The Enhancement of Psychological Wellness: Challenges and Opportunities[1]

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Developed the concept of psychological wellness and made the case that proportionally more resources should be directed to the pursuit of this goal. Five pathways to wellness are considered, implicating aspects of individual development and the impact of contexts, settings, and policies. The five pathways are: forming wholesome early attachments; acquiring age- and ability-appropriate competencies; engineering settings that promote adaptive outcomes; fostering empowerment; and acquiring skills needed to cope effectively with life stressors. Although these noncompeting pathways have differential salience at different ages and for different groups and life conditions, each is an essential element in any comprehensive social plan to advance wellness. Examples of effective programs are cited in all five areas, including recent comprehensive, long-term programs embodying multiple pathways to wellness.

KEY WORDS: psychological wellness; wellness enhancement.

Since its very beginnings, mental health's focus and efforts have centered fixedly around (a) things that go wrong psychologically (i.e., psychopathology); (b) attempts to understand the processes by which they go wrong (pathogenesis); and (c) seeking better ways to repair things that have already gone wrong (e.g., psychotherapy). Historically, such efforts have

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overshadowed by far the fleeting glimpses the field has accorded to an intriguing, but directionally opposite, set of issues: What goes *right* in psychological development and adjustment, and what forces subserve such outcomes?

Mental health's focus on the pathological is reflected in its vocabulary as well as its orientation and activities. Illustratively, Hollister (1967) reported Margaret Mead's observation that although the English language had the word trauma to describe "an unfortunate blow that injures the personality," it had no word to describe an experience that strengthened personality. He proposed the word "stren" to fill that void. And, for a short while at least, that concept provided an impetus for fruitful research (Finkel, 1974; 1975). A related example: Antonovsky (1979), whose work in medical sociology focused on relationships between stressors and disease outcomes, noted that although our language had a word to describe the processes by which diseases unfold (i.e., pathogenesis), there was no parallel word to describe processes that favor healthy outcomes. He coined the word *salutogenesis* to spotlight the existence of such health-promoting processes and to direct attention to new, proactive challenges for medical sociology built around the question: "What makes for *health*, not disease?"

It is somewhat ironic that society holds much clearer views of failings in wellness than it does of wellness. Those views have long shaped mental health's de facto mandate (i.e., to repair) and derivative activities (Zax & Cowen, 1976). Efforts to repair established psychological dysfunction however, are difficult, costly, and often end in failure. The source of such failure may reside more in the refractory nature of presenting problems (i.e., the "point of address") than laxity in the field's search for effective ways to undo rooted psychological problems. To the contrary, the tenacity of that search over many decades has spawned complex multilevel "industries" (e.g., medications, psychotherapy, clinics, intensive-care facilities) dedicated to containing or minimizing psychological dysfunction. Indeed, the rising costs of such efforts (Kiesler, 1992; Kiesler, Simpkins, & Morton, 1989) and, at another level, the misery and waste of potential that human dysfunction entails, are among the pressing realities that fuel consideration of wellness-oriented prevention alternatives.

The orienting concept of psychological wellness directs attention to new conceptual formulations and derivative phenomena of interest (Jessor, 1993; Rappaport, 1987) that differ sharply from those that now guide the mental health fields. Historically, mental health professionals have been type-cast as "guardians" of wellness, with the term guardian defined narrowly as society's sanctioned repair agents for deficits in wellness. That role is an understandable outgrowth of the field's long-standing, dominant,

"fight-pathology"-orientation. And, if professional involvements are to begin only after evident dysfunction presents itself, then the main options available are to repair wounds and forestall further erosion. That, at least, is how most mental health professionals have been trained and socialized, and that is the main arena in which their efforts and expertise have focused.

In a wellness framework, however, that classic role is limited to one small segment of a much more complex and temporally extended scenario. Although proactive and repair approaches may share a common view of ideal wellness outcomes, working to promote such outcomes from the start involves different concepts, target groups, and activities than restorative, or balming, efforts that begin only after clear signs of wellness erosion have appeared.

Mental health's historic emphasis on seeking to understand and undo crystallized pathology has left a residue of unresolved problems. The inability of a field to deal satisfactorily with major problems within its purview stimulates efforts to identify qualitatively different solutions to those problems. When the latter process reaches a certain point of cohesive evolution, it is called paradigm shift (Kuhn, 1970). Baldly put, the current mental health system is reactive, not proactive! Its time, efforts, and resources are allocated to visible, deeply rooted, change-resistant problems. Known limitations of this system raise the salience of a conceptually appealing alternative, that is, systematic effort to promote wellness from the start may prove to be a more humane, cost-effective, and successful strategy than struggling, however valiantly and compassionately, to undo established deficits in wellness.

The main goal of this article is to develop the preceding thesis. We first consider the nature of the terms wellness and wellness enhancement, how they differ from existing concepts and what can be gained from their usage. Next, basic pathways to wellness are described and examples of effective programs reflecting these strategies are cited. A final section summarizes the argument and suggests directions for future work within a wellness enhancement framework.

THE CONCEPT OF PSYCHOLOGICAL WELLNESS AND ITS UTILITY

Although the concept of psychological wellness has kindred predecessors (e.g., Antonovsky, 1979; Jahoda, 1958; Shoben, 1957), it has, for reasons noted above, recently come into clearer focus and more active usage (Cowen, 1991). It is not, however, a term that defines itself automatically or

easily. For one thing, built into any definition of wellness (or, for that matter, sickness) are overt and covert expressions of values. Because values differ across cultures as well as among subgroups (and indeed individuals) within a culture, the ideal of a uniformly acceptable definition of the construct is illusory. Yet, because the concept is important both in its own right and as an orienting counterpoint to the yoke imposed by past dominant notions of pathology in mental health, it may be useful to underscore some of its definitional features that many people would value positively. These elements include (a) *behavioral* markers, such as eating, sleeping, and working well (mindful of Freud's simple notion of adaptation: *"Leben und Arbeiten"*), having effective interpersonal relationships, and mastering age- and ability-appropriate tasks; and (b) *psychological* markers, such as having a sense of belongingness and purpose, control over one's fate, and satisfaction with oneself and one's existence. It has also been suggested that there are *physiological* markers of wellness (Shedler, Mayman, & Manis, 1993).

I make no case for the sanctity of the specific outcome terms used to frame this contour definition of psychological wellness. Others with interest in wellness outcomes have used different, albeit conceptually kindred, designators such as gratification in living (Rappaport, 1981), life-satisfaction (Rappaport, 1987), sense of efficacy (Bandura, 1977; Crick & Dodge, 1994), and sense of coherence (Antonovsky, 1979). I also recognize that the literal operations that define these outcomes may vary some for different age groups and subcultures. Finally, my use of the term psychological wellness is not intended to convey the image of an etched in granite, immutable state. To the contrary, I believe it much more realistic to see wellness in more-or-less terms and as susceptible to buffeting and (some) change with changing circumstances.

Even so, I would argue that the "ideal" (value?) of wellness as depicted above pervades major segments of our culture including its mental health system and, thus, importantly shapes outcome objectives for diverse natural and interventive processes (e.g., child development, psychotherapy, primary prevention). So put, the mere use of the term wellness should not be seen as "boat-rocking." On the other hand, it is fair to ask how the proposed usage of the terms wellness and wellness enhancement is intended to differ from existing concepts and, importantly, what can be gained from such usage. Answering these questions requires consideration of two more specific issues: (a) continuity versus discontinuity in adjustment; and (b) usage distinctions between wellness enhancement and a currently better known (related) concept, that is, primary prevention in mental health.

The term wellness, as used here, is intended to anchor one end of a hypothetical continuum, anchored at the other end by an opposing term such as pathology (sickness). The preceding sentence seeks to highlight two points: (a) wellness should indeed be seen as an extreme point on a continuum, *not* as a category in a binary classification system; and (b) wellness is something more than/other than the absence of disease, that is, it is defined by the "extent of presence" of positive marker characteristics such as those cited above. And, for that reason, many people who fall well short of being glaring psychological casualties also fail to approach a predominant state of wellness. The two preceding points suggest that the ideal of wellness, and the goal of wellness enhancement, pertain to *all* people, not just to a limited or select portion of the population.

The preceding argument provides a base on which to consider similarities and differences between wellness enhancement and primary prevention. One key commonality is that both strategies share the abstract goal of maximizing positive (adaptive) outcomes. But for whom, and how? The latter question is to suggest that, depending on one's definitional druthers, the two strategies may differ in targeting, timing, and methodology. The Rosetta Stone in this case pivots around one's definition of primary prevention — a concept to which I have long been warmly cathected (e.g., Cowen, 1973, 1977, 1980, 1983, 1985, 1986). My initial mind's eye notion of this concept (which, I confess, remains today) featured *two* key components: (a) forestalling dysfunction (maladaptation), including in situations of known risk; and (b) promoting psychological health and well-being (Cowen, 1973). I have always seen this second element as very important.

Although these two strands continue to be acknowledged intellectually, they have not followed parallel courses. Indeed there has been a strong trend in influential quarters to define primary prevention, de facto, as disease prevention and for such a definition to guide the allocation of program and research monies. Illustratively, Dinges (1994) noted that less than 2% of the items in a new primary prevention bibliography (Trickett, Dahiyat, & Selby, in press) focused on promotion (wellness enhancement) as opposed to disease prevention. More specifically, Koretz (1991), in a special number describing the activities of NIMH-sponsored Preventive Intervention Research Centers (PIRCs), identified as a prime objective for their work: "the prevention of specific disorders and dysfunctions." Similarly, Coie et al. (1993) proposed a "science of prevention" built around the overarching goal of forestalling specific "serious problems of human adaptation," for example, major mental illness, substance abuse, delinquency. In stating explicitly that "the goal of prevention science is to prevent or moderate major human dysfunctions," (p. 1013). Coie et al. imply that prevention

efforts should be directed to those at known risk for specific maladaptive outcomes that one hopes to avert. A similar definitional emphasis shaped the focus of Mrazek and Haggerty's (1994) important compendium summarizing a spectrum of interventions designed to prevent specific mental disorders.

Because definitions are definitions, there is no basis for challenging the legitimacy of a pathology-reduction definition of primary prevention. Such a definition has, in fact, already (a) achieved considerable ascendancy in the field; and (b) spawned major national initiatives designed to prevent specific dysfunctions (e.g., depression, substance abuse, and conduct disorders in children). Hence, it is more fruitful to ask what such a definition *excludes*, and what might be gained by addressing those exclusions. The case made here is that a disease prevention definition of primary prevention, based on binary views of risk versus non-risk on the antecedent side, and health versus pathology on the outcome side, excludes most people. Moreover, by not centrally featuring proactive, health-building initiatives it may deflect attention from a potentially more utilitarian population-oriented outcome, that is, wellness in the many.

The wellness concept proposed here is thus broader in scope and farther reaching than current, widely espoused disease prevention concepts of primary prevention. This broader usage reflects the assumptions that (a) sound early wellness formation may, itself, be among the best possible inoculants against a range of adverse later outcomes — a view consistent with findings reported in several recent reviews (Yoshikawa, 1994; Zigler, Taussig, & Black, 1992); and (b) all people, not just those at risk, stand to profit from wellness enhancement steps. This second point, which flows naturally from a more continuous view of adaptation than is conveyed by dichotomies such as healthy–sick or risk–not at risk, suggests that wellness enhancement goals can be gainfully pursued all along a risk continuum.

Thus, the relationship between the term wellness enhancement and current risk-anchored definitions of primary prevention is *not* transitive. The former term includes, but is not limited to, primary prevention approaches (Cowen, 1994). Otherwise put, although most primary prevention goals and activities fit neatly within a wellness enhancement framework, they do not exhaust that framework. Within the latter matrix, psychological wellness is the overarching goal and the term wellness enhancement is used to describe a family of strategies for advancing that goal. Those strategies are considered in the next section.

RELEVANT PATHWAYS TO WELLNESS

At least five major input strands can act alone or in combination to enhance, or pose threats to, psychological wellness. These five strands reflecting individual, environmental, and stress-related sources differ with respect to (a) when, temporally, they are most relevant; (b) their modifiability; and (c) the specific steps needed for constructive modification to occur. We shall consider these five strands in a roughly developmental sequence, starting with two that are especially important in infancy and childhood (i.e., wholesome attachment formation, and the development of age- and ability-appropriate competencies).

The human infant develops slowly through a long dependency period that unfolds within a family microstructure. Key wellness-relevant outcomes in this period are shaped by the nature of the attachment relationship that forms between the infant and its primary caregiver (Ainsworth, 1989; Bowlby, 1982). This relationship is defined by the love and nurturance the caregiver communicates to the child, her sensitivity and responsiveness to the child's needs, and her availabity as a predictable source of comfort and support. A warm, secure early attachment is a vital early force that favors wellness. It promotes a view of self in the infant as loved and worthwhile, and as living in a safe, protected world. The absence of a secure attachment poses a direct threat to wellness both proximally and by restricting the formation of a solid base on which later wellness enhancing steps can rest. Although recent extensions of attachment theory (Ainsworth, 1989) highlight the importance of attachment relationships throughout childhood and adolescence, the form of this relationship must change to reflect ongoing processes of growth and development in the child. The caregiver's early essential role as "protector," for example, must gradually yield place to fostering the child's autonomous development and age-appropriate independence. Moreover, love and caring, which remain central to the construct throughout, must take on different forms of expression and involvement as the child matures.

Although there is a tendency to see the early attachment relationship as a relatively pure source of influence on psychological wellness, both physically and psychologically harsh living conditions can restrict opportunities for wholesome attachments to form (McLoyd, 1990). On the other hand, because the attachment relationship is bounded by caregiver–child interactions, and much is known about its attributes, it is in principle more amenable to constructive change than other more complexly rooted, less "controllable" input strands to wellness.

Beyond the crucial attachment pathway, another wellness-related task of childhood is to acquire age-appropriate cognitive and interpersonal skills. Some of these develop directly from the base of a sound attachment relationship; others grow out of learning experiences that take place in the two main contexts of a child's formative years (i.e., home and school). Several taxonomies of key early competencies have been proposed (Anderson & Messick, 1974; Strayhorn, 1988). Strayhorn's comprehensive list of 62 such skills reflects nine clusters (e.g., relationship building, handling frustration, cognitive processing) most of which are formed in the preschool years. Although Strayhorn developed this taxonomy and an associated assessment system in the context of therapy (i.e., repairing *deficits* in competence development), his framework offers a rich matrix within which to view proactively the essentials of early childhood competence development.

Thus, forming and maintaining wholesome attachment relationships and acquiring age-appropriate competencies are central pathways toward psychological wellness in the early years — important both in their own right and in terms of "setting the table" for what follows (Rutter, 1990). Successful early negotiation of these steps roots in the child a sense of efficacy, that is the belief that they can handle life's pressures and demands and, with that, a phenomenological sense of empowerment. Conversely, it is difficult to imagine how wholesome early growth toward wellness can occur without essential nutrients from the home and school soils in which the children form and the ongoing processes of child-rearing and education that are indigenous to those soils. The latter crucial shaping forces can be strengthened as generative knowledge cumulates about relationships between their defining features and wellness outcomes in children. Recognizing this point, Sarason (1993a, 1993b) argued cogently the key proactive role that education must play in wellness enhancement. Early efforts to build wellness, such as those noted, seem more compassionate and promising as *social* alternatives than struggling later to undo established deficit known to exact heavy human and societal tolls.

Whereas the wellness routes thus far considered unfold primarily around the development of individual children in family contexts, two other key routes, closer perhaps to community psychology's turf, highlight aspects of the social milieus in which people develop: (a) creating settings and social environments that favor wellness; and (b) promoting empowering conditions that offer people justice, hope, and opportunity. Although these routes are not *un*related to wellness in early childhood (e.g., their absence may limit wholesome attachment and competence development), they become more salient later because of the greater number and complexity of the systems (e.g., employment, justice) in which people interact, and the growing relevance of these systems to psychological wellness.

Influential social environments are those in which people have major interactions over long periods. Such environments have impact at different times. Whereas family and school are crucial shaping environments in the early years (Eccles et al., 1993), churches, worksites, and social and community agencies take on growing significance later. Within each setting category, specific exemplars are alike in that they share a common mandate, yet different because such broad mandates (e.g., imparting knowledge) can be discharged in many different ways. Class environments, for example, can be autonomy-supportive or controlling; they can promote or discourage affiliation (Deci & Ryan, 1985; Moos, 1979). Precisely for that reason it has been argued that the school's impact comes not just from the academic learnings it provides, but importantly from a steady, if unobtrusive, stream of "affective lessons, taught through the functional dynamics of human relationships" (Ryan & Stiller, 1991, p. 1116). Those "lessons," which shape such outcomes as appropriate behaviors, friendship formation, cooperation, and competition differ appreciably across schools (Gump, 1980; Ryan & Stiller, 1991; Weinstein, 1991). Thus, while acting intentionally to discharge their mandate, settings often operate unintentionally in ways that enhance or restrict wellness (Sarason, 1993a). This raises several wellness-relevant questions: What are the different ways, structurally, in which settings can pursue their mandates? What relationships exist between these ways and wellness outcomes for setting inhabitants? Finding that differently operating settings are equally effective in realizing mandated objectives, but yield different wellness outcomes, would point to system change steps designed to enhance wellness.

The concept of empowerment, that is, gaining control over and making critical decisions about one's life (Rappaport, 1981, 1984, 1987; Swift, 1992) has attracted growing interest in many contexts as an important pathway to wellness. This development is fueled by the undeniable presence of many disempowered groups in modern society (e.g., minorities, poor people, children, the elderly, the homeless, disabled people) and the painful awareness of striking associations between disempowerment and problems of living. Empowerment theorists (Rappaport, 1981) argue that people benefit psychologically, that is, have greater gratification in living, when they gain control over their lives. Within an overall wellness framework, empowerment issues are most salient and compelling when focusing on the devastating correlates and costly sequelae of society's most floridly disempowering conditions. Albee (1982) cited racial, ethnic, age- and gender-related biases as among the most damaging of such conditions.

Empowerment notions have applicability at many levels ranging from the functioning of groups or settings to broad macrosocial realities (Rappaport, Swift, & Hess, 1984). Some of these contexts are more amenable to change than others. Unfortunately, the most influential ones are so complex and deeply rooted that they may at best change only slowly over generations. Hence, some (societal) empowerment strategies may be more difficult to bring off, certainly in the short term, than attachment or competence promotion strategies.

The pathways to wellness thus far considered have age- and situation-specific linkages. A fifth potential route, stemming from the occurrence of major life stress, is relevant to people of all ages and life situations. The term major stress includes powerful, often unpredictable occurrences such as parent divorce or death of a loved one and, even more corrosively, the chronically stressful life situations under which many children in modern society grow up. People vary greatly in how they adapt to such events and circumstances. Whereas some are devastated by them both in the short and long term, others cope well (are "resilient") even in the face of profoundly stressful life circumstances (Cicchetti & Garmezy, 1993; Cowen, Wyman, Work, & Parker, 1990; Garmezy, Masten, & Tellegen, 1984; Werner & Smith, 1982, 1992). Although the processes underlying such resilient adaptation have, rightfully, become a central focus both for prevention and developmental psychopathology, they are not yet fully understood (Cowen et al., 1990). What is clear, is that the ability to cope effectively with major life stress facilitates wellness outcomes (Antonovsky, 1979).

Five main pathways to wellness have been identified: (a) forming wholesome early attachments; (b) acquiring age-appropriate competencies; (c) exposure to settings that favor wellness outcomes; (d) having the (empowering) sense of being in control of one's fate; and (e) coping effectively with stress. Real-life wellness scenarios, however, are more complex than this simple listing implies. For one thing these strands are not fully independent. Witness the thought-provoking conclusion reported in two recent reviews (Yoshikawa, 1994; Zigler et al., 1992) that several early, comprehensive programs (i.e., with attachment, competence, and empowerment elements) for disadvantaged urban families did more to prevent delinquency than later, specifically targeted, delinquency-prevention programs. Pathways are also interdependent in that early failures to move toward wellness restrict a person's ultimate wellness potential (McLoyd, 1990). Moreover, as noted above, these pathways are differentially important (i.e., in regression language, have different beta weights) in different situations and at different points in the life-span. Whereas beta weights for attachment are crucial in infancy, and attachment and competence strands are crucial in childhood, empowerment may be more relevant cross-sectionally to wellness for an inner-city minority youth than for a 2-year-old in the suburbs.

A key point to highlight in considering these complex wellness strands is that *they are mutually enhancing elements in an elaborate system, not elements in competition with each other.* Thus, competence without empowerment may restrict wellness just as much as empowerment without competence. By contrast, the synergistic presence of both constitutes a powerful proactive force toward wellness. Thus a comprehensive solution to the wellness challenge requires that contributions reflecting diverse input strands be identified and harnessed. An exclusive emphasis on any one pathway would work against such a solution.

The ideal of promoting these five routes to wellness, singly and in combination, offers a conceptually appealing alternative to mental health's past dominant restorative ways. To develop the whole package however, calls for ways of thinking and doing that go well beyond psychology (cf. below). And, even within psychology many of the issues at stake and tasks at hand (e.g., competence enhancement, system modification, and empowerment) are well removed from the classically defined mental health sphere. Finally, it should be noted that although each of the five identified strands reflects a constructive, theory-guided effort to enhance wellness, their supporting empirical substrates are still porous.

PROGRAMS TO ENHANCE WELLNESS

Interventions designed to enhance wellness are on the rise. Because primary prevention programs, as suggested above, constitute *one* major element in a broader wellness enhancement framework, some of the wellness enhancement programs to be cited can also be seen as primary prevention. The varied programs to be considered include ones (a) for adults and children; (b) targeted broadly to all people versus to specific risk subgroups; and (c) featuring a single route to wellness or combining several routes. A number of exemplary programs of this type have been reported in several review articles (Cowen, 1982, 1986; Hawkins, Catalano, & Miller, 1992a; Lorion, 1990; Price, Cowen, Lorion, & Ramos-McKay, 1988; Yoshikawa, 1994). The rest of this article cites examples of such programs both to illustrate actual accomplishments and potentials of the larger wellness thrust and to identify needed areas of program development and research.

Attachment

Broussard's (1977, 1989) Infant Family Resource Program provided 3 years of wellness-oriented services to mothers of high-risk babies. Its main

goal was to "foster the development of the bonds of attachment between mother and infant . . .at jeopardy in many of the pairs" (1989, p. 193) through biweekly meetings with mothers and home visits from child development specialists. Program evaluation after 3 years, including observations of mother–child free-play and reunion episodes, showed that program children exceeded controls in coping and communication skills, balance of affect, and confidence, and were also less aggressive. Greenspan's (1981, 1982) related intervention for high-risk urban infants ages 0–6 taught parenting skills to meet the child's attachment needs, plus stage-specific skills of infancy and early childhood. This program too reduced the anticipated negative effects of adverse early-life conditions in a high-risk sample.

Relatedly, the Yale Child Welfare Project (Provence & Naylor, 1983; Seitz, Rosenbaum, & Apfel, 1985) provided young, inner-city mothers of firstborns $2^1/_2$ years of pediatric care; regular instructional home visits; and periodic developmental assessments and feedback, as well as later day care for the child. The program's main goals were to provide support and promote sound parent–child attachments. Ten years after the program ended, the children in the experimental group were found to exceed those in the control group in socialization and school adjustment (Seitz et al., 1985). To test the hypothesis that those gains reflected enduring, positive changes in caregiver practices and parent–child relationships, Seitz and Apfel (1994) studied the program's "diffusion" effects for siblings, born *after* it ended. Younger siblings of program children had better school attendance, needed fewer remedial or support services, and were making better school progress than their control counterparts. Specific expenditures for special services were four times greater for the younger siblings of controls, compared to program children. These intriguing findings suggest that the initial intervention yielded important direct, and indirect (diffusion), benefits through a common mediating mechanism, that is, positive changes in parenting practices and parent–child attachments.

Many wellness-oriented programs for infants and young children that seek to strengthen parent–child attachments also include competence enhancement elements. The Perry Preschool Project (Berrueta-Clement, Schweinhart, Barnett, Epstein, & Weikart, 1984; Schweinhart, Barnes, & Weikart, 1993; Schweinhart & Weikart, 1988) is a good example. It included an enriched preschool experience for 3-4-year-old black inner-city children, plus weekly $1^1/_2$ hour home visits designed to stimulate children's learning and promote effective parent–child interactions (attachments) and child-rearing approaches. Program outcomes have been tracked through participant age 27 (Schweinhart et al., 1993) with important long-term benefits shown on (a) extent of schooling, literacy rates, and intellectual performance; (b) percentage employed, average monthly earnings, and percentage

homeowners; (c) lower arrest rates, including drug-related arrests; and (d) fewer welfare or social service recipients. Those bellwether wellness indicators reflect major benefits to individuals and to society. Specifically, cost–benefit analysis showed that "over the lifetimes of participants the preschool program returns to the public an estimated $7.16" (e.g., in later costs of delinquency, unemployment) "for each $1 invested" (Schweinhart et al., 1993; p. xviii).

Price et al. (1988) cited other programs for young children built around the goals of strengthening attachments and enhancing competencies, that have led to important socioemotional and cognitive wellness gains (e.g., Johnson, 1988; Olds, 1988; Ramey, Bryant, Campbell, Sparling, & Wasik, 1988). Levine and Perkins (1987) noted that the success of such programs often reflects a felicitous combination of competence-building and setting-change elements.

Competence Enhancement

Although wellness-oriented programs for young children often combine attachment and competence enhancement elements, competence acquisition later takes on greater importance in its own right. Effective competence training programs include broadly oriented ones versus those targeted to specific skills, and ones that train primarily academic versus primarily social competencies.

The Home Improvement Program for Preschool Youngsters (HIPPY), which began in Israel (Lombard, 1981), exemplifies the academically oriented skill-building approach. This 2-year home-based enrichment program teaches disadvantaged parents with limited formal education to use structured curricular materials to train school readiness skills in their own children. Learning to function effectively in this way is both empowering for parents and illuminates key roles they can play in their child's future education.

Trained indigenous paraprofessionals (most themselves parents) make regular home visits to go over curriculum exercises with parents and support their role as a teacher. In that sense the program also has a community-enhancing, empowering quality. HIPPY outcomes were assessed in a controlled longitudinal study that followed children from ages 4–16. Program children exceeded controls in school adjustment and achievement and had fewer grade retentions and dropouts. Over the same period, mothers of program children evidenced more positive self-concepts, pursued further education, and participated more in community activities (Lombard, 1981).

Spivack and Shure's (1974) Interpersonal Cognitive Problem Solving program teaches children a family of skills (e.g., recognizing feelings in oneself and others, generating alternative solutions, evaluating their consequences, and implementing appropriate action steps) designed to enhance adjustment. Program children acquired these skills. As they did, their adjustment improved and linkages were shown between these cognitive and adaptive gains (Shure & Spivack, 1982, 1988; Spivack & Shure, 1974). Programs to train other families of competencies such as adaptive assertiveness (Rotheram, Armstrong & Booraem, 1982; Rotheram-Borus, 1988), also with positive findings, grew out of the same conceptual soil.

Although findings from early competence training programs were encouraging, their cumulation over time suggested that program outcomes were less robust or enduring than initially hoped (Durlak, 1983). Eventually, thinking in this area came to reflect several key conclusions: (a) Because social competence includes many different sets of skills, no single, simplistic training program can cover all its essential elements; (b) a circumscribed time-limited program exposure may not be enough to produce meaningful, enduring skill acquisition; (c) different skills and competencies "phase in" at different developmental stages.

These emergent views fueled the development of more complex (i.e., greater breadth and depth) second generation school-based competence training programs that seek to train multiple skills and competencies including ones to promote physical, as well as psychological, wellness. Some extend over several years, with age-appropriate entry points for new program materials and "booster shots" for skills taught earlier in simpler forms. They also reflect efforts to build class or school climates that support program leanings, and follow-through after the initial program ends (Elias & Clabby, 1992).

One such program, the Improving Social Awareness–Social Problem Solving Program (Elias & Clabby, 1992), is based on a 2-year social competence training curriculum designed to build, and promote application of, skills in (a) self-control, social awareness, and group participation; and (b) problem solving and social decision making. An initial evaluation (Elias, Gara, Ubriaco, Rothbaum, Clabby, & Schuyler, 1986) showed that the program reduced the impact of typical middle-school stressors. Follow-up 6 years later (Elias, Gara, Schuyler, Branden-Muller, & Sayette, 1991) documented long-term gains in program children's sense of efficacy and prosocial behavior, and reductions in pathology (e.g., depression) and socially disordered behaviors (e.g., aggression, vandalism).

Another multipronged social competence training program, the Yale-New Haven Social Problem Solving Program, conducted by teachers in fifth- to eighth-grade inner-city classes, sought to teach three families of competencies: stress management and impulse control; social problem solving and information processing; and behavioral social skills. A recent comprehensive evaluation demonstrated gains that grew directly out of the program, for example, problem-solving skills, prosocial attitudes in conflict resolution; and those reflecting generalization beyond program precepts, for example, more positive teacher ratings of adjustment and fewer self-reported delinquent acts (Weissberg & Caplan, in press).

A related, 20-session school-based program called the Positive Youth Development Program included units on stress management, self-esteem, problem solving, substance use and health, appropriate assertiveness, and forming social networks (Caplan et al., 1992). Conducted with urban and suburban sixth and seventh graders, this program strengthened participants' ability to handle interpersonal problems and deal with anxiety. Teacher ratings of program children showed improved conflict resolution, impulse control, and peer popularity. Program children also evidenced less receptive attitudes than controls toward substance and alcohol use (Caplan et al., 1992).

Elias and Clabby (1992) noted a growth in comprehensive, multi-year curricula that combine social competence and social problem-solving training with proactive health education, that is, to promote physical well-being and reduce risk for accidents, substance abuse, and preventable diseases and disorders. Examples of promising programs of this type can be cited (Pentz et al., 1989; Perry, Klepp, & Shultz, 1988; Perry, Klepp, & Sillers, 1989). Weissberg, Caplan, and Harwood, (1991) made a strong case for developing highly comprehensive Social Competence and Health Education (C-SCAHE) programs and cited as an example the ambitious Social Development Project (Kasprow, Weissberg, et al., 1992). This district-wide kindergarten to 12th-grade program had three main components: (a) training at all grade levels to promote core cognitive, affective, and behavioral skills (e.g., critical thinking, problem solving, decision making), prosocial values about self and others, and accurate knowledge about health and interpersonal relationships; (b) developing school- and community-based activities and contexts to support acquisition of program learnings; (c) building school structures and decision-making mechanisms that involve all members of the school community in efforts to create a wholesome climate for academic and social development.

Although Weissberg and Elias (1993) noted that truly comprehensive C-SCAHE programs are both scarce and lack careful evaluation, they argued that such programs represent the wave of the future, that is, a third generation in school-based competence-promotion programs. They also listed essential desiderata for C-SCAHE programs and advanced a 20-year plan for program development and evaluation in this area.

Other programs with competence-training elements are targeted to specific objectives such as substance-abuse prevention (Hawkins et al., 1992a). Botvin and Tortu's (1988) Life Skills Training Program (LST) for adolescents is a good example. Based on a review of factors associated with the onset of substance abuse, LST seeks to provide immunizing personal and social skills, and strengthen self-control. This carefully developed 18-session program offers information on substance use; has units on decision making, improving self-concept, and handling anxiety; and trains skills in communication, overcoming shyness, boy–girl relationships, and appropriate assertiveness. LST programs have been conducted with different ethnic groups, using both teachers and peers as trainers. The program has been shown to reduce the use of the gateway substances (i.e., tobacco, alcohol, and marijuana), to which it is targeted (Botvin & Eng, 1982; Botvin, Renick, & Baker, 1983; Botvin & Tortu, 1988). St. Pierre, Kaltreider, Mark, and Aikin, (1992) have shown that (a) substance-abuse programs of this type can also be conducted effectively in community settings (i.e., Boys and Girls clubs); and (b) annual booster sessions enhance program effects.

To sum up, earlier "one-shot" social competence training programs are yielding place to more labor-intensive and ecologically valid interventions with greater breadth and continuity and a stronger emphasis on building environmental supports for the program (Elias et al., 1991). There is reason to hope that these second-generation programs can contribute to the goal of enhancing wellness (Weissberg et al., 1991; Weissberg & Elias, 1993). Mass-oriented, before the fact, comprehensive programs of the type described well exemplify a proactive, health-building thrust that tends to be overlooked in risk-grounded definitions of primary prevention (Coie et al., 1993; Koretz, 1991).

Social Environment Change

Demonstrations of relationships between attributes of social environments and person outcomes (Deci, Vallerand, Pelletier, & Ryan, 1991; Moos, 1974, 1975, 1979) have fueled efforts to develop environments that

favor wellness outcomes. A school, for example, might seek to do this by engineering cooperation among students (Gump, 1980; Sharon, 1990; Slavin, 1977). In an early example of this approach, Aronson, Blaney, Stephan, Sykes, and Snapp's (1978) "jig-saw" model of cooperative learning in fifth-grade social studies classes was shown both to reduce racial tensions and enhance student self-concept. A similar program (Wright & Cowen, 1985) led to more favorable views of the class environment and better social studies grades. Sprinthall (1984) argued that cooperative learning formats strengthen children's ego development, self-reliance, integrity, empathy, and moral judgment, and decrease their egocentricity. He attributed these wellness gains to system changes that redistribute power from teacher to students and thus enhance students' sense of stake and empowerment. This view is consistent with the demonstration of positive academic and adjustment outcomes in autonomy supportive class environments (Ryan & Stiller, 1991).

The STEP program (Felner, Ginter, & Primavera, 1982) modified the school environment in an effort to address major attendance and dropout problems of inner-city youth. Specifically, it sought to reduce the flux associated with the tough transition from junior to senior high school by creating stable student groupings and support systems and by having homeroom teachers do the guidance and administrative functions usually done by other school personnel. These proximal changes, it was hoped, would improve later educational outcomes. Evaluation of program outcomes 5 years later showed that STEP children had significantly fewer absences, higher grades and, importantly, a nearly 50% lower dropout rate than matched comparison youth (Felner & Adan, 1988). Such findings, reflecting major wellness benefits for participants and major dollar savings to society, provided a solid base on which to expand the program to junior high and middle school students. This new work confirmed behavioral and socioemotional gains for STEP participants (Felner et al., 1993).

The San Ramon Project (Battistich, Solomon, Watson, Solomon, & Schaps, 1989; Solomon, Watson, Delucchi, Schaps, & Battistich, 1988), involving major system changes, reflects the trend noted above toward developing broadly based, long-term wellness enhancement programs that go well beyond a risk-grounded notion of primary prevention. This project sought to create total school environments, that is, "caring communities," that harness teacher, parent, and child involvements. Based on motivation theory (Deci & Ryan, 1985), classes strive to maximize students' feelings of autonomy, competence, and relatedness. A school-wide developmental-discipline approach seeks to promote autonomy and responsibility by having students set and uphold classroom norms and rules (which, in turn,

helps them to feel valued), and by emphasizing solutions that build students' commitment to democratic values. To foster relatedness from kindergarten to sixth grade, many academic tasks are done in cooperative learning formats in small mixed-ability groups, and a schoolwide Buddies' program is used pairing older and younger students. The latter wellness-targeted program element has been proposed for widespread adoption by schools (Gartner & Riessman, 1993). Literature-based reading instruction is also used to help pupils better understand themselves, others, and prosocial values such as fairness and responsibility. The San Ramon program rests on the rationale that children engage better in school if they have a genuine stake and involvement in what they are doing and find their educational activities rewarding and challenging.

Program teachers exceeded controls in opportunities provided for student input and autonomy, use of cooperative learning, highlighting prosocial values and social understanding, warmth and supportiveness, number of helping activities in their classes, and using discipline styles that promoted responsible behavior rather than external rewards and punishments. These findings confirms that the program had been implemented as intended. Program children did at least as well as controls academically — better in some areas (e.g., reading comprehension). They were judged to be more cooperative and considerate, felt more accepted by classmates, were better able to resolve conflicts equitably and defend their views, and more willing to have peers participate in group decision making. They were also less anxious socially and had more friends at school.

The San Ramon project has documented important wellness outcomes in several key areas. Although it is primarily a conceptually driven effort in system change, the program includes significant competence enhancement, attachment, and empowerment components. The program is not a simple one; rather it calls for the synergistic involvements of parents, children, teachers, and other school personnel, and touches on all facets of the child's school functioning in internally consistent, goal-oriented ways, over the full elementary period.

The Seattle Social Development Project (Hawkins et al., 1992b) is another broad-based program that spans the full elementary period. Although its long-term goal is to prevent substance abuse and delinquency, it assumes that such behaviors can be reduced in high-risk children by strengthening home and school attachments. The program does not address substance abuse directly. A two-pronged parent component seeks to provide family management and communication skills and help parents to create a conducive home-learning environment. Teaching practices such as proactive class management, interactive teaching, and cooperative

learning are intended to strengthen school bonding. Social problem-solving training is provided only for first graders. Program children and controls all come from high crime neighborhoods. A program evaluation, when children entered fifth grade (Hawkins et al., 1992b) showed that the experimental group, as expected, had stronger home and school attachments than the control group and evidenced lower rates of delinquency and drug use initiation (Hawkins & Lam, 1987; Hawkins, Von Cleve, & Catalano, 1991).

Some school-based (system change) programs have quite specific wellness goals. One example is Olweus's (1978, 1979, 1993) highly focused, persistent efforts over several decades to understand and reduce school bullying problems in Norway. His early studies (a) showed substantial base rates for the occurrence of school bullying and victimization; (b) identified determinants and correlates of these behaviors; and (c) documented their negative consequences for both bullies and victims. These generative findings were used to frame a major preventive (system change) intervention designed to reduce the incidence of bullying (aggressive behaviors), implemented in 42 Norwegian elementary and junior high schools. Key program goals included (a) enhancing awareness of bully–victim problems and their consequences; (b) gaining the active involvement of parents and teachers in addressing such problems; (c) developing and enforcing clearly articulated rules against bullying; and (d) providing support and protection for victims. Steps to advance those goals were taken at three levels: *school* (e.g., questionnaire survey, close supervision at lunch and recess times, school conferencing to enhance awareness), *class* (firm, enforced class rules against bullying; class discussion meetings), and *individual* (serious talks with bullies and victims and their parents; parent–teacher collaboration to counter bullying).

Key program findings after 2 years included (a) 50% reduction in "direct" and "indirect" school bullying plus fewer out-of-school bullying incidents both for boys *and* girls and across all grade levels (fourth to ninth); (b) parallel reductions in other antisocial behaviors (vandalism, fighting, theft, drunkenness, and truancy; and (c) improved social climate (order and discipline), interpersonal relationships, and attitudes to school work and school satisfaction. These wellness-related findings are important in their own right and have implications for the growing problems of school violence in contemporary society.

The complex (i.e., reflecting multiple wellness pathways) programs reviewed in this section provide evidence that children's wellness can be enhanced by informed school-based programming.

Empowerment

The gut appeal of the concept of empowerment lies in its potential for addressing irrepressible social blights. Hence the term has come into greater use in both the professional literature (Rappaport, 1981, 1987; Swift, 1992; Swift & Levin, 1987; Trickett et al., in press) and the public domain. Sarason (1993b) raised a note of caution about this development: "Empowerment has become a fashionable word. It has the ring of virtue and unquestioned morality. Some proclaim it as a panacea. If the empowerment movement is to avoid the worst excesses of sloganeering and conceptual superficiality, it will have to come to grips with issues that are as complex conceptually as they are at the level of action" (p. 260). Although Sarason did not spell out these issues concretely, his choice of the word "sloganeering" hints at one, that is, that the concept's eminent good sense may outpace its empirical support base.

People also use the term differently (e.g., to reflect an objective or phenomenological view of change in power). In this vein, Zimmerman (1990) distinguished between psychological empowerment and individually oriented conceptions of empowerment and later showed different outcomes to be associated with these definitions (Zimmerman, Israel, Schulz, & Checkoway, 1992). Concerns about how the concept is defined are heightened when, as is often the case, empowerment is not a directly assigned "commodity," but rather is intended (or inferred) as part of an ongoing system change. This definitional fuzziness hampers evaluation of the efficacy of intended empowering actions by making interpretations of outcome findings susceptible to circular explanations. Thus, if positive outcomes follow system change, the change steps taken are assumed to have been empowering. If such outcomes are *not* found, and that sometime happens (Gruber & Trickett, 1987), an apologist can argue that the steps taken were either insufficiently empowering or not of the empowering type needed.

The preceding caution points are noted as factors that currently limit the empowerment notion. At the same time, both common sense and observation suggest it to be a concept with widespread potential applicability and heuristic value. Nor do we lack examples of its fruitful application. Illustratively, a recent journal number (Wandersman & Florin, 1990) presented a set of studies documenting a range of positive empowerment effects in diverse community organizations and settings. Another way used to show such effects is the setting or program vignette, that is, a descriptive account of positive change in people or organizations (Rappaport, Davidson, Wilson, & Mitchell, 1975) seen to result from an empowering process. Rappaport et al. (1984) devoted a special journal number to such accounts, reflecting diverse settings and circumstances.

Realistically, however it may be difficult to pin down empowerment effects in situations where they are potentially most important (major macrosocial contexts) because of the complexity and widespread operation of other variables under such conditions. Important way-station indicators of the concept's power may be derivable under more controlled conditions by studying outcomes associated with analogous but less global constructs such as autonomy support (Deci & Ryan, 1985). Ryan and Stiller (1991), for example, reviewed an extensive body of research linking autonomy support to positive educational and adaptive outcomes in children, and Cowen (1991) suggested that acquiring stage-salient competencies may be a natural pathway to the child's sense of feeling empowered.

Comer's (1980, 1987) work in black inner-city schools can readily be viewed in empowerment terms though, content-wise, it is fundamentally a school management (system change) program in which parents and teachers share decision making and responsibility for education policy and practice. Comer (1988) justifiably viewed this as a potentially empowering process that can radiate positively to students, service providers, and the community. Among the important program outcomes he reported are long-term improvements in students' academic achievement and parallel gains in parents' morale and interest and educators' sense of program ownership. These positive changes are seen to stem from salutary system changes, that is, the empowerment of previously disempowered people.

Gottfredson's (1986) school-based program also used shared decision making as a route to empowerment, along with curricular changes and co-operative learning formats. After 3 years, program children evidenced less drug use and delinquent behavior than controls, were more closely attached to the school, and had more positive views of school rules and practices. Findings cited in this section thus suggest that gains in empowerment (i.e., being able to make important decisions that affect one's life) can enhance psychological wellness.

Coping With Stress

The ubiquitous term *stress* is used to describe many different situations that pose threats to wellness: real and perceived; mild and intense; specific and diffuse; anticipable and nonanticipable; acute and chronic. Moreover, each category includes multiple exemplars with different "tugs and pulls" and consequences. Although much evidence suggests that stress predisposes adverse physical and psychological sequelae (Auerbach & Stolberg, 1986; Honig, 1986a, 1986b; Johnson, 1986; Kornberg & Caplan, 1980; Roberts & Peterson, 1984), that broad generalization is differentially

valid for different stressors (e.g., daily hassles vs. chronic, profound life-stress). The more severe, uncontrollable, broad-ranging, and enduring the stress, the greater is its risk-enhancing quality and the more likely is it to undermine wellness. Even so, for any given type and level of intensity of stress (objectively defined), the thought-provoking reality remains that people vary greatly in the extent to which they perceive the situation as stressful and the range of adaptations that follow.

The concept of childhood resilience, that is, coping and adapting well in the face of major life stress (Cicchetti & Garmezy, 1993; Cowen et al., 1990; Garmezy et al., 1984; Werner & Smith, 1982), offers a compelling case in point. Resilient youngsters, described as "healthy children in un-healthy environments" (Garmezy, 1982) and as those who "overcome the odds" (Werner & Smith, 1992), offer intriguing clues about pathways to wellness, even under the most dire conditions. That such resilient out-comes occur with no special programming or intervention, suggests that early wellness-enhancing processes such as sound attachment and compe-tence acquisition help to forge protective attributes such as perceived self-efficacy, empathy, social problem-solving skills, and sense of security (Cowen et al., 1990; Rutter, 1990; Werner & Smith, 1982, 1992) which, in turn, act both to minimize the perceived stressfulness of life situations and to promote effective coping when stress occurs (Fonagy, Steele, Steele, Higgit, & Target, 1994). More needs to be learned how exactly these attributes operate and the processes by which they form (Rutter, 1990; Masten, Best, & Garmezy, 1991).

Although people's reactions to stress vary greatly, and it is important to understand why, many situations predispose adaptive problems for most people who experience them. These range from mild, circumscribed, an-ticipable events (e.g., dental or minor surgical procedures) to more in-tense, enduring situations (e.g., job loss, death of a loved one, parental divorce) with radiating negative ramifications, to unanticipable, dire, in-deed potentially catastrophic, stressors both short term (e.g., fire, earth-quake, flood, tornado) and prolonged (war, nuclear disaster, concentration camp). Such situations have been foci for wellness-enhancing interventions for several reasons: (a) they do indeed precipitate stressful reactions in many people who experience them — even securely attached, competent people; (b) victims can readily identify with others who have experienced the same stressor; and (c) successful coping equips one to deal more ef-fectively with future stress whereas failure to cope increases susceptibility to future stress.

Effective models for short-circuiting the predictably negative conse-quences of stress and strengthening people's resources and skills for deal-ing with future stressors have been reported in such areas as bereavement

(Silverman, 1988; Vachon, Lyall, Rogers, Freedman-Letofsky, & Freeman, 1980), marital disruption (Pedro-Carroll & Cowen, 1987), illness and hospitalization, natural disaster, war, and holocaust (e.g., Auerbach & Stolberg, 1986; Roberts & Peterson, 1984). Indeed, Bloom (1979) proposed a general preventive paradigm pivoting around the two-stage process of identifying stressful events and charting their damaging effects, and developing effective preventive interventions to short-circuit these predictable negative sequelae. Cowen (1980) called these two steps prevention's "generative" and "executive" components.

In summary, because stress operates to elevate risk, being able to cope effectively with it is another key pathway to wellness. This ability can be nourished both by basic steps in the child's formation and, later, by interventions that seek to defuse the negative effects of stress and promote adaptive skills.

SUMMARY AND NEW DIRECTIONS

Psychological wellness is proposed as a potentially fruitful orienting concept that directs attention to a family of genotypically unified, if phenotypically diverse, phenomena of interest. Wellness is seen not as an absolute but rather as an anchor point at the positive end of an adjustment continuum, that is, as an ideal that we should strive concertedly to approach. To do that requires (a) greater investment in efforts to promote wellness from the start rather than repair work that begins only after major wellness deficits become apparent; and (b) following diverse pathways, including those that focus on individuals, settings, community contexts, and societal structures and policies, in efforts to promote the well-being of the many. Promoting wellness is likely to be more humane, efficient, and (ultimately) more cost-effective than struggling to undo dysfunction.

Five pathways were considered as part of a comprehensive framework for wellness enhancement: forming wholesome attachment relationships; acquiring age-appropriate skills and competencies; developing settings and environments that favor positive adaptation; fostering empowerment; and acquiring skills for coping effectively with stress. These pathways are different. Each rests on its own special knowledge base and set of technologies. Some of the latter reflect terrains familiar to psychologists; others considerably transcend psychology's normal boundaries. Hence, systematic pursuit of a wellness enhancement grail, calls for changes not only in *what* we do (focus on) but in *how* we go about doing those things, and with whom (i.e., professional collaborations and alliances).

Even those who subscribe to a narrower, risk-driven notion of primary prevention (e.g., Coie et al., 1993; Koretz, 1991) recognize that because behavior is shaped by many, and diverse, influence systems (e.g., intraindividual, familial, community), the full range of prevention programming and research "will require collaborative efforts of interdisciplinary teams to achieve the diversity of expertise and breadth of intellectual focus that is necessary" and that "explanatory models must take full account of the social and community context as well as the systems operating within individuals and families" (Coie et al., 1993, p. 1016). Areas cited specifically by those authors as part of a necessary collaborative effort include sociology, epidemiology, econometrics, psychopathology, criminology, child development, education, and several subareas of psychology.

If that view is valid for a primary prevention framework built around risk for pathology, and we believe it is, the need for cross-discipline inputs to program development and research is even stronger in a wellness framework that is all-population oriented and not bound by the concept of risk. Advancing all facets of the wellness concept thus calls for major inputs from social policy makers, urban planners, political scientists, child development specialists, and educators, among others. Hence it would be professionally "precious" (Sarason, Levine, Goldenberg, Cherlin, & Bennett, 1966) to assume that any single subarea of psychology (e.g., community, clinical, developmental, social) — indeed all of psychology or mental health — had, by itself, the knowledge or technology needed to meet this complex challenge. At the same time, those fields can play several legitimate and important roles in such a thrust, that relate both to their background and know-how in conceptualizing and assessing adjustment outcomes (i.e., the ultimate dependent variables in a wellness framework) and their expertise in studying particular wellness strands (e.g., attachment, competence) and developing ways to strengthen them.

Although the nature and magnitude of current unresolved problems in mental health underscore the need for pursuing wellness alternatives actively, the preceding falls well short of saying that the pathways proposed here are yet sufficiently clearly formulated or adequately documented. To the contrary, several need greater definitional clarity and all could profit from a more solid empirical base. We mean only to suggest here that enough is now known to argue that each identified strand represents a promising potential pathway to wellness, for which important answerable next-questions can be posed. Existing limitations notwithstanding, examples of effective programs illustrating each major pathway to wellness have been cited. Several impressive recent examples that combine multiple pathways and extend over long periods seem more valid ecologically than earlier unidimensional, time-limited approaches.

Thus, even though wellness enhancement approaches are not yet ready for beatification, this theoretically appealing option is well beyond being a mere pipe dream. Indeed, detailed practitioner-ready manuals are now available for conducting some effective programs of the types described (Price et al., 1988). At the same time, additional generative information about the ontogenesis of wellness is needed in several ares including (a) the *in vivo* study of conditions and processes that nourish the early, spontaneous development of wellness; (b) clarifying understandings of the self-views, skills and competencies, and familial contexts and pathways that operate to advance and maintain wellness; (c) identifying settings, community structures, and policies that further support the development of wellness. In parallel, there is need to develop interventions that promote wellness, both by honing existing technology more finely and by expanding the scope and reach of this family of approaches. We need also to explore ways of blending wellness approaches to augment their overall impact, and to understand better the applicability of various approaches at different developmental levels, in different settings, and with different sociocultural groups.

Although these complex challenges structure an agenda that could easily extend for decades into the next century, the questions raised are well worth pursuing — indeed have urgency. Clear answers to them can build bridges to richer, more productive life experiences for a next generation of children and youth. There is reason to be encouraged by recent findings from programs that seek to enhance wellness, and reason to hope that a further paradigm shift toward the promotion of wellness will attract increasing interest and allocation of resources in the years to come.

REFERENCES

Ainsworth,, M. D. S. (1989). Attachments beyond infancy. *American Psychologist, 44,* 709-716.

Albee, G. W. (1982). Preventing psychopathology and promoting human potential. *American Psychologist, 37,* 1043-1050.

Anderson, S., & Messick, S. (1974). Social competence in young children. *Developmental Psychology, 10,* 282-293.

Antonovsky, A. (1979). *Health, stress and coping.* San Francisco, Jossey-Bass.

Aronson, E., Blaney, N., Stephan, C., Sikes, J., & Snapp, M. (1978). *The jigsaw classroom.* Beverly Hills, CA: Sage.

Auerbach, S. M., & Stolberg, A. L. (Eds.) (1986). *Crisis intervention with children.* Washington, DC: Hemisphere.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. *Psychological Review, 84,* 191-215.

Battistich, V., Solomon, D. S., Watson, M., Solomon, J., & Schaps, E. (1989). Effects of an elementary school program to enhance prosocial behavior and children's cognitive social problem solving skills and strategies. *Journal of Applied Developmental Psychology, 10,* 147-169.

Berrueta-Clement, J. R., Schweinhart, L. J., Barnett, M. W., Epstein, A. S., & Weikart, D. P. (1984). *Changed lives: The effects of the Perry Preschool Program on youths through age 19*. Ypsilanti, MI: High/Scope Educational Research Foundation.

Bloom, B. L. (1979). Prevention of mental disorders: Recent advances in theory and practice. *Community Mental Health Journal, 15,* 179-191.

Botvin, G. J., & Eng, A. (1982). The efficacy of a multicomponent approach to the prevention of cigarette smoking. *Preventive Medicine, 11,* 199-211.

Botvin, G. J., & Renick, N., & Baker, E. (1983). The effects of scheduling format and booster sessions on a broad spectrum psychosocial approach to smoking prevention. *Journal of Behavioral Medicine, 6,* 359-379.

Botvin, G. J., & Tortu, S. (1988). Preventing substance abuse through life skills training. In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.), *14 ounces of prevention: A casebook for practitioners* (pp. 98-110). Washington, DC, American Psychological Assocation.

Bowlby, J. (1982). *Attachment and loss* (Vol. 1). New York: Basic Books.

Broussard, E. R. (1977). Primary prevention program for newborn infants at high risk for emotional disorder. In D. C. Klein & S. E. Goldston (Eds.), *Primary prevention: An idea whose time has come* (pp. 63-68). Rockville, MD: U. S. Department of Health, Education, and Welfare.

Broussard, E. B. (1989). The Infant-Family Resource Program: Facilitating optimal development. In R. E. Hess & J. DeLeon (Eds.), *The National Mental Health Association: 80 Years of involvement in the field of prevention* (pp. 179-224). New York: Haworth.

Caplan, M. Z., Weissberg, R. P., Grober, J. S., Sivo, P. J., Grady, K., & Jacoby, C. (1992). Social competence promotion with inner-city and suburban young adolescents: Effects on social adjustment and alcohol use. *Journal of Consulting and Clinical Psychology, 60,* 56-63.

Cicchetti, D., & Garmezy, N. (Eds.). (1993). Milestones in the development of resilience. *Development and Psychopathology, 4,* 497-783.

Coie, J. D., Watt, N. F., West, S. G., Hawkins, J. D., Asarnow, J. R., Markman, H. J., Ramey, S. L., Shure, M. B., & Long, B. (1993). The science of prevention: A conceptual framework and some directions for a national research program. *American Psychologist, 48,* 1013-1022.

Comer, J. P. (1980). *School power*. New York: Free Press.

Comer, J. P. (1987). New Haven's school-community connection. *Educational Leadership, 44,* 13-16.

Comer, J. P. (1988). Educating poor minority children. *Scientific American, 259,* 42-48.

Cowen, E. L. (1973). Social and community interventions. In P. Mussen & M. Rosenzweig (Eds.), *Annual Review of Psychology, 24,* 423-472.

Cowen, E. L. (1977). Baby-steps toward primary prevention. *American Journal of Community Psychology, 5,* 1-22.

Cowen, E. L. (1980). The wooing of primary prevention. *American Journal of Community Psychology, 8,* 258-284.

Cowen, E. L. (Ed.). (1982). Research in primary prevention in mental health. *American Journal of Community Psychology, 10,* 239-367.

Cowen, E. L. (1983). Primary prevention in mental health: Past, present and future. In R. D. Felner, L. Jason, J. Moritsugu, & S. S. Farber (Eds.), *Preventive psychology: Theory, research and practice in community interventions* (pp. 11-25). New York: Pergamon.

Cowen, E. L. (1985). Person centered approaches to primary prevention in mental health: Situation-focused and competence enhancement. *American Journal of Community Psychology, 13,* 31-48.

Cowen, E. L. (1986). Primary prevention in mental health: Ten years of retrospect and ten years of prospect. In M. Kessler & S. E. Goldston (Eds.), *A decade of progress in primary prevention* (pp. 3-45). Hanover, NH: University Press of New England.

Cowen, E. L. (1991). In pursuit of wellness. *American Psychologist, 46,* 404-408.

Cowen, E. L. (1994). Community psychology and routes to psychological wellness. In J. R. Rappaport & E. Seidman (Eds.), *Handbook of community psychology* (2nd ed.) New York: Wiley.

Cowen, E. L., Wyman, P. A., Work, W. C., & Parker, G. R. (1990). The Rochester Child Resilience Project (RCRP): Overview and summary of first year findings. *Development and Psychopathology, 2,* 193-212.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information processing mechanisms in children's social adjustment. *Psychological Bulletin, 115,* 74-101.

Deci, E. L., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior.* New York: Plenum Press.

Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective, *Educational Psychologist, 26,* 325-346.

Dinges, N. (1994). Mental health promotion. In P. J. Mrazek & R. J. Haggerty (Eds.) *Reducing risks for mental disorders: Frontiers for preventive intervention* (pp. 333-355). Washington, DC: National Academy Press.

Durlak, J. (1983). Social problem-solving as a primary prevention strategy. In R. D. Felner, L. A. Jason, J. N. Moritsugu, & S. S. Farber (Eds.), *Preventive psychology: Theory, research and practice* (pp. 31-48). New York: Pergamon.

Eccles, J. S., Midgley, C., Wigfield, A., Buchaman, C. M., Reuman, D., Flanagan, C., & McIvers, D. (1993). The impact of stage-environment fit on young adolescents' experiences in schools and families. *American Psychologist, 48,* 90-101.

Elias, M. J., & Clabby, J. F. (1992). *Building social problem-solving skills: Guidelines from a school-based program.* San Francisco: Jossey-Bass.

Elias, M. J., Gara, M. A., Schuyler, T. F., Branden-Muller, L. R., & Sayette, M. A. (1991). The promotion of social competence: Longitudinal study of a school-based program. *American Journal of Orthopsychiatry, 61,* 409-417.

Elias, M. J., Gara, M., Ubriaco, M. Rothbaum, P. A., Clabby, J. F., & Schuyler, T. (1986). Impact of a preventive social problem solving program on children's coping with middle school stressors. *American Journal of Community Psychology, 14,* 259-275.

Felner, R. D., & Adan, A. M. (1988). The School Transitional Environmental Project: An ecological intervention and evaluation. In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.), *14 ounces of prevention: A casebook for practitioners* (pp. 111-122). Washington DC: American Psychological Association.

Felner, R. A., Brand, S., Adam, A. A., Mulhall, P. F., Flowers, N., Sartain, B., & DuBois, B. L. (1993). Restructuring the ecology of the school as an approach to prevention during school transitions: Longitudinal follow-up and extensions of the School Transition Environmental Project (STEP). *Prevention and Human Services, 10,* 103-136.

Felner, R. P., Ginter, M. A., & Primavera, J. (1982). Primary prevention during school transitions: Social support and environment structure. *American Journal of Community Psychology, 10,* 227-240.

Finkel, N. J. (1974). Strens and traumas: An attempt at categorization. *American Journal of Community Psychology, 2,* 265-275.

Finkel, N. J. (1975). Strens trauma and trauma resolution. *American Journal of Community Psychology, 3,* 173-178.

Fonagy, P., Steele, M., Steele, H., Higgit, A. & Target, M. (1994). The theory and practice of resilience. *Journal of Child Psychology and Psychiatry, 35,* 231-257.

Garmezy, N. (1982). Foreword. In E. E. Werner & R. S. Smith (Eds.), *Vulnerable but invincible: A study of resilient children* (pp. xiii-xix). New York: McGraw-Hill.

Garmezy, N., Masten, A. S., & Tellegen, A. (1984). Studies of stress-resistant children: A building block for developmental psychopathology. *Child Development, 55,* 97-111.

Gartner, A., & Riessman, F. (1993). Peer tutoring: Toward a new model. ERIC Digest. Washington, DC: ERIC Clearinghouse on Teaching and Teacher Education.

Gottfredson, D. C. (1986). An empirical test of school-based environmental and individual interventions to reduce the risk of delinquent behavior. *Criminology, 24,* 705-731.

Greenspan, S. I. (1981). *Psychopathology and adaptation in infancy and early childhood: Principles of clinical diagnosis and preventive intervention* (Clinical Infant Reports No. 1). New York: International Universities Press.

Greenspan, S. I. (1982). Developmental morbidity in infants in multi-risk-factor families. *Public Health Reports, 97,* 16-23.

Gruber, J. & Trickett, E. J. (1987). Can we empower others? The paradox of empowerment in the governing of an alternative public school. *American Journal of Community Psychology, 15,* 353-371.

Gump, P. V. (1980). The school as a social situation. In M. R. Rosenzweig & L. W. Porter (Eds.) *Annual Review of Psychology, 31,* 553-582.

Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992a). Risk and protective factors for alcohol and other drug problems: Implications for substance abuse prevention. *Psychological Bulletin, 112,* 64-105.

Hawkins, J. D., Catalano, R. F., Morrison, D. M., O'Donnell, J., Abbott, R. D., & Day, L. E. (1992b). The Seattle Social Development Project: Effects of the first four years on protective factors and problem behaviors. In J. McCord & R. E. Tremblay (Eds.), *The prevention of anti-social behavior in children* (pp. 139-161). New York: Guilford.

Hawkins, J. D., & Lam, T. (1987). Teacher practices, social development, and delinquency. In J. D. Burchard & S. N. Burchard (Eds.), *The prevention of delinquent behavior* (pp. 241-274). Newbury Park, CA: Sage.

Hawkins, J. D., Von Cleve, E., & Catalano, R. F. (1991). Reducing early childhood aggression: Results of a primary prevention program. *Journal of the American Academy of Child and Adolescent Psychiatry, 30,* 208-217.

Hollister, W. G. (1967). Concept of strens in education: A challenge to curriculum development. In E. M. Bower & W. G. Hollister (Eds.), *Behavioral science frontiers in education* (pp. 193-206). New York: Wiley.

Honig, A. S. (1986a, May). Stress and coping in children (Part 1). *Young Children,* pp. 50-63.

Honig, A. S. (1986b, July). Stress and coping in children (Part 2): Interpersonal family relationships. *Young Children,* pp. 47-50.

Jahoda, M. (1958). *Current concepts of positive mental health.* New York: Basic Books.

Jessor, R. (1993). Successful adolescent development among youth in high-risk settings. *American Psychologist, 48,* 117-126.

Johnson, D. L. (1988). Primary prevention of behavior problems in young children: The Houston Parent Child Development Center. In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.), *14 ounces of prevention: A casebook for practitioners* (pp. 44-52). Washington, DC: American Psychological Association.

Johnson, J. H. (1986). *Life events as stressors in childhood and adolescence.* Newbury Park, CA: Sage.

Kasprow, W. J., Weissberg, R. P., et al. (1992). *New Haven Public Schools Social Development Project.* New Haven, CT: New Haven School District.

Kiesler, C. A. (1992). Some observations about the concept of the chronically mental ill. In M. Kessler, S. E., Goldston, & J. M., Joffe (Eds.). *The present and future of prevention: In honor of George W. Albee* (pp. 55-68) Newbury Park, CA: Sage.

Kiesler, C. A., Simpkins, C. & Morton, T. (1989). The psychiatric in-patient treatment of children and youth in general hospitals. *American Journal of Community Psychology, 17,* 821-830.

Koretz, D. S. (1991). Prevention-centered science in mental health. *American Journal of Community Psychology, 19,* 453-458.

Kornberg, M. S., & Caplan, G. (1980). Risk factors and preventive intervention in child psychotherapy: A review. *Journal of Prevention, 1,* 71-133.

Kuhn, T. S. (1970). *The structure of scientific revolutions,* (2nd ed.). Chicago: University of Chicago Press.

Levine, M., & Perkins, D. V. (1987). *Principles of community psychology: Perspectives and applications.* New York: Oxford University Press.

Lombard, A. D., (1991). *Success begins at home.* Lexington, MA: Lexington Books.

Lorion, R. P. (Ed.). (1990). *Protecting the children: Strategies for optimizing emotional and behavioral development.* New York: Haworth.

Masten, A. S., Best, K. M., & Garmezy, N. (1991). Resilience and development: Contributions from the study of children who overcame adversity. *Development and Psychopathology, 2,* 425-444.

McLoyd, V. C. (1990). The impact of economic hardship on Black families and children: Psychological stress, parenting and socioemotional development. *Child Development, 61,* 311-346.

Moos, R. H. (1974). *Evaluating treatment environments: A social ecological approach.* New York: Wiley.

Moos, R. H. (1975). *Evaluating correctional and community settings.* New York: Wiley.

Moos, R. H. (1979). *Evaluating educational environments.* San Francisco, CA: Jossey-Bass.

Mrazek, P. J. & Haggerty, R. J. (Eds.). (1994). *Reducing risks for mental disorders: Frontiers for preventive intervention.* Washington, DC: National Academy Press.

Olds, D. L. (1988). The prenatal/early infancy project. In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.), *14 ounces of prevention: A casebook for practitioners* (pp. 9-23). Washington, DC: American Psychological Association.

Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys.* Washington, DC: Hemisphere.

Olweus, D. (1979). Stability of aggressive reaction patterns in males: A review. *Psychological Bulletin, 86,* 852-875.

Olweus, D. (1993). *Bullying at school: What we know and what we can do about it.* Cambridge, MA: Blackwell.

Pedro-Carroll, J. L., & Cowen, E. L. (1987). Preventive interventions for children of divorce. In J. P. Vincent (Ed.), *Advances in family intervention, assessment and theory* (Vol. 4, pp. 281-307). Greenwich, CT: JAI Press

Pentz, M. A., Dwyer, J. H., MacKinnon, D. P., Flay, B. R., Hansen, W. B., Wang, E. Y. I., & Johnson, C. A. (1989). A multi-community trial for primary prevention of adolescent drug abuse: Effects on drug use prevalence. *Journal of the American Medical Association, 261,* 3259-3266.

Perry, C. L., Klepp, K. I., & Shultz, J. M. (1988). Primary prevention of cardiovascular disease: Community wide strategies for youth. *Journal of Consulting and Clinical Psychology, 56,* 358-364.

Perry, C. L., Klepp K. I., & Sillers, C. (1989). Community wide strategies for cardiovascular health. The Minnesota Heart Health Youth Program. *Health Education Research, 4,* 87-101.

Price, R. H., Cowen, E. L., Lorion, R. P., & Ramos-McKay, J. (Eds.). (1988). *14 ounces of prevention: A casebook for practitioners.* Washington, DC: American Psychological Association.

Provence, S., & Naylor, A. (1983). *Working with disadvantaged parents and children: Scientific issues and practice.* New Haven, CT: Yale University Press.

Ramey, C. T., Bryant, D. M., Campbell, F. A., Sparling, J. J., & Wasik, B. H. (1988). In R. H. Price, E. L. Cowen, R. P. Lorion & J. Ramos-McKay (Eds.), *14 ounces of prevention: A casebook for practitioners* (pp. 32-43). Washington, DC: American Psychological Association.

Rappaport, J. (1981). In praise of paradox: A social policy of empowerment over prevention. *American Journal of Community Psychology, 9,* 1-25.

Rappaport, J. (1984). Studies in empowerment: Introduction to the issue. *Prevention in Human Services, 3,* 1-7.

Rappaport, J. (1987). Terms of empowerment/exemplars of prevention: Toward a theory of community psychology. *American Journal of Community Psychology, 15,* 121-148.

Rappaport, J., Davidson, W. S., Wilson, M. N., & Mitchell, A. (1975). Alternatives to blaming the victim or the environment: Our places to stand have not moved the earth. *American Psychologist, 30,* 525-528.

Rappaport, J., Swift, C., & Hess, R. (Eds.). (1984). Studies in empowerment: Steps toward understanding and action. *Prevention and Human Services, 3,* 1-230.

Roberts, M. C., & Peterson, L. (1984). *Prevention of problems in childhood: Psychological research and applications.* New York: Wiley.

Rotheram, M. J., Armstrong, M., & Booraem (1992). Assertiveness training in fourth- and fifth-grade children. *American Journal of Community Psychology, 10,* 567-582.

Rotheram-Borus, M. J., (1988). Assertiveness training with children. In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.), *14 ounces of prevention: A casebook for practitioners* (pp. 83-97). Washington, DC: American Psychological Association.

Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. Rolf, A. Masten, D. Cicchetti, K. H. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 181-214). Cambridge, England: Cambridge University Press.

Ryan, R. M., & Stiller, J., (1991). The social contexts of internalization: Parent and teacher influences on autonomy, motivation, and learning. In R. P. Pintrich & M. L. Maehr (Eds.), *Advances in motivation and achievement, Vol. 7: Goals and self-regulatory processes* (pp. 115-149). Greenwich, CT: JAI.

Sarason, S. B. (1993a). *Letters to a SERIOUS education president.* Newbury Park, CA: Corwin.

Sarason, S. B. (1993b). *The case for change: Rethinking the preparation of educators,* San Francisco, Jossey-Bass.

Sarason, S. B., Levine, M., Goldenberg, I. I., Cherlin, D. L., & Bennett, E. M. (1966). *Psychology in community settings: Clinical, educational, vocational and social aspects.* New York: Wiley.

Schweinhart, L. J., Barnes, H. V., & Weikart, D. P. (1993). *Significant benefits: The High/Scope Perry Preschool study through age 27.* Ypsilanti, MI: High Scope Press.

Schweinhart, L. J., & Weikart, D. P. (1988). The High Scope/Perry Preschool Program. In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.), *14 ounces of prevention: A casebook for practitioners* (pp. 53-65). Washington, DC: American Psychological Association.

Seitz, V., & Apfel, N. H. (1994). Parent focused intervention: Diffusion effects on siblings. *Child Development, 65,* 677-683.

Seitz, V., Rosenbaum, N. K., & Apfel, N. H. (1985). Effects of family support intervention: A ten-year follow-up. *Child Development, 56,* 376-391.

Sharon, S. (1990). *Cooperative learning: Theory and research.* New York: Praeger.

Shedler, J., Mayman, M., & Manis, M. (1993). The illusion of mental health. *American Psychologist, 48,* 1117-1131.

Shoben, E. J. (1957). Toward a concept of normal personality. *American Psychologist, 12,* 183-189.

Shure, M. B., & Spivack, G. (1982). Interpersonal problem-solving in young children: A cognitive approach to prevention. *American Journal of Community Psychology, 10,* 341-356.

Shure, M. B., & Spivack, G. (1988). Interpersonal cognitive problem solving (ICPS). In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.). *14 ounces of prevention: A casebook for practitioners* (pp. 69-82). Washington, DC: American Psychological Association.

Silverman, P. R. (1988). Widow-to-widow: A mutual help program for the widowed. In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.). *14 ounces of prevention: A casebook for practitioners* (pp. 175-186). Washington, DC: American Psychological Association.

Slavin, R. L. (1977). Classroom reward structure: An analytical and practical review. *Journal of Educational Research, 44,* 633-650.

Solomon, D., Watson, M. S., Delucchi, K. L., Schaps, E., & Battistich, V. (1988). Enhancing children's prosocial behavior in the classroom. *American Educational Research Journal, 25,* 527-554.

Spivack, G., & Shure, M. B. (1974). *Social adjustment of young children: A cognitive approach to solving real-life problems.* San Francisco: Jossey-Bass.

Sprinthall, N. A. (1984). Primary prevention: A road paved with a plethora of promises and procrastinations. *Personnel and Guidance Journal, 62,* 491-495.

St. Pierre, T. L., Kaltreider, D. L., Mark, N. M., & Aikin, K. J. (1992). Drug prevention in a community setting: A longitudinal study of the relative effectiveness of a three-year primary prevention program in Boys and Girls Clubs across the nation. *American Journal of Community Psychology, 20,* 673-706.

Strayhorn, J. M. (1988). *The competent child: An approach to psychotherapy and preventive mental health.* New York: Guilford.

Swift, C. F., & Levin, G. (1987). Empowerment: The greening of prevention. In M. Kessler, S. E., Goldston, & J. M. Joffe. (Eds.), *The present and future of prevention: In honor of George W. Albee* (pp. 99-111). Newbury Park, CA: Sage.

Swift, C. F. (1992). Empowerment: An emerging mental health technology. *Journal of Primary Prevention, 8,* 71-94.

Trickett, E. J., Dahiyat, C. & Selby, P. (in press). *Primary prevention in mental health: An annotated bibliography.* Rockville, MD: U. S. Department of Health and Human Services.

Vachon, J. L., Lyall, M. A., Rogers, J., Freedman-Letofsky, K., & Freeman, S. (1980). A controlled study of self-help intervention for widows. *American Journal of Psychiatry, 137,* 1380-1384.

Wandersman, A., & Florin, P. (1990). Citizen participation, voluntary organizations and community development: Insights for empowerment through research. *American Journal of Community Psychology, 18,* 41-177.

Weinstein, C. S. (1991). The classroom as a social context for learning. In M. R. Rosenzweig & L. W. Porter (Eds.) *Annual Review of Psychology, 42,* 493-525.

Weissberg, R. P., & Caplan, M. Z. (in press). *Promoting social competence and preventing antisocial behavior in young urban adolescents.*

Weissberg, R. P., Caplan, M. Z., & Harwood, R. L. (1991). Promoting competence enhancing environments: A systems-based perspective on primary prevention. *Journal of Consulting and Clinical Psychology, 59,* 830-841.

Weissberg, R. P., & Elias, M. J. (1993). Enhancing young children's social competence and health behavior: An important challenge for educators, scientists, policy makers and funders. *Applied and Preventive Psychology, 2,* 179-190.

Werner, E. E., & Smith, R. S. (1982). *Vulnerable but invincible: A study of resilient children.* New York: McGraw-Hill.

Werner, E. E., & Smith, R. S. (1992). *Overcoming the odds: High risk children from birth to adulthood.* Ithaca, NY: Cornell University Press.

Wright, S., & Cowen, E. L. (1985). The effects of peer teaching on student perceptions of class environment, adjustment and academic performance. *American Journal of Community Psychology, 13,* 413-427.

Yoshikawa, H. (1994). Prevention as cumulative protection: Effects of early family support and education on chronic delinquency and its risks. *Psychological Bulletin, 115,* 28-54.

Zax, M., & Cowen, E. L. (1976). *Abnormal psychology: Changing conceptions* (2nd ed.). New York: Holt, Rinehart, & Winston.

Zigler, E., Taussig, C. & Black, K. (1992). A promising preventative for juvenile delinquency. *American Psychologist, 47,* 997-1006.

Zimmerman, M. A. (1990). Taking aim on empowerment research: On the distinction between individual and psychological conceptions. *American Journal of Community Psychology, 18,* 169-177.

Zimmerman, M. A., Israel, B. A., Schulz, A. & Checkoway, B. (1992). Further explorations in empowerment theory: An empirical analysis of psychological empowerment. *American Journal of Community Psychology, 20,* 707-728.