context in systemic prevention interventions to reduce attrition and provide for booster programs at period intervals to maintain program effectiveness.

Systemic prevention interventions are appropriate across the life span, especially among older adults, a frequently overlooked segment of the population. Depression and suicide prevention initiatives are important systemic prevention interventions for older adults (U.S. Surgeon General, 1999). Other systemic interventions for these individuals include community-based programs that allow older adults to live at home rather than living in an institutionalized care facility and programs that address the emotional and physical needs of older caregivers (Konnert, Gatz, & Hertzsprung, 1999). Community-based programs for older adults will vary based on the targeted audience of these adults. Older adults with greater physical and emotional

capacity will benefit from community primary prevention programs that involve them in community volunteer opportunities, social advocacy, and neighborhood networking and social support groups. Those who have already experienced a major life event (e.g., loss of a spouse, health crisis, move from family home to a care facility) may benefit from secondary prevention programs such as those that focus on developing new support networks and addressing the needs of the caregivers of the older person. Finally, community-based programs to help an older adult remain in her or his home through the delivery of home-based services (e.g., meals, nursing care, and social support) are ways to help this individual remain in his or her home if the older adult desires, thus delaying movement to a nursing facility (Konnert et al., 1999). Given the aging U.S. population and the projected needs of older adults in the twenty-first century, it is vitally important that preventionists consider systemic ways to enhance the lives of this population within our communities.

14. Psychologists are encouraged to design, promote, and support institutional change strategies that strengthen the health and well-being of individuals, families, and communities.

Psychologists can be instrumental in contributing to institutional change strategies that strengthen protective and resiliency factors of individuals within societal institutions such as families, schools, workplaces, faith communities, and health care centers (e.g., Greenberg et al., 2003; Johnson & Millstein, 2003; Kumpfer & Alvarado, 2003; Wandersman & Florin, 2003). For example, corporations may develop policies and procedures designed to reduce employee work-related stress to increase worker satisfaction and productivity and to reduce health consequences of stress-related illnesses. Faith communities may promote family enrichment activities to strengthen relationships within and between families within a community. Health care settings may promote employee programs that focus on strengthening employee resiliency strategies to help inoculate employees against the physical and psychological demands of the working setting. Employment settings and schools may offer healthy food choices in cafeterias, lunch rooms, and vending machines to promote healthy nutrition, which when coupled with a more active lifestyle can reduce the incidence of obesity and the resulting health consequences. The training of school personnel to design and implement alcohol and drug use prevention projects in schools is another example of prevention activity that targets institutional settings (Romano, 1997). Similarly, prevention projects may focus on disordered eating among students (Neumark-Sztainer, 1996). In the workplace, stress management interventions can be applied to prevent and reduce employee stress

and to increase satisfaction and productivity (Murphy, Hurrell, & Quick Campbell, 1992).

In relation to employee stress, MacLennan (1992) focused on stress reduction within organizations as a primary prevention strategy compared with individual stress management. Therefore, the focus of the prevention intervention is the organization and not the individual. Sources of organizational stress may occur in three areas, according to MacLennan: (a) physical environment, (b) organizational and managerial, and (c) interpersonal and organizational climate. The physical environment includes factors such as temperature, safety, light, noise, and air quality. Organizational and managerial factors include clarity of employee role definition and functions, professional development opportunities, and policies related to employee benefits and compensation. Interpersonal relationships within the work and organizational climate place refer to relationships between supervisors and supervisees and among peer employees, attention to discrimination and harassment complaints in the workplace, employee decision making and control as ways to empower employees, and policies related to alcohol and drug use policies and dress codes. It is more difficult and complex to develop preventive interventions at the organizational level, and evaluating such interventions is challenging. However, institutional change strategies to enhance employee well-being that address both the work environment and the individual employee offer greater potential for sustainability of prevention program benefits as well as more satisfied and productive employees (Maslach & Goldberg, 1998).

The social and emotional learning approach to school-based prevention incorporates health promotion, competence enhancement, and youth development as frameworks for prevention strategies designed to reduce youth risk behaviors and enhance protective factors (Perry, 1999; Weissberg & Greenberg, 1998). The review article by Greenberg et al. (2003) discussed the growing empirical evidence showing that well-designed and effectively implemented school-based prevention programs can positively influence the social, health, and academic outcomes for youths. The authors reported that effective school-based prevention programs teach students social and emotional learning skills and ethical values, and encourage activity-based learning strategies, including community service learning opportunities. Effective programs foster supportive and respectful relationships among and between students, school personnel, and parents. Finally, effective programs work toward strategies that bring about systemic changes involving the school, parents, and community. School-based prevention programs are best started earlier rather than later in the life of a student, and multiyear and multicomponent approaches will have a greater likelihood of impact and sustainability. The body of literature reviewed suggests that sustained prevention

programs that address the multiple needs of students across the school and community environment are likely to yield promising results and positively impact student emotional, social, and academic development.

Tolan, Gorman-Smith, and Henry (2004) developed a preventive research-based intervention for inner-city families who had children entering the first grade. The intervention, called SAFEChildren, is based on a developmental–ecological perspective, incorporating age-appropriate developmental tasks and community ecology to reduce risk and enhance child competence. Specifically, the program used a multiple family group intervention that focused on parenting skills, family support and relationships, and skills to assist families interact with their children's school. In addition, children participated in a reading and tutoring program. The intervention was implemented for 22 weeks when the children were in first grade. The families met weekly and the children twice weekly for the reading program. Of the 424 families participating, 42.5% were African American and 57.5% Latino, 51% of the children were boys, and 40% lived in single-parent households. More than half of the families had yearly incomes below $20,000. Families were randomly assigned to intervention and control groups. Data were collected at pretest, at the end of first grade (posttest), and at 6-month follow-up. Interviewers from the African American and Latino communities were recruited to collect data from caregivers and children. The intervention was assessed in multiple ways: the children's school functioning, behavior, and social competence; parenting practices and parent involvement in his or her child's school; and family relationships. Results of the intervention showed differences between intervention and control groups in children's reading achievement. Children who received the intervention were nearly one-half grade level ahead of the control children in reading at the 6-month follow-up. No other differences were found on measures of school bonding, child behavior, and social competence. The only parent measure that showed differences between the intervention and control conditions was the one assessing parent involvement in his or her child's school in which intervention parents maintained a stable score over time, while control parents declined. Additional analyses found that families identified as high risk (i.e., less adequate parenting skills and family relationships at pretest) and children with high levels of problem behaviors at pretest showed gains in child's behavior and social competence and parental monitoring when compared with high-risk families and children in the control condition. Although the high-risk families and children experienced more benefits from the intervention compared with the total sample, the overall effects of the intervention were limited. Perhaps the strength of the intervention was not sufficiently powerful to bring about major change over the relatively short study period. However, the study is

important as it focused on school achievement and child behavior during the early years of school, involved parents and caretakers to strengthen parenting skills and family functioning to promote school achievement and positive child development, and utilized representative community members as part of the research team.

Bully Busters is an example of a school-based program that offers a psychoeducational intervention for middle school teachers to reduce classroom bullying (Carlson-Newman & Horne, 2004). The teachers were trained through seven staff development workshops to increase their awareness of bullying and skills to intervene when bullying occurs. The teachers were also provided with support and consultation after their training ended. The results of the study showed that the program increased teachers' knowledge and use of bullying intervention skills, as well as teachers' instructional self-efficacy, and reduced the number of student disciplinary referrals. The authors suggested that training teachers in student bullying prevention strategies and skills may be an effective and financially efficient way to create to safe schools.

Another example of a school-based program is Phelps et al.'s (2000) empirically supported prevention program, which addressed the problem of eating disorders at three educational levels: middle school, high school, and college. The intervention emphasized active and collaborative learning strategies and highlighted personal strengths of participants to protect against disordered eating. In addition, the program, conducted over six sessions, was integrated into existing school curricula with participation by classroom teachers. The program sessions focused on identifying sociocultural pressures to conform to media stereotypes of attractiveness, developing physical self-esteem and personal competence, reducing body dissatisfaction, and teaching healthy methods of weight control. The program was implemented with 475 young women across the three educational levels, and each level included a control group of students who eventually rotated into the program. The researchers found the program successful in achieving greater acknowledgement of societal pressures and changing personal attitudes to look a certain way, building physical self-esteem and personal competence, altering students' current and future intentions to utilize unhealthy aids and behaviors for weight control, and reducing body dissatisfaction. The program goals emphasized a risk and protection model of prevention by focusing on risk factors as well as the promotion of health and personal competence. The integration of the program into existing school curricula and the involvement of classroom teachers are strengths of the program. However, the long-term effectiveness of the program needs further evaluation, and its applicability for male students should be considered.

15. Psychologists are encouraged to engage in governmental, legislative, and political advocacy activities that enhance the health and well-being of the broader population served.

Through political advocacy that promotes legislative actions to enhance the physical and emotional health of people, psychologists can impact broad segments of the population and can help prevent physical and emotional distress of people within given legislative boundaries. Examples in recent years of national legislation include the proposed Paul Wellstone Mental Health Equitable Treatment Act (2003) that provides for mental health services for all Americans, the reauthorization of the Individuals with Disabilities Act (1997), and the Campus Care and Counseling Act (2004).

Psychologists can advocate for federal funding priorities that address issues of mental health promotion through agencies such as the Substance Abuse and Mental Health Services Administration and the Office of Juvenile Justice and Delinquency. APA's Public Interest Directorate and Public Policy Office have strongly encouraged psychologists to become involved in the political process to advance the health and well-being of the citizenry. Fouad (2002), in her 2001 Society of Counseling Psychology Presidential Address, Dreams for 2010: Making a Difference, implored psychologists to use the science and practice of the profession to promote principles of prevention science in our schools, communities, and places of work. Ripple and Zigler (2003) summarized several federal policy prevention programs with children and families and discussed the impact of programs such as Head Start, which has improved school readiness, and Medicaid, which has positively affected birth outcomes for women living in poverty. It behooves government at all levels to support prevention programs, but the programs need to have strong conceptual designs and be adequately implemented as well as evaluated. The authors recommended that researchers and policy makers develop prevention programs that are comprehensive and based on prevention science. They also argued for the importance of training doctoral students to link prevention research and public policy to adequately inform stakeholders and policy makers. Psychologists who engage in the science of prevention are well positioned to be a strong voice for public policies that promote human growth and development.

Coates and Szekeres (2004) wrote about a policy and structural research agenda in relation to the AIDS pandemic. Their HIV policy research challenges include the need for empirical research to inform policy decisions related to effective HIV–AIDS prevention interventions, especially as related to the debate surrounding sexual-abstinence-only programs and

more comprehensive HIV prevention programs. Studies are needed to address the impact on families, communities, and entire countries of the AIDS pandemic, including family stress, the economy, and the high number of orphaned children in some countries. To address these and other issues, communities must be mobilized to develop strong models of advocacy for prevention efforts. Coates and Szekeres wrote that these efforts will be strengthened through partnerships of legal, public policy, and psychology professionals to advance a prevention agenda, as will research that addresses the disparities in education, the workplace, and access to health care and prevention services. Finally, Coates and Szekeres argued that wealthy nations must support services and research in countries that have more limited financial resources. While Coates and Szekeres focused most of their attention on the HIV–AIDS pandemic, the number of global issues related to problems such as family violence, drug use, poverty, and discrimination, as well as the interface of these problems, made their policy research agenda relevant across prevention domains.

At the local and state levels, psychologists are encouraged to support political and legislative actions that reduce discrimination based on gender, ethnic and racial background, socioeconomic status, religious or spiritual background, and sexual orientation. Psychologists are encouraged to support legislation that strengthens the educational enterprise through policies that enhance the education and well-being of communities at the local level (Romano & Kachgal, 2004). Examples of the latter include educational equity across schools and neighborhoods, programs to reduce community and school bullying as well as interpersonal violence (Hage, 2000), and initiatives to reduce adolescent alcohol, tobacco, and drug use. A specific example is support for laws banning smoking in all public places, including bars and restaurants, given the strong evidence between second-hand cigarette smoke and health risks (International Agency for Research on Cancer, 2004).

Many of the political prevention initiatives will be controversial within the broader population, as well as among psychologists. Nevertheless, it is recommended that psychologists become actively involved in political initiatives that support their personal beliefs and to which they can lend their professional expertise, especially as they relate to the prevention of psychological and physical stress and disorders.

CONCLUSION

Significant historical barriers have hindered development of a prevention orientation in psychology and specifically in counseling psychology,

including a major emphasis on individual remediation, the influence of the medical model, and training curricula devoid of prevention themes (Romano & Hage, 2000b). As psychology continues to redefine the roles and identity of its members, we urge organizational leaders to take steps to overcome these barriers and to move toward a deeper affirmation of a commitment to a prevention agenda, as articulated in these best practice guidelines. Such a commitment seems the only tenable option, given that traditional mental health services systems have failed to significantly reduce the effects of debilitating social and emotional distress in the vast majority of the people in the United States (U.S. Department of Health and Human Services, 2000).

Our hope is that these best practice guidelines will be a catalyst for psychologists in evaluating their preparation for engaging in prevention work and in furthering their education and training by increasing their knowledge, skills, and experience in the area of prevention. Hence, these guidelines have important implications for training and preparation of psychologists. To promote a high level of professional competency among psychologists in the area of prevention, it is essential that psychologists in training be educated about the guidelines addressed in this article. While we recognize the difficulty in adding additional course work, content related to prevention may be incorporated into existing psychology program course work, such as theoretical foundations, practica, internships, group work, professional ethics, and research training.

While these guidelines do represent a summons to the field of psychology to shift to a prevention focus, they are not meant as a mandate to replace existing standards of training, psychological applications, and research that give much greater attention to crisis intervention and remediation compared with prevention, nor do they suggest that graduate students be diverted from their aspiration to be effective psychologists. Instead, a prevention-based agenda within the current scientist–practitioner training model would complement and interact with the prevailing model to enhance the depth and overall effectiveness of our work as psychologists.

As noted by Biglan et al. (2003), the adoption of a prevention focus has significant potential to strengthen the integration of science and practice among psychologists. Biglan et al. noted that this integration will be further facilitated by the following:

> (a) the use of epidemiological evidence to guide prevention programming; (b) ongoing monitoring of the incidence and prevalence of youth problem behaviors and risk and protective factors in every community; (c) increased evaluation of preventive practices in schools, communities, and states; (d) the creation of a registry of evaluations of preventive interventions; (e) agreement on a set of consensus standards for selecting disseminable preventive

> interventions; (f) further development of an infrastructure of organizations that can assist schools, community organizations, whole communities, and states in implementing research-based assessment, evaluation, and intervention practices; and (g) research that evaluates methods of influencing practice settings to effectively adopt empirically supported practices. (p. 438)

In summary, infusing a prevention orientation in psychology would serve to orient psychologists to a *broader application* of their research and practice, with the goal of more effectively and sensitively responding to the tremendous social needs that exist in communities. Such a paradigm shift in the field of psychology necessitates changes in training, practice, research, and policy, as well as stronger collaboration among professionals in prevention, consultation, education, and other areas in addition to direct treatment. Finally, incentives must be created to encourage midcareer professionals to incorporate prevention approaches into their work with children and families (Mrazek, 2002; Tolan & Dodge, 2005).

The goal of such training is about fundamentally changing the lens and context for psychology training efforts, shifting from a largely remedial, individually focused, adaptation approach to one that includes before-the-fact intervention that involves groups, communities, and social systems and that is ultimately aimed at social change. As noted by former APA President Norine G. Johnson (2003), endorsing an approach that

> enables and encourages the design of wellness and prevention research and interventions . . . is a major step toward equalizing and enhancing health care. Psychologists need to take the lead in fighting for the rights of all people for the best care possible. (pp. 675-676)

Finally, we further desire that the guidelines presented in this article be viewed as an initial step in a process that will engage a broader collaboration of psychologists working to enhance the guidelines and eventually lead to a final set of best practice guidelines for prevention with formal approval and recognition by the Society of Counseling Psychology, other appropriate APA divisions, as well as the parent organization, APA.

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