A Developmental Psychopathology Perspective on Adolescence

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Developmental psychopathology offers an integrative framework for conceptualizing the course of development during adolescence, with particular relevance for understanding continuity and the emergence of psychopathology during this and subsequent developmental periods. In this article, the utility of a developmental psychopathology perspective for informing the design of research, prevention, and intervention is highlighted. Interdisciplinary, organizational models of development, emphasizing the dynamic relations between the developing individual and internal and external contexts, are discussed. Examination of boundaries between abnormal and normal development during adolescence offers important vantage points for articulating diversity in the developmental course during this period. Conceptualizing divergence and convergence in developmental pathways, continuity and discontinuity in development, and the transactions of risk and protective processes leading to maladaptation, psychopathology, and resilience are highlighted.

Research on adolescence has burgeoned over the course of the past several decades. Testimony to the growing interest in the period of adolescence is provided through an examination of the table of contents in the Annual Review of Psychology volumes. Although the first article in this publication devoted exclusively to adolescence did not appear until the 38th volume (Petersen, 1988), since 1995, reviews of adolescence have appeared every 3 years (Compas, Hinden, & Gerhardt, 1995; Lerner & Galambos, 1998; Steinberg & Morris, 2001). In addition, investigations on adolescence and normative development, as well as work on adolescence and psychopathology, have increased greatly in the scientific literature. Despite these advances, there remains a relative paucity of published research addressing adolescence, development, and psychopathology.

In view of the risks facing adolescents attributable to biological and psychological developmental changes, as well as to more external social and situational challenges they must confront, it is not surprising that the study of adolescent development holds much promise for advancing many of the goals embodied by a developmental psychopathology perspective. A number of issues that have been examined by investigators of adolescent development mirror areas of interest to developmental psychopathologists. These include (a) the use of interdisciplinary models of development, (b) issues related to the continuity or discontinuity of development across the life course, (c) the boundary and linkages between normal and maladaptive or pathological functioning, (d) the transactions that occur between environmental and more person-specific characteristics, (e) processes associated with risk and resilience, and (f) the integration of basic research into the design and provision of prevention and intervention.

Adolescence is a particularly compelling period of development and one that lends itself to investigations guided by a developmental psychopathology perspective. Biological, psychological, and social systems undergo marked developmental changes during adolescence (Feldman & Elliott, 1990; Spear, 2000a, 2000b). Building on the normative advances accompanying adolescence, research conceived within a developmental psychopathology framework not only can inform knowledge of adolescent psychopathology but also can contribute to an enhanced understanding of developmental processes more generally (Cicchetti, 1984; Cicchetti & Cohen, 1995c; Sroufe, 1990). Over the life course, adolescence is characterized by a rather lengthy transition phase in which the individual is neither a child nor an adult. Although the adolescent strives to move toward acquiring independence and the attainment of the perceived rewards of adulthood, parents and social institutions, recognizing the adolescent’s relative lack of preparedness for the assumption of full adult responsibilities, struggle with relinquishing their perceptions of the adolescent as a child. Consequently, the flux and renegotiation inherent in this developmental period increase the potential for both internal and external conflict. Concomitantly, however, opportunities for growth and the realization of new possibilities occur (Cicchetti & Toth, 1996).

Adolescence has in the past been characterized as a period of “storm and stress” (Hall, 1904), and the extreme problems in adjustment exhibited by a few were generalized as normative experiences for all adolescents (Freud, 1958). However, the storm and stress of adolescence is neither universal nor inevitable. Most adolescents cope successfully with the developmental demands of this period and do not evidence extremes of maladaptation. Nev-
ertheless, adolescence typically does generate more turmoil than either childhood or adulthood (Resnick et al., 1997). Arnett (1999) identifies three central features of this turmoil that may be heightened in adolescence: mood disruptions, risk behaviors, and conflict with parents. Although adolescents exhibit large individual differences in these areas, the fact that mood disruptions and increased risk taking are not atypical during this period of development suggests that behaviors associated with internalizing and externalizing forms of psychopathology are in ascendance. Thus, the boundaries between normal and abnormal, as well as between normative struggles and psychopathology, become less clear.

When are irritability, dysphoria, and emotional lability part of normative adolescent self-searching versus symptoms of mood disorder? When does experimentation with alcohol and drugs lapse into substance abuse? Which adolescents are most vulnerable to moving into the psychopathological extremes? Why do many adolescents adapt successfully, and what protects adolescents from developing significant disturbance? What current and historical developmental factors influence the trajectories engaged that involve normative struggles versus emerging disorder? What are the future ramifications of adolescent psychopathology? These are some questions relevant to adolescence that can be better understood by invoking a developmental psychopathology perspective.

In this article, we explicate those aspects of developmental psychopathology that are particularly useful for informing research and intervention for adolescents who are at risk for, or who have developed, psychopathology. Illustrative examples of the applicability of a developmental psychopathology approach to adolescence derived from research on various “high-risk” conditions and psychopathological disorders are highlighted in this article. We conclude with a discussion of approaches to prevention and intervention for adolescent disorders. Our overarching goal in this article is to elucidate those aspects of developmental psychopathology that we view as integral toward understanding the trajectories toward adolescent psychopathology, the course of disorder during adolescence, and the mechanisms and processes that contribute to adaptation versus maladaptation during adolescence and throughout the life course.

Before proceeding further with our discussion, we want to underscore that if taken in isolation, many aspects of a developmental psychopathology perspective are equally applicable to other fields. However, the incorporation and integration of concepts that are more typically considered as discrete entities serve to set a developmental psychopathology approach apart from more traditional perspectives on disorder (see Cummings, Davies, & Campbell, 2000, for an elaboration). Whereas traditional viewpoints conceptualize maladaptation and disorder as inherent to the individual, the developmental psychopathology framework places them in the dynamic relation between the individual and the internal and external contexts (Sameroff, 2001).

What Is Developmental Psychopathology?

Developmental psychopathology is an integrative discipline that seeks to unify, within a developmental, lifespan framework, contributions from multiple fields of inquiry with the goal of understanding psychopathology and its relation to normative adaptation (Cicchetti, 1990, 1993). As a “macroparadigm” (Achenbach, 1990), developmental psychopathology strives to integrate knowledge across scientific disciplines at multiple levels of analysis and multiple domains, rather than espousing a singular theory that would account for all developmental phenomena (Cicchetti, 1993; Rutter & Sroufe, 2000).

Accordingly, Sroufe and Rutter (1984) conceptualized the discipline as “the study of the origins and course of individual patterns of behavioral maladaptation, whatever the age of onset, whatever the causes, whatever the transformations in behavioral manifestation, and however complex the course of the developmental pattern may be” (p. 18). The unifying developmental orientation of the discipline results in new types of questions being posed. For example, rather than being satisfied to compare a normative and disordered group of adolescents on a phenomenon of interest, the developmental psychopathologist strives to understand how group differences in that phenomenon evolved over the course of development (Cicchetti & Sroufe, 2000). Moreover, the developmental psychopathologist is concerned not simply with differences in symptom presentation at different developmental periods but rather with the degree of convergence or divergence in the organization of biological, psychological, and social-contextual systems as they relate to symptom manifestation and disorder (Boyce et al., 1998; Cicchetti & Toth, 1995, 1998).

A developmental psychopathology approach to adolescence does not involve merely studying teenagers, as age alone does not necessarily result in the elucidation of developmental process (Rutter, 1989; Wohllwill, 1973). Adolescents could be investigated by a downward extension of a phenomenon observed in adults, but the fact that the investigation involved adolescents does not ensure a developmental understanding. Rather, a developmental approach requires that an issue of interest be conceptualized in terms of how it would be manifested in view of the particular developmental capacities and attainments of the adolescent period of development. For example, the cognitive and emotional capacities for coping with a traumatic event and the meanings attributed to the occurrence are likely to be very different for individuals aged 6, 16, or 36. Thus, consideration of the developmental capacities of the individual and linkages with other psychological and biological domains are essential for understanding manifestations of disturbance during adolescence or, for that matter, during any developmental period.

A developmental analysis also requires that the current functioning of the adolescent be considered within the context of how that level of functioning evolved over the course of development. Distal influences and their dynamic relation to proximal causes need to be delineated (Cicchetti & Lynch, 1993; Cicchetti & Toth, 1998). For example, contextual issues such as community violence or membership in a gang can exert significant and potentially deleterious effects on the family and on individual adolescent development. A developmental analysis also benefits not only from knowing the progression of experiences prior to adolescence but also from knowing the subsequent developmental trajectories of individuals into adulthood. Seemingly comparable groups of adolescents may appear indistinguishable in adolescence but may manifest very different patterns of adaptation in adulthood. In addition to differences in subsequent experiences, the knowledge of later developmental divergence may contribute to identifying differences during the adolescent period that were not apparent at the time. Thus, the lifespan orientation is central to how questions are framed and how psychopathology is to be understood more
broadly. Investigation of psychopathological functioning during adolescence not only provides information about parameters and origins of a disorder during this specific developmental period but also, by means of comparison and contrast across the life course, offers insight into potential variations in causal processes that may operate according to when a disorder emerges.

For example, there is evidence that depressive disorders that occur in childhood and those that occur during adolescence may be differentially influenced by genetic and psychosocial factors. Both childhood and adolescent depressive disorders increase the risk for subsequent depression in adulthood. However, the linkage is much stronger for adolescent onset depression (Harrington, Fudge, Rutter, Pickles, & Hill, 1990). Furthermore, for both childhood and adolescent onset depressive disorders, there is a higher familial loading for depression in first- and second-degree relatives. For children with depressive disorder, higher rates of criminality, alcohol abuse, and family discord are found in their families compared with the adolescent cases, and among relatives with depression, there also is higher comorbidity with criminality (Harrington et al., 1997). These findings suggest that psychosocial stressors may play a more prominent role in childhood onset depression as compared with adolescent onset depression, underscoring the need for attention to the differential matrix of processes that may contribute to psychopathology during different periods of development.

From a developmental psychopathology perspective, the interface between normal and abnormal is particularly informative for understanding the course of development, and the period of adolescence emerges as particularly valuable in this regard. Applying knowledge of normative adolescent development to the study of psychopathology is critical for delineating developmental processes that have gone awry in those exhibiting a disorder. Thus, even before the emergence of a psychopathological disorder, certain pathways signify adaptational compromises or failures in normal development that probabilistically forebode subsequent psychopathology. For example, children who are high on the temperamental characteristic of behavioral inhibition and who have developed an anxious attachment and maintained high separation anxiety through the early years of life, as well as a tendency to withdraw during elementary school, may have consequently developed a perspective of helplessness in regard to social challenges. When these children are faced with the transition to adolescence with the accompanying new physical, academic, and social challenges, intense anxiety may contribute to the development of obsessions and compulsions and emergent obsessive compulsive disorder in efforts to contain feelings of being unable to manage the new responsibilities and demands of the period (Carter, Pauls, & Leckman, 1995).

Understanding how psychopathological conditions evolve and how aberrations in the organization of component developmental systems that exist among disordered individuals eventuate may be informative for elucidating critical components of development that are not typically evident. In usual circumstances, the integration of component developmental systems may be so well established that it is difficult to determine how normal functioning is dependent on this integration. When there is a clear aberration or deficit in a component system within a disordered population, examination of how that atypicality relates to the organization of other component systems can reveal information regarding the interdependency of components not apparent under normal conditions (see Cicchetti & Sroufe, 1978). Thus, the interest of developmental psychopathologists in the convergences and divergences between normal and abnormal can be mutually beneficial for understanding development across the range of variation (Cicchetti & Cohen, 1995c; Sroufe, 1990).

It is important to note that developmental psychopathology is not limited to the study of disorders, although studying disordered functioning is of central interest to the discipline. Rather, the elucidation of the developmental process within and among multiple biological and psychological systems in context across the full range of functioning is a fundamental objective of developmental psychopathology (Boyce et al., 1998; Cicchetti & Schneider-Rosen, 1986). Accordingly, developmental psychologists are primarily interested in understanding constancies in developmental processes as well as the typical, central tendencies in functioning and adaptation (Radke-Yarrow & Zahn-Waxler, 1990). The extremes of the distribution in this context may be regarded as problematic outliers or cases that need to be transformed statistically to be more in line with the normal distribution. Developmental psychopathologists regard such extremes as of significance for study because of their potential to provide insight into the full range of developmental processes and functioning. In addition to the extremes, the subclinical range of functioning also is important. Individuals at this range of adaptation may be vulnerable to the subsequent emergence of psychopathology on the basis of the organization of their developmental systems, and the investigation of processes that contribute to the later emergence of a disorder, as well as processes that mitigate against disordered outcomes, provides further insight into the full range of developmental phenomena.

Finally, developmental psychopathologists are as interested in individuals at high risk for the development of psychopathology who do not manifest it over time as they are in individuals who develop an actual disorder (Luthar, Cicchetti, & Becker, 2000). Relatedly, developmental psychopathologists also are committed to discovering pathways to competent adaptation despite exposure to conditions of adversity (Cicchetti & Garmezy, 1993; Masten, Best, & Garmezy, 1990). For example, in a longitudinal investigation of the pathways to resilience and maladaptation from childhood to late adolescence, Masten and her colleagues (1999) found that better adolescent intellectual functioning and parenting resources were associated with good outcomes across a variety of competence domains, even in the context of severe, chronic adversity. Resilient adolescents had much in common with their low-adversity competent peers, including average or better IQ, good quality of parenting, and higher psychological well being.

Likewise, Garber and Little (1999), in a prospective longitudinal investigation, followed up a large cohort of children of mothers with major depressive disorder. In the sixth grade, 51 of the 185 offspring of depressed mothers were identified as being in the high-competence group (i.e., high functioning and without psychopathology). Two years later, 18 of the high-competence children developed problems by early adolescence. In comparison with the children who manifested a decrease in competence during the transition to adolescence, the 33 continuously competent children demonstrated more positive coping, an enhanced commitment to school achievement, greater social support, and better family relationships. Additionally, Garber and Little (1999) discovered
that the group manifesting decreased competence experienced a
greater number of hassles during junior high school. It is interesting

to note that among the adolescents experiencing higher levels
of hassles during junior high school, high commitment to achieve-
ment and a positive family environment each moderated the rela-
tion between school hassles and competence.

Furthermore, Luthar and her colleagues (Luthar, 1991; Luthar,
Doenberger, & Zigler, 1993) found that disadvantaged adoles-
cents who manifested resilient functioning in some domains often
were at risk for difficulties in other realms of functioning. These
findings suggest that resilient individuals may need support to deal
with the emotional difficulties and distress that are often associated
with coping with the emotional difficulties they have had to
address and surmount.

These aspects of developmental psychopathology illustrate the
complexity of the tasks confronting the field and highlight ways in
which the discipline can offer new direction to how developmental
questions related to adolescence are posed and the answers that are
sought. Of course, no single study can provide answers to the
myriad of issues raised, but collectively, individual investigations
conceptualized from this perspective can progressively expand the
knowledge base on normality and psychopathology during adoles-
cence (see Cicchetti & Sroufe, 2000).

Organizational Perspective on Development

Although developmental psychopathology is not characterized
by the adherence to a unitary theoretical approach, the organiza-
tional perspective provides a powerful framework for conceptual-
izing the intricacies of the life span perspective on risk and
psychopathology, as well as on normal development (Cicchetti &
Schneider-Rosen, 1986; Sroufe & Rutter, 1984). The organiza-
tional perspective focuses on the quality of integration both within
and among the psychological and biological systems of the indi-
vidual. This attention to variations in the quality of integration
provides the framework on which developmental psychopatholo-
gists characterize developmental status. Moreover, the organiza-
tional perspective addresses how development occurs, specifically
identifying a progression of qualitative reorganizations within and
among the biological, psychological, and social systems that pro-
cede through differentiation and subsequent hierarchical integra-
tion (Werner & Kaplan, 1963).

In accord with the organizational perspective, development is
not viewed as consisting of a series of tasks that need to be
accomplished and that subsequently decrease in importance.
Rather, development is conceived as being comprised of a number
of age- and stage-relevant tasks. Although the salience of these
tasks may wane in relation to newly emerging issues, the tasks
remain important to adaptation over time (Cicchetti, 1993). A
hierarchical picture of adaptation emerges in which the successful
resolution of an early stage-salient issue increases the probability
of subsequent successful adjustment (Sroufe & Rutter, 1984). As
each new stage-salient issue comes to the fore, opportunities for
growth and consolidation, as well as challenges associated with
new vulnerabilities, arise. Thus, an ever-changing model of devel-
opment in which newly formed competencies or maladaptations
may emerge throughout the life course and transact with the
individual’s prior developmental organization is proffered (Cic-
cchetti & Tucker, 1994). Although early adaptation probabilistically
portends the quality of future functioning, the possibility of devel-
opmental divergence and discontinuity is recognized in this dy-
namic model (i.e., probabilistic epigenesis).

A principle of importance to developmental psychopathology is
that individuals exert an active role in directing the course of their
development. Although more distal historical factors and current
influences are important to the process of development, individual
choice and self-organization have increasingly been viewed as
exerting critical influences on development (Cicchetti & Rogosch,
1997; Cicchetti & Tucker, 1994). Early experience and prior levels
of adaptation neither doom the individual to continued maladap-
tive functioning nor inoculate the individual from future problems
in functioning. Moreover, not only because biological factors can
influence psychological processes but also because social and
psychological experiences exert actions on the brain by feeding
back on it to modify gene expression and brain structure, function,
and organization (Cicchetti & Tucker, 1994; Eisenberg, 1995;
Kandel, 1998; Nelson & Bloom, 1997), developmental plasticity
can be brought about by both biological and psychological self-
organization (Cicchetti, in press; Cicchetti & Tucker, 1994). Thus,
for example, the fact that most maltreated children evidence at
least some self-righting tendencies in the face of extreme adversity
attests to the strong biological and psychological strivings toward
resilience that virtually all humans and living organisms possess
(Cicchetti & Rogosch, 1997; Waddington, 1957). In contrast, the
absence of such resilient self-strivings in some maltreated children
attests to the deleterious and pernicious impact that traumatic
experiences can exert on biological and psychological develop-
mental processes.

Over the course of development, diverse prototypical organiza-
tions of biological and psychological systems emerge, and some of
these prototypes will exhibit vulnerability to developing psycho-
pathology (Cicchetti & Toth, 1998). The quality of organization
among systems, rather than the individual components in isolation,
influences the potential for emergent psychopathology. Adaptively
functioning individuals exhibit a coherence in the organization of
biological and psychological systems. In contrast, an individual
who is vulnerable to psychopathology will evidence an incoher-
ence in the organization across systems, with aberrations in one
system adversely impinging on other systems. Rather than a sin-
gular vulnerable prototype for psychopathology, different proto-
types of incoherent organization are likely to exist. Thus, individ-
uals enter adolescence with broad individual differences in the
quality of organization of internal biological and psychological
systems, and this developmental organization will greatly influ-
ence the pathways taken during this developmental period.

During adolescence, organizational developmental theorists
view the crucial stage-salient tasks of the period as the successful
transition to secondary schooling, academic achievement (i.e.,
learning skills that are needed for higher education or work),
psychological autonomy, forming close friendships within and
across gender, and deriving a cohesive sense of self-identity (Mas-
ten & Coatsworth, 1998). Because of space constraints, we discuss
two of the developmental tasks of adolescence, psychological
autonomy and the development of romantic relationships.

Psychological autonomy involves different dimensions, includ-
ing emotional autonomy from childhood dependency on parents,
behavioral autonomy in terms of independent functioning and
self-reliance, and cognitive autonomy involving self-confidence in
Achievement of psychological autonomy is best attained through maintaining a relatedness with parents that is transformed, rather than through repudiation of parents (Hill & Holmbeck, 1986; Ryan & Lynch, 1989; Steinberg, 1990). With respect to romantic relationships, research suggests that although success in intimate relationships has roots in general peer competence, there may be both prosocial and deviant pathways of initial involvement with a relationship partner. Neemann, Hubbard, and Masten (1995) provided evidence suggesting that the initiation of romantic involvement during late childhood and early to middle adolescence may engender harmful consequences for academic, job, and conduct competence domains. However, the formation of romantic relationships later in adolescence no longer appears to reflect negative consequences (Neemann et al., 1995), perhaps because subsequently these relationships are more normative developmentally.

The internal resources that the adolescent has available for resolving the salient developmental tasks of adolescence will depend significantly on the quality of the resolution of stage-salient tasks in childhood (Masten & Coatsworth, 1998). For the early adolescent who has been able to achieve competent resolutions progressively across the earlier stage-salient tasks, the internal organization of developmental domains will be more flexible and integrated, and there will be greater adaptive capacity available for striving to resolve the challenges of the period. In contrast, an individual who has incompetently resolved earlier stage-salient tasks will enter the adolescent period with substantial liabilities in terms of internal resources with which to negotiate the challenges of the era. Individual adolescents will thus vary between these extremes in terms of the adaptability of their internal organization of developmental competencies that have emerged over the course of earlier development.

As an illustration, the dynamic interplay of risk and protective processes operating during adolescence also will act to influence the ease or difficulty the adolescent experiences as he or she strives to attain psychological autonomy. Clearly, both the quality of prior developmental organization attained and the current interplay of risk and protective processes encountered will contribute to individual differences in the character of adolescent adaptation. Moreover, the quality of organization of developmental competencies that individuals bring to the adolescent period is likely to influence both how they interpret and respond to the risks to which they are exposed and how they go about striving to attain psychological autonomy. Adolescents with a competent developmental organization may articulate an area of special skill or interest (e.g., sports, art, music, job, community volunteer work) and use this as a vehicle to obtain self-confidence in their own abilities and a sense that they can make decisions and choices on their own. If such adolescents engage in more risky strategies (e.g., drugs, delinquent pranks), then the extent to which they are used is more likely to remain at the experimental level.

In contrast, adolescents with more compromised organizations of earlier developmental challenges are likely, for example, to engage in risk behaviors more wholeheartedly as a means to strive to demonstrate psychological autonomy. In so doing, the psychological autonomy they derive is likely to be compromised and less advantageous to an emergent efficacious self. These adolescents also are in jeopardy of greater negative consequences from the extent to which they involve themselves in risky activities, which can curtail later opportunities and possibly constitute psychopathology (e.g., drug addiction, severe antisociality or crime). Alternatively, some adolescents with an incompetent organization of earlier challenges may be reluctant to even strive for psychological autonomy. Prior liabilities may restrict their self-generated ambitions for independence, and they may cling to a dependent stance, coasting and letting decisions be made for them, with little sense of personal direction.

As the concept of probabilistic epigenesis connotes, the likelihood of continuity of earlier to later forms of developmental organization is not inevitable. However, early experience is important, and attention to how it has structured the organization of the individual’s biological and psychological systems is useful for understanding individual differences in response to risk and stress over development and in the current context, as well as for how protective resources may be used. Nonetheless, the effects of early experience are not immutable. Subsequent experience may alter the course of biological and psychological development.

Given the many biological, psychological, and social-contextual transitions that occur during adolescence, many opportunities for reorganization are presented. Further, significant changes in the balance of risk and protective processes have the potential to alter the direction of developmental trajectories. Rutter (1992) has suggested that such turning points in developmental trajectories may be best accomplished when events that transpire are dramatically different from what the individual has generally experienced over the life course. For example, dropping out of school for a teenager who had exhibited poor school performance and grade failure would constitute an event consistent with an established trajectory. However, for a successful student to drop out of school because of an unplanned pregnancy, a very different trajectory could be engaged, as opportunities for further education are reduced and potential attainments that would have otherwise been expected are not realized. Not only are life options limited, but the contrast between potential and actual attainments could be a source of distress, dysphoria, and hopelessness, with attendant risks for depression. In contrast, Elder (1986) demonstrated the dramatic change in life trajectories for some disadvantaged men who joined the military. Continuing educational opportunities, delays in marriage, and exposure to a wider range of potential spouses were examples of subsequent events that resulted in improved life course pathways. Alternatively, a turning point could be initiated by a biological event. For example, among persons developing schizophrenia in late adolescence who previously had good premorbid competence, an activation of previously dormant genes or a reorganization of neurological structures as a result of brain maturation and lags in social–cognitive development could result in the onset of the disorder, marking a substantial turning point and change in functioning and life course (Cicchetti & Cannon, 1999; Keshavan & Hogarty, 1999).

More normative transitions during adolescence also hold the potential for affecting the developmental trajectory individuals follow, and the timing and context of these transitions may have a significant influence. Graber and Brooks-Gunn (1996) delineated several models of how transitions may influence development. Differences in timing within a transitional period may have significant impact on adjustment, as is the case with early versus on-time versus late pubertal development (Brooks-Gunn & Reiter, 1990). Adolescents maturing early are potentially less likely to
have developed the social and cognitive skills that will assist later maturing individuals when they encounter the transition, thereby making the earlier maturing adolescent more in jeopardy of adjusting less adaptively to the transition. Cumulative or simultaneous events co-occurring with a transitional period (e.g., menarche and entry into junior high school) also may stress coping capacities and compromise adjustment, whereas adolescents experiencing these transitions at different times will have greater resources to adapt to each transition individually. Transitions may also accentuate or intensify typical patterns of behavior of an adolescent, as preexisting dispositional strategies (e.g., increased moodiness, antagonism) are used to cope with the transition. Alternatively, there may be perturbations in behavior in response to transitions (e.g., onset of moodiness) as an adolescent struggles with acquiring new behavior needed to adapt to the transition. Adolescents also may become more reactive during periods of transition, in which sensitivity to stresses experienced may be exacerbated. Additionally, the impact of transitions on capacities to adapt may be influenced by the degree of fit between the needs of the individual during the transition and the supportiveness of the context encountered. Thus, transitions may have a significant impact on the developmental course and are critical points in which to assess continuity and discontinuity in development.

In the next section, we examine illustrative principles inherent to a developmental psychopathology perspective in more detail. We pay particular attention to providing examples of how these principles can elucidate the understanding of the emergence of problem behaviors and psychopathology in adolescence.

Illustrative Developmental Psychopathology Principles and Their Relation to the Study of Psychopathology in Adolescence

Normal and Abnormal

A basic premise that has guided work within developmental psychopathology is that knowledge of normal development is necessary to comprehend psychopathology and that, similarly, the examination of psychopathological development can elucidate the understanding of the normal functioning of individuals (Cicchetti, 1984, 1990). Because all pathology can be viewed as a distortion, disturbance, or degeneration of normal functioning, in order to comprehend psychopathology, the normal functioning with which psychopathology is compared must be fully grasped. Thus, a core aspect of a developmental psychopathology perspective lies in its focus on both normal and abnormal, both adaptive and maladaptive developmental processes (Sroufe, 1990).

Knowledge of the biological, cognitive, social–cognitive, and social–contextual changes that occur during normal adolescent development can contribute to the comprehension of serious mental disorders that emerge in adolescence. For example, an understanding of normative biological processes that occur during adolescence, such as the continued maturation of the prefrontal cortex (Thompson & Nelson, 2001) and the overproduction of gray matter just prior to puberty (Rapoport et al., 1999), should provide valuable insights into some of the mechanisms that eventuate in psychopathology.

Specifically, the spurt in gray matter that occurs during adolescence predominates in the frontal lobes, the seat of “executive functions,” such as reasoning, impulse control, and planning. In teenagers affected by the rare childhood onset form of schizophrenia, structural magnetic resonance imaging scans have revealed that there is four times as much gray matter loss (i.e., excessive synaptic pruning) in the frontal lobes than that which occurs normally (Rapoport et al., 1999). It appears likely that the processes underlying the normal development and maturation of cortical circuitry and connectivity have gone awry in this variant of schizophrenia (Arnold, 1999; Weinberger, 1987). Unraveling these misorganizations in brain development should greatly enhance our understanding of the genesis and epigenesis of schizophrenic disorders as well as provide insight into the organization of normal brain development.

Developmental Pathways

As a developmental period, it is essential to view adolescence in lifespan perspective. Attention to developmental pathways emerging earlier in development that eventuate in psychopathology or maladaptation in adolescence is critical for understanding variation in trajectories operating for different individuals. Both current risk and protective processes, as well as the history of their dynamic transactions and how they have influenced the evolving individual over the course of development, need to be examined. Moreover, because adolescents have not passed through the major risk period for adult disorders (e.g., schizophrenia, bipolar disorder, negative affect alcoholism), nonsympomatic adolescents may be on pathways toward adult disorders, although not currently manifesting those disorders at this stage of development. Being able to identify adolescents who are at risk for subsequent adult disorders is important for the elucidation of prodromal organizations that may subsequently evolve into adult psychopathology.

The general systems theory concepts of multifinality and equifinality (von Bertalanffy, 1968) are central for conceptualizing developmental pathways (Cicchetti & Rogosch, 1996). Multifinality specifies that diverse outcomes are likely to evolve from any original starting point. Individuals sharing characteristics at a specified starting point will not exhibit the same pattern of later developmental outcomes. Rather, varied outcomes will emerge. The ongoing dynamic transaction of risk and protective processes experienced uniquely by individuals will eventuate in different outcomes unfolding over the course of development. For example, being the offspring of a parent with alcoholism may contribute to an adolescent developing alcohol abuse and dependence. However, not all such offspring will develop alcoholism, either in adolescence or subsequently (Luthar, Cushing, Merikangas, & Rounsaville, 1998). Other psychopathologies (e.g., antisocial personality disorder, major depression), as well as adaptive functioning, may occur. Identifying the processes and their developmental progressions that contribute to the dispersion in outcomes is an important goal of developmental psychopathology.

A further illustration of multifinality is provided in Lee Robins’s (1966) classic work Deviant Children Grown Up. Children with conduct disorder were found to manifest differential outcomes in adulthood. Some displayed adult antisocial personality disorder, whereas others developed schizophrenia, and yet others exhibited normal adaptation.

Likewise, Cicchetti and Toth (1995) have concluded that not all maltreated individuals are equally affected by their traumatic ex-
periences. An array of psychological and biological deviations are displayed by individuals who have experienced sexual and physical abuse, neglect, and emotional abuse. Moreover, a subsample of these individuals function resiliently, despite their adverse experiences (Cicchetti & Rogosch, 1997; Luthar et al., 2000).

In contrast, the concept of equifinality specifies that a common outcome will develop over time from different starting points, indicating that diversity in processes is involved in attaining the shared outcome (Cicchetti & Rogosch, 1996). For example, some adolescents who develop a depressive disorder in adolescence may have a genetic predisposition for the disorder; others may have grown up in a home with substance abusing parents or experienced child maltreatment. Parental loss through death early in development may have occurred for others; still other adolescents may have more benign early experiences but may have struggled with the physical changes of puberty occurring as they entered junior high school. Thus, the common outcome of depression in adolescence is likely to result from diverse processes across different individuals rather than from all adolescents following the same progression to depression.

In an illustration of the concept of equifinality, Gjerde and Block (1996) have proposed different gender-based pathways to depression by early adulthood. In terms of expression of dysphoria, girls tend to be more allocentric, or outer-directed, resulting in heightened attention to their own thoughts and feelings of distress, low self-esteem, and preoccupations with adequacy of the self. In contrast, allocentric, or outer-directed, modes of symptom expression are more common in boys, resulting in them enacting their frustrations on the world with impulsiveness, anger, and antagonism. For adolescents, both forms of symptom expression are likely to interfere with the successful resolution of adolescent adaptational tasks. The two different forms of expression result in girls ruminating and having a negative self-focus when experiencing sadness and anger, and boys being more likely to be aggressive and antagonistic and to exhibit poor impulse control. Gjerde and Block found that the different sets of characteristics for girls and boys at age 14 predicted depressive feelings at age 18. However, in early adulthood at age 23, the manifestations of depression tended to converge for men and women, with men beginning to evidence more internal distress and women exhibiting more an- tagonism. For adolescents, both forms of symptom expression are likely to interfere with the successful resolution of adolescent developmental tasks. The two different forms of expression result in girls ruminating and having a negative self-focus when experiencing sadness and anger, and boys being more likely to be aggressive and antagonistic and to exhibit poor impulse control. Gjerde and Block found that the different sets of characteristics for girls and boys at age 14 predicted depressive feelings at age 18. However, in early adulthood at age 23, the manifestations of depression tended to converge for men and women, with men beginning to evidence more internal distress and women exhibiting more antagonism. It is important to note that the predictors of depression in boys were evident as early as nursery school, in terms of undersocialization of impulse and antagonism (Block, Gjerde, & Block, 1991). Observable predictors for girls did not appear until adolescence, reflecting girls' tendency to suppress outward expression of distress. Thus, females and males appeared to follow different developmental trajectories to depression through adolescence into early adulthood. The common outcome of depression evolves along different developmental pathways.

Relatedly, Duggal, Carlson, Stroufe, and Egeland (2001) reported that there appear to be different predictors of childhood onset depression as compared with adolescent onset depression, suggesting variation in processes promoting depression in different developmental periods. Maternal depression during childhood was related to both childhood and adolescent onset of depression. In contrast, childhood onset depression also was strongly influenced by additional factors related to pervasive deficits in the overall family context, including poor early supportive care of the child, abuse, and early maternal stress. Among adolescents, gender differences emerged for the predictors of depression. For girls, maternal depression during childhood was strongly associated with high depressive symptomatology during adolescence, whereas for boys, high depressive symptomatology was linked to deficits in the early supportive care they received. Thus, different processes appear to be prominent in promoting a common depressive outcome for boys versus girls during adolescence.

Neumann, Grimes, Walker, and Baum (1995) offer support that there are different developmental pathways to schizophrenia. The behavior problems that are antecedents to schizophrenia were found to vary in their developmental course, with some behavior problems revealing an insidious but consistent escalation across childhood and others manifesting more precipitous increases in adolescence. Finally, a third subgroup was identified that displayed more pronounced behavior problems that increased with age and that exhibited more neuromotor anomalies.

The identification of diverse pathways through which neurodevelopmental anomalies may result in schizophrenia provides insight into how specificity and differentiation into a syndrome may result from a commonality of initiating circumstances. These multiple pathways embrace a number of possible contributors which may potentiate or mediate the links between early neurodevelopmental anomalies and schizophrenia in genetically vulnerable individuals. These include the normal developmental changes that take place during late adolescence and early adulthood, such as (a) synaptic pruning of the prefrontal cortex (Feinberg, 1982; McGlashan & Hoffman, 2000), (b) pubertal increases in gonadal hormones during adolescence (Spear, 2000a, 2000b), (c) developmental transformations in prefrontal cortex and limbic brain regions (Keshavan & Hogarty, 1999), (d) continued myelination of intracortical connections (Benes, 1989; Gibson, 1991; Yakovlev & LeCours, 1967), (d) alterations in the balance between mesocortical and mesolimbic dopamine systems (Benes, 1989, 1994, 1997), (e) the stress that arises during postnatal social development (Keshavan & Hogarty, 1999; Walker & Diforio, 1997), (f) the transformations that occur in cognitive and social–cognitive development (Keating, 1990; Noam, Chandler, & LaLonde, 1995; Spear, 2000a, 2000b), and (g) the growing importance of the peer group. Such an integrative, interdisciplinary approach is necessary to capture the full complexity of schizophrenic illness, including the multiple pathways to, and the diverse outcomes associated with, the disorder. As Cicchetti and Tucker (1994) pointed out, such an interaction among these various changing developmental domains must also take into account the individual’s active strivings for self-organization that critically affect brain development. Relatedly, such a perspective suggests that specific treatments should be developed and implemented for use at particular developmental stages, before, after, and during illness episodes.

Research on antisocial personality disorder provides another illustration of the concept of equifinality. For example, Stattin and Magnusson (1996) noted that the correlations between childhood and adolescent/adult antisociality and adjustment relations often range between .20 and .40. Despite the importance of these developmental findings in terms of demonstrating continuities in development, the relations are not strong, and more occurs from early in development onward than stability over time. One reason for not observing stronger relations between early child externalizing difficulties and adolescent delinquency is that, although there is continuity for a group of problem children, there also is an emer-
gent group of youth who display delinquent behaviors during adolescence but who did not have significant problems in childhood. Research examining influences on delinquency based only on behavior in adolescence would combine the two groups, despite there being different developmental histories and likely different etiologies for disturbance in adolescence. This would obscure causal influences for both groups. In fact, different subgroups of adolescent delinquents with different etiologies have consistently been delineated by various research groups (Loeber, 1990; Moffitt, 1993; Patterson & Yoerger, 1993; Steinberg, 1987). Moffitt (1993) labeled these groups “life-course persistent” (LCP) and “adolescence limited” (AL). The LCP group evidences early conduct disturbance and mild neuropsychological deficits (Moffitt, 1993), as well as more early family dysfunction (Aguilar, Sroufe, Egeland, & Carlson, 2000), and has much greater likelihood of adult criminality. In contrast, the AL group does not evidence early difficulties in development, has better social skills in adolescence, and is likely to desist from delinquency and not evidence adult criminality. The LCP versus AL distinction, which is revealed through a developmental perspective, underscores the importance of expecting individuals with an identified disorder to have different etiologies, rather than sharing a common pathway.

Although the AL group appears to be less pathological, these youth are not without impairment beyond their delinquent behaviors. Aguilar et al. (2000) found that AL youth were more likely to report high levels of internalizing symptoms and life stress, suggesting that these adolescents may ultimately face more than transitory developmental behavior problems. In fact, in a prospective longitudinal investigation, Moffitt, Caspi, Harrington, and Milne (in press) found that the AL group evidenced elevations in various indicators of maladaptive functioning at age 26, including impulsivity, mental health problems, substance abuse, financial problems, and property offenses. Thus, their later adaptation manifested negative sequelae, and their adolescent delinquent problems were not without adverse developmental implications.

Nevertheless, the LCP group did demonstrate far greater continuity and severity of antisocial behavior, including much more extensive mental health problems, psychopathic personality traits, and substance abuse and dependence. These individuals also were more likely to have a larger number of children, have financial and work problems, and exhibit violence against women and children. Violent and drug-related crime also was more prevalent. Thus, this subgroup of antisocial youth, distinguished by childhood behavioral disturbances and family dysfunction, followed a pathway to more extreme adult antisocial behavior and more pervasive failure in adult adjustment.

Moffitt et al. (in press) also reported on a group of individuals who had exhibited antisocial problems in childhood but whose delinquent activity in adolescence was limited. By adulthood, these men largely did not appear to have recovered from their childhood behavioral disturbances. At age 26, they exhibited a pattern of low-level chronic offending. They also displayed elevated rates of depression and anxiety disorders and were socially isolated. Thus, childhood antisocial problems signified not transient problems for these individuals but rather a more enduring pattern of dysfunction that evolved in a different manner from that of their LCP peers.

Increasingly, analogous to the important distinction between AL and LCP delinquency, attention also has been directed toward differentiating subgroups of adolescents who may have different patterns of risk associated with their substance use. For example, Zucker, Fitzgerald, and Moses (1995) differentiated three types of alcoholism, including antisocial, developmentally limited, and negative affect. The antisocial and developmentally limited types have considerable similarity to the two types of delinquency that have been identified. Of interest, the negative affect type does not emerge until young adulthood. The developmental precursors to these three types of alcoholism are substantially different, underscoring the importance of identifying multiple developmental patterns that may eventuate in disorder rather than assuming a common set of etiological factors operates for all. Attention to the distinct causal processes that operate in different subgroups through the use of pattern-analysis and person-centered approaches provides a more complex view of the varied developmental trajectories of substance use disorders and their impact on long-term risk for disorder as well as recovery (Chassin, Curran, Hussong, & Colder, 1996; Schulenberg, Wadsworth, O’Malley, Bachman, & Johnston, 1996).

The principles of multifinality and equifinality suggest that investigations examining adolescent psychopathology should occur within a broad framework. Specifically, different psychopathology conditions and adaptive outcomes should be considered potential results of a common risk condition, and a specific form of psychopathology may develop in different individuals through alternative developmental processes.

Delineating developmental pathways over the course of development requires an ability to articulate continuities of behavioral organization across developmental time. Given the progression of expanding abilities and capacities and changing contexts as an individual develops, the meaning of the same behavior at different developmental periods may change. For example, drinking alcohol at age 10 versus at age 18 suggests very different meanings in terms of what the same behavior signifies (atypical or pathologic vs. normative). Thus, the identical behavioral expression of an underlying process at different developmental periods, that is, homotypic continuity, is likely to be rare (Kagan, 1971). In contrast, heterotypic continuity, or the manifestation of the same underlying process through different behavioral presentations at different developmental periods, should be anticipated. Heterotypic continuity has been demonstrated by changing manifestations of autonomy struggles at different points in adolescence (Allen, Hauser, O’Connor, Bell, & Eickholt, 1996). In the context of parent-adolescent interaction, hostility earlier in adolescence did not demonstrate continuity with midadolescent hostility (i.e., a lack of homotypic continuity). Rather, midadolescent hostility toward parents was found to be predicted by earlier adolescent difficulty in establishing autonomy and relatedness in relation to parents, as indicated by the adolescent’s autonomy-undermining behaviors (e.g., personalizing disagreements, prematurely recanting ones’ position). Thus, a changing behavioral manifestation of the same developmental process at different periods in adolescence was demonstrated.

Sroufe (1979) articulated the concept of coherence in development, specifying that the meaning, organization, and function of behaviors be identified in order to delineate behavioral continuities in developmental pathways, rather than focusing on the repetition of discrete behaviors. Thus, heterotypic continuity, involving persistence of the underlying organization and meaning of behavior
despite changing behavioral manifestation, is likely to be encountered frequently and should be central to how adolescent development is conceptualized.

Cultural Influences

The influence of culture on development and psychopathology has not received adequate attention (Garcia Coll, Akerman, & Cicchetti, 2000; Hoagwood & Jensen, 1997), yet the milieu in which an adolescent develops is likely to profoundly influence the developmental course. The dynamic interplay of risk and protective processes may have differential impact depending on the cultural norms, practices, values, and beliefs. Cultures may be characterized on a continuum ranging from sociocentric (emphasizing community, family, and interconnectedness) to individualistic (emphasizing individuality, autonomy, and personal achievement; Schweder & Bourne, 1991). The ideal self correspondingly varies with respect to the degree to which the self is defined in terms of relatedness to others versus in terms of autonomy and achievement. As such, cultural groups will differ in their socialization goals for desired outcomes for well-functioning members of the culture. Norms for appropriate and inappropriate behavior will have different thresholds, and discipline strategies will vary in accord with what behaviors are regarded as desirable or unacceptable. Gender expectations also may vary.

Canino and Guarnaccia (1997) noted that psychiatric epidemiological studies have shown that Puerto Rican adolescents exhibit lower rates of conduct disorder and substance abuse than adolescents in mainland America, and this difference may be attributable to greater monitoring and supervision of teenagers in the culture, consistent with a more sociocentric emphasis, and a more authoritarian parenting orientation, fostering deference to adults and social institutions. Conversely, the high rate of teen pregnancies among Puerto Rican youth (Garcia Coll & Vazquez Garcia, 1996) may suggest that these girls assume more adultlike responsibilities earlier in their lives, thereby decreasing the likelihood of their involvement in conduct disordered and substance-abusing behaviors.

To provide a further illustration, Luthar and McMahon (1996) discovered that inner-city youth whose peer representations were aggressive nonetheless were popular with their peers. Thus, in addition to the more typical pathway to peer popularity (i.e., prosocial behaviors, academic success), Luthar and McMahon identified a less typical pathway characterized by disruptive and aggressive behaviors and poor academic functioning. They hypothesized that within the crime-, violence-, and poverty-laden disenfranchised communities where these youth reside, aggressive behaviors that are viewed as deviant by the mainstream may be associated with prestige and high status among particular socioeconomic groups.

Thus, risk and protective processes and the manner in which they transact may vary depending on priorities of the culture. Consequently, the individual’s response to an event, as well as the reactions of other members of the culture, will influence the salience of the event and how it is responded to. Culture also may influence the mode of symptom expression. Cultural values, beliefs, and practices may tend to suppress manifestation of distress in one domain (e.g., socioemotional) while tolerating the expression in another domain (e.g., physical; Weisz, Suwanlert, Chatya-

Prevention and Intervention

Now that we have examined some illustrative principles of developmental psychopathology and their relevance to investigating adolescent adaptation and psychopathology, we discuss how a developmental psychopathology framework can similarly assist in the development and provision of prevention and intervention to adolescents who are at risk for or who have developed psychopathology. Of course, we are not suggesting that a developmental psychopathology perspective is necessary to treat adolescent psychopathology. However, we do believe that such a framework can enhance the treatment of adolescent psychopathology regardless of the specific theoretical orientation used.

Although it might be assumed that logical connections exist between the provision of psychotherapeutic interventions to children and adolescents and developmental theory and research, far too few bridges have been forged between these areas of knowledge (Cicchetti & Toth, 1992; Shirk & Russell, 1996; Toth & Cicchetti, 1999). Because nondevelopmental, adult-derived classification guidelines have historically been applied to formulating diagnoses of the mental disorders of childhood and adolescence (Jensen & Hoagwood, 1997; Silk, Nath, Siegel, & Kendall, 2000), it is not surprising that developmental approaches to intervention, frequently drawn from the adult literature, often have been the norm when providing interventions to children and adolescents. The perpetuation of the “developmental uniformity myth” (Kendall, Lerner, & Craighead, 1984) to interventions for children and adolescents, wherein it is assumed that mental disorders manifest themselves similarly regardless of age and therefore do not require therapeutic techniques that are sensitive to developmental change, has impeded efforts to provide theoretically guided and developmentally appropriate services to children and adolescents.

Fortunately, an increased dialogue among theorists, basic researchers, and professionals interested in providing developmentally guided prevention and intervention to children and adolescents has occurred in recent years. A major impetus to this process has emanated from the field of developmental psychopathology. As a growing number of research investigations have illustrated how the study of the interface between normal and abnormal development is mutually enriching for scientists of each persua-
sion, the application of findings conceptualized within the developmental psychopathology genre to intervention efforts has similarly increased. In fact, in recognition of the field’s importance, the Institute of Medicine (1994) report on reducing risks for mental disorders through preventive intervention highlighted developmental psychopathology as one of four core sciences considered to be necessary for advancing prevention and intervention efforts for children and adolescents.

Because adolescence marks a significant transition period in development, with ensuing reorganization within and among biological and psychological systems and the consequent emergence of new behavioral organizations, this period provides an important opportunity for prevention and intervention (Holmbeck et al., 2000; Toth & Cicchetti, 1999; Weiss, 1997). Clearly, all adolescents need to negotiate the developmental tasks of the period. Thus, for adolescents who have developed competently, contexts need to continue to scaffold and optimize these individuals’ ongoing success. For adolescents who have had a compromised earlier development or who have exhibited psychopathology, adolescence presents an important window for fostering change to deflect the quality of adaptation onto a more competent developmental trajectory. Developmental psychopathology offers an important foundation for conceptualizing how to achieve these goals.

A major common theme that should undergird prevention efforts is how best to promote competent resolution of the primary developmental tasks of adolescence. Many problem behaviors of adolescence, particularly when engaged in to extremes, can be conceptualized as compromised attempts to grapple with establishment of psychological autonomy. Conversely, adolescents who do not strive adequately to attain psychological autonomy will be dependent and less prepared to establish their own direction and identity in early adulthood. In effect, autonomy strivings can cut across stage-salient issues of adolescence such as the formation of intimate relationships and the establishment of a cohesive sense of self-identity.

Contexts need to optimize adolescents’ strivings for psychological autonomy, and this should occur in a graded fashion in accord with changing needs as the adolescent matures. For example, mismatches between contexts and the developmental needs of the early adolescent, as exemplified by organizational features of traditional junior high schools that do not promote a successful transition, can lead to dismotivation and may stimulate problem behavior (Eccles, Lord, & Roeser, 1996). Restructuring junior high schools in accord with the developmental needs of early adolescents would potentiate more adaptive academic and social strivings. Similarly, Keating and MacLean (1996) reported that gender-segregated math and science classrooms in 9th and 10th grades had a significant influence on fostering subsequent interest and achievement in math and science for girls. Structural change allowed for girls to gain more self-confidence in abilities, which in mixed-gender classroom were reduced because of discomfort during those years in competing with boys.

Siegel and Scovill (2000) similarly highlight the need for teenagers’ environments to be structured so as to optimize their success in negotiating developmental tasks. The meaning adolescents ascribe to “problem behaviors” is likely to differ from that of adults and most likely involves a strategy to assert autonomy. Rather than be provided exclusively with restrictions, adolescents would benefit from contexts that provide alternative avenues for asserting autonomy in ways that both have personal meaning and promote self-esteem and personal accomplishment (Siegel & Scovill, 2000). Through processes of person–environment correlation, individuals progressively select or delimit the particular environments that they experience. However, the niches that adolescents have available to them will influence the extent to which individual characteristics are accentuated. Wachs (1996) noted that some adolescents, particularly those in impoverished and disorganized communities, may have few niche options available and that the ones they do have may be largely negative. Thus, providing more positive niches to adolescents that match their particular strengths may facilitate their exhibition of competence and striving. This may be particularly true for adolescents who do not excel in academics or athletics or who are highly unconventional and therefore may need alternative avenues for expressing and building their unique strengths.

Masten and Curtis (2000) reviewed the complementarity of constructs of competence and psychopathology and noted that although the two domains are distinct, they are inextricably interwoven. Building on adolescents’ strengths and promoting competence thus is important prevention strategies to protect against emergent psychopathology. Such an approach based on enhancing “psychological wellness” has been advocated consistently by Cowen (1994; Cicchetti, Rappaport, Sandler, & Weissberg, 2000). Cowen (1994) outlined five essential elements for promoting psychological wellness: promoting wholesome early attachments, rooting early core competencies, engineering wellness-enhancing settings, acquiring effective stress coping skills, and empowerment.

Implicit in Cowen’s (1994) formulation is a recognition of the importance of the organizational perspective on development and the building of a foundation of competence in the early years, beginning with a secure attachment and further acquisition of competencies as subsequent developmental tasks are negotiated. Consequently, promoting competence and psychological wellness in adolescence must be conceptualized within a developmental lifespan perspective; interventions designed to promote positive attainments during the early years also can be considered as instilling a foundation of competence that should contribute to a greater likelihood of psychological wellness in adolescence. For example, interventions to reduce preschool emotion dysregulation, aggression, and impulsivity through promoting competent resolution of the developmental tasks of the period could reduce the emergence of conduct disorder during elementary school and the engagement of a life-course-persistent antisocial pathway (Moffitt, 1993).

Cowen’s (1994) third goal of engineering wellness-enhancing settings is consistent with the types of school structural changes and opportunity-enhancing contexts advocated above (Eccles et al. 1996; Keating & MacLean, 1996; Siegel & Scovill, 2000). All adolescents will continue to confront stressors in their lives, but the extent of intense stress is escalated in impoverished and structurally disorganized communities. Thus, all adolescents need effective coping skills. Coping skills may be acquired over the course of development as competence in the affective, cognitive, and social domains is attained. However, new coping skills may be required for adolescents who do not have benign and supportive developmental histories. Programs geared toward building adaptive coping skills in such youth are important for helping these
adolescents in the challenges they face during this period. Finally, empowerment as a guiding strategy to promote psychological wellness involves appreciation of adolescents’ experiences within the specific contexts and cultures they reside in. Prevention and wellness enhancement efforts must be formulated in terms of the unique meaning and sociocultural realities of the group of interest, and with their participation. The empowerment ideal is likely to be particularly important in order to reach adolescents in ways that are meaningful to them and that empower them to make adaptive choices as they negotiate the adolescent era.

Luthar and Cicchetti (2000) emphasized that findings from research on resilience in high-risk youth, particularly those in impoverished communities who face multiple interacting risk factors, are valuable for informing preventive efforts. Identifying processes that contribute to positive adaptation despite profound adversity directs attention toward factors that would be important to promote in the lives of high-risk children generally. Such factors may derive from different levels of the social ecology, including individual characteristics, family features, and community resources. The collective of protective resources that a youth experiences may be particularly important for promoting resilience in the context of multiple adversities. Just as an increasing number of risk factors exponentially elevates the potential for negative outcomes, an increasing number of protective resources exponentially facilitates resilient outcomes in adolescents (Fergusson & Lynskey, 1996), and if protective resources are available at different levels of the social ecology, resilient functioning will be enhanced. Because resilience is an ongoing dynamic process rather than a static characteristic of children and adolescents (Luthar et al., 2000), prevention programs promoting resilience, especially among youth immersed in adversity, likely need to be long term and geared toward assisting high-risk youth across successive periods of development. Short duration and narrowly focused interventions are not likely to be effective to combat the heavy weight of multiple risk factors.

Appreciation of equifinality in development with a specific form of psychopathology evolving from different origins and developmental pathways necessitates a recognition that one prevention strategy focused on a singular causal model may not be sufficient. A single pathway may be influenced by interventions formulated within one conceptual model, but alternative pathways may not be. Zucker, Ellis, Fitzgerald, Bingham, and Sanford’s (1996) delineation of different subtypes of alcoholism is a case in point. Youth with AL alcoholism, without a substantial burden of developmental liabilities, might be more likely to benefit from programs geared toward greater awareness of the potentially serious negative consequences of impaired decision making (e.g., driving while intoxicated, unwanted pregnancies, acquiring HIV). Alternatively, adolescents at risk for negative affect alcoholism may benefit more from interventions based on reducing negative attributional biases, anger management, and alternative ways to experience positive affect and pleasure. For antisocial alcoholism, the alcohol problems are embedded within a larger behavioral organization of antisociality with strong developmental origins in childhood. Prevention of this form of alcoholism focused only on the adolescence period may not be effective given the extent of long-term, consolidated developmental processes that contribute to this outcome. Prevention efforts would ideally be coordinated with those designed to reduce conduct disorder and implemented early in development. As a result of these differences in pathways, devising reliable methods to differentiate among the subtypes of alcoholism will be essential so that appropriate interventions may be targeted at the respective subgroups to maximize effectiveness of the intervention.

Therapists providing more individualized clinical interventions for adolescents with disorders similarly need to be cognizant of the different pathways that may lead to a particular disorder (Toth & Cicchetti, 1999). Applying the same theoretical approach to all cases may not be effective because of the inherent differences among adolescents in the processes in development that eventuate in a given disturbance. Moreover, because the processes leading to a disorder may not be the same ones that maintain a disorder (cf. Courchesne, Townsend, & Chase, 1995; Post, 1992), different therapeutic approaches or emphases may be needed depending on where one is trying to intervene in the course of the disorder. For example, treatment for an adolescent with an initial episode of depression may need to differ from that provided to an adolescent with onset during childhood. Treating adolescents also requires specific attention to the cognitive and emotional capacities they have to make use of an intervention (Holmbeck et al., 2000; Shirk, 1988; Toth & Cicchetti, 1999). Not all adolescents reason at the same level, and within individuals there is likely to be inconsistency in the sophistication with which they reason across different content domains (Keating, 1990). Attention to the personal meanings that adolescents ascribe to their behaviors also is critical. Finally, given that adolescents with disorders are likely to struggle with resolving the stage-salient task of adolescence, optimal balance between parental authority and adolescent autonomy strivings often will require interventions to assist the whole family in negotiating the challenges of this period of development.

Conclusion

In summary, we have sought to frame this special section on “Adolescent Clinical Psychology: Developmental Psychopathology and Treatment” by providing an overview of concepts and aspects of the discipline relevant to adolescent risk and psychopathology. It is not feasible in an article of this length to comprehensively address all facets of developmental psychopathology, and we therefore refer the interested reader to other sources for elaboration (e.g., Cicchetti & Cohen, 1995a, 1995b; and the 24 special issues of the journal Development and Psychopathology). We do not profess to have addressed all issues of import to adolescent development, nor all investigations framed within a developmental psychopathology perspective that are meaningful to inquiries in this area. Rather, it is our hope that the conceptualization proffered herein will impel experts in adolescent research and treatment to broaden their thinking to incorporate relevant components of this framework into their ongoing work.

References


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