Chapter 7

A Developmental Framework for Selecting Indicators of Well-Being During the Adolescent and Young Adult Years

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In this chapter, we have two goals: (a) to suggest a set of psychological and social assets that are important for healthy development during adolescence and young adulthood and (b) to summarize the readily available indicators for these assets. We address the first goal in the first half of our chapter. We address the second goal in the last half of the chapter.

DEVELOPMENT DURING ADOLESCENCE AND YOUNG ADULTHOOD

There is general agreement that the adolescent years are critically important for the successful transition to adulthood. We have included the years from 18 to 25 as well because rapid demographic, sociocultural, and labor market changes have made these years as transitional as the teen years were in previous generations. As recently as the 1960s, the transition into adulthood in most Western industrialized countries (particularly in the United States and Canada) was well defined for most social class groups: adolescents finished high school and either went to college or into the labor market or the military. People generally married and began families in their early 20s. Thus, people were usually launched into adulthood by their early 20s, and there were only a limited number of fairly well-defined pathways from adolescence into adulthood. This is no longer the case for many young people (Arnett, 2000; Corcoran & Matsudaira, 2005; Fussell & Furstenberg, 2005; Mortimer & Larson, 2002; Mouw, 2005; Osgood, Ruth, Eccles, Jacobs, & Barber, 2005). The median age for marriage and childbearing has moved up to the late 20s. Both the length of time and proportion of youth in some form of tertiary education have increased dramatically. Finally, the heterogeneity of passage through this period of life has exploded. There is no longer a small, easily understood set of patterns for the transition to adulthood, making the years between 18 and 25 as challenging a period of life as adolescence. In the United States, the level of challenge is especially high for noncollege youth and for members of several ethnic minority groups, particularly Blacks and Hispanics, for the following two reasons. First unlike many European and Asian industrialized countries, there is very little institutional support for the transition from secondary school to work in the United States, creating what the William T. Grant foundation (1988) labeled a "floundering" period in their important report: *The Forgotten Half*. Second, stereotypes about the competence of Blacks and Hispanics, coupled with lower levels of "soft skills" (Murnane & Levy, 1996) and the loss of employment options in many inner city communities (Wilson, 1997), have made employment of Black and Hispanic youth (particularly males) quite problematic (Corcoran & Matsudaira; 2005; Mollenkopf, Waters, Holdaway, & Kasinitz, 2005).

The years from age 10 to 25 are marked by major changes at all levels. Among the most dramatic are the biological changes associated with puberty. These include dramatic shifts in the shape of the body, major increases in gonadal hormones, and changes in brain architecture. These biological shifts are directly linked to increases in sexual interest and changes in both cognitive and physical capacities. However, there are also major social changes associated with school and work and with the changing roles adolescents and young adults are expected to play by friends, parents, teachers, coaches, and so on. Finally, there are major psychological changes linked to increasing social and cognitive maturity. In fact, very few developmental periods are characterized by so many changes at so many different levels. With rapid change comes a heightened potential for both positive and negative outcomes (Rutter & Garmezy, 1983; Wheaton, 1990). Although most individuals pass through these two developmental periods without excessively high levels of storm and stress, a substantial number of individuals experience difficulty that extends well into young adulthood (Arnett, 1999; Eccles et al., 1993; Osgood et al., 2005).

Adolescence and emerging adulthood are particularly important for life course development because these are times when individuals make many choices and engage in a wide variety of behaviors that have the potential to influence the rest of their lives (see Mortimer, 2003; Mortimer, Zimmer-Gembeck, Holmes, & Shanahan, 2002; Osgood et al., 2005; Settersten, Furstenberg, & Rumbaut, 2005). For example, adolescents pick which high school courses to take, which after-school activities to participate in, and which peer groups to join. They begin to make future educational and occupational plans and to implement these plans through secondary school coursework and out-of-school vocational and volunteer activity choices. Finally, some experiment with quite problematic behaviors linked to drug and alcohol consumption and unprotected sexual intercourse. Similarly, in the emerging adulthood years individuals make choices related to education, vocational training, entry into the labor market, transitions within the labor market, moving out of one's natal family home, spouse selection, and parenthood. Given the power that these choices and behaviors can have over future options and opportunities, it is critical that we understand what influences whether youth stay on a healthy, productive pathways or move onto more problematic, and potentially destructive, pathways as they pass through this important developmental period.

In his theoretical model of life span development, Eric Erikson (1963, 1968) outlined a set of tasks that are particularly salient for individuals between the ages of 10 and 25, namely, developing a sense of mastery, a sense of identity, and a sense of intimacy. Others have expanded these tasks to include establishing increasing autonomy from one's natal family and/or taking on the responsibilities to one's family and community that are identified with adulthood in various ethnic groups, dealing with sexuality and intimacy, finding a niche for oneself in the worlds of education and work, and moving into the roles associated with partnering and parenting (e.g., Havinghurst, 1972; Levinson, 1978). As individuals make the transition into adulthood in this society, they become more and more independent from their natal families. As a consequence, they need to play a much more active role in their own development. This involves taking on and then managing and coordinating multiple demanding life roles; refining the skills necessary to succeed in these roles; finding meaning and purpose in the roles one has selected, or has ended up in for any number of reasons; developing a mature view of one's strengths and limitations; coping with both foreseen and unforeseen events and life changes; making changes in one's life course, if necessary; and then coping with both the planning and implementation of these new choices.

As Erikson (1968) made clear, each of the tasks of adolescence and emerging adulthood is played out in a complex set of social contexts and in both cultural and historical settings (see also Bronfenbrenner, 1979; Eccles et al., 1993; Settersten et al., 2005). For example, the array and severity of risks for adolescents have increased dramatically over the last 30 years as communities have become more transient and less homogeneous, drugs have become more widely available, and social norms have become less rigid and proscribed. Similarly, the passage from 18 to 25 has become increasingly complex during the last 40 years as the transition to adulthood has become more extended in time and less homogeneous in the array of transitional and end-state patterns

(Arnett, 2000; Settersten et al., 2005). These changes have created a situation in which the tasks of emerging adulthood must be carried out in a climate of extreme uncertainty about both one's current options and the implications of one's choices for future options and barriers.

Optimal progress on each of these tasks depends on the psychosocial, physical, and cognitive assets of the individual (Eccles & Gootman, 2002; Erikson, 1963; Wheaton, 1990). Because transition and change are primary characteristics of both of these life periods, personal and social assets that facilitate coping with change will be critical for successful functioning during these periods. Optimal progress also depends on the developmental appropriateness of the social contexts encountered by the individual as he or she passes through these periods of life. Repeated exposure to developmentally inappropriate and unsupportive social contexts during these years can undermine the coping skills of even the most resilient youth (Eccles, Barber, Stone, & Templeton, 2003; Foster & Gifford, 2005; Mortimer, 2003; Rutter, 1988; Setterstein, 2005; Werner & Smith, 1982, 1992). This complexity must be taken into account when one thinks about successful development during this period of life. Equally important is the longer term consequences of well-being during these two periods for the successful transition into adulthood. Failure to deal with these tasks adequately will place restrictions on adult options-restrictions that are very hard to overcome.

PERSONAL ASSETS

Having laid out the major developmental challenges associated with adolescence and emerging adulthood, we now turn to a discussion of the personal and social assets likely to facilitate both optimal passage through these periods of life and optimal transition into the next phase of life-adulthood. In this section, we review what we know about the personal and social assets that predict both concurrent well-being and optimal future life transitions. First, we discuss what theories and practical wisdom tell us about the likely assets, and then we very briefly summarize what empirical studies (particularly longitudinal studies) tell us about these assets.

Theoretical Perspectives

Developmental theoreticians in psychology, sociology, anthropology, and ethology have speculated on the core human needs and how their fulfillment relates to well-being and well-becoming. Freud, the first grand scientific theorist to suggest core human needs, suggested that well-being depended on success in the two broad domains of work and love. More recently, Erikson proposed the following characteristics as key to healthy psychological development: trust (which he linked to positive emotional relationships with caring adults), a strong sense of self-sufficiency, initiative, a strong sense of industry (confidence in one's ability to master the demands of one's world), identity, and intimacy. More recently, theorists ranging from Harter (1990), Bandura (1997), Deci and Ryan (1985), and Connell and Wellborn (1991), in the field of motivation; to Garmezy and Rutter (1983; see also Masten & Coatsworth, 1998) in the arena of risk and resilience; and to Baltes, Lindenberger, and Staudinger (1998), Elder (1998), and Levinson (1986) in the field of life span development have suggested the following: a sense of personal efficacy, intrinsic motivation, a desire for mastery, social connectedness, good emotional coping skills, planfulness, a sense of optimism, and attachment to conventional prosocial institutions.

Practical Wisdom

Over the last 10 or so years, many lists of assets have been proposed by foundations, youth-serving organizations, and practitioners. Lerner, Fisher, and Weinberg (2000) summarized these lists, along with their sense of the empirical literature, in terms of five major psychological assets: (a) competence in academic, social, and vocational arenas; (b) confidence; (c) connection; (d) character; and (e) caring and compassion. The Search Institute (see Scales & Leffert, 1999) has also provided an extensive list of personal assets broken into the following six general areas and has provided extensive research evidence of the importance of each of these assets: (a) commitment to learning; (b) positive values; (c) social, interpersonal, and cultural competencies; (d) positive identity; (e) positive use of time; and (f) autonomy and "mattering."

Empirical Findings

There has been substantial research over the last 50 years aimed at identifying the key characteristics needed for success in the American society. Much of this work has grown out an effort to understand resilience and well-being. By and large, these suggestions coincide quite well with the suggestions made by both theorists and practitioners. For example, in the now-classic study of development of poor children and their families on Kauai, Emmy Werner and her colleagues concluded that the following characteristics are key for resilience: good cognitive skills; good social skills and an engaging personality; self-confidence, self-esteem, and self-efficacy; good self-regulation skills; good coping and adaptation skills; good health; strong social connections to family; strong social connections to prosocial organizations and networks; and spirituality or a sense of meaningfulness. These conclusions were based on a longitudinal study that lasted more than 25 years. Clausen (1993) and Elder (1974) reached similar conclusions based on the classic longitudinal work done on the Berkeley and Oakland Growth Studies, following a sample of children born just before or during the Depression. Clausen added planfulness to the list. Other longitudinal researchers have provided additional support for the importance of various subsets of these characteristics (e.g., Block, 1971; Cairns & Cairns, 1994; Compas, Wagner, Slavin, & Vannatta, 1986; Elder & Conger, 2000; Furstenberg et al., 1987; Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999; Jessor, Donovan, & Costa, 1991; Moritmer, 2003; Sampson & Laub, 1993).

In reviewing this work and related studies of resilience and adolescent development, the National Research Council (NRC) panel on Community-Based Programs for Youth (Eccles & Gootman, 2002) selected the personal assets listed in Table 7.1 (organized around three general categories: intellectual development, psychological and emotional development, and social development). There is quite strong empirical evidence of the link of some of the personal characteristics (assets) to other widely accepted indicators of well-being, such as school success, good mental health, avoidance of involvement in a variety of problem behaviors, and both educational and occupational attainment.[1] The empirical work is much weaker for other assets, and we know very little about how these assets work together to facilitate positive development. For example, very few studies have included more than a couple of the assets and target outcomes. Thus, we have no idea which of these assets are most important for various outcomes, and we have no idea how various patterns of the assets work together to support positive development. It seems quite likely that there are many quite effective profiles of personal assets and that different profiles are more or less effective in different cultural and personal contexts. Nonetheless, the existing literature suggests three major conclusions: (a) it is important to have assets in each of the three general categories; (b) within each general category, one can do quite well with only a subset of the many characteristics listed, and (c) in general, having more assets is better than having only a few.

In addition, much more work is needed to establish the extent to which these assets are equally important in different cultural groups and to extent to which other assets need to be added for other cultural groups. More work is especially needed on the role of constructs linked to culture and ethnicity, including cultural knowledge, ethnic identities, coping skills for dealing with experiences of discrimination and racism, and management skills for living in an ethnically and culturally diverse world. Finally, we know very little about the role of these and possibly other assets for a wide range of subpopulations such as either youth with disabilities or highly gifted youth.

SOCIAL ASSETS

Personal assets do not exist or develop in a vacuum, however. Evidence suggests that these personal assets influence life chances because they both facilitate the engagement of youth in positive social contexts that support continued positive development and protect youth against the adverse effects of negative life events, difficult social situations, pressure to engage in risky behaviors, and academic failures. So, on the one hand,

Table 7.1

Personal Assets That Facilitate Positive Youth Development

Intellectual development

Knowledge of essential life and vocational skills

Rational habits of mind – critical thinking and reasoning skills

Good decision-making skills

In depth knowledge of more than one culture

Knowledge of skills needed to navigate through multiple cultural contexts

School success

Psychological and emotional development

Good mental health including positive self-regard

Good emotional self-regulation and coping skills

Good conflict resolution skills

Mastery motivation and positive achievement motivation

Confidence in one's personal efficacy

Planfulness

Sense of personal autonomy/responsibility for self

Optimism coupled with realism

Coherent and positive personal and social identity

Prosocial and culturally sensitive values

Spirituality and/or a sense of purpose in life

Strong moral character

Social development

Connectedness – perceived good relationships and trust with parents, peers, and some other adults

Sense of social place/integration – being connected and valued by larger social networks

Attachment to prosocial/conventional institutions such as school, church, out of school youth development centers

Ability to navigate in multiple cultural contexts

Commitment to civic engagement

Source: Box 3-1, Eccles & Gootman, 2002. Content reproduced with permission of the National Academies Press.

these personal assets can increase life chances, and on the other hand, excessive and prolonged exposure to negative life events, dangerous contexts, and inadequate schooling are likely to undermine youth's life chances despite personal assets (e.g., X. Cui & Vallant, 1996; Elder, 1998; Jessor et al., 2003; Kim, Conger, Elder, & Lorenz, 2003; Mortimer, 2003). In addition, these personal assets will take youth only so far. They need continued exposure to positive developmental contexts as well as abundant opportunities to refine their life skills so that they have the means to move into jobs that provide living wages. Some youth live in families and neighborhoods that ensure these experiences. Others do not. Given these concerns, the second thing that the NRC panel did was to suggest a set of social assets (characteristics of the contexts in which youth spend their time) that are important for supporting the development of these personal assets. Again the panel relied on theory, practical wisdom, and empirical evidence from work in multiple disciplines. The following contextual characteristics emerged from this review with strong support across studies of families, peer groups, schools, communities, and out-of-school programs for youth:

- adequate provisions for physical and psychological safety, developmentally appropriate levels of structure and adult supervision;
- supportive relationships with adults;
- supportive and respectful relationships among peers;
- opportunities to development a strong sense of belonging;
- opportunities to experience mastery and mattering;
- opportunities to learn the cognitive and noncognitive skills essential for succeeding in school, work, and other prosocial social and institutional settings; and
- strong positive social norms for behavior.

These general assets are elaborated in Table 7.2 along with specific features representative of each asset category. We include these in this chapter because we (like many practitioners and people interested in youth policy, e.g., the Search Institute, public/private ventures, the William T. Grant Foundation) believe it is important to be gathering systematic data on the extent to which communities are providing these contextual experiences for their youth. There are good indicators available for some of these contextual features, particularly with regard to the family context. There are very few such indicators for many of these features for other contexts of development, such as the schools, peer groups, out-of-school programs, and workplace contexts. There are even fewer indicators of these social contextual assets at the community level. The Search Institute has led the way in creating such community-level social asset indicators. Although community asset mapping activities are becoming more common, a great deal of work remains before there will be readily available, high-quality instruments to use as indicators of many of these social assets.

Table 7.2
Features Of Contexts That Promote Youth Development

Context	*Descriptors*	*Opposite poles*
Appropriate structure	• Age appropriate monitoring • Limit setting • Clear and consistent rules and expectations • Age appropriate controls and rules continuity • Predictability • Clear boundaries	• Chaotic • Disorganized • Laissez-faire • Rigid • Over-controlled • Autocratic
Physical and Psychological Safety	• Safe and health promoting facilities • Practices that increase safe peer group interaction • Practices that decrease unsafe or confrontational peer interactions	• Physical and health dangers • Fear • Feeling of insecurity • Sexual and physical harassment • Verbal abuse
Emotional and Instrumental Support	• Warmth • Closeness • Connectedness • Good communication • Caring • Support • Guidance • Responsiveness	• Cold • Overcontrolling • Ambiguous support • Untrustworthy • Focus on winning rather than mastery • Inattentive • Unresponsive • Rejecting
Opportunities to Belong	• Opportunities for meaningful inclusion, regardless of one's gender, ethnicity, or disabilities • Social inclusion • Social engagement and integration • Opportunities for social-cultural identity formation • Support for cultural and bicultural competence.	• Exclusion • Marginalization • Intergroup conflict • Tolerance of bullying and discriminative behaviors
Pro-Social Norms	• Prosocial rules of behavior • Strong expectations for prosocial and moral behaviors • Prosocial values and morals • Obligations for service and for helping within program	• Normlessness • Anomie • Tolerance for antisocial and amoral norms and behaviors such as those linked to violence, reckless behavior, bullying, consumerism, and poor health practices • Tolerance of peer pressures to conform.
Opportunity for Efficacy and for Mattering	• Youth based, empowerment practices that support autonomy, mattering, and being taken seriously • Practices that include enabling, responsibility granting, meaningful challenge • Opportunities to demonstrate and acquire mastery in valued activities • Service opportunity • Stress on improvement	• Unchallenging • Overcontrol • Disempowerment • Disabling • Failure experiences without opportunity to improve • Stress on social comparative performance rather than mastery and improvement • Lack of role in governance and program planning

(continued)

Table 7.2 *(continued)*

Context	*Descriptors*	*Opposite poles*
Opportunities for Skill Building	• Intentional learning environments • Knowledge-centered environments • Opportunities to learn cultural and media literacies, communication skills, and good habits of mind • Preparation for adult employment • Stress on improvement • Opportunities to develop social and cultural capital	• Practices that promote bad physical habits and habits of mind • Practice that undermine school and learning • Lack of opportunities to learn important life skills • Stress on social comparative performance rather than mastery and improvement
Integration with Family, Schools, and Community	• Concordance, coordination and synergy between family, school, and community • Opportunities to develop social and cultural capital	• Discordance, lack of communication, conflict.

Source: Table 4-1, Eccles and Gootman, 2002. Content reproduced with permission of the National Academies Press.

Although there is strong support for the importance of each of these general social assets, we know very little about how these assets work together across contexts of development. Most of the studies have focused on one context, usually the family. We know little about whether, when, and how assets in one context, like the school or a community-based program for youth, can compensate for the lack of such assets in other contexts, like the family. Studies that do include indicators of multiple contexts (e.g., Cook et al., 2002; Eccles, Early, Frasier, Belansky, & McCarthy, 1997; Elder & Conger, 2000; Furstenberg et al., 1999) suggest that the impact of contexts are additive-meaning they accumulate. These results suggest that exposure to positive social assets in one context can help ameliorate the lack of such exposure in other contexts. These results also indicate that having assets across many contexts is associated with more positive outcomes than having social assets in only one or two contexts.

Another problem hindering our ability to understand the relation of social assets across contexts is the lack of comparable measures for the different contexts. Until quite recently, researchers have tended to focus on one context and have developed measures for only that one context. Consequently, quite different conceptualizations and measures of the social assets of the different contexts have emerged-making comparison across contexts very difficult. Much more work is needed on the development of comparable indicators of social assets across various contexts so that we can actually compare the impact of specific social assets across these contexts.

Finally, as was true for personal assets, the importance of cultural issues is just being acknowledged in both measure development and conceptualization of social assets. As but one example of this problem, consider the role of support for autonomy. Western scholars with a northern European perspective have stressed the importance of independence from one's parents and other adults as a key feature of support for autonomy during adolescence. Scholars with other perspectives have questioned this orientation, suggesting instead that maturity is reflected by a changing form of interdependence between the generations, a form that involves taking on great responsibility for the well-being of one's natal and extended family rather than a form that involves moving away from one's natal and extended family (see Fuligni & Flook, 2005). The types of social opportunities needed for one of these forms of maturity are likely to be different from the opportunities needed for the other. Conceptual and methodological work is needed to further our understanding of such differences.

A second critical example of this problem is the scarcity of indicators of experiences linked to discrimination and racism on the one hand and to experiences linked to learning tolerance and both cultural respect and valuing of diversity on the other. We live in a very diverse society, and yet we have little information about the contextual characteristics and assets that promote well-being in diverse cultural situations. Given the changing demographics in the United States, such work is critical.

EXISTING INDICATORS AND DATA SOURCES

We now turn to a discussion of existing indicators. In the first part of this section, we discuss indicators available at the community level. We then turn to a discussion of various either national or regional survey instruments that have been developed during the last 10 to 20 years. Many of these contain short scales directly related to the assets listed in Tables 7.1 and 7.2. We end this section with a summary of a variety of studies focused on a more limited set of indicators. This section is organized around the assets listed in Tables 7.1 and 7.2. Again we provide information about how to locate these scales.

COMMUNITY-LEVEL INDICATOR DATA

Communities make use of a variety of data sources for monitoring the well-being of their youth. These include census data; administrative sources, such as school records and vital statistics; as well as original surveys using high-quality survey instruments developed for that purpose. Administrative data have the advantage of being available in all communities. However, these data are not always easily accessible outside of the agencies that collect them,[2] and there are many important aspects of youth development and well-being that are not collected through administrative sources. For that reason, some motivated communities will field their own surveys of youth to get a more complete picture of youth well-being and the contextual influences that shape well-being, although the expense keeps many from doing so.

Census Data

Decennial census data have long been available down to the community and even the neighborhood level. Census data focus on basic demographics (i.e., race, age, sex, family structure) and socioeconomic outcomes (educational attainment, income, employment, housing tenure) as well as some data on disability status. These data have been a mainstay of public and private planning for many decades. Their main weakness, however, was the fact that they are collected only once every 10 years, going quickly out of date.

In response to the widely acknowledged need for more current local estimates, the U.S. Census Bureau launched the American Community Survey, which collects virtually all of the same information collected by the decennial census but does so on a continuous basis, interviewing approximately 3 million households each year starting in 2005. As early as 2010, the census bureau will produce annually updated estimates down to the census tract level, generally areas of 2,500 to 8,000 people.[3]

Administrative Data

Examples of administrative data sources include vital statistics birth and death data, school performance assessments, child abuse and neglect records, public assistance data, police records, health surveillance systems, and emergency room admissions records (Child Trends 2006, Tatian 2000; Coulton 1998; Coulton & Hollister 1998).

Every community has access to a variety of youth well-being indicators from administrative data sources. Often, these data are capable of producing estimates down to the neighborhood level, which is very important for many community planning purposes. They also provide information on youth that is not easily collected through surveys such as academic assessments, teen birth data, as well as characteristics of the neighborhoods in which youth live (e.g. poverty rate, crime levels, unemployment rates).

A number of problems are commonly encountered when using administrative data sources.

Data Quality and Consistency

Some sources of administrative data, such as birth and death data, are on the whole quite reliable and consistent over time and across jurisdictions. Other sources, such as child welfare data, have suffered to various degrees from poor or uneven data quality. Even here, though, substantial strides have been made over the last decade through the National Child Abuse and Neglect Data System (Child Trends 2006).

Inconsistent Geographic Units

Administrative data are collected for particular purposes, and collecting agencies will use the geographic units that best suit their needs. For example, the school system will aggregate data by school and school district, others may use census tracts, and some may use health districts. This can make it difficult to produce a rich set of estimates for the same neighborhood, because the boundaries units often cannot be made to match.

Lack of Subgroup Estimates

Administrative data sources tend to collect only the data that are needed for agency work. Background characteristics that would be important for more general purposes (e.g., family income, immigrant status, family structure) are often absent. As a result, separate estimates for important subgroups (poor people, immigrants) may not be available from some administrative sources. For example, vital statistics birth data gathers no information on income, so separate rates for poor and nonpoor people cannot be generated.

Lack of Accessibility

Although administrative data are collected and used in every community, the availability of these data for general planning purposes can vary greatly across communities. Some administrative data that could be of use to many community organizations never make it beyond the walls of the collecting agency. The computerization of administrative records and the growth of the Internet have lowered barriers to sharing such data, but it is still a problem in many communities.

There have been several notable efforts to make community-level administrative data more accessible to the public and across local agencies.

Kids Count

The Annie E. Casey Foundation has for some time funded organizations in every state, the District of Columbia, the Virgin Islands, and Puerto Rico to put out annual reports on the condition of children and youth that feature indicators of child and youth well-being down to the county level. These reports are widely distributed each year in hard copy and over the Internet. In addition, the Casey Foundation has recently made data from all these state reports available in one location in what they call the *CLIKS system*, which stands for *Community Level Information on Kids*.[4] Within states, the data are comparable across counties, allowing for cross-county comparisons. The data presented will vary from state to state according to what data are available.

National Neighborhood Indicators Partnership

Increasingly communities are looking to take administrative data from many sources make them available across agencies and even to the general public by placing them in Geographic Information Systems databases that allow all users to look at data from many sources for particular areas within the community. The National Neighborhood Indicators Partnership was established as a collaboration between The Urban Institute and local data partners to develop and use these neighborhood data systems to support better community planning. As of 2006, groups in 27 cities participated in the partnership. Partners draw from a wide variety of data sources to build their databases. (See Tatian, 2000, for a discussion of commonly available data sources.)

No Child Left Behind

The federal No Child Left Behind (NCLB) initiative to improve student academic performance and close performance gaps across population subgroups mandates regular assessment of all students and holds states accountable for improving student outcomes. The NCLB also mandates that detailed assessment results be made publicly available, down to the school district and individual school level. States have opted to make their data available through a common web portal called *Schoolmatters* (http://www.schoolmatters.com). The data are available in a common format, providing easy access to useful data for individual public schools throughout the country. Assessments are comparable within states, but not between states.

Community-Level Surveys of Youth

Although administrative data are clearly important sources for tracking youth development and well-being, they can also have their limitations in terms of substantive coverage, ability to produce subgroup estimates, quality, and so on. Researchers seeking a more complete picture of youth well-being must turn to surveys. Surveys have their own limitations, of course, principal among them being the expense to collect the data. However, many communities around the country have determined that the additional information provided by surveys is worth the cost. In the following sections, we review three of the most popular and well-designed of these surveys focusing on youth development outcomes and social settings.

Profiles of Student Life: Attitudes and Behaviors

The Profiles of Student Life: Attitudes and Behaviors (PSL:AB) survey was developed by the Search Institute and is grounded in what they call a *developmental assets framework*. They identified 40 assets, both personal and social, that youth need to thrive. The framework is highly compatible with the approach taken by the NRC panel's own framework, which guides us here, in that it emphasizes positive developmental outcomes (internal assets) and the positive social settings (external assets). External asset domains (each of which contains multiple assets) include external sources promoting support, empowerment, boundaries and expectations, and constructive use of time. Internal asset domains include commitment to learning, positive values, social competencies, and positive identity. This survey is designed for youth in Grades 6 through 12, although recently they have also developed asset lists for both early and middle childhood.[5]

The 40 assets were derived from a comprehensive review of the youth development literature (Scales & Leffert, 1999), although the research base for some assets is admittedly thin. Most assets are measured using 3- or 4-item scales with Cronbach's alphas (a measure of reliability) ranging between .31 and .82, with most at or above .60 (a common cutoff used in research). Research has demonstrated a strong relationship between the number of assets a youth has and the degree to which he or she is thriving and avoiding risky behaviors (Leffert et al., 1998). The PSL:AB is available through the Search Institute at a modest cost, and they will also process the survey and produce a report for an additional fee.

Because of the comprehensive nature of the assets framework and its compatibility with the NRC model, it is not surprising that the PSL:AB includes measures in every one of the NRC domains, both youth outcome and social setting domains. Most domains in fact include multiple measures. For example, the *social development* domain includes volunteering in the community; friendship skills; capacity for empathy; and respect for cultural diversity; as well as participation in such activities as sports, music, theater, and art. Measures in the *psychological development* domain include measures of moral character and measures of positive and negative mental health. Measures of social structure within social settings include such things as the presence of clear rules and monitoring activity within the family, the school, and the neighborhood. Not all of the domains have such a generous selection of measures as these, but all are covered.[6]

Communities That Care Youth Survey[7]

This survey was originally developed by research staff at the Social Development Research Group at the University of Washington. The survey is designed for administration at the community level and is based on a risk and protective factors model (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002). It is intended for youth in Grades 6 through 12. The risk and protective scales have been shown to have strong reliability and validity across gender and racial-ethnic groups, properly correlated with problem behaviors and with alphas exceeding .65 (Arthur et al., 2002; Mrazek, Biglin, & Hawkins, 2004; Pollard, Catalano, Hawkins, Arthur, & Baglioni, 1999). Many states use or have used this survey, including Arizona, Arkansas, Colorado, Florida, New York, Oklahoma, Oregon, Pennsylvania, Utah, Washington, and Wyoming (Mrazek et al., 2004). The survey and report-generating software area available through the federal government's Substance Abuse and Mental Health Services Administration/Center for Substance Abuse and Prevention.[8]

Like the PSL:AB, the Communities That Care survey includes at least one measure in each of the NRC youth outcome and social setting domains. Unlike the PSL:AB, youth outcomes are overwhelming negative. The survey focuses more on negative outcomes such as drug use, violent behaviors, and delinquency and school suspensions, although a few positive outcomes related to academic achievement are included. For example, questions relating to moral character focus on attitudes toward a host of negative behaviors in which teens may engage rather than positive moral strengths.

Data on the family, peer, and schools environments contain more of a balance of positive and negative influences. There are strong positive measures related to structure (e.g., clear rules; monitoring youth behavior in the family, school, and neighborhood) supportive relationships (e.g., parent-child closeness, teacher attention and praise) opportunities for efficacy (e.g., students help in setting rules at school, parents help youth succeed in school), and positive social norms (parents, peers, and adults in community providing positive role models) as well as measures of safe environments, belonging, and opportunities for skill building.

Youth Risk Behavior Survey

The Youth Risk Behavior Survey (YRBS) was developed by the Centers for Disease Control and Prevention and designed by national experts in the health care field with input from state and city education agencies. The survey, for students in Grades 9 through 12, has been fielded on a regular basis since 1990, and a modified survey for Grades 6 through 8 was fielded in 2005. In 2005, the Grade 9–12 survey was fielded nationally, in 40 states and 21 major cities. In addition, individual counties or school districts have also fielded this survey, and several states have expanded the survey in their states so that separate school district-level estimates can be produced. A detailed, science-based rationale for the inclusion of all measures has been produced and is updated at each redesign.[9]

The YRBS has a much more narrow focus than the PSL:AB and the Communities That Care survey, concentrating on health risk behaviors in six areas: (a) tobacco use, (b) dietary behaviors, (c) physical activity, (d) alcohol and other drug use, (e) sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, and (f) behaviors that contribute to injuries and violence. The survey covers important health outcomes and behaviors not covered in the other surveys, including overweight, pregnancy, nutrition, dating violence, and rape, as well as more detailed questions about physical exercise and sexual activity. Information on social settings is nearly nonexistent in this survey, limited to one question each on school safety, driving with a person who has been drinking, and whether the student has ever been taught about AIDS or HIV infection in school. States and communities are, however, allowed to add their own questions to cover other areas of well-being of particular interest.

NATIONAL YOUTH SURVEYS

Like the community surveys, national surveys that focus on youth development offer many high-quality measures across the domains that define the NRC youth development framework. In addition, they have some important advantages. First, whereas the community surveys are designed for middle and high school students, many national surveys follow participants into early adulthood, allowing one to construct and to track indicators of early adult well-being and the transition to adulthood. Second, most of the national surveys include high school dropouts, a critical subgroup that cannot be tapped through the (largely) school-based community surveys. Third, several of the surveys gather data from parents, teachers, and school administrators in addition to youth, providing unique data on the family and school environments in which youth develop.

Most of these surveys are one-time longitudinal surveys. This is a great strength in the sense that they are able to support the development of new indicators based on their relationship to long-term developmental outcomes (see chap. 2, this volume). It is a weakness, though, in the sense that the data generated from these surveys do not allow us to track changes over time for the same age groups, a critical function of social indicators data (Moore, 1997). For that reason, we split our review here into periodic national surveys and one-time surveys.

Periodic National Youth Surveys

These surveys are repeated on a regular basis, which allows users to track changes in youth well-being over time at the national level. In fact, the YRBS, reviewed earlier, also has a national-level survey fielded every 2 years. Two additional periodically collected national youth surveys that include measures of positive youth development and related social settings are summarized next.

Monitoring the Future

Monitoring the Future (MTF) has been surveying national samples of 12th-grade students on an annual basis since 1975, adding 8th- and 10th-graders beginning in 1991. In addition to these annual cross-sectional surveys, a subsample of 12th-graders from each year is periodically reinterviewed into adulthood, allowing one to track early adult outcomes over time. The MTF contains measures that cover every domain within the NRC framework with the exception of the "integration of family, school, and community" domain. Although heavily focused on drug use, it also collects measures of cognitive development (academic achievement, school engagement), social development (civic engagement, connectedness to peers, multicultural understanding), physical activity (hours of sleep, physical activity), and psychological and emotional development (self-worth, religiosity, emotional understanding). Post-high school follow-ups focus on additional issues, including military service and employment, marriage, and parenthood. In the social settings domains there are indicators of structure (clear and fair rules at home and in school), supportive relationships (positive relationship with parents), belonging (opportunities for extracurricular participation), social norms (peer values), support for efficacy (parental expectations), and opportunities for skill building (availability for youth involvement in civic activities).

MTF data are available as raw data files for original analysis, annual compendia of tables that summarize results, and in other regularly released reports. For additional information, visit http://www.monitoringthefuture.org.

National Survey of Children's Health

The National Survey of Children's Health (NSCH) is a survey of over 100,000 families with children ages 0 through 17 and is designed to support separate estimates for each of the 50 states and the District of Columbia. It is the only source of state-level estimates for many measures of positive youth development and youth social settings. It was first fielded in 2003–04 and is scheduled to be repeated every 4 years. Data are collected through telephone interviews with the parent or guardian, but youth are not interviewed. This is a disadvantage of the data in some respects, but it provides an important parental perspective on youth well-being and family and neighborhood context.

Although the major focus of the survey is on health issues, all of the NRC domains of youth outcomes are covered to some extent. Measures related to physical and social development (e.g., sport and club activities, physical exercise, obesity, volunteering, employment, involvement in religious groups) are well represented. In the emotional development domain there are several interesting measures related to the youth's capacity for empathy and his or her ability to engage in conflict resolution with family and friends.

In the social setting domains the NSCH focuses particularly on measures of supportive relationships within the family and in the neighborhood (e.g., parent-child closeness, ability to talk together about things that really matter, family meals, neighborhood cohesion and support). In the social norms domain there are several measures of parental exercise and smoking habits that one does not find in other surveys. Finally, within the "integration" domain, intended to capture the level of integration among the social settings in which youth develop, there is a question of what proportion of the youth's friends the parents know.

Data from the NSCH can be analyzed online at the Data Resource Center for Child and Adolescent Health at http://www.childhealthdata.org/.

Longitudinal Surveys of Youth

There are a number of major national longitudinal surveys that contain rich sets of high-quality measures of positive youth development and related social settings. These surveys are designed to follow a cohort from childhood or adolescence into early adulthood, paying particular attention to the role of family, peers, school, and neighborhood in shaping their development.

Characteristics that set these surveys apart from most of the surveys described above include the following:

- *Multiple respondents*. All of these surveys collect data from both the child/youth and his or her parents, and most also collect data from teachers and school administrators. Many also include data gathered from standardized assessments.
- *More complex measures*. Whereas most of the cross-sectional surveys just discussed are relatively short, longitudinal surveys can last for several hours. This allows for the collection of more complex indexes and scales that will capture a construct more completely than individual items. In addition, these longer scales are often used to guide the construction of optimized short scales that can in turn be used and tracked using periodic cross-sectional surveys (see, e.g., Moore, Halle, Vandivere, & Mariner, 2002).
- *Not repeated periodically*. One of the most important features of an indicators data collection system is the capacity to track changes in the population over time and on a regular basis (e.g., trends in the percentage of teens ages 15–17 who exercise regularly). In longitudinal surveys, however, the children are always getting older, making it

impossible to track changes in well-being over time among the same age group.

- *Follow the same persons over time.* Indicators take their importance both because of their intrinsic worth (e.g., good health is valuable in itself), and because of what they indicate or predict for future well-being (e.g., good health is valuable because it promotes future health and well-being). This dual nature is captured in the notions of well-being versus well-becoming (see Ben-Arieh, Kaufman, Andrews, Goerge, & Lee, 2001). Longitudinal data help us particularly to explore the well-becoming moment of social indicators.

In cases where important measures of well-being do not exist in repeated cross-sectional surveys, then longitudinal surveys can and should be used to produce such estimates, because they still allow us to assess levels of need or strength at a given point in time and to identify differences in well-being across groups, both important functions of social indicators (Brown & Corbett, 2003). Longitudinal data are a necessity in constructing certain types of indicators that are intended to reflect life conditions over time, such as sustained poverty (see Duncan & Moscow, 1997). However, the primary value of these rich data sources is the support of research that can help us to deepen our understanding of existing indicators and to develop new and better indicator measures for the future. Next, we briefly discuss four contemporary longitudinal surveys that are rich with measures reflecting the major well-being domains within the NRC framework.

Panel Study of Income Dynamic Child Development Supplement

The Panel Study of Income Dynamic (PSID) is a nationally representative survey of American families that has been conducted since 1968. In 1997, the PSID added the child development supplement (CDS), gathering data on children ages 0 through 12 within the PSID sample. These children were followed up in 2002–03 and 2005, and an additional follow-up is planned for 2007. The 2005 and 2007 rounds include a special Transition to Adulthood component for respondents ages 18 and older. By 2007, the oldest respondents will be 22.

The PSID-CDS is an extremely rich data set, with data collected from the children through interviews and assessments, from the parents, and from teachers and school administrators. It is also a unique source of data on nonresident fathers. In addition, it uses many detailed, high-quality assessments and scales to capture facets of intellectual, emotional, social, and psychological development. It also collects outcomes of particular relevance for the transition to adulthood, including voter registration, social identity, marriage and children, employment, and postsecondary schooling. In addition to the more common measures related to physical development (obesity, physical activity) there are also detailed questions on nutrition habits. Finally, a unique source of information is the time diary, which is used to collect detailed data on activities and the social context of those activities.

Measures of social settings are also broad, covering all of the NRC domains. The PSID-CDS has a particularly rich set of parent and peer characteristics that fall under the "positive social norms" setting domain, including parental volunteering and giving, parent self-efficacy and esteem, peer engagement in school and community, and peer encouragement of positive behaviors.

For more information, and to access PSID-CDS data, visit http://psidonline.isr.umich.edu/CDS/.

National Longitudinal Study of Adolescent Health

The National Longitudinal Study of Adolescent Health (Add Health) study was designed specifically to support research relating social settings (families, friends, schools, neighborhoods, and communities) to the health and health-related behaviors of youth in Grades 7 through 12. These youth were interviewed in 1994, 1996, and 2001, with an additional follow-up planned for 2007, by which time the respondents will be into their mid-20s to early-30s. Sensitive information for youth was gathered using audio computer assisted self-interview techniques. Parent interviews were taken during the initial wave in 1994. Survey data were also collected from siblings and friends of some respondents. In adulthood, partners are also interviewed.

Add Health is the best overall source of longitudinal data on health outcomes and behaviors from youth through adulthood, with detailed information on nutrition, exercise, dieting, sleep patterns, mental health, sexual experience and practices, tobacco and drug use, weapons carrying and violence, sun exposure, and even tattoos. Psychological and emotional development measures tend toward the negative (e.g., depression scale, suicide attempts, deviant behaviors, gambling, risk taking), although there are positive measures related to self-efficacy, self-confidence, and life satisfaction. In early adulthood, marriage, cohabitation, parenthood, and workforce data are gathered in addition to substantial health information.

In addition to the peer-related data gathered from youth respondents, all students in several schools were included in the survey, and for those schools researchers have the means to link the data from friends and romantic partners who were in the same school, offering a unique opportunity to explore peer influences.

Data are available in both public use and restricted forms. The restricted use data are more extensive and sensitive, and require an institutional review board-approved security plan and a confidentiality contract. Restricted use data access requires a nonrefundable fee of $750. Public use data can be purchased through Sociometrics at http://www.socio.com. For additional information on Add Health, visit http://www.cpc.unc.edu/projects/addhealth.

National Longitudinal Survey of Youth 1997

The National Longitudinal Survey of Youth 1997 (NLSY 97) is the latest in a series of longitudinal surveys focusing on schooling and the transition to employment into adulthood. Adolescents ages 12 through 16 were first interviewed in 1997 and have been reinterviewed annually since that time. The annual follow-ups make this a particularly strong data resource for many research purposes, because there are fewer information gaps than in most of the other longitudinal surveys reviewed here. Parents were also interviewed, but in the first year only. Additional information has been collected through standardized testing (ASVAB vocational aptitude battery, PIAT-R math achievement) and through school administrators, including transcripts and elements of the school environment. ZIP code and census tract-level data related to the youth's place of residence are also available, but access is restricted.

As with the other longitudinal surveys covered here, the NLSY 97 contains a set of measures of youth development and related social settings that cover every domain in the NRC framework.[10] It is particularly strong in terms of school and employment-related information. Data and codebooks can be downloaded for free at http://www.nlsinfo.org/ordering/display_db.php3.

Education Longitudinal Survey of Youth 2002

The Education Longitudinal Survey of Youth 2002 is a longitudinal study that follows a nationally representative sample of high school sophomores through high school, postsecondary school, and the transition to the workforce (into their mid- to late 20s). Data are collected from the student, student records, parents, teachers, and school administrators. Survey data are available in several formats at http://nces.ed.gov/surveys/els2002.

Each of the NRC framework domains is covered in the Education Longitudinal Survey of Youth 2002. Measures of supportive relations and opportunities for skill-building are particularly strong, as are measures on the integration of family, peers, school and community. Data on the school environment are particularly rich in this database, with information from the teacher, principal, student, and the youth.

National Longitudinal Survey of Youth, 1979 Cohort: Children and Young Adults Study

The NLSY 79, launched in 1979, is the precursor to the NLSY 97, reviewed earlier. In 1986, a second survey of the children of all NLSY 79 females was started, which substantially expanded the data collected on the children. The detailed longitudinal data on the female parent of these children makes this a unique data set for exploring the relationship between indicators of youth well-being and the well-being of the children of those youth. This allows researchers to explore the fuller meaning of youth indicators as they relate to the well-being of subsequent generations.

Regional and More Local Longitudinal Studies

Studies by Eccles and Colleagues

Eccles and her colleagues are conducting two comprehensive longitudinal studies of development in context that follow youth through adolescence and the transition to adulthood. Each of these studies contain well-validated and quite reliable indicators of many of the personal and social assets discussed earlier. The first, the Michigan Study of Adolescent/Adult Life Transitions (MSALT), began in the mid-1980s with a group of approximately 1,800 working- and middle-class, predominantly White 6th-graders in 12 school districts in southeast Michigan. The participants have been surveyed nine times: twice in the 6th and 7th grades, once in the 10th and 12th grades, and 3 times during their 20s. The study was designed to address the following three general questions: (a) How do social and academic experiences at school, at home, at work, and with one's peers relate to work and educational options and to psychological adjustment during adolescence and the early twenties? (b) How do individual characteristics linked to motivation, psychological adjustment, personal values and both personal and social identities relate to concurrent and subsequent development? (c) How do both the personal and social assets identified in answering the first two questions relate to the successful transition into and through young adulthood? This data set has measures of many of the assets discussed earlier, and the scales have very high face and predictive validity and quite good internal consistency reliabilities. The items and scales are available on the following web site: http://www.rcgd.isr.umich.edu/garp. The data set is archived at the Murray Center. Two good sources of information about this study are the 2001 article by Barber, Eccles, and Stone and the 2005 chapter by Osgood et al.

The second study, the Maryland Study of Adolescent Development in Multiple Contexts (MADICS), focuses on psychosocial development during adolescence and young adulthood within the contexts of family, peer groups, school, and neighborhoods. The sample (65% African American and 30% European American) is a stratified representative sample of youth enrolled in public schools at Grade 7 in Prince Georges County, Maryland. The population is now approximately 28 years of age. The youth and their parents were surveyed when the youth were in the 7th, 8th-9th, and 11th grades. The youth were surveyed 1 year and 3 years after high school. The project had five major goals: (1) provide a comprehensive description of various developmental trajectories through adolescence; (2) test the utility of the Eccles expectancy/value model of choice behavior and of self and identity theories for predicting individual differences in pathways through adolescence; (3) link variations in these trajectories to experiences in four salient social contexts (family, peers, schools, neighborhood) in terms of the following contextual characteristics: (a) structure/control, (b) support for autonomy, (c) emotional support, (d) opportunities and risks, and (e) shared beliefs, values, and expectations, as well as on the developmental fit between changes in both individuals and contexts; (4) investigate the interplay between these social spheres of experience as they influence development; and (5) extend the understanding of Goals 1 through 4 to African American adolescents with a focus on both general developmental processes and the specific dynamics associated with ethnic identity, prejudice, discrimination, and social stratification. The scales developed to study these goals have high face and predictive validity and have internal consistency reliabilities ranging averaging about .70. The scales and questionnaires are available at http://www.rcgd.isr.umich.edu/garp, and the data are archived at the Murray Center. Two good sources of information on this study are 1997 article by Eccles et al. and the 2003 article by Wong, Eccles, and Sameroff.

The Iowa Longitudinal Study

In 1989, Rand Conger and his colleagues at the University of Iowa began a longitudinal study of 451 White families living in eight adjacent counties in Iowa. Farming was the predominant industry in these counties. The study was designed to investigate the impact of the changing farm economy on adolescents and their families. Each family consisted of 2 parents, a seventh-grade youth, and a sibling within 4 years of age of the seventh-grader. These adolescents and their families have been followed several times over the last 15 years—annually from the years 1989 to 1992 and again in 1994. This data set includes many measures of the types of assets outlined earlier and has quite good reliabilities and extensive evidence of construct, discriminant, and predictive validity. One good source of information on this data set is the 2005 article by M. Cui, Conger, and Lorenz. Many measures in this data set have now also been used with a longitudinal sample of African Americans in the Southeast. For a good source of information about this data set, see Conger et al. (2002).

The Carolina Longitudinal Study

In 1981, Robert Cairns and his colleagues launched the Carolina Longitudinal Study of two cohorts of adolescents in eight different public schools in North Carolina. The first cohort included 220 fourth-grade children from four different public elementary schools; the second cohort included 475 adolescents from the seventh grades of four public middle schools. The samples were representative (in terms of race and social class) of the residents in the communities in which the schools were located; 25% were minorities. The participants were followed annually through the end of high school and occasionally through their 20s. Their parents and grandparents were also interviewed at various points. Extensive work went into developing the measures for this study, and there is now extensive information on the reliability and validity of the scales. Many of the scales measure the types of assets discussed earlier. Cairns and Cairns (2002) provided an excellent summary of the study and the quality of the measures. Another excellent source of information about this study is Cairns and Cairns's (1994) book.

Indicators of Measures of Youth Development From Other Sources

The number of useful measures and well-constructed scales tapping into the domains of youth development and social settings reflected in the NRC framework goes well beyond the sources we have reviewed so far. Readers interested in developing their own surveys, and particularly those who would like to focus strongly on particular topical areas, should look beyond to other surveys and small-scale studies in the field. There have been several attempts to catalogue such measures by topical area across surveys and major studies.

The Children, Youth, and Families At-Risk Program is a collaboration of land grant extension services focusing on community-based programs for at-risk children, youth, and their families. The Children, Youth, and Families At-Risk Program Evaluation Collaboration Project worked during the 1990s to catalogue measures of youth, child, family, and community development that could be used for evaluation purposes. Their youth working group catalogued measures relating to youth social competencies and risk behaviors in the following areas: social competency, relationships, conflict resolution, decision making, social responsibility, communication, goals setting, valuing diversity, academic risk, sexual activity, delinquency, and violence. For each area, they supplied an overview of the literature, a detailed bibliography, and a systematic review of available measures. Each review included the measure or scale title, creator, description, availability, cost, psychometrics, and advantages and disadvantages. This information is available at http://www.ag.arizona.edu/fcs/cyfernet/nowg. It appears that these catalogues were last updated around 2000, so measures developed after that time are of course not covered. A separate work group focusing on the family produced a similar set of reviews for measures related to parent and family well-being. Some of the measures they have collected are directly applicable to the families of adolescents.

A second catalogue or compendium of youth development measures was developed by Child Trends in 2001 with funding from the Edna McConnell Clark Foundation. This collection, called the *Youth Develop-*

ment Outcomes Compendium, has a similar format and focuses more on measures from national surveys. Information on each measure includes the name, source, intended respondents, availability, supporting literature, psychometrics, cost, advantages and disadvantages, and the measures themselves. Areas covered overlap substantially the NRC outcomes domains and include Educational Achievement and Cognitive Attainment (educational attainment, grade retention, basic academic/cognitive skills, research-related skills, oral and interpersonal communication skills, language skills, computer skills, arts participation and knowledge, study skills, achievement motivation, and school engagement); Health and Safety (drug and alcohol use, risky sexual behavior, violence, accidents and injuries, good safety habits); Social and Emotional Development (civic engagement), parent-child relationship quality, positive relationships with adults other than parent, behavior problems, productive use of nonschool time, spirituality, and sense of personal identity); and Self-Sufficiency (work). The report is available for free at the Child Trends web site.[11]

Next, we offer some examples of measures and scales of youth development and related social settings as set out in the NRC framework (see Tables 7.1 & 7.2), taken from a variety of sources. It is not intended to be comprehensive but is offered to give readers a sense of the variety of measures that are out there and available.

PERSONAL ASSETS

Intellectual Development

Important aspects of intellectual development for youth include the usual measures, such as standardized assessments, grades, and dropping out, but also include such things as capacity for critical thinking, knowledge of life skills and vocational skills, and knowledge of multiple cultures. Under the NCLB initiative, which seeks to hold all schools accountable for improving the academic performance of all children, every state has adopted its own set of math and reading assessments that are given annually for Grades 3 through 8 and at least once in high school. Assessment results are available online down to the school level.[12] In addition, so that the federal government may track progress using assessments that are consistent across states, every state now participates in the National Assessment for Educational Progress, testing math and reading skills in the fourth and eighth grades.[13]

The Patterns of Adaptive Learning Survey is widely used and contains reliable and valid measures of skills relevant for learning, including personal mastery, performance approach, and performance-avoidance goal orientations (for details, see E. R. Anderman, Urdan, & Roeser, 2005). Finally, Eccles and her colleagues have developed extensive measures of students' academic ability self-perceptions, the value they attach to academic success, causal attributions for academic performance, emotional reactions to success and failure at school, and school engagement in their MSALT and MADICS studies (see http://www.rcgd.isr.umich.edu/garp).

Psychological and Emotional Development

Measures of psychological and emotional development are varied and can include the following: good mental health, including positive self-regard; emotional self-regulation and coping skills; conflict resolution skills; personal efficacy; planfulness; optimism; positive personal and social identity; spirituality; and strong moral character. A common measure of mental health is the Center for Epidemiologic Studies youth depression scale, a 12-item instrument that has been used in NLSY 97, the National Survey of Family Growth, and other national surveys. Psychometrically strong measures of positive attributes such as hope, optimism, spirituality, and strong moral character are more difficult to construct, although this is an area where a lot of interesting work has been done recently. For example, Snyder (2005) recently developed the Children's Hope Scale, which shows good validity and reliability. Similarly, all of the community-based longitudinal studies outlined earlier have extensive high-quality measures of the psychological and emotional assets summarized in Tables 7.1 and 7.2.

Several measures have been developed in recent years to assess issues related to positive ethnic identity. The Multigroup Ethnic Identity Measure (Phinney, 1992) was developed on the basis of ethnic identity components shared across groups. The subscales of the measure include Affirmation and Belonging, Ethnic Identity Achievement, Ethnic Behaviors, Ethnic Self-Identification, Ethnicity, and Parents' Ethnicity. Another measure, the Social Identity Self-Esteem Scale (Luhtanen & Crocker, 1992), was created to assess the positivity of one's social identity. The Multidimensional Inventory of Black Identity (Sellers et al., 1997) includes seven subscales to represent three dimensions of African American racial identity: (a) centrality, (b) ideology, and (c) regard. Finally, Eccles and her colleagues include several measures of racial identity and of perceptions of racial discrimination at school by peers and teachers in the MADICS study (Wong, Eccles, & Sameroff, 2003).

Social Development

Positive social development can include a wide range of activities, including sports, the arts, and after-school youth organizations, as well as peer pressure resistance skills, valuing cultural diversity, and civic engagement.

As an example, Keeter, Jenkins, Zukin, and Andolina (2005) recently developed a scale of youth civic engagement with strong validity and reliability whose components include measures of community problem-solving, volunteering, and active group membership. Eccles, Barber, and colleagues have used data from the MSALT to create composite measures of youth activities sorted into five categories: (a) team sports, (b) prosocial activities (church attendance, volunteering, service activities), (c) performing arts, (d) academic clubs, and (e) school involvement (student government, pep club, cheerleading). The measures were also used to construct indices of participation. (See Barber, Stone, and Eccles, 2005, for details). The measures showed strong concurrent and predictive validity.

Delinquency measures are also important measures of social development. The Philadelphia Family Management Study's Attitudes Toward Delinquency & Protective Factor scale focuses on attitudes about delinquent behavior, including alcohol, stealing, drugs, and skipping school (for a summary of these measures, see Furstenberg et al., 1999).

SOCIAL SETTINGS THAT PROMOTE POSITIVE DEVELOPMENT

Appropriate Structure

Measures of appropriate structure promoting youth development would include clear rules setting, age-appropriate monitoring of youth activities and relationships, and consistent enforcement of rules. This is important in all social settings, including especially the family, school, and in youth programs (Eccles & Gootman, 2002, chap. 4).

The Monitoring scale, for example (Barber, 1996; Barber et al., 1994; Brown et al., 1993), measures parents' awareness of their adolescents' friends and use of time. Adolescents answer items about how much their parents know about their lives. Sample items include: who your friends are? where you go at night? how you spend your money? what you do with your free time? Even better is Barber, Stolz, and Olsen's (2005) scale on intrusive parenting as well as Barber's other measures of parenting that have been validated across many different cultural and national groups.

The Patterns of Adaptive Learning Survey inventory cited earlier also includes extensive measures of classroom climate that are appropriate for assessing structure. Eccles and her colleagues also developed measures of support for autonomy and structure for learning in the MSALT.

Physical and Psychological Safety

Safe family, school, and neighborhood environments are important prerequisites for all aspects of positive youth development. For example, as part of the NCLB initiative, which focuses on raising academic performance, schools are held accountable for taking measures to increase safety in the schools in order to create an environment in which learning can flourish.[14]

Family Safety

Although measures related to the physical safety of the family environment are common (e.g., secondary smoke in the house, presence of guns in the house), survey data related to physical violence or psychological abuse are uncommon. Measures are available, but under most circumstances researchers collecting such data are required to report any cases of suspected abuse to authorities. An example of a well-developed measure of home violence is the Conflict Tactics Scale, developed by Strauss and Gelles (1990), which has been administered in several national surveys. It includes scales reflecting parent-child and parent-partner conflict, with subscales covering different modes of violence (Strauss & Gelles, 1990).

Neighborhood Safety

Neighborhood personal safety items from the MacArthur Network ask parents to rate how much of a problem their neighborhood has with sexual assaults or rapes, assaults or muggings, delinquent gangs or drug gangs, and drug use or drug dealing in the open. These measures were included in the Philadelphia Family Management study (see Furstenberg et al., 1999), which also included measures of neighborhood social control that asked parents how likely it would be for someone in the neighborhood to do something if there were problems in the neighborhood, such as fighting, drug selling, or someone breaking into a house.

Supportive Relationships

Parent-Adolescent Relationship

Many aspects of the parent-youth relationship can provide positive support for youth development, including connectedness and attachment, communication, and guidance. (See Hair et al., 2005, for a recent review of measures.)

Parent-Youth Communication. The parent-child communications measures, developed by the MacArthur Adolescent Network, asks parents the frequency their eighth-grader talks with them about topics such as how things are going with his or her friends, problems he or she is having at school, future jobs he or she might have, and what courses he or she should take in school. These items were also used in the MADICS study outlined earlier. Barber et al. (2005) included similar measures in their parenting survey.

Parental Guidance. Parents often find it difficult to provide guidance about sexual activity. Items used by the McArthur Adolescent Network ask parents if they have talked with their child about the biological facts of sex and pregnancy, how to decide whether or not to have sex, different methods of birth control, how to avoid getting a sexually transmitted disease, such as venereal disease or AIDS, and the age at which these issues were discussed with the child. Jaccard, Dittus, and Gordon's (1998) sexual behaviors measure looks at the congruency between parent and adolescent reports of adolescent sexual behavior and the communications about sexual behavior. Specifically, the measure looks at the agreement between mothers' and adolescents' reports of communication about sex, satisfaction with the parent-child relationship, maternal disapproval of adolescent sexual activity, and adolescent sexual behavior.

Parent-Youth Time Together. The Time Use Parenting scale from the MacArthur Adolescent Network collects data on how often the immediate family has dinner together; how much time is spent together on the weekends; and how often the immediate family gets together for birthdays, anniversaries, and other holidays. These items were used in the Philadelphia study (Furstenberg et al., 1999) and the MADICS study discussed earlier.

Support From Peers

As youth mature, they seek more support from their peers. The Friendship Quality Scale (Gauze, Bukowski, Aquan-Assee, & Sippola, 1996) has youth rate their relationship with their best friend on 35 different attributes. The scores for each of four categories (Companionship, Help/Support, Security and Closeness) are used to compute an overall friendship quality score. The Peer Advice Seeking measure (Fuligni & Eccles, 1993) evaluates adolescents' orientation toward their peers.

Support From Teachers

Both the PALS and the studies by Eccles and her colleagues include a variety of measures of perceived social support from teachers. MADICS also includes scales related to lack of social and emotional support from teachers and peers at school. Some of these items focus on experiences of racial and sexual discrimination. Others focus on more general lack of support and low teacher expectations for the students' success.

Connection to Larger Social Networks

In addition to connection to family and friends, attachment to larger prosocial/conventional institutions, such as school, church, and out-of-school youth programs, is believed to be an important part of social development. Measures such as the school/religion/resources items in Add Health's religion scale examine participation in and positive attitudes toward religious activities such as going to church, praying, and attending church-sponsored youth activities. The neighborhood items from the Add Health survey measure the extent to which the respondent perceives him- or herself as being a part of his or her neighborhood.

Opportunities to Belong

Adequate financial resources are necessary to provide opportunities to belong. Mistry and Crosby (1999) measured how often adolescents' activities were restricted because their parents couldn't afford the activity. The items included activities that provide skill-building opportunities, such as sports, as well as activities with somewhat less skill-building utility, such as going to see a movie with friends.

The community also provides opportunities to belong, according the presence or absence of youth activities and organizations such as Boys and Girls Clubs, youth sports associations, and active religious youth groups. A number of surveys, including Add Health and MTF, ask specifically about perceived opportunities to participate in such groups.[15] In addition, some communities are gathering their own data on the availability of such youth resources, using youth to collect the information and offering the results online for public use and program planning. This is called *Community YouthMapping*, and it was developed by the Academy for Educational Development.[16]

A sense of belonging at school is critical to engagement at school (see Wigfield, Eccles, Schefele, Roeser, & Davis-Kean, 2006). MADICS has items that assess this asset. Other such scales are available from L. H. Anderman and Anderman (1999) and Goodenow (1993).

Prosocial Norms

Positive Peer Influence

The Pittsburgh Youth Study gathers information on conventional activities of friends. Youth are asked to think of their friends and then report how involved they have been in activities such as school clubs, special school events, school athletes, community activities such as YMCA or youth clubs, religious activities, and so on. MADICS includes a nice inventory of the perceived beliefs and behaviors of one's friends that can be used to estimate perceived peer social norms.

Parental Influence

Parents who role model unhealthy behaviors can also be a negative influence for youth. Bogenschneider and colleagues (1998) looked at parents' influences on adolescent peer orientation and substance use. The measure they used included items such as how often in the past year the parent used eight substances: (a) tobacco, (b) beer, (c) wine/wine coolers, (d) hard liquor, (e) marijuana, (f) inhalants, (g) hallucinogens, and (h) cocaine/crack.

Parents exert positive influence on their adolescents in many ways. A measure developed by the MacArthur Adolescent Network asked parents how often they encouraged their eighth-graders to get involved in sports and other school activities, to be good to others, to get ahead in life, to work hard, to show respect to others, to have faith in God, and so on. In other words, the items indicated whether parents encouraged their adolescents to accept prosocial values. These are available through the MADICS and Iowa studies.

Opportunity for Efficacy and for Mattering

Overcontrolling parents do not provide optimal support for youth. The Perceived Parent Overprotectiveness scale of Philadelphia Family Management Study may give some indication of inadequacy in the number of opportunities youth are given to achieve a sense of efficacy and mattering. The measure asks youth how often their parent tells them what to do or how to act and whether their parent tries to protect them too much, lets them make their own mistakes, has too many rules, and often treats them like a baby. Item responses may indicate that the youth is feeling unchallenged, overcontrolled, and disempowered. Barber et al. (2005) provided similar measures.

However, there are very few such measures related to the critical nonfamilial contexts where opportunities are most likely to be available. For the most part, evaluations of service learning type programs provide single-item indicators of the opportunities to engage in meaningful social service. We need scales that assess youth's perceptions of these opportunities and of their sense that they are actually making a difference in these programs.

Opportunities for Skill Building

The transition to adulthood requires youth to gain knowledge and skills in many areas, including intellectual, social, practical, and life skills. In schools, for example, such opportunities depend in part on elements of school quality, such as teacher skills and experience, course design, and class size (see chap. 10, this volume, for related measures).

CONCLUSION

Existing research has amply demonstrated the importance supportive social settings in promoting positive youth development and the importance of positive youth outcomes for making a smooth transition to adulthood. Areas of opportunity for pushing the field forward include the extent to which a lack of assets in one context (e.g., the family) can be compensated for with assets in another context (e.g., after-school programs), the extent to which personal and social assets may have different effects on development across different social groups (e.g., male and female, Black and Hispanic; rich and poor), the extent to which the effects of assets are additive, and the extent to which certain assets may be culture specific (e.g., the importance of independence from the family as a defining characteristic of adulthood). Exploration of these questions will lead us to more effective and targeted intervention strategies for helping youth and to the development of better measures for tracking progress.

Our review of available data sources indicates that a great deal of data are available for tracking the well-being of adolescents and those transitioning to adulthood, although many important measures are not tracked on a regular basis or at all levels of geography. The measures available in one-time national longitudinal studies and in community survey instruments like the Communities That Care survey and the Search Institute's youth assets survey are far richer than those in existing national and state surveys that are repeated on a regular basis. We believe that greater efforts should be made to migrate measures of positive development and positive social settings into these periodically fielded surveys, particularly as research from the longitudinal studies enriches our understanding of these measures.

Finally, although there are many high-quality measures of positive youth development and positive social settings strewn across the many sources we have reviewed, they are often buried in data archives or in other nooks and crannies of the Internet, when they are publicly available at all. Several attempts have been made to collect and organize these measures into compendia, but they have not been kept up to date. Researchers and professionals in the field need ready access to such measures in developing their own research and tracking efforts. We believe it would be a boon to research and practice if there were a single online source, consistently updated, that offered such access.

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Some sections of this chapter draw heavily from the National Research Council report *Community Programs to Promote Youth Development* (Eccles & Goodman, 2002).

NOTES

1. Concurrent indicators of well-being include good mental health, good school performance, good peer relations, good problem-solving skills, and low levels (or the absence) of involvement in a variety of problematic behaviors such as gang membership, drug and alcohol use, school failure, school

dropout, delinquency, and early pregnancy. Longitudinal indicators of more adult well-being include completing high school, completing tertiary education, adequate transition into the labor market (obtaining and keeping a job that pays at least a living wage), staying out of prison, avoiding drug and alcohol abuse, turning around a problematic adolescent trajectory, and entering a stable and supportive intimate relationship (usually assessed in terms of one's marital partner). Some recent studies have included involvement in civic and community activities as an indicator of positive adult outcomes.

2. There are an increasing cities putting their administrative data into community Geographic Information Systems databases that are accessible to the public. For additional information, see the National Neighborhood Indicators Partnership, at http://www2.urban.org/nnip/. See also databooks produced by state KIDS COUNT organizations in each state, at http://www.aecf.org/kidscount/
3. For additional information, visit http://www.census.gov/acs/www/index.html
4. See the CLIKS data system at http://www.aecf.org/cgi-bin/cliks.cgi
5. For additional information on the Search Institute's assets approach, visit http://www.search-institute.org/assets/
6. For a detailed crosswalk of PSL:AB indicators and the NRC framework, see Eccles and Gootman (2002, Table 8-1).
7. This survey is also known as the *Student Survey of Risk and Protective Factors.*
8. For additional information, visit http://www.preventionplatform.samhsa.gov/
9. For the most recent version of the rationale, and for a copy of the instrument, visit http://www.cdc.gov/HealthyYouth/yrbs/index.htm
10. For a more detailed breakdown by domain, see Tables 8-2 and 8-3 in Eccles and Gootman (2002).
11. Because of its size, the compendium must be downloaded in sections:
    http://www.childtrends.org/files/Compendium_Phase1_Intro.pdf
    http://www.childtrends.org/files/Compendium_Phase1_DivA.pdf
    http://www.childtrends.org/files/Compendium_Phase1_DivB.pdf
    http://www.childtrends.org/files/Compendium_Phase1_DivC.pdf
    http://www.childtrends.org/files/Compendium_Phase1_DivD.pdf
12. To see NCLB state assessment results, visit http://www.schoolmatters.com
13. For additional information on the National Assessment of Educational Progress, visit http://nationsreportcard.gov
14. For additional information on school violence and NCLB, visit http://www.ed.gov/nclb/freedom/safety/keeping_kids_safe.pdf
15. For additional information on the NSCH visit http://www.cdc.gov/nchs/about/major/slaits/nsch.htm
16. For additional information on Community YouthMapping, visit http://www.aed.org/Projects/cym.cfm

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KEY INDICATORS OF CHILD AND YOUTH WELL-BEING

Completing the Picture

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