# Finding Out What Matters for Youth:

Testing Key Links in a Community Action Framework for Youth Development

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Table of Contents

Acknowledgements

Chapter I: Introduction[1]

The last decade has seen an explosion of interest in "youth development" as both a policy and a community approach to helping children achieve healthy outcomes as young adults.

Historically, public policies and funding, as well as private-sector investments in youth programs, were based on the premise that the public good is served by reducing the number of young adults on welfare, addicted to drugs or alcohol, or committing crimes. Much of this investment was motivated by the perception that the significant number of youth experiencing negative outcomes is harmful to the general public's quality of life and a drain on public resources; rather than by a notion that the general public (or "village") is responsible for outcomes for **all** children. Trying to reduce these problems was seen as legitimizing the authority of governments and organizations to intervene in what is otherwise seen as a firmly entrenched private right of families – to raise their children as they see fit.

As a result, these investments targeted teenagers who had already exhibited negative or "high risk" behaviors – such as dropping out of school, having babies, using drugs or committing crimes – and intervened through programs designed to change their behavior.

As these remediation programs showed little appreciable success over time, early advocates of youth development convinced decision-makers that trying to change these outcomes in the late teen years was unsuccessful because they were the end result of a developmental **process**, rather than simple behavioral choices that could be redirected in early adulthood. As a result, funding began to flow not only to programs for "high risk" youth, but to **prevention** programs for younger "at risk" youth with the same end in mind – reducing the number of young adults exhibiting unhealthy, unproductive behaviors. But again, as young people were taught to "say no" to drugs, violence, crimes and unprotected sex, the number of young adults in the welfare, criminal justice and other public systems was not declining significantly.

Although the prevention approach was a positive step that allowed more flexibility in the use of resources, these programs still did not constitute a "youth development" approach. They remained focused on negative behaviors rather than on the positive developmental milestones young people must achieve if they are to become healthy adults. Many of the early youth development frameworks *[see Table I.1, page 2]* evolved precisely to make this point. They sought to shift the focus away from directly reducing negative long-term outcomes for at risk youth, to promoting healthy

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[1] Parts of this Introduction are drawn from Connell and Gambone, 1998; Connell, Gambone and Smith, 2000; and Gambone, 2002.

TABLE I.1 **DEVELOPMENTAL OUTCOMES** (Adapted from Gambone, in Press)		
HHS (23, 24)	• Competence • Connection • Control • Identity	• Temperament • Age at puberty • Cognitive development
Pittman & Wright (17, 18)	• Health and physical competence • Personal and social competence • Cognitive and creative competence	• Vocational competence • Citizenship competence
Matter of Time (Carnegie) (3)	• Cognitive development (knowledge, critical thinking, academic achievement) • Social development (communication skills, relationships with peers and adults)	• Physical development (health, less risk) • Emotional development (identity, control) • Moral development (values, responsibilities)
Great Transitions (Carnegie) (4)	• Master social skills • Cultivate problem-solving skills • Acquire technical capabilities	• Become ethical • Learn requirements of citizenship • Respect diversity
Search Areas (1, 2, 14, 21)	• Internal assets • Social competence (planning and decision-making, interpersonal, cultural, conflict resolution) • Positive identity (self-esteem, sense of purpose, belief in future)	• Positive values (caring, equality and justice, responsibility) • Commitment to learn (achievement, engagement, homework, bonding)
Connell, Aber, Walker (5)	• Productive • Connected	• Able to navigate
CCYD (Public/Private Ventures) (10)	• Self-efficacy • School performance	• Low risk-taking
Youth Development Mobilization (Center for Youth Development and Policy Research) (15)	• Identity (safety and structure, membership and belonging, self-worth, mastery, future, responsibility, autonomy, spirituality, self-awareness) • Social, civic and cultural competencies	• Physical and emotional health competencies • Intellectual and employable competencies
Communities That Care (12)	• Attachment (positive relationships) • Commitment (investment in future)	• Beliefs (positive moral behavior and action)
National Academies of Science (8)	• Physical development (e.g., health habits, health risk management) • Intellectual development (e.g., life and vocational skills, school success, critical thinking)	• Psychological and emotional development (e.g., mental health, coping, conflict resolution, mastery, efficacy, planfulness, personal autonomy, moral character) • Social development (e.g., connectedness, social place/integration, navigate, civic engagement, attachment to institutions)

developmental outcomes for all youth (e.g., good coping and decision-making skills; successful educational and employment experiences; healthy connections to families, friends and communities, etc.) that would **subsequently** lower the occurrence of negative long-term outcomes. These frameworks then focused intervention strategies on providing all young people access to the relationships and experiences that promote these healthy developmental outcomes.

Despite the success of these frameworks in shifting the field's focus to developmental outcomes as the goal in the shorter term, they have often left the longer-term outcomes implicit, or excluded them completely, which often raises questions. Should youth development programs be expected individually or collectively to change young people's long-term life chances or not? Will investing

in strategies to provide all youth with positive developmental experiences lead to better short-term **and** long-term outcomes for youth or not?

As advocates of the youth development approach sought answers to these questions, they turned increasingly to academic and applied research linking "assets" or "developmental supports" to healthier developmental trajectories and better long-term outcomes – research that includes psychology, sociology, education, health, community and program evaluation research.

The positive result of this infusion of research into the youth field has been the incorporation of information about the developmental process during adolescence into the work of all stakeholder groups – from government officials, to private foundation boards and staff, to the line staff who work with youth every day. The problematic result of this diversity of information has been a certain level of confusion about what it all says about "action."

In some cases, the breadth of information and inability to process it all has resulted in more confusion and less consensus about what to do.

For example, the academic literature on child and adolescent development tends to organize development into domains, such as cognitive, social, moral, interpersonal, emotional and physical development. Some descriptive frameworks have followed suit (see, for example, Carnegie Council's *Matter of Time*, 1992). Other frameworks follow applied research and program evaluations that tend to parse youth development into strands: either personality or character traits (e.g., healthy identity, sense of competence, self-esteem, strong moral values, empathy, empowerment, etc.) or acquired competencies or skills (e.g., conflict resolution, decision-making skills, social skills, etc.) (see, for example, Search Institute (Benson, 1990, 1993), Center for Youth Development and Policy Research (Pittman & Wright, 1991a, 1991b), National Academies of Science (Eccles & Gootman, 2002). These organizing principles alone offer over 70 different developmental outcomes as important – all of which have been shown to have at least some correlation with important long term outcomes *[Table I.1]*. Not surprisingly, when frameworks describe the types of experiences and opportunities which influence this myriad of outcomes, another diverse list emerges *[see Table I.2, page 4]*.

The scope of information the field was trying to digest, and the confusion about how it should be used to guide funding and the development of activities for youth, led us to conclude there is a need to tie this information together in a way that would help all stakeholders make choices about **what to do**.
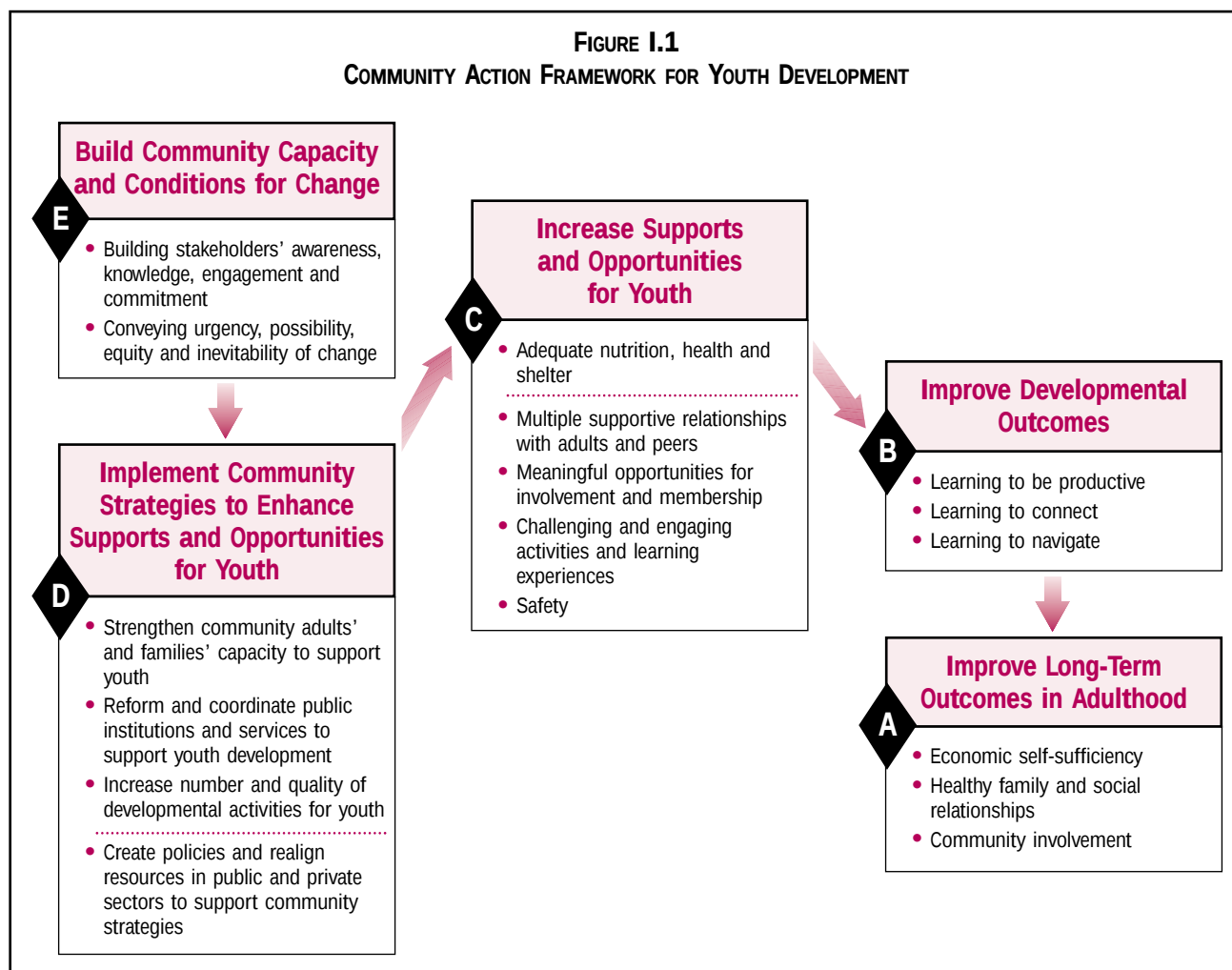
There is clearly a need for a method of sorting what we know and putting it together in a way that: 1) helps us understand – in succinct terms – the pathways that lead youth to the outcomes we want; and 2) tells us what requires most attention at each of the steps along these pathways. The *Community Action Framework for Youth Development* was developed to fill these needs. The framework is based on both academic and applied research on youth and communities, and on the fieldwork of this project's two principal investigators. As a first step toward clarity and precision, the framework presents a research-based set of developmental supports and opportunities to guide the design and evaluation of programs, organizations and initiatives serving youth. We also offer two sets of outcomes that these supports and opportunities are hypothesized to influence both directly – youth learning to be productive, to connect and to navigate – and indirectly – young adults becoming economically self-sufficient, having healthy family and social relationships and contributing to their communities. This framework is described briefly in the next section.

TABLE I.2
SUPPORTS AND OPPORTUNITIES INFLUENCING DEVELOPMENTAL OUTCOMES
(Adapted from Gambone, in Press)

HHS (23, 24)	• Family (parent-child relationships, parental practices, family structures, family dysfunction) • Peers (groups, friends)	• Community (culture, support, youth organizations) • Social (economic and employment, discrimi-nation/prejudice, educational institutions)
Pittman & Wright (17, 18)	• Safety/structure • Belonging/Ggroup membership • Self-worth/contributing • Independence/control	• Closeness/relationships • Competence/mastery • Diverse opportunities/exploration
Matter of Time (Carnegie) (3)	• Opportunities to socialize with peers and adults • Develop skills • Contribute to community	• Belong to a valued group • Feel competent
Great Transitions (Carnegie) (4)	• Value placed in constructive groups • Form close durable relationships • Sense of worth • Reliable basis for decisions	• Use support system • Constructive curiosity and exploring behavior • Be useful to others • Believe in future
Peter Scales (1, 2, 14, 21)	• Positive interaction with adults and peers • Structure and clear limits • Physical activity • Creative expression	• Competence and achievement • Meaningful participation in schools and communities • Opportunities for self-definition
Search Areas (1, 2, 14, 21)	• Support (family, neighborhood, school) • Boundaries and expectations (adult role models, positive peer relationships, high hopes) • Empowerment (community values youth, service, safety)	• Constructive time use (programs, religious community, home supervision)
Connell, Aber, Walker (5)	• Relationships with family • Relationships with peers	• Relationships with others
CCYD (Public/Private Ventures) (10)	• Adult support and guidance • Gap activities • Work as developmental tool	• Youth involvement • Support through transitions
Youth Development Mobilization (Center for Youth Development & Policy Research) (15)	• People (emotional, motivational and strategic) • Opportunities (to learn and explore new skills for group membership, for contribution and service, for employment)	• Places (for safe activities during non-school hours)
Communities That Care (12)	• Opportunities to be positive contributor • Skills	• Recognition
Oakland, Blue Print for Youth (Urban Strategies Council) (22)	• Caring adult • Safety • Goods, services and developmentally appropriate activities • Knowledge and respect for other cultures	• High-quality education • Work, entrepreneurship and community service • Central, active roles in planning and decision-making
National Academies of Science (8)	• Physical and psychological safety • Appropriate structure • Supportive relationships • Opportunities to belong • Positive social norms	• Support for efficacy and mattering • Opportunities for skill building • Integration of family, school and community efforts

A. The Community Action Framework for Youth Development [2]

The Community Action for Youth Development Framework *[see Figure I.1]* seeks to integrate basic knowledge about youth development and the community conditions that affect it with emerging hypotheses about what it will take to transform communities into places where all young people, and particularly those young people currently least likely to succeed, can achieve their fullest potential. It reorganizes existing information from other youth development frameworks, research and practical experience[3] in terms that explicitly seek to translate developmental principles into a systematic approach to planning, implementing and evaluating activities and investments for youth.

FIGURE I.1
COMMUNITY ACTION FRAMEWORK FOR YOUTH DEVELOPMENT

Build Community Capacity and Conditions for Change
E
- Building stakeholders' awareness, knowledge, engagement and commitment
- Conveying urgency, possibility, equity and inevitability of change

Implement Community Strategies to Enhance Supports and Opportunities for Youth
D
- Strengthen community adults' and families' capacity to support youth
- Reform and coordinate public institutions and services to support youth development
- Increase number and quality of developmental activities for youth
- Create policies and realign resources in public and private sectors to support community strategies

Increase Supports and Opportunities for Youth
C
- Adequate nutrition, health and shelter
- Multiple supportive relationships with adults and peers
- Meaningful opportunities for involvement and membership
- Challenging and engaging activities and learning experiences
- Safety

Improve Developmental Outcomes
B
- Learning to be productive
- Learning to connect
- Learning to navigate

Improve Long-Term Outcomes in Adulthood
A
- Economic self-sufficiency
- Healthy family and social relationships
- Community involvement

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[2] A fuller explication of the framework can be found in Connell, Gambone and Smith, 2000, and in Connell and Gambone, 1998.

[3] The framework presented in Figure I.1 builds on three main sources: existing frameworks that are currently influential in shaping the field's thinking on these issues; academic theory and research on adolescent development; and the lessons we have learned either directly or indirectly from the following initiatives: Public/Private Venture's *Community Change for Youth Development*, Center for Youth Development and Policy Research's *Youth Development Mobilization*, Search Institute's *Developmental Assets for Children*, National Urban League's *Community Youth Development Mobilization Initiative*, Development Research and Programs Inc.'s *Communities That Care* and Community Network for Youth Development's *San Francisco Beacons Initiative and Youth Development Learning Network.*

The framework seeks to address five questions:

1. What are our basic long-term goals for youth? *[Box A, Figure I.1]*;

2. What are the critical developmental milestones/markers that tell us young people are on their way to the goals? *[Box B, Figure I.1]*;

3. What do young people need to achieve these developmental milestones? *[Box C, Figure I.1]*;

4. What must change in key community settings to provide enough supports and opportunities to all youth that need them? *[Box D, Figure I.1]*; and

5. How do we create the conditions and capacity in communities to make these changes possible and probable? *[Box E, Figure I.1]*.

The framework asserts the following:

- **Improvement in long-term outcomes *[Box A, Figure I.1]*** is the goal of community-based youth development initiatives. These long-term outcomes include:
  - **Economic self-sufficiency:** all youth should expect as adults to be able to support themselves and their families and have some discretionary resources beyond those required to put food on the table and a roof over their heads. They should have a decent job and the education or access to enough education to improve or change jobs.
  - **Healthy family and social relationships:** young people should grow up to be physically and mentally healthy, be good caregivers for their children, and have positive and dependable family and friendship networks.
  - **Contributions to community** could come in many forms, but we hope that our young people will aim to do more than simply be taxpayers and law abiders – to contribute at some level to their community, however they define that community.

- These long-term outcomes are made possible by **improvements in developmental outcomes *[Box B, Figure I.1]*** – milestones young people need to achieve in order to move on to a healthy adulthood, including:
  - **Learning to be productive:** to do well in school, to establish outside interests and to establish basic life skills;
  - **Learning to connect:** to establish connections with adults, including family members and others within the community; to establish positive peer relationships; to connect with larger institutions such as religious or civic groups; and
  - **Learning to navigate:** to interact appropriately across diverse settings; to begin to take responsibility for themselves and others; and to manage the lures of unhealthy or risky behaviors – such as premature sexual activity, substance abuse and serious criminal activity – that endanger their future.

- Improvements in these aspects of youth development are, in turn, made possible by **increased supports and opportunities available for youth *[Box C, Figure I.1]*.** These supports and opportunities are the critical building blocks of development across all the settings in which youth spend their time. They include:
  - **Adequate nutrition, health and shelter:** this first developmental need stands alone among the supports and opportunities as a necessary **precondition** for youth to benefit from the others.

- **Multiple supportive relationships with adults and peers:** perhaps the most consistent and robust research finding on human development is that experiencing support from the people in one's environment, from infancy on, has broad impacts on later functioning. Relationships with both adults and peers are the source of the emotional support, guidance and instrumental help that are critical to young people's capacity to feel connected to others, navigate day-to-day life and engage in productive activities.

- **Challenging and engaging activities and learning experiences:** youth, especially adolescents, need to experience a sense of growth and progress in developing skills and abilities. Whether in school, sports, arts or a job, young people are engaged by – and benefit from – activities in which they experience an increasing sense of competence and productivity. Conversely, they are bored by activities that do not challenge them in some way. In adolescence, "boredom" can lead to participation in high-risk activities.

- **Meaningful opportunities for involvement and membership:** as young people move into adolescence, they need ample opportunities to try on the adult roles they are preparing for. They need to make age-appropriate decisions for themselves and others: deciding what activities to participate in; choosing responsible alternatives; taking part in setting classroom, team and organization policies. They also need to have others depend on them through formal and informal roles, including peer leader, team captain, council member or organizational representative. Finally, youth need to experience themselves as individuals who belong and have something of value to **contribute** to their different communities. When healthy opportunities to belong are not found in their environments, young people will create less healthy versions, such as cliques or gangs.

- **Safety:** young people need to feel physically and emotionally safe in their daily lives.

● Increasing supports and opportunities for youth requires **implementing community strategies *[Box D, Figure I.1]*** in the major settings in which youth spend time – neighborhoods and families, schools and other public institutions and gap period settings. These strategies include:

- Strengthening the capacity of community adults (parents, families and primary caregivers, neighbors and employers) to provide supports and opportunities for youth;

- Reforming schools and other public institutions and services affecting youth;

- Increasing the number and quality of developmental activities for youth; and

- Realigning public policy and resources to support these community strategies.

● In order to initiate and sustain change, it is necessary to **build community capacity and conditions for change *[Box E, Figure I.1]***. Communities need to mobilize to create conditions that encourage **all** stakeholders to put their oars in the water and pull together. Four conditions that mobilization efforts should seek to achieve to launch and sustain implementation of the community strategies include building within the community:

- Awareness;

- Knowledge;

- Engagement; and

- Commitment to change.

B. Using the Framework

The application of this framework in our work led directly to the development of this project. We have used this framework over the last few years in diverse settings with a broad variety of stakeholders. This work includes using the framework to guide the planning and evaluation of comprehensive community initiatives for youth (e.g., IRRE's First Things First comprehensive education reform initiative (IRRE, 1996), the Kellogg Youth Initiative Partnership (W.K. Kellogg Foundation, 1998) and National Urban League's Youth Development Mobilization Initiative (National Urban League, 2002)); to guide community-based, youth-serving organizations through a process of assessment and organizational improvement (e.g., in the Youth Development Program Outcomes Project[4] and the Innovation Center's Youth Leadership Development Initiative (Wheeler, Roach, & Mohamed, 2000)); and for presentations to both academic and practitioner audiences at meetings and conferences devoted to defining the type of research and policy needed to advance the field of youth development (e.g., University of Rochester Child Health Congress and the Mott Symposium on After School Programs).

Across these settings, the range of stakeholders has included policymakers, community residents, service providers, public and private funders, educators and youth. With all these groups we have generally found the framework to be an effective and easily understood tool for three reasons. First, it provides a common language for diverse groups to use in their thinking about youth development; the increasing use of collaborative strategies requires that individuals from different backgrounds have a way to communicate that resonates with all of them. Second, it serves as a tool for building consensus about prioritizing action: by limiting the outcomes included in the framework to those that are both important and amenable to action, and by clearly articulating the causal connections between youth's experiences, developmental accomplishments and long-term success as adults, the framework has enabled stakeholders to see clearly the type of initiative required to achieve the desired outcomes for youth. Finally, the framework serves as a tool for both needs assessments and accountability. The framework's elements can be used at the community level to assess the areas across settings (e.g., families, neighborhoods, schools, youth organizations) that would need to be strengthened in order to improve youth's longer-term outcomes; and within a setting (for example, in a youth-serving organization) as evaluation outcomes that can be used both for accountability and to guide organizational improvement strategies.

Despite the utility and acceptance of the framework among varied groups, policymakers and funders have sent a consistent message that while they believe the "youth development approach" has merit, stronger evidence linking developmental experiences to better later outcomes would increase their ability to use this approach for setting priorities and monitoring success. That is, we keep hearing the question, "Can you show me, and those I am accountable to, evidence that proves that providing developmental supports to all youth will improve their longer-term outcomes?" This project was designed to respond directly to this question.

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[4] The Youth Development Program Outcomes Project was done in collaboration with the Community Network for Youth Development (CNYD), a San Francisco-based local youth development intermediary.

C. The Project

Two years ago, with support from the W. T. Grant Foundation, we began to gather and develop two types of evidence for the community action framework: evidence from published research studies and from newly analyzed results from existing data sets on youth. These first two steps in building the evidentiary base for the framework – literature review and data analyses – were designed to address three questions:

- How much evidence exists in the research literature **linking** the **specific outcomes** in our framework to each other (for example, linking a developmental outcome – productive use of free time – to an early adult outcome – employment; or linking a developmental support and opportunity – supportive adult relationships – to a developmental outcome – school performance)?

- Are there high-quality, practical **measures** in the research literature of the outcomes in this framework that could be used in community settings to assess how well youth are doing?

- Can existing **data** on youth be analyzed in a way that shows **how well** youth need to be doing on early outcomes in the framework in order for us to be confident they will succeed later in life; and can we show how much difference youth development makes in achieving long-term success?

Our goal was to add value to other recent reviews and syntheses of the youth development literature – all of which aim to extract implications of existing research for practice, policy and future research (e.g., National Academies of Science (Eccles & Gootman, 2002)). Unlike these other efforts, we narrowed our review to existing evidence and available data sets addressing linkages between a **specific** set of supports and opportunities and subsequent outcomes for youth in late adolescence and early adulthood. By doing so, we hope to offer more specific and detailed evidence (including from analyses of existing data sets) than could other reports with broader mandates. We also hope to offer more detailed and focused implications for practice. Specifically, we want to say something about how to operationalize what good youth development settings look like; and what difference they can make for youth who spend time there.

The Literature Review Component

The youth development research literature is not a unified or even cross-referenced set of articles and reports. We did not intend to provide a synthesis or summary of everything that is known about youth development. In our review of this literature, we used our framework as a guide for what studies to review and then made judgments as to the quality of these studies in our synthesis of the evidence. What we hoped to learn from the review was which of the hypotheses included in the framework have support in the existing research, which are not supported and which have yet to be tested.

In those studies that did provide evidence about links between supports and opportunities in different settings and later progress on youth development and/or young adult outcomes, we also examined the measures used. Our goal here was to identify existing measures that either partially or fully assessed the framework's key elements.

Our review of the literature has given us a clear sense of where there is strong evidence from other studies supporting the framework, where there are gaps, and where there is the greatest need for measure development. Summary findings from this effort are included throughout the report; and detailed results will be published in full in a separate report. But as interesting as these results are, they are not enough to fully answer the core question from practitioners. There is a need to go further and demonstrate empirically – and in a straightforward way – what youth need to be experiencing in order for us to be confident they will do well as adults. Further, we need to begin to show what level of quality we should require from the activities and settings where youth spend their time in order to be confident that youth will have the requisite level of developmental support. This was the enterprise of the second component of the project and is the focus of this report.

The Analyses of Youth Data Sets Component

The project's second component involved identifying existing, high-quality data sets with information on youth's experience of supports and opportunities, their developmental outcomes and/or their early adult outcomes. Our goal was to test the links in our framework in order to begin providing community stakeholders with guidance on what standards, or goals, should be set in trying to improve the life chances of youth. Using what we call a "threshold approach" – we are trying to offer some ways of getting at, and then clearly describing, "how good is good enough" on the supports and opportunities, and on developmental outcomes, to make the most difference to youth later in life. This methodology and the results are described in detail in later sections of the report. **These analyses have yielded strong, confirmatory evidence that youth development experiences and outcomes are linked to *long-term* outcomes in early adulthood.**

D. The Report

The remainder of the report turns to some of the most interesting aspects of our method and findings. In the next chapter we describe the analytic strategy used to establish evidence for what communities need to provide to their youth in order to have reasonable confidence they will succeed as adults. We then turn in Chapters III and IV to the findings from our analyses of relevant data sets that show the actual "threshold" levels of youth's experiences and accomplishments that we found to be important to a successful transition to adulthood, and to the results that demonstrate how much difference these levels make in achieving the long-term goals sought for youth.

Chapter II: Description of Approach

A. Goals of the Approach

The primary goals of the study were to:

- Identify threshold levels on elements in the Community Action for Youth Development Framework most critical to predicting later success; and

- Estimate how much difference achieving these threshold levels make in the likelihood of having success or difficulty as an adult.

B. Method of Analysis

The first step toward these goals was to identify data sets with sufficient information on youth to measure the elements of the framework. The selection process and details about the data sets are included later in this chapter. After selecting the data sets and reviewing the survey questions and school records data included, we were able to recombine existing survey questions and administrative indicators into short, practical measures of each of the framework elements.

The next task was to identify threshold levels at each step on the pathway of development that distinguish between youth who were doing well – defined as **optimal levels** – and those who were not – defined as **risk levels**. Unlike more traditional methods, this method shifts the focus from "group averages" to knowing where individual youth fall in relation to a standard. A brief description of this method follows. Readers interested in more detail on the method will find it in Appendix A.
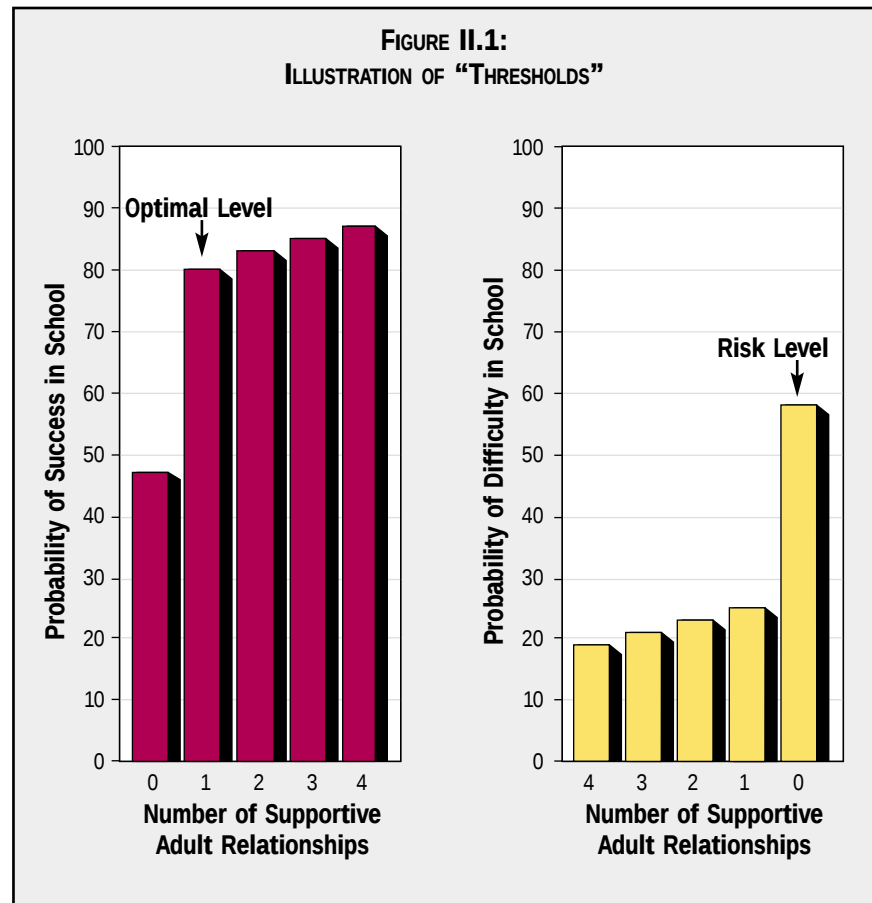
Setting Thresholds

Optimal levels on earlier elements in the framework identify the "tipping point," or threshold, at which youth's chances for success on later elements increase dramatically. For example, we know from the literature and from this study that youth who have at least one highly supportive relationship with an adult will do better than youth who have none. While there may be some additional benefits from having more than one supportive relationship, the greatest difference in later success is between having none and having one or more relationships. In other words, the tipping point or threshold for later success is youth having one or more supportive relationships. In contrast, risk levels on earlier elements in the framework identify the "tipping point," or threshold,

at which youth's chances for difficulties on later elements increase dramatically. Again, from past research and this study we know that youth who lack any supportive relationships with adults will be much worse off than youth who have at least one supportive relationship. Figure II.1 illustrates these thresholds.

By framing the results of this analysis in terms of thresholds, it is possible for programs, organizations and communities to set targets for how many **more** of their youth they can help meet or exceed optimal levels on particular outcomes and how many **fewer** of their youth will be at risk levels on these outcomes. For example, an after-school program may attempt

FIGURE II.1:
ILLUSTRATION OF "THRESHOLDS"

to raise the percent of their youth who indicate they have at least one close adult in their life by adding a mentoring component in which an adult is linked to each youth in the program.

Identifying Resources and Liabilities

The next critical question is **how much** difference does it make that youth hit these thresholds or tipping points? For instance, how much more likely is it that youth who are learning to be productive at optimal levels early in high school will attend college, find a good job and/or be involved in their community? To describe the positive effects of earlier elements on later elements in the framework, we looked at how early experiences and accomplishments act as **resources** for later ones. To describe the negative effects, we examined how much the lack of certain experiences or the inability to accomplish certain milestones act as **liabilities** to youth's chances for success.

More specifically:

- **Resources** are early experiences and outcomes that improve the chances that adolescents will get **into optimal** levels on later outcomes; or that keep adolescents **out of risk** on later outcomes. For example, having one or more supportive adults can act as a resource by increasing the chance a youth will be highly engaged in school (learning to be productive) or by reducing the chance a youth will get into trouble with the law (failing to learn to navigate).

- **Liabilities** refer to experiences or outcomes that contribute to youth getting **into risk** levels on later outcomes; or that keep adolescents **out of optimal** levels on later outcomes. For example, having no highly supportive relationships with adults in early adolescence could lead youth to

be less productive in later adolescence by disengaging from school; or reduce the likelihood youth will be connected with strong and positive peer networks in later adolescence.

The hope is that this method will provide readers clarity around three issues: **what** matters for youth, **how** it matters (as a resource and a liability), and how **much** it matters. Knowing that youth who do well in school also do better later in life is important. Knowing that youth with higher levels of supports and opportunities at home, at school and in their communities do better in school and spend their spare time more productively is also important. However, many audiences would like to know **how** well youth need to do in school to increase their likelihood of doing well as young adults; and **what** levels of supports and opportunities in **what** settings contribute **how** much to young people doing well and being engaged in school. Such precision can help schools, policymakers, parents, youth organizations and even youth themselves better articulate and prioritize what they are striving for – increasing particular resources and decreasing specific liabilities – and more accurately and fully assess their accomplishments.

The remainder of this chapter provides a detailed description of how the data sets were selected. A more technical explanation of the methods is contained in Appendix A.

C. Selecting the Data Sets

There were several key features that data sets needed to include in order to be used in the analyses. They needed to contain variables that could be mapped onto the elements of the framework *[Figure I.1]* **and** those variables needed to map onto consecutive boxes in the framework. In other words, at a minimum the data sets needed to allow us to look at youth experiences *[Box C, Figure I.1]* **and** at developmental milestones *[Box B, Figure I.1]*; or at developmental milestones *[Box B, Figure I.1]* **and** early adult outcomes *[Box A, Figure I.1]*.

We began the selection process by identifying potential data sets for inclusion in the study. National data sets in the public domain were examined, including: the Adolescent Health Studies; the National Longitudinal Survey of Youth: 79; the National Longitudinal Survey of Youth: 97; and the National Survey of American Families. Additional data sets were obtained from academic institutions including Michigan Study of Adult Life Transitions (MSALT) and Maryland Adolescent Development in Context Study (MADICS), both from Dr. Jacquelynne Eccles at the University of Michigan, Ann Arbor. Finally, several research organizations provided us with data sets, including data from the Community Change for Youth Development and Voluntary Youth Serving Organizations evaluations from Public/Private Ventures (P/PV) and the Career Academies evaluation from Manpower Demonstration Research Corporation (MDRC).

After cataloguing these data sets for their relevance to the framework elements, two – MSALT and MADICS – were selected for the first round of analyses.

1. Michigan Study of Adult Life Transitions (MSALT) began in 1983 with 2,381 fifth and sixth graders and their parents, from ten different school districts in Southeastern Michigan. Additional data about students were obtained from school staff and school records. This sample is primarily from working and middle class families and communities. Adolescents were followed through high school and as they made the transition into early adulthood (age 20 and again at age 23+).

TABLE II.1								
DATASET DEMOGRAPHICS								
NAME	**SOURCE**	**TOTAL N**	**SES**		**ETHNICITY**		**AGE**	**STUDY YEARS**	**YEARS OF WAVES IN ANALYSES**
Michigan Study of Adult Life Transitions (MSALT)	J. Eccles, University of Michigan, Ann Arbor	2,381	$20K or < 15% $20K-$40K 28% $40K-$60K 32% >60K 26%	African-American 7% Asian 1% Hispanic 1% Native American 2% White 87% Other 2%	11-23+ Box C: 15 Box B: 17 Box A(1): 20 Box A(2): 23+	1984–1997 8 waves of data	Box C: 1988 Box B: 1990 Box A(1): 1993 Box A(2): 1997
Maryland Adolescent Development in Context Study (MADICS)	J. Eccles, University of Michigan, Ann Arbor	1,482	$20K or < 6% $20K-$40K 21% $40K-$60K 25% >60K 48%	African-American 63% Asian 2% Hispanic 1% Native American .3% White 32% Other 1%	12-20 Box C: 14 Box B: 17 Box A: 20	1991–1998 5 waves of data	Box C: 1993 Box B: 1996 Box A: 1998

2. Maryland Adolescent Development in Context Study (MADICS) began in 1991 with 1,482 adolescents and their families from Prince Georges County, Maryland. Additional information about the teens was collected from their older siblings, the staff at their schools, their school records and 1990 census data banks. Two unique features of the sample are: (1) the range of income is equally large among the African-American and European-American families; and (2) the youth come from a county that includes several different ecological settings, including low income, high-risk urban neighborhoods, middle-class suburban neighborhoods, and rural, farm-based neighborhoods.

Table II.1 summarizes the demographics of each of these data sets, including the years of the studies, the total number of youth included in each, as well as their ages, socioeconomic status and ethnicity.

These two data sets were selected for several reasons: they represent diverse populations of youth across the entire age span from 11 to 23 and up; they combine survey and administrative records at relevant ages; and, of greatest importance, they include longitudinal measures of the three elements of the framework (Supports and Opportunities, Developmental Outcomes **and** Early Adult Outcomes).

Furthermore, while the items included in these data sets do not map perfectly onto the elements of the framework since the studies driving the data collection process did not define their variables in exactly the same way we do, many of the questions used to measure their variables could be recombined in ways that address framework elements of interest.[5] The elements of the Community Action for Youth Framework and the variables from each data set that were used to represent those elements are presented in Table II.2 *[pages 15-17]*.

Finally, the fact that these data sets included longitudinal data was a determining factor in their selection. Using longitudinal information for the analyses was crucial because as youth grow we need to be able to look at how key early experiences are related to how they fare as older adolescents and young adults. Using cross-sectional data tells us whether young people who have good supports and opportunities at one point in time also have good developmental outcomes at that

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[5] For a technical description of the process for identifying measures that mapped onto the framework elements as well as for creating recombined measures of those elements, see Appendix A.

			TABLE II.2 **COMMUNITY ACTION FRAMEWORK INDICATORS**	
FRAMEWORK BOX	**OUTCOMES**	**INDICATORS**	**MSALT MEASURES**	**MADICS MEASURES**
A	**Economic Self-Sufficiency**	**Education**	Education level	Education level
		Living Wage Job	a. Employed b. Earnings	a. Employed b. Earnings
		Discretionary Resources	a. Adjustments due to financial problems b. Difficulty paying bills c. Worry about not having enough money	a. Adjustments due to financial problems b. Difficulty paying bills c. Worry about not having enough money
		Not on Welfare	Welfare receipt in past 12 months	Welfare receipt in past 12 months
		Job Satisfaction	a. Job stimulation b. Job stress c. Perceived autonomy d. Bored/underemployed	a. Job stimulation b. Job stress c. Perceived autonomy d. Bored/underemployed
A	**Healthy Family and Social Relationships**	**Physical Health**	a. Healthy eating habits b. Frequency of exercise c. Overall health rating d. Drug use	a. Problem drinking b. Overall health rating c. Drug use
		Mental Health	a. Resilience b. Isolation vs. sociability c. Aggression and impulsivity d. Depression e. Social anxiety	a. Social anxiety b. Mental health problems
		Good Caregivers/ Parents	NONE	Time spent caring for own children
		Dependable Family Networks	a. Relationship with father b. Relationship with mother c. Family closeness	a. Relationship with father b. Relationship with mother c. Family closeness
		Dependable Friend Networks	a. Positive feelings toward friends b. Negative feelings due to friends c. Support from friends	a. Positive feelings toward friends b. Negative feelings due to friends c. Support from friends
		Healthy Romantic/ Marital Relationships	a. Support and affection b. Coercive behavior of partner c. Violent behavior toward respondent	a. Support and affection b. Coercive behavior of partner c. Violent behavior toward respondent
A	**Community Involvement**	**Law-Abiding Citizens**	Frequency of law breaking in last six months	Frequency of law breaking in last six months
		Membership in Churches and Other Community Organizations	a. Community service b. Political/civil rights organizations c. Special interest clubs d. Leadership roles in a–c e. Religion	a. Community service b. Political/civil rights organizations c. Special interest clubs d. Religion
		Know and Interact with Neighbors	NONE	NONE
		Vote	NONE	NONE
			table continues . . .	

			TABLE II.2, *continued* COMMUNITY ACTION FRAMEWORK INDICATORS	
FRAMEWORK BOX	OUTCOMES	INDICATORS	MSALT MEASURES	MADICS MEASURES
B	Productive	School Engagement, Attendance and Performance	a. GPA (records) b. School engagement c. Number of days skipped	a. GPA (self-report) b. Engagement c. Number of days skipped
		Use of Free Time	a. Sports participation b. Hobbies/club participation c. Passive entertainment: hang out; watch TV	a. Sports participation b. Hobbies/club participation c. Passive entertainment: hang out; watch TV
		Life Skills	NONE	NONE
		Work	a. Currently working b. Length of time working c. Hours per week	a. Currently working b. Length of time working c. Hours per week
B	Connected	Connected to Adults	a. Closeness to parents b. Parents approve of friends	a. Closeness to parents b. Parents approve of friends c. Closeness to family d. Closeness to teachers
		Connected to Peers	Closeness to friends	Closeness to friends (different items from MSALT)
		Connected to Groups, Organizations and Institutions	a. Time on volunteer activities b. Time on religious activities	a. Time on volunteer activities b. Religious participation: importance and frequency.
B	Navigate	Social Settings	NONE	NONE
		Responsibility/ Taking Care of Self and Others	NONE	NONE
		Risk Taking	Frequency of risk-taking behaviors in the last six months	a. Frequency of risk-taking behaviors in last six months (different items from MSALT) b. Good at carrying out plans c. Bouncing back from bad experiences d. Learning from mistakes
		Coping or Reaction to Challenge	Coping	a. Anger b. Nervous c. Coping
			table continues . . .	

			TABLE II.2, *continued*	
			COMMUNITY ACTION FRAMEWORK INDICATORS	
FRAMEWORK BOX	OUTCOMES	INDICATORS	MSALT MEASURES	MADICS MEASURES
C	Supportive Relationships	Guidance	a. Overprotective parenting b. Harsh parenting c. Inconsistent parenting	a. Rules b. Negative consequences c. Overprotective parenting d. Harsh parenting e. Inconsistent parenting
		Practical Support	a. Parent talks to youth about things b. Parent helps on non-school issues	a. Parent talks to youth about things b. Parent helps with schoolwork c. Teachers provide help d. Friends provide help e. Parent helps on non-school issues
		Emotional Support	a. Positive support from parents b. Negative support from parents	a. Positive support from parents b. Negative support from parents
		Adult Knowledge of Youth	a. Parents' knowledge of youth activities b. Parents are interested in youth	a. Parents' knowledge of youth activities b. Parents are interested in youth
C	Meaningful Involvement	Input and Decision-Making	Involvement in decision-making at home	Involvement in decision-making at home
		Leadership	NONE	NONE
		Sense of Belonging	NONE	NONE
		Opportunities for Service	NONE	NONE
C	Challenging and Interesting Activities	Challenging Experiences	a. Math and science are challenging b. English is challenging	a. School is challenging b. Social studies is challenging c. Math and Science are challenging d. English is challenging
		Interesting Experiences	NONE	NONE
		Growth and Progress	NONE	NONE
C	Safety	Physical Safety	NONE	NONE
		Emotional Safety	NONE	NONE

same point in time. Using longitudinal data allows us to examine whether young people who have supports and opportunities at an early point in their life are more or less likely than other youth to have good developmental outcomes and good long term outcomes later in life. So for example, only longitudinal data allow us to explore whether youth who have challenging learning experiences earlier in their lives are better at navigating life problems/difficulties in late adolescence and early adulthood; or whether youth who experience meaningful involvement in groups in early adolescence are more likely to graduate from high school and attend college.

D. Presentation of Results

Results are presented in two chapters – Chapter III focuses on relationships between Developmental Outcomes and Early Adult Outcomes and Chapter IV focuses on relationships between Supports and Opportunities and Developmental Outcomes. Both chapters begin with a brief summary of the findings from the literature review, followed by a description of the thresholds, or tipping points, identified for the relevant elements in the framework. Information is included on what percentage of the sample from the two data sets is at optimal or risk levels on these elements. All results are combined across data sets[6] in order to provide a single finding for the importance of each element on the pathway to long-term success.

Next the resource and liability effects are presented – in Chapter III, how much developmental outcomes matter to early adult outcomes; and in Chapter IV, how much supports and opportunities matter to later developmental outcomes.[7]

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[6] In summarizing results across the two data sets, the strength of the relationships between elements of the framework was estimated by taking a weighted mean of the effects.

[7] Ultimately, we want to know whether and how much earlier experiences and accomplishments influence the individual developmental trajectories of youth. Future technical reports and research articles will focus on these questions.

Chapter III: Relationship Between Developmental Outcomes and Early Adult Outcomes

In focusing first on the questions of whether and how developmental outcomes affect early adult outcomes, we begin at the end of the story. We do so because we believe that for the framework to be credible and useful to its intended audiences, it must speak to the "bottom line" issues captured by the Early Adult Outcomes. Whether the reader is interested in using the framework as a guide for action or research, in youth organizations or public institutions, with considerable or modest resources to invest – the connection between what youth can do and how they turn out as adults is of critical importance.

The first step in addressing this question was to see whether existing studies showed connections between the developmental outcomes in the framework and early adult outcomes.[8] The literature provided only a partial answer, for the following reasons. Most studies looking at developmental outcomes (learning to be productive, connected, and to navigate) examine their relationship only to **other** developmental outcomes, for example, links between school performance (productive) and risk behaviors (navigate); or between feeling connected to family, peers and teachers (connected) and school performance (productive). One reason many studies focus **within** the period of adolescence is the expense and difficulty associated with collecting data on the same group of people over long periods of time (i.e., following them from teen years to adulthood). The distribution of relationships between framework elements that were found in the literature is illustrated in Table III.1[9] *[page 20]*.

In the studies that do examine relationships between developmental and early adult outcomes, we found two important trends. First, there is strong evidence in the literature on the effects of learning to be productive (e.g., grades, test scores, attendance) on later economic self sufficiency (e.g., high school completion, post high school education, employment); and on later healthy family and social relationships *[see Table III.2, page 20]*. Learning to navigate (e.g., drug use and other risky behaviors) was shown to have strong effects on both later economic self-sufficiency and community involvement.

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[8] The methodology used in the literature review is included in Appendix B. The detailed results from the literature review and a full bibliography can be found in a separate report forthcoming in 2003.

[9] More specifically, Table III.1 provides the total number of relationships that have been found in the literature (a) among developmental outcomes (learning to be productive, connected and to navigate) and (b) between developmental outcomes and young adult outcomes (economic self-sufficiency, healthy family and social relationship and community involvement). Because most studies are comprehensive (e.g., explore the relationship between school performance, attendance, participation in extracurricular activities and dropout rate), more than one relationship is often reported within a single study.

TABLE III.1
NUMBER OF RELATIONSHIPS FROM STUDIES THAT LOOK AT ONLY DEVELOPMENTAL OUTCOMES

		BOX B: Developmental Outcomes			TOTAL # Relationships
		Productive	Connected	Navigate	
Box B: Developmental Outcomes	**Productive**	44	3	20	67
	Connected	13	0	16	29
	Navigate	7	0	1	8

NUMBER OF RELATIONSHIPS FROM STUDIES THAT LOOK AT DEVELOPMENTAL AND EARLY ADULT OUTCOMES

		BOX A: Early Adult Outcomes			TOTAL # Relationships
		Economic Self-Sufficiency	Healthy Family and Social Relationships	Community Involvement	
Box B: Developmental Outcomes	**Productive**	20	4	6	30
	Connected	3	2	1	6
	Navigate	4	5	6	15

TABLE III.2
STRENGTH OF EVIDENCE IN THE LITERATURE

	Economic Self-Sufficiency			Healthy Family and Social Relationships			Community Involvement	
	EDUCATION	EMPLOYMENT	INCOME	HEALTH	RELATIONSHIPS	PARENTING	CIVIC INVOLVEMENT	LAW-ABIDING
Productive	• **Grades*** • **Test scores*** • Engagement* • **Attendance** • Extra-curricular activities • Work • Dropout	• Use of time • **Work*** • Grades • **Dropout***	• Test scores* • **Work*** • **Dropout***	•**Grades** • Dropout • **Take care of others**	• Grades • **Extra-curricular activities** • **Dropout** • Coping		• Extra-curricular activities* • Grades	• Grades* • Dropout • Work
Connected	• Connect to parents • Religion • Community service	• Religion		• **Connect to parents**		• Connect to family	• Connect to parents	
Navigate	• **Risky behavior*** • **Drug use***	• **Risky behavior** • **Drug use**		• **Coping** • Risky behavior • Drug use	• Risky behavior* • **Drug use*** • Coping		• Drug use	• **Drug use*** • **Risky behavior***

★ = Strong quality of study   **Bold** = Strong relationship

Second, while the literature does contain strong evidence of the connections between some of the developmental and early adult outcomes in the framework, there are still questions to be explored. This literature tells us **that** these outcomes are important. Moving to action at a community level requires also understanding **how well** young people need to be doing in developmental areas (how good is good enough?) and **how much** of a difference these outcomes make (how much can young people's lives expect to be changed by improving these outcomes?).

The remainder of this chapter focuses on the results of the data analysis designed to address these key questions. The threshold levels for the early adult and developmental outcomes are described, followed by an analysis of how much these outcomes matter for later success.

A. How Good is Good Enough? Thresholds for Early Adult Outcomes and Developmental Outcomes

Early Adult Outcomes

The process of setting thresholds described briefly in the last chapter was used to create **optimal** and **risk** classifications for the different outcomes in the framework.[10] Not all youth fit into one of these categories – some are neither optimal nor risk, but in between. This chapter focuses on the youth who were identified either as doing very well or as having a lot of difficulty. The thresholds for the early adult outcomes are listed in Table III.3.[11] In general, to be at optimal levels on the individual early adult outcomes (economic self-sufficiency, healthy family and social relationships, community involvement) after graduating high school a young adult had to:

- Be on the path to **economic** security by either attending school or working;

- Have good **health** and health habits, exhibit good mental health and have supportive relationships with family and friends;

- Engage in **community** life by volunteering, being politically active or active in their church and not committing crimes.

TABLE III.3 THRESHOLDS FOR INDIVIDUAL EARLY ADULT OUTCOMES	
Economic Self-Sufficiency	
RISK	**OPTIMAL**
Has one or more threats to economic security (e.g., high school diploma or less, unemployed or part-time job, has money problems, on welfare); AND is not optimal on any of these indicators.	Has one or more indicator of current or future economic security (e.g., attends a four-year college, employed full-time or its equivalent, reports job satisfaction); AND is not at risk on any of these indicators.
Healthy Family and Social Relationships	
RISK	**OPTIMAL**
Has two or more indicators of poor health (mental health, physical health, or poor relationships); OR has poor mental health or no supportive relationships; AND is not optimal on the other indicators.	Has two or more indicators of good health (mental health, physical health, or good relationships) and is not at risk on the third indicator; OR has either good mental health or experiences good relationships; AND is not at risk on the other indicators.
Community Involvement	
RISK	**OPTIMAL**
Commits an illegal activity about once a month.	Has very low levels of illegal activities; at least moderate levels of involvement in community organizations (e.g., volunteering, community service, political activism); AND/OR semi-regular church attendance.

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[10] See Appendix A for a fuller description of the method for setting thresholds.

[11] A table containing a more detailed description of the threshold levels for each outcome is included in Appendix C.

In general, to be considered at risk levels on the individual early outcomes a young adult had to:

- Have one or more threats to **economic** security by being unemployed, not continuing education, or having money or job problems;

- Have poor mental or physical **health** and a lack of supportive relationships;

- Be a detriment to the **community** by committing an illegal activity once a month or more.

While we were interested in how young people were doing as young adults in each of the different developmental areas in the framework, we were also interested in looking at how they were doing overall. In **early adulthood**, to be considered thriving **overall**, a young person had to be at the **optimal** level in at least one of the three outcome areas – that is, they had to be either doing well economically, in their health and personal relationships or in community participation –

and they could not be at risk in the other areas. Conversely, a young adult who was at **risk** in at least one of the three outcomes areas and not optimal on any of the others was considered **overall** to be having difficulty at that point in life. These thresholds are shown in Table III.4.

After creating these threshold levels, the data sets were analyzed to see

TABLE III.4 THRESHOLDS FOR OVERALL EARLY ADULT OUTCOMES	
RISK	**OPTIMAL**
Meets Risk criteria on at least one of three outcomes (economic self-sufficiency, healthy family and social relationships, or community involvement) and does not meet Optimal criteria on any of the others.	Meets Optimal criteria on at least one of three outcomes (economic self-sufficiency, healthy family and social relationships, or community involvement) and does not meet Risk criteria on any of the others.

what proportion of young people fell into the optimal and risk levels on early adult outcomes. The early adult outcomes combined *[Table III.5, Column 1]* showed that the percentage of young people in the sample who are thriving (in the optimal category) is about double the percentage having difficulty as young adults (in the risk category).

The table of individual outcomes *[Table III.5, Columns 2-4]* shows that the largest proportion of young adults in this sample (55 percent) are at optimal levels in the area of economic self-sufficiency. Except in the area of healthy family and social relationships, the proportion of youth in the optimal category on these outcomes is higher than the proportion at risk levels.

TABLE III.5 PERCENTAGES OF YOUTH IN OPTIMAL AND RISK CLASSIFICATIONS: EARLY ADULT OUTCOMES (Weighted Percents for Combined Sample)				
	Overall Early Adult Outcomes	**Economic Self-Sufficiency**	**Healthy Family and Social Relationships**	**Community Involvement**
	(N=1939)	(N=2595)	(N=2048)	(N=2173)
OPTIMAL	43%	55%	25%	36%
RISK	22%	27%	30%	20%

Developmental Outcomes

Setting the thresholds for each of the developmental outcomes (learning to be productive, learning to connect and learning to navigate), and for developmental outcomes overall, built on the information on early adult outcomes. In order to determine "how good is good enough" on the developmental outcomes, we had to identify the level of success late in high school that most dramatically increased the probability of youth having success in early adulthood.[12] This was defined as the optimal level on developmental outcomes. The risk level on developmental outcomes for teens was set at the point where the probability of having difficulty later as young adults increased the most.

These thresholds are presented in Tables III.6 and III.7. The data used for these thresholds were collected from youth in their junior or senior year of high school. To be considered at **optimal** levels **overall** in reaching **developmental** milestones at this age, young people had to be thriving in at least two of the three developmental areas. Conversely to be considered at **risk overall** late in high school, a young person had to be having serious problems with at least two of the three developmental milestones (school/work, relationships or navigating/coping).

The percentage of youth in our sample who fell into the optimal and risk levels on developmental outcomes is shown in Table III.8. In gen-

TABLE III.6
THRESHOLDS FOR INDIVIDUAL DEVELOPMENTAL OUTCOMES

Productive	
RISK	**OPTIMAL**
Low levels of grades (C or below), attendance and engagement in school.	Two or more behavioral indicators of being productive (e.g., grades of B or better, high levels of engagement and attendance, participation in sports and hobbies, etc.).

Connected	
RISK	**OPTIMAL**
Has problems with one or more of their important relationships (e.g. parents, friends, teachers).	Strong attachment to at least two important networks (parents, friends, teachers, volunteer/ religious organizations) and not at risk in any of these areas.

Navigate	
RISK	**OPTIMAL**
Has one or more markers of failures to navigate (e.g., high number of illegal/antisocial activities or high levels of emotional distress or inconsistent problem solving).	Shows low levels of illegal/antisocial activities, low levels of emotional distress, consistently effective problem solving.

TABLE III.7
THRESHOLDS FOR OVERALL DEVELOPMENTAL OUTCOMES

RISK	**OPTIMAL**
Meets Risk criteria on at least two of the three outcomes (productive, connected and navigate) AND does not meet Optimal on the third.	Meets Optimal criteria on at least two of the three outcomes (productive, connected and navigate) and does not meet Risk criteria on on the third.

TABLE III.8
PERCENTAGES OF YOUTH IN OPTIMAL AND RISK CLASSIFICATIONS:
DEVELOPMENTAL OUTCOMES
(Weighted Percents for Combined Sample)

	Overall Early Adult Outcomes	Economic Self-Sufficiency	Healthy Family and Social Relationships	Community Involvement
	(N=1516)	(N=1564)	(N=2111)	(N=1859)
OPTIMAL	23%	23%	29%	40%
RISK	16%	25%	27%	26%

[12] This process is described briefly in Chapter II and in detail in Appendix A.

eral, between 20 and 30 percent of the youth show risk levels on these outcomes, and the same proportion falls into the optimal category – with the exception of learning to navigate. Here, 40 percent of the young people showed optimal levels.

B. How Much Do Developmental Outcomes Matter to Later Success?

In order to explore how much developmental outcomes matter to later success in life we looked at the developmental outcomes as both resources and liabilities; that is, how much does doing well on these earlier outcomes act as a positive influence (or resource) on outcomes in young adulthood; and how much does doing poorly on earlier outcomes act as a negative influence (or liability) on these outcomes.

Developmental Outcomes as Resources and Liabilities[13]

An earlier outcome can act as a resource for later success in two ways: it can either **increase** a young person's chances of being at **optimal** levels on later outcomes, or it can **decrease** a young person's chances of being at **risk** levels on later outcomes.

Conversely, an outcome earlier in life can also act as a liability in achieving later success in two ways: it can either **increase** a young person's chances of being at **risk** levels on later outcomes, or it can **decrease** a young person's chances of being at **optimal** levels on later outcomes.

The first two questions addressed here are:

QUESTION 1

If young people have done well at reaching the developmental milestones in high school, how much more likely are they to be successful as young adults?
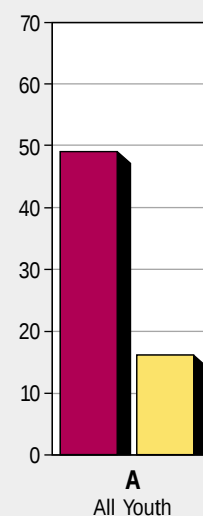
and

QUESTION 2

If young people have had difficulty reaching the developmental milestones in high school, how much less likely are they to be successful as young adults?

In general, about half (49 percent)[14] of the young adults in this sample were doing very well on the early adult outcomes and were classified as optimal overall *[Figure III.1, dark bar A]*. About 16 percent of the youth in this sample were in the risk category as young adults *[Figure III.1, light bar A]*.

FIGURE III.1
RELATIONSHIP BETWEEN YOUNG ADULT AND DEVELOPMENTAL OUTCOMES

Good Young Adult Outcomes
Poor Young Adult Outcomes

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[13] Sample size information for all graphs in this chapter are located in Appendix D.

[14] The proportions of the general sample in optimal and risk categories reported in this section may vary from the proportions reported in the tables in the previous section because of sample attrition in analyses crossing time periods.

Good Developmental Outcomes as Resources

While approximately half of the sample were doing very well as young adults in their early twenties (i.e., were optimal), when we considered young people who had optimal levels of developmental outcomes late in high school the proportion with good young adult outcomes increases to over two-thirds (69 percent) *[Figure III.1, dark bars A & B]*. Conversely, the proportion of youth in the sample who were at risk on young adult outcomes in their early twenties decreases from 16 percent to 5 percent *[Figure III.1, light bars A & B]*.
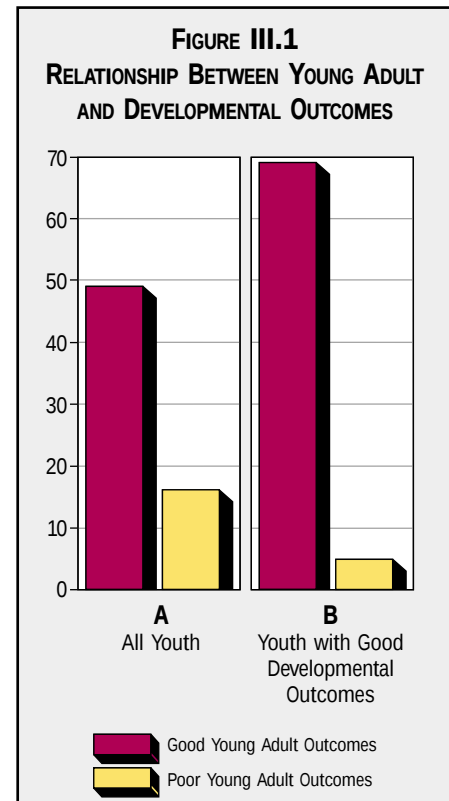
FINDING 1

Youth who had reached optimal levels on developmental milestones in high school were 41 percent[15] more likely to be at optimal levels on early adult outcomes in their early twenties.

and
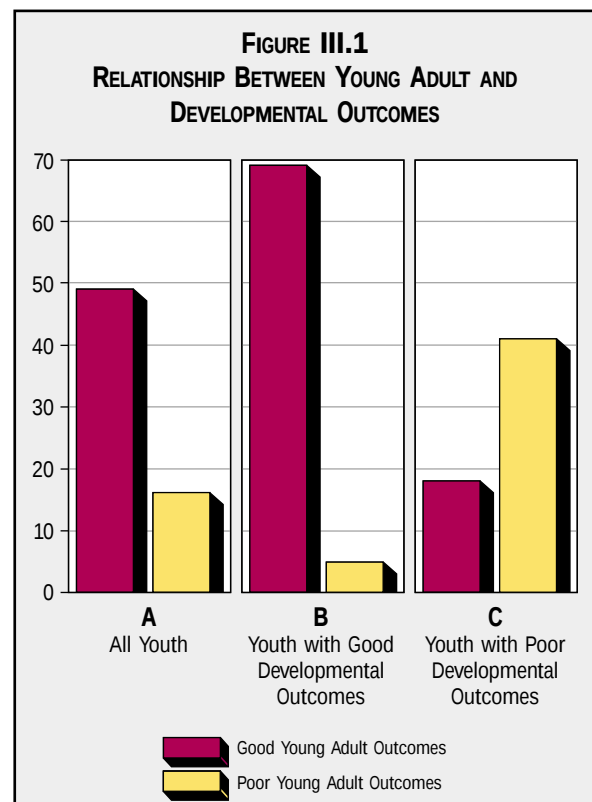
FINDING 2

Youth with good developmental outcomes late in high school are 69 percent less likely to have difficulty as a young adult.

FIGURE III.1
RELATIONSHIP BETWEEN YOUNG ADULT AND DEVELOPMENTAL OUTCOMES

Legend:
- Good Young Adult Outcomes
- Poor Young Adult Outcomes

Poor Developmental Outcomes as Liabilities

We also examined the extent to which poor developmental outcomes act as a liability for youth. On average 49 percent of the youth in the sample had optimal young adult outcomes, but only 18 percent of youth who had poor developmental outcomes late in high school were thriving as young adults *[Figure III.1, dark bars A & C]*. Youth with poor developmental outcomes late in high school were also more likely to have poor young adult outcomes in their early twenties. While close to a fifth (16 percent) of all young adults in this sample were having difficulty on the early adult outcomes, that percent rose to two-fifths (41 percent) for youth who were at the risk level on developmental outcomes late in high school *[Figure III.1, light bars A & C]*.

[15] The method for calculating the percent change is illustrated in Text Box A.5 and A.6 in Appendix A.

FIGURE III.1
RELATIONSHIP BETWEEN YOUNG ADULT AND DEVELOPMENTAL OUTCOMES

Legend:
- Good Young Adult Outcomes
- Poor Young Adult Outcomes

> **FINDING 3**
>
> Young people who were at risk levels on developmental milestones in high school were 156 percent more likely (over one and a half times) to have poor early adult outcomes in their early twenties.

and

> **FINDING 4**
>
> Young people who had poor developmental outcomes late in high school were 63 percent less likely than the average young adult to have good adult outcomes in their early twenties.

In addition to looking at how the developmental outcomes combined act as resources, we can also look at each of the individual outcomes (productive, connected, navigate) as resources for early adult outcomes. The analyses show the relative importance of each of the developmental outcomes as **resources** for later outcomes, illustrating that:

- Each developmental milestone has about the same effect – about a 35 percent increase – on the proportion of high school aged youth achieving **optimal** early adult outcomes in their early twenties.

- Similarly, each developmental milestone has a beneficial effect on the proportion of high school aged youth at risk levels in early adulthood – specifically, decreases ranging between 45 to 75 percent. Youth who learn to be productive are the least likely to have poor early adult outcomes (decreases from 16 percent to 5 percent). Of the youth in this sample who either learn to connect or to navigate, only about 9 percent were at risk in early adulthood.

Youth who do not do well on achieving the developmental milestones have a dramatically greater chance of having problems in their early twenties. The relative importance of each of the developmental outcomes as **liabilities** was also examined and the results show:

- Youth who are not doing well on any one of the developmental milestones have dramatically greater chances of having poor outcomes as young adults (between 78 percent and 112 percent increased likelihood). On average, about 16 percent of the sample had poor early adult outcomes; but about 33 percent of those having trouble learning to be productive, learning to connect **or** learning to navigate were at risk in early adulthood (a 100 percent increase); and

- Youth who are doing poorly at reaching any one of the developmental milestones have between a 37 and 53 percent lower chance of doing well as young adults. For high school youth who have not learned to navigate effectively, the likelihood of having good adult outcomes drops from 47 percent to 22 percent; not learning to connect reduces the likelihood of good outcomes from 47 percent to 27 percent; not learning to be productive, from 48 percent to 30 percent.

C. Summary

A comprehensive review of the literature offers clear evidence of the links between developmental outcomes and early adult outcomes in the framework. The best of the studies reviewed controlled for differences in youth's demographic characteristics and show that learning to be **productive** and to **navigate** as teens makes a significant difference in later economic success, being healthy and establishing healthy relationships, and being involved in communities. Few published studies focus on the importance for positive adult outcomes of learning to **connect**, so the evidence in the literature for this link in the framework is not as strong.

This study advances previous work by focusing on two questions: 1) what **levels** of these outcomes, in what **combination**, have the strongest influence on youth's lives; and 2) **how much** do these outcomes influence the probability of young people facing challenges and succeeding as adults.

When young people in this sample mastered at least two of the three developmental milestones, their likelihood of succeeding as young adults was substantially increased. Achieving just one of the milestones – for example, learning to navigate the choices and risks that are part of adolescence – is beneficial, but achieving two of the three milestones markedly increases the likelihood of later success. This finding supports the common wisdom that youth need to be "well rounded" to some degree to ultimately succeed in life.

The second stage of the analysis yielded clear, compelling evidence of **how** important these developmental outcomes are. Taken together, or considered separately, they are strongly linked to promoting healthy adult outcomes and to reducing the number of young adults with adverse outcomes.

For example, looking at developmental outcomes as resources showed young people are 41 percent more likely to thrive as adults, and nearly 70 percent less likely to have difficulty, when they had optimal levels of developmental outcomes. Further, youth at risk on these milestones are 63 percent less likely to succeed as young adults and 156 percent more likely to have poor outcomes.

From a policy perspective, these results point to improving developmental outcomes – learning to be productive, connected and to navigate – as a viable focus for both public and private investments. The results also highlight the critical importance of understanding what the youth experiences are that are required to achieve these developmental milestones. This is the next segment of the framework – the supports and opportunities – and the topic of the next chapter.

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Chapter IV: Relationship Between Supports and Opportunities and Developmental Outcomes

Having established the significance of developmental outcomes, it is important to understand how young people achieve those milestones at levels that are linked with long-term success. The supports and opportunities in the framework – supportive relationships, challenging and engaging learning experiences, meaningful involvement and safety – are the experiences that this and other frameworks cite as the experiences young people need across settings in order to reach the developmental milestones. They are at the center of our framework because they are the link between what we want for all young people (reaching developmental milestones and achieving healthy adult outcomes) and what organizations, public institutions and communities can do to improve outcomes for youth.

The literature review showed that most of the connections explored in existing studies are between **supportive relationships** and the developmental outcomes of learning to be **productive** and learning to **navigate** *[see Table IV.1]*. About twice as many studies look at these connections than at any other. These studies show that the dimensions of support from parents that matter are: they offer

TABLE IV.1 NUMBER OF RELATIONSHIPS FROM STUDIES THAT SEPARATE SUPPORT AND OPPORTUNITY OUTCOMES				
		BOX B: Developmental Outcomes		**TOTAL #**
		PRODUCTIVE	CONNECTED	NAVIGATE	RELATIONSHIPS
Box C: Supports and Opportunities	**Supportive Relationships**	37	5	38	80
	Challenging Activities	5	0	3	8
	Meaningful Involvement	8	4	5	17
	Safety	0	0	0	0

NUMBER OF RELATIONSHIPS FROM STUDIES THAT COMBINE SUPPORT AND OPPORTUNITY OUTCOMES				
		BOX B: Developmental Outcomes		**TOTAL #**
		PRODUCTIVE	CONNECTED	NAVIGATE	RELATIONSHIPS
Box C: Supports and Opportunities	**Supportive Relationships**	6	0	5	11
	Challenging Activities	7	0	7	14
	Meaningful Involvement	6	0	5	11
	Safety	2	0	2	4

help when needed, discuss school and future plans with their child, check up on homework, know what the child is doing with his/her time, know his/her friends, discipline consistently, and are emotionally supportive. When children have these supports they get better grades, are more engaged in school, have higher test scores, better attendance, participate in more extracurricular activities, and are less likely to drop out. Other studies have shown that youth with such supportive parents are also more likely to have adaptive coping mechanisms and less likely to engage in risky behavior.

Although not as many studies have looked at the roles of support from other people in the lives of adolescents, some studies have explored the effect of support from peers, teachers and mentors on youth's ability to reach developmental milestones; these studies found similar effects to those found for parents.

The next largest concentration in the literature is on the connection between the experiences of **meaningful involvement** and **challenging learning activities** on learning to be **productive** (e.g., school performance) and learning to **navigate** (e.g., risk behaviors, coping). However, about half of this research stems from program evaluation research in which studies examine the effects of participation in programs, organizations and schools that aim to provide more challenging and engaging activities, provide youth with more opportunities to become involved in something larger than themselves (e.g., leadership opportunities, decision-making), and provide more relationships with supportive adults. As a result, it is often difficult to identify whether one of these developmental experiences is more influential than another on helping youth reach developmental milestones, since the actual quality and content of programmatic experiences are often not measured. This is one of the largest gaps identified in the literature.

However, across the studies we reviewed there is evidence of the importance of each of the supports and opportunities in the framework, with the exception of safety (which was not included in most studies). Supports and opportunities were connected in some way with each of the develop-

	TABLE IV.2 STRENGTH OF RELATIONSHIPS IN THE LITERATURE – BOX C TO BOX B						
	Productive		**Connected**			**Navigate**	
	SCHOOL PERFORMANCE AND COMMITMENT	USE OF FREE TIME	PARENTS AND OTHER ADULTS	PEERS	COMMUNITY ORGANIZATIONS	RISKY BEHAVIOR	COPING
Supportive Relationships	• **Parents*** • **Peers*** • **Adults***	• Parents • Adults	• **Parents** • Adults		• Parents	• **Parents*** • **Peers*** • Adults*	• Parents* • Peers • Adults*
Challenging Activities	• Learning activities*	• Out-of-school activities			• Out-of-school activities	• Out-of-school activities*	• Out-of-school activities*
Meaningful Involvement	• Involvement*	• Involvement	• **Decision-making**		• Involvement	• **Decision-making***	
Safety	• Physical					• Physical	

★ = Strong quality of study   **Bold** = Strong relationship

mental outcomes (productive, connected, navigate). The strongest relationships found in the literature *[see Table IV.2, page 30]* show:

- Youth with supportive parents have greater school commitment (engagement);

- Youth with support from other adults (teachers and mentors) are better at learning to be productive (e.g., school engagement, attendance, dropout);

- Youth with supportive parents and opportunities for meaningful involvement in family decision-making are better at learning to be connected;

- Youth who have very supportive peers are less likely to engage in risky behaviors, while those who have delinquent peers are more likely to engage in risky behaviors; and

- Youth who experience meaningful involvement opportunities (e.g., decision-making in families, community service projects) are less likely to engage in risky behaviors.

The literature establishes that the supports and opportunities matter. The remainder of this chapter explores this study's two primary questions about supports and opportunities: How good is good enough? How much do they matter?

A. How Good is Good Enough? The Thresholds for Supports and Opportunities

To establish thresholds for the framework's supports and opportunities, we looked for the level early in high school that most dramatically increased the probability of youth attaining good developmental outcomes (optimal) by the end of high school. Conversely, we looked for the level at the beginning of high school where the likelihood of having poor developmental outcomes (risk) at the end of high school increased the most. These thresholds are listed in Table IV.3.

This analysis was limited in two ways. The data sets were initially collected for the purpose of looking at the effects of family and school contexts on school attachment and performance, and followed a different theoretical model than the framework guiding the work here.[16] As a result, not all the supports and opportu-

TABLE IV.3 THRESHOLDS FOR SUPPORTS AND OPPORTUNITIES	
Supportive Relationships	
RISK	OPTIMAL
One or more indicators of unsupportive parents (e.g., parents over-criticize, over-punish, overprotect, have inconsistent or harsh rules, are unaware or uninterested in their child's activities).	Two or more indicators of support: parents show interest in youth's time and activities, have consistent rules and are emotionally supportive; parents, teachers and friends often provide practical support (e.g., help with schoolwork or personal problems).
Meaningful Involvement	
RISK	OPTIMAL
Youth is not involved in decision-making at home.	Youth is always involved in decision-making at home.
Challenging Activities	
RISK	OPTIMAL
School is occasionally or rarely experienced as challenging.	Schoolwork is almost always challenging, interesting and related to everyday life.

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[16] For a description of the model framing the data collection for both the MSALT and MADICS studies see: Wigfield, A. & Eccles, J. S. (Eds.) (2001). *Development of Achievement Motivation.* San Diego, CA: Academic Press.

	Supportive Relationships	Challenging Activities	Meaningful Involvement
TABLE IV.4 **PERCENTAGES OF YOUTH IN OPTIMAL AND RISK CLASSIFICATIONS: SUPPORTS AND OPPORTUNITIES** (Weighted Percents for Combined Sample)			
	(N=2282)	(N=2473)	(N=2183)
OPTIMAL	17%	15%	17%
RISK	21%	23% *	17%

* = MADICS only

nities in our framework are included, and those that are included focus on the family and school settings. Therefore, we did not attempt to combine the supports and opportunities into an overall measure as we did with the developmental outcomes in the previous chapter, but did examine their individual importance to the developmental outcomes.

The three areas measured in these data sets are: supportive relationships – predominantly with parents, but also with teachers and peers; meaningful involvement in family decision-making; and challenging activities in school.

Table IV.4 shows the proportion of youth that fell into the optimal and risk categories for each support/opportunity. About equal proportions of youth fell into each category for supportive relationships and for meaningful involvement (about one-fifth). Fifteen percent of the youth had optimal levels of challenging activities in school at the beginning of high school, and a little more than one-fifth fell into the risk category for this support/opportunity.[17]

B. How Much Do Supports and Opportunities Matter to Developmental Outcomes?

Having seen how vital the developmental outcomes are to the transition to healthy adulthood, we turn our attention to exploring how important youth's experiences of supports and opportunities in their early teens are to increasing the likelihood of good developmental outcomes by the end of high school. We looked at each of the supports and opportunities for which we had data to see how they act as resources or liabilities for later outcomes.

Supports and Opportunities as Resources and Liabilities[18]

The supports and opportunities in the early teen years can act as **resources** by either **increasing** youths' chances of having **optimal** developmental outcomes late in high school, or by **decreasing** the chances that youth will have **risk** developmental outcomes in their late teens.

Conversely, when young people are **not** provided with the types of experience that fuel healthy development, it can decrease their chances of reaching the developmental milestones that help

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[17] Only the sample in the MADICS data set is included in the analysis of the risk category for challenging activities. The MSALT data set had fewer items for this measure and they focused on specific class subject areas which did not yield a clear threshold for the risk level in the sample.

[18] Sample sizes for all graphs in this chapter are located in Appendix D.

them achieve good adult outcomes. In this way, not having the supports and opportunities can be considered a **liability** to healthy development.

So, the next two questions addressed in this analysis were:

QUESTION 3

If young people have good supports and opportunities as they begin high school, how much more likely are they to have good developmental outcomes in their late teens?

and

QUESTION 4

If young people experience low levels of supports and opportunities as they begin high school, how much less likely are they to have good developmental outcomes in their late teens?

The three supports and opportunities for which we had data are: supportive relationships, challenging and engaging learning activities and meaningful involvement. Each is examined below first as a resource and then as a liability.

Supportive Relationships

In this sample, about one-quarter of the youth (24 percent[19]) had optimal levels of developmental outcomes at the end of high school *[Figure IV.1, dark bar A]* and 16 percent were at risk on developmental outcomes *[Figure IV.1, light bar A]*.

Supportive Relationships as Resources

However, for youth who did have high-quality relationships in high school the proportion with positive developmental outcomes increases from 24 to 48 percent *[Figure IV.1, dark bars A & B]*. Conversely, the proportion of youth in the sample who were at risk on developmental outcomes at the end of high school is cut by more than half (from 16 percent to 7 percent) for youth who had optimal supportive relationships with adults at the beginning of high school *[Figure IV.1, light bars A & B]*.

FIGURE IV.1
RELATIONSHIP BETWEEN SUPPORTIVE RELATIONSHIPS AND DEVELOPMENTAL OUTCOMES

A
All Youth

Good Developmental Outcomes
Poor Developmental Outcomes

FIGURE IV.1
RELATIONSHIP BETWEEN SUPPORTIVE RELATIONSHIPS AND DEVELOPMENTAL OUTCOMES

A
All Youth

B
Youth with Supportive Relationships
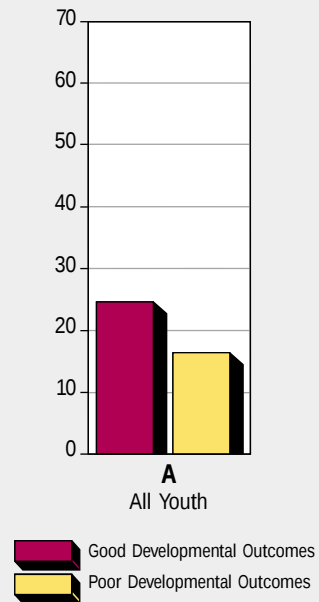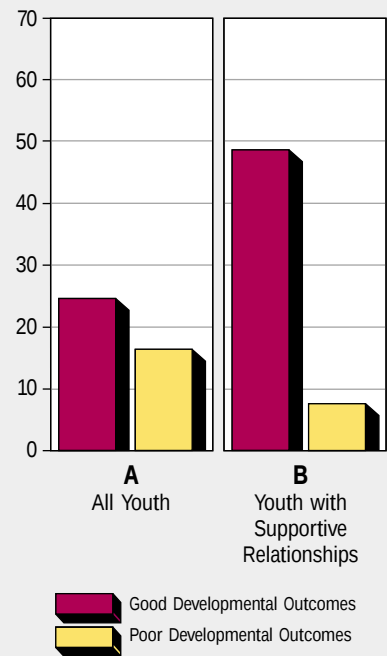
Good Developmental Outcomes
Poor Developmental Outcomes

---

[19] As with the developmental outcomes, the proportions in the baseline optimal and risk categories may vary from those of the full sample because of sample attrition in analyses across time periods.

> **FINDING 5**
>
> Youth with high-quality supportive relationships early in high school were twice as likely (100 percent[20] more likely) as the average youth to have optimal developmental outcomes at the end of high school.

and

> **FINDING 6**
>
> Youth who experienced high-quality relationships with adults at the beginning of high school were 56 percent less likely to have difficulty with developmental outcomes at the end of high school.

Unsupportive Relationships as a Liability

We also examined the extent to which unsupportive relationships act as a liability for youth. While on average 24 percent of the youth in the sample had optimal developmental outcomes, only 12 percent of youth with unsupportive relationships fared this well *[Figure IV.1, dark bars A & C]*. Youth with unsupportive relationships were also more likely to have poor developmental outcomes later in adolescence. While 16 percent of the youth overall in this sample did poorly developmentally, that percent rose to 31 for youth who had unsupportive relationships early in high school *[Figure IV.1, light bars A & C]*.
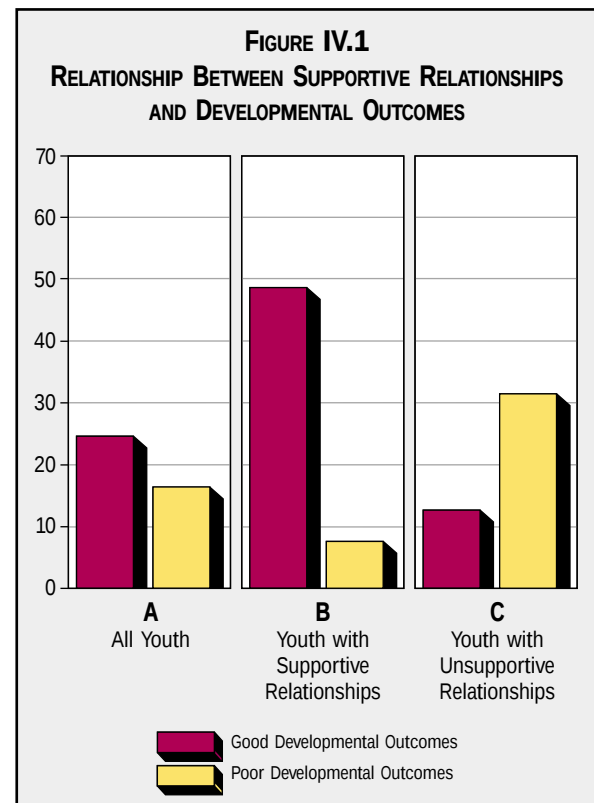
> **FINDING 7**
>
> Youth with unsupportive relationships in their early teens were 94 percent more likely – almost twice as likely – to have poor developmental outcomes at the end of high school.

and

> **FINDING 8**
>
> Youth with unsupportive relationships early in high school were half as likely to have optimal developmental outcomes at the end of high school.

FIGURE IV.1
RELATIONSHIP BETWEEN SUPPORTIVE RELATIONSHIPS AND DEVELOPMENTAL OUTCOMES

A — All Youth
B — Youth with Supportive Relationships
C — Youth with Unsupportive Relationships

Good Developmental Outcomes
Poor Developmental Outcomes

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[20] The method for calculating the percent change is illustrated in Text Box A.5 and A.6 in Appendix A.

Challenging and Engaging Activities

In the framework this opportunity is defined as one that provides youth with challenging activities that are interesting and lead to a sense of growth and progress. The data sets available allowed us to look only at the relationship between challenging activities in school and how well young people were doing on the developmental outcomes at the end of high school. Again, about one-quarter (24 percent) of the youth in this sample had optimal developmental outcomes in their late teens and 16 percent had poor developmental outcomes *[Figure IV.2]*.

Challenging and Engaging Activities as Resources

Comparing youth who experienced challenging activities early in high school with youth in the whole sample shows the percentage of young people experiencing optimal developmental outcomes at the end of high school increases from 24 percent to 41 percent *[Figure IV.2, dark bars A & B]*.

Conversely, the proportion of these young people who had trouble reaching developmental milestones decreased from 16 percent to 11 percent *[Figure IV.2, light bars A & B]*.

FINDING 9
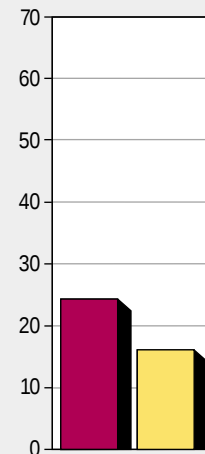
Youth having the opportunity to experience challenging, engaging learning activities early in high school have a 71 percent higher probability of having good developmental outcomes.

and

FINDING 10

Youth with challenging learning experiences at the beginning of high school are one-third less likely to have poor developmental outcomes late in high school.
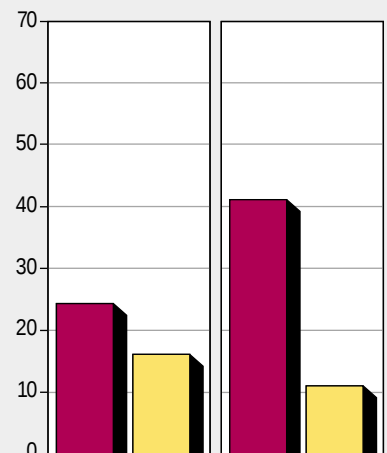
FIGURE IV.2
RELATIONSHIP BETWEEN CHALLENGING AND ENGAGING ACTIVITIES AND DEVELOPMENTAL OUTCOMES

FIGURE IV.2
RELATIONSHIP BETWEEN CHALLENGING AND ENGAGING ACTIVITIES AND DEVELOPMENTAL OUTCOMES

Lack of Challenging Learning Activities as a Liability

Youth who rarely or only occasionally experienced challenging learning experiences at the beginning of high school were also less likely to have optimal levels on developmental outcomes at the end of high school, and more likely to have poor developmental outcomes. One-quarter of the youth in general had optimal developmental outcomes, but only 15 percent of the youth without challenging experiences did *[Figure IV.2, dark bars A & C].* In general, 17 percent of the youth in the sample were in the risk category of developmental outcomes, compared to 27 percent of youth not experiencing challenging activities early in high school *[Figure IV.2, light bars A & C].*

FINDING 11

Youth with low levels of challenging learning activities at the beginning of high school were 59 percent more likely than youth in general to have poor developmental outcomes at the end of high school.

and
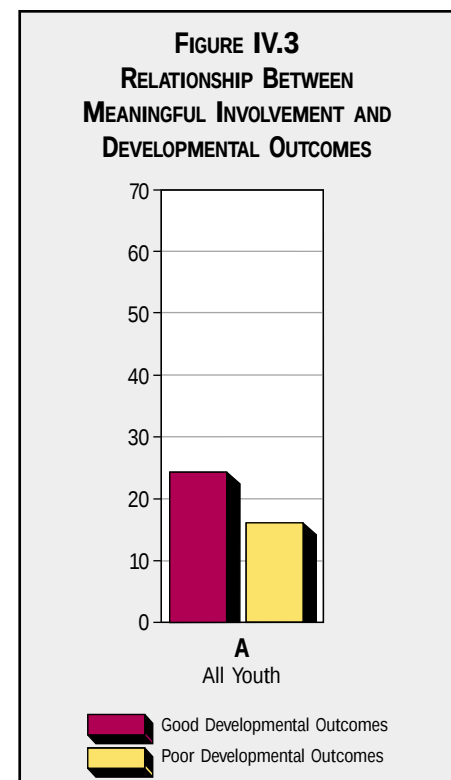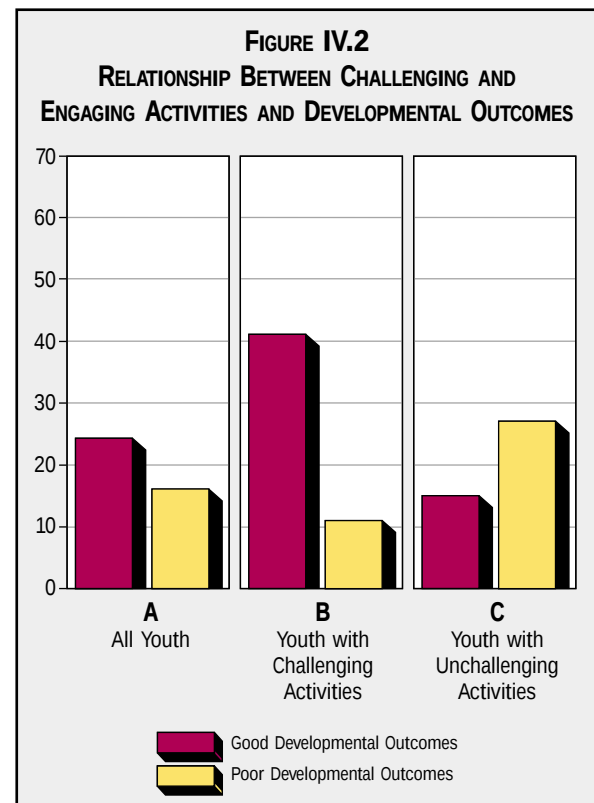
FINDING 12

Youth with unchallenging learning activities at the beginning of high school were 40 percent less likely to have optimal developmental outcomes in their late teens.

Meaningful Involvement

The final support/opportunity we were able to examine with these data is meaningful involvement of youth. While this is a multidimensional area in the framework (comprised by leadership, decision-making, belonging and community involvement), the only measure we were able to include in these analyses was decision-making, and only in the family setting. Nevertheless, there were meaningful relationships between this area and developmental outcomes *[Figure IV.3].*

FIGURE IV.2
RELATIONSHIP BETWEEN CHALLENGING AND ENGAGING ACTIVITIES AND DEVELOPMENTAL OUTCOMES

A — All Youth
B — Youth with Challenging Activities
C — Youth with Unchallenging Activities

Good Developmental Outcomes
Poor Developmental Outcomes

FIGURE IV.3
RELATIONSHIP BETWEEN MEANINGFUL INVOLVEMENT AND DEVELOPMENTAL OUTCOMES

A — All Youth

Good Developmental Outcomes
Poor Developmental Outcomes

Approximately one-quarter (24 percent) of the youth in our sample had good developmental outcomes late in high school while 16 percent had poor developmental outcomes.

Meaningful Involvement as a Resource

In contrast to the 24 percent of youth in general who had good developmental outcomes, even with a limited measure we found that 34 percent of youth with the opportunity to participate in decision-making in their early teens had good developmental outcomes later in life *[Figure IV.3, dark bars A & B]*. Conversely, youth with the opportunity to be involved in decision-making about their lives also were less likely to experience poor developmental outcomes. The proportion of youth in the risk category for developmental outcomes decreased from 16 percent to 11 percent when young people had this opportunity early in high school *[Figure IV.3, light bars A & B]*.

> **FINDING 13**
>
> Given the opportunity for meaningful involvement in decision-making about their lives early in high school, youth are 42 percent more likely to have optimal developmental outcomes at the end of high school.

and

> **FINDING 14**
>
> Opportunities for optimal meaningful involvement early in high school can decrease by one-third youth's chances of poor developmental outcomes at the end of high school.

Lack of Meaningful Involvement as a Liability

Finally, when youth did not have the opportunity for meaningful involvement in decision-making about their lives the chances of poor developmental outcomes increased and the chances of good developmental outcomes decreased. One-quarter of all youth in this sample had optimal developmental outcomes late in high school, but only 14 percent of those without the opportunity for meaningful involvement did so *[Figure IV.3, dark bars A & C]*. In general, 16 percent of the youth in this sample had risk levels of developmental outcomes, compared to 27 percent of those with little opportunity for meaningful involvement *[Figure IV.3, light bars A & C]*.

**FIGURE IV.3
RELATIONSHIP BETWEEN MEANINGFUL INVOLVEMENT AND DEVELOPMENTAL OUTCOMES**
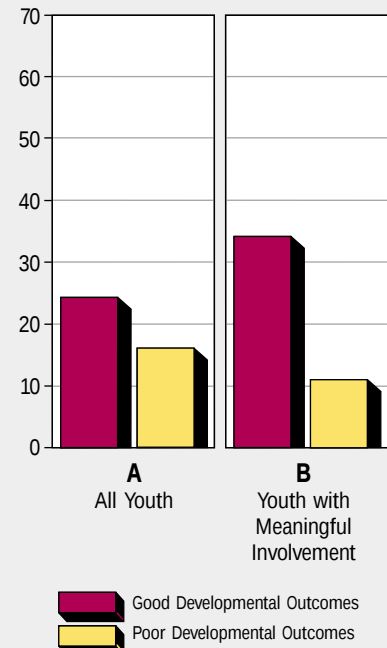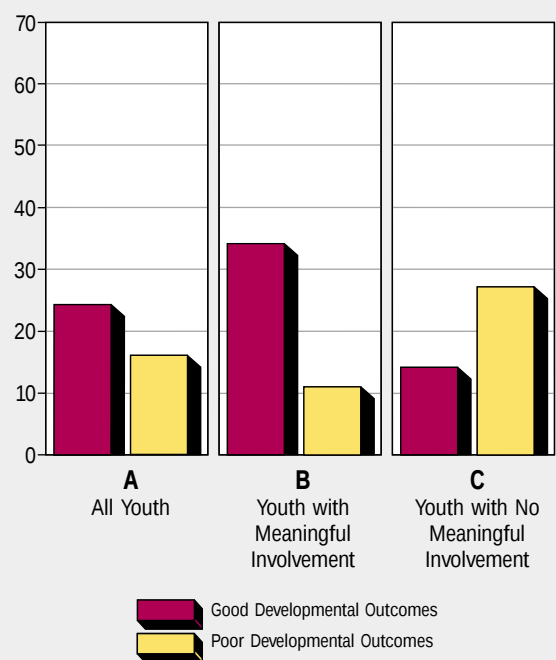
A — All Youth
B — Youth with Meaningful Involvement

Good Developmental Outcomes
Poor Developmental Outcomes

**FIGURE IV.3
RELATIONSHIP BETWEEN MEANINGFUL INVOLVEMENT AND DEVELOPMENTAL OUTCOMES**

A — All Youth
B — Youth with Meaningful Involvement
C — Youth with No Meaningful Involvement

Good Developmental Outcomes
Poor Developmental Outcomes

> **FINDING 15**
>
> Youth with **risk** levels of **meaningful involvement** early in high school were **69 percent more likely** than youth in general to have **poor developmental outcomes** at the end of high school.

and

> **FINDING 16**
>
> Youth without **meaningful involvement** in decision-making at the beginning of high school were **42 percent less likely** to have **optimal developmental outcomes** in their late teens.

C. Summary

The studies we reviewed show definitively that supportive relationships, particularly with parents, have strong, positive effects on adolescents' learning to be productive and to navigate by the end of their high school years. The research literature on effects of the framework's other supports and opportunities (challenging and engaging activities, meaningful involvement in decision-making and leadership) is less definitive, since it is sometimes difficult to disentangle in program evaluations which of the dimensions of youth experience are producing effects. But the research literature does provide support for this part of the framework (with the exception of safety, which is not considered by the studies we identified.)

Our analyses revealed how, and how much, supports and opportunities early in high school could affect youth's later developmental outcomes.

- By the end of high school, young people with strong supportive relationships early in high school are twice as likely as the average youth to have optimal developmental outcomes, and 56 percent less likely to have poor developmental outcomes. In contrast, young teenagers with unsupportive relationships are nearly twice as likely as the average teen to have poor developmental outcomes by the end of high school.

- Challenging, engaging learning activities early in high school increase the probability of doing well by 71 percent, and decrease the probability of doing poorly by one-third. In contrast, youth with few such learning activities were 59 percent more likely than the average youth to have poor developmental outcomes at the end of high school, and 40 percent less likely to have good outcomes.

- The disparity in outcomes is also large between youth who have meaningful involvement in decision-making and those who do not: having such opportunities increases youth's chances to achieve positive developmental outcomes by 42 percent over the average at the end of high school, and decreases the chances for poor outcomes by one-third. Conversely, young teens with few such opportunities are 69 percent more likely than youth in general to have poor development outcomes, and 42 percent less likely to do well in their late teens.

The strength of these results points to the importance of focusing on the quality of activities and relationships that youth experience across the settings where they spend their time. Some implications of these findings for communities are discussed in the final chapter.

Chapter V: Conclusions and Implications for Policy and Practice

T he aim of responsible research is not to astonish, since most research findings tend to confirm "common sense," but to build a solid foundation for paths toward remedy. Our aim is to help focus programming for youth on what will make the most difference in increasing the number who fare well in development throughout their adolescence and thrive as adults, and in decreasing the number who struggle in making the transition to adulthood.

When we began using this framework to guide our work, we argued, based on the evidence available at the time:

> *… that the presence of the five supports and opportunities across key community settings will result in dramatic and sustainable improvements in young people's productivity, connectedness and ability to navigate and, in the longer term, their success as adults.*
>
> *Conversely, if these investments in youth are not made, we will continue to see a growing proportion of our young people move into adulthood, at best, ill-equipped to achieve the goals we have for them and, at worst, dangerous to themselves and others* (Connell, Gambone and Smith, 2000).

The findings in this report, by continuing to add new evidence to our knowledge base, bolster the case for the developmental approach and the significance of supports and opportunities. This "action focused" presentation clearly demonstrates the differences between adults with different configurations of resources and liabilities earlier in their adolescence. These findings extend, and build on, the results already in the academic research literature.

A. What Matters

Our search for what matters most in helping youth reach healthy adult outcomes identified two crucial elements:

1. **The achievement of developmental outcomes** – learning to be productive; to connect with adults, peers and society's institutions; and to navigate through diverse settings, relationships and the lure of risky behavior. Good outcomes in these areas for teens are strongly associated with success in early adulthood. The case for the importance of developmental outcomes is clear and compelling.

2. **The availability of supports and opportunities** – supportive relationships with adults and peers; challenging and engaging activities and learning experiences; and meaningful opportunities for involvement and membership. The evidence here bolsters the case that the supports and opportunities contribute to healthy outcomes later in life.

However, we were somewhat limited by what has been published in the research literature and by the data available for our analyses. Most research on development, including the studies used here, focuses on the family and school settings. Yet, even without complete measures of the supports and opportunities, and with measures in only a few settings, we still saw meaningful differences between youth who had the supports and opportunities and those who did not. What we are able to extract from the work here is that what matters in any setting for achieving developmental outcomes is that:

- Relationships are emotionally supportive with adults showing interest in youth's time and activities, and providing practical support with, for example, schoolwork or personal problems;

- Activities are challenging, interesting and related to everyday life; and

- Youth participate in decision-making in developmentally appropriate ways, relating to things they care about.

B. How Much Supports and Opportunities and Developmental Outcomes *Could* Matter

The results in this study can be used to illustrate the potential impact of providing youth with supports and opportunities at scale. A community that does so could expect significant effects on the number of teenagers who fare well in development: an increase from 500 of every 1000 young adults doing very well in their early twenties, to 700 out of every 1000. At the same time, the average of 160 of every 1000 youth struggling as young adults could be decreased to 50, if young people are provided the resources to succeed in mastering the developmental milestones of adolescence.

Supportive relationships could double the average number of young teenagers with optimal developmental outcomes from 240 in every 1000 youth to 480 in 1000; and could decrease the average number with poor outcomes from 160 in 1000 to 70 in 1000. At the same time, experiencing poor quality relationships could nearly double the number of youth with poor developmental outcomes from 160 in 1000 to 310 in 1000, and could cut in half the number of youth with optimal development outcomes from 240 in 1000 to 120 in every 1000.

Similarly, challenging learning experiences could boost the chances of youth doing well in their developmental outcomes from 240 in 1000 to 410 in 1000, while the lack of meaningful involvement in decision-making could increase the likelihood of having poor developmental outcomes from 170 in 1000 to 270 in 1000.

With every youth having the potential both for high levels of success and serious difficulty as they move through adolescence and into adulthood, these findings provide a powerful illustration of how much that potential could be shaped over this span. The findings also point to what could be done to maximize the potential for success and dramatically lower the risk for serious difficulties.

C. Using Supports and Opportunities to Strengthen Communities

At the outset of our work with this framework, we made the case for the central role the supports and opportunities should play in shaping community efforts on behalf of youth:

> *The (presence of these) supports and opportunities, then, become the* **non-negotiables** *of the youth development approach. They are the lens through which a community should first examine its ecology to* **identify** *the* **resources** *available in the lives of its young people. They are the guideposts that communities can use to* **plan** *and* **assess** *these supports and their efforts to enrich and realign resources, with confidence that when these supports and opportunities are available for all youth, across settings, from ages 10 to 18, their developmental outcomes will improve dramatically. These are also the* **standards** *of practice to which individual organizations and programs working with youth should commit themselves, and against which they should document their accomplishments (Connell, Gambone and Smith, 2000; emphasis added).*

This report has focused primarily on showing that the supports and opportunities matter – they do play an important role in shaping how successful youth are later in life. The task now is to build on this foundation and learn **how** to provide youth with these supports and opportunities, and how to work with existing and emerging initiatives that aim to do so.

Our own[21] and other organizations' ongoing work is focused on demonstrating how the supports and opportunities can function as the linchpins for community action as portrayed in the above quote. Some of this work is briefly described here.

The San Francisco Beacons Initiative (Walker & Arbreton, 2001) provides diverse urban youth with gap period activities and programs explicitly focused on the supports and opportunities in this framework. The evaluation of the initiative by Public/Private Ventures was designed around a theory of change closely aligned with the framework as well. The forthcoming final report from this evaluation should provide rich information on what works and what difference it makes when diverse stakeholders – including community youth and their families, public and private investors, public schools, youth serving agencies and technical assistance providers – work together in these settings with supports and opportunities and developmental outcomes as their focus.

The First Things First (FTF) comprehensive school reform framework, developed by the Institute for Research and Reform in Education (IRRE, 1996), shares with the Beacons initiative an explicit focus on providing youth – in this case, in schools serving economically disadvantaged communities – supports and opportunities in order to improve developmental outcomes. FTF works on creating thematic small learning communities to increase the quality of relationships (among students and adults at school and at home), provide students (and their families) more emotionally and physically safe environments, more opportunities for meaningful involvement and a greater sense of belonging. FTF also focuses its work with teachers on making their instruction more challenging and engaging for students. Two external evaluations (Gambone, et al., 2002; Quint, 2002), both aligned with the framework's key elements, are being conducted by Gambone & Associates and by Manpower Demonstration Research Corporation (MDRC), with reports avail-

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[21] For more information about these projects contact Youth Development Strategies, Inc. at www.ydsi.org or IRRE at www.irre.org

able and forthcoming on how supports and opportunities can be increased in school settings and what difference they make to youth engagement, learning and school success.

Finally, the Youth Development Programs Outcomes Project jointly developed by Community Network for Youth Development, Gambone & Associates and IRRE worked with a diverse set of community-based, youth-serving agencies to use the framework and new measures of youth's experience of supports and opportunities to drive organizational improvement activities in each of the organizations. Like the other two framework-driven initiatives, this project focused on the supports and opportunities as the "currency of the realm" for youth development in these settings. Self-assessment on these supports and opportunities was followed by action planning around change in organizational features and practice that would enhance youth's experience of the supports and opportunities and ultimately influence their developmental outcomes. Findings from this project illustrate that not only do these supports and opportunities matter, but they are also movable when actions are taken by adults and youth to orient their everyday work and the organizational structures around that work to making sure all youth have these critical experiences.

The future of this work takes its direction from youth themselves. Just as youth face unforeseen challenges and opportunities as they deepen what they know about their world and their role in it, we will continue to use data from these and other efforts to deepen our own and the field's understanding of what makes a difference for youth and how to make that happen more often, for more youth, in more settings.

References

1. Benson, P. *(1993). Healthy Communities, Healthy Youth: How Communities Contribute to Positive Youth Development.* Minneapolis: Search Institute.

2. Benson, P. (1990). *The Troubled Journey: A Portrait of 6th–12th-Grade Youth.* Minneapolis: Search Institute.

3. Carnegie Council on Adolescent Development. (1992). *A Matter of Time: Risk and Opportunity in the Non-School Hours.* New York: Carnegie Corporation of New York.

4. Carnegie Council on Adolescent Development. (1995). *Great Transitions: Preparing Adolescents for a New Century.* New York: Carnegie Corporation of New York.

5. Connell, J.P., Aber, J.L., & Walker, G. (1995). How do urban communities affect youth? Using social science research to inform the design and evaluation of comprehensive community initiatives. In J.P. Connell, A. Kubisch, L.B. Schorr, and C. Weiss, (Eds.), *New Approaches to Evaluating Community Initiatives: Concepts, Methods, and Contexts.* Washington, DC: Aspen Institute.

6. Connell, J.P., Gambone, M.A., and Smith, T.J. (2000). Youth development in community settings: Challenges to our field and our approach. In *Youth Development: Issues, Challenges, and Directions* (pp. 281-300). Philadelphia, PA: Private/Public Ventures.

7. Connell, J.P. & Gambone, M.A. (1998). *Youth Development in Community Settings: A Community Action Framework.* Working paper. Philadelphia, PA: Institute for Research and Reform in Education and Youth Development Strategies, Inc.

8. Eccles, J. and Gootman, J.A. (Eds.) (2002). *Community Programs to Promote Youth Development.* Washington, DC: National Academies Press.

9. Gambone, M.A. (in press). Community action and youth development: What can be done and how can we measure progress? In K. Fulbright-Anderson and P. Auspos (Eds.), *Community Change: Theories, Practice, and Evidence.* Washington, D.C: The Aspen Institute.

10. Gambone, M.A. (1997). *Launching a Resident-Driven Initiative: Community Change for Youth Development (CCYD) from Site-Selection to Early Implementation.* Philadelphia: Public/Private Ventures.

11. Gambone, M.A., Klem, A.M., Moore, W.P., & Summers, J.A. (2002). *First Things First: Creating the Conditions and Capacity for Community Wide Reform in an Urban School District.* Philadelphia: Gambone & Associates.

12. Hawkins, J. D. and Catalano, R. (1992). *Communities that Care: Action for Drug Abuse Prevention.* San Francisco: Jossey-Bass Publishers.

13. IRRE. (1996). *First Things First: A Framework for Successful School-Site Reform.* White Paper prepared for the E.M. Kauffman Foundation. Kansas City, MO: E.M. Kauffman Foundation.

14. Leffert, N, Benson, P, and Roehlkepartain, J. (1997). *Starting Out Right: Developmental Assets for Children.* Minneapolis: Search Institute.

15. National Urban League. (2002). *Youth Development Mobilization Initiative.* Retrieved from http://cgi.nul.org/directory/evaluation.html on 7/1/02.

16. Panel on High-Risk Youth National Research Council. (1993). *Losing Generations: Adolescents in High-Risk Settings.* Washington, D.C.: National Academy Press.

17. Pittman, K.J., with Wright, M. (1991a). *A Rationale For Enhancing the Role of the Non-School Voluntary Sector in Youth Development.* Prepared for the Carnegie Council on Adolescent Development, Task Force on Youth Development and Community Programs. Washington D.C.: Center for Youth Development and Policy Research, Academy for Youth Development.

18. Pittman, K.J., and Wright, M. (1991b). *Bridging the Gap: A Rationale for Enhancing the Role of Community Organizations in Promoting Development.* Washington, D.C: Center for Youth Development and Policy Research.

19. Quint, J.C. (2002). *Scaling Up First Things First: Site Selection and the Planning Year.* New York: Manpower Demonstration Research Corporation.

20. Roach, C., Yu, H.C., & Lewis-Charp, H. (2001). Race, poverty, and youth development. *Poverty & Race, 10*(4), 3-6.

21. Scales, P. (1991). *A Portrait of Young Adolescents in the 1990s: Implications for Promoting Healthy Growth and Development.* Carrboro, N.C., Center for Early Adolescence, University of North Carolina at Chapel Hill.

22. Urban Strategies Council. (1996). *Call to Action: An Oakland Blueprint for Youth Development.* Oakland, CA.: Urban Strategies Council.

23. U.S. Department of Health and Human Services. (1996). *Reconnecting Youth and Community: A Youth Development Approach.* Washington, D.C: National Clearinghouse on Families and Youth.

24. U.S. Department of Health and Human Services. (1997). *Understanding Youth Development: Promoting Positive Pathways of Growth.* Washington, D.C: National Clearinghouse on Families and Youth.

25. W.K. Kellogg Foundation. (1998). *Kellogg Youth Initiative Partnerships 1987–1997: Lessons Learned from the Crucial First Decade of Positive Youth Development through Community Based Programming.* Battle Creek, MI: W.K. Kellogg Foundation.

26. Walker, K. & Arbreton, A.J. (2001). *Working Together to Build Beacon Centers in San Francisco.* Philadelphia, PA: Public/Private Ventures.

27. Wheeler, W., Roach, C. & Mohamed, I. (2000). *The Youth Leadership for Development Initiative: Broadening the Parameters of Youth Development and Strengthening Civic Activism.* Chevy Chase, MD: The Innovation Center for Community and Youth Development.

28. Zeldin, S. (1995). *Opportunities and Supports for Youth Development: Lessons from Research and Implications for Community Leaders and Scholars.* Washington, D.C.: Center for Youth Development and Policy Research.

29. Zeldin, S; Kimball, M; and Price, L. (1995). *What are the Day-To-Day Experiences that Promote Youth Development? An Annotated Bibliography of Research on Adolescents and Their Families.* Washington, D.C.: Center for Youth Development and Policy Research.

Page 46 left blank intentionally

Appendix A: Methods for Secondary Analyses

How Were Measures Aligned with Framework Elements Created?

Survey items and administrative record indicators from the two research data sets – MSALT and MADICS – were examined and screened for inclusion in the secondary analyses. The screening process narrowed the pool down through the following process.

Step 1

Face Validity – did the research team find the item content or indicator consistent with one of the framework's elements? See Textbox A.1 for an example.

TEXTBOX A.1
EXAMPLE OF CREATING RECOMBINED MEASURES:
PRACTICAL SUPPORT

Step 1: Face Validity
Was the item content or indicator consistent with one of the framework's elements?

There are numerous ways to measure youth's experience of supportive relationships with adults. Looking at the possible indicators of practical support, there were dozens of items from which to choose. For example, several items referred to the extent to which youth discussed important issues in their lives with their parents. These included:

- How often do you talk to your parent about how things are going with your friends?
- How often do you talk to your parent about your plans for the future?
- How often do you talk to your parent about problems you are having in school?
- How much did your parents talk to you about which courses you would take next year?
- I like to discuss homework or other schoolwork with my parents.

After reviewing the above items for face validity, we retained the first four, all of which referred to problems or decisions that youth discussed with their parents. The final item was dropped because it did not have the same sense of discussing something in order to get support for a specific decision or issue, but is more general in nature.

A similar process was used with other items related to practical support, some of which tapped into youth's reliance on parents for help with their schoolwork; and other that measured youth's reliance on parents for help with other problems, not related to school. Still other items measured the extent that youth received assistance from teachers with their schoolwork or personal problems; and finally one set of items measured the extent to which youth relied on their friends for help with problems.

Step 2

Adequate Variation – did each of these items or indicators show adequate variations, was there some spread among individual scores on the item or indicator? See Textbox A.2 for an example.

TEXTBOX A.2
EXAMPLE OF CREATING RECOMBINED MEASURES:
PRACTICAL SUPPORT

Step 2: Adequate Variation

Did each of these items or indicators show adequate variation? Was there some spread among individual scores on the item or indicator?

In order to be a good indicator, items needed not only to have face validity but to be able to distinguish among respondents. If everyone in the sample responded in the same manner to an item, then it would not be particularly useful in predicting later outcomes of interest. Thus, the frequency distribution of each of the items that held face validity was examined in terms of measuring some aspect of practical support. Looking again at the items related to talking with parents about issues or decisions, we found that responses to all four items were distributed across all possible responses. For example, for the item that asked how often the youth and parent talked about plans for the future, the distribution of responses looked as follows:

Almost never 10%
Less than once/month 17%
1-3 times/month 23%
Once a week 20%
Few times/week. 17%
Almost every day. 14%

The other items in this set exhibited similar response patterns, thus none of the items was eliminated at this stage of the process.

Step 3

Internal Coherence and Consistency – did the survey items and indicators that were thought to measure the same element in the model "hang together" and show sufficient internal consistency (i.e., did individuals scoring high or low on one item or indicator tend to score similarly on other items or indicators thought to measure the same thing)? See Textbox A.3 for an example.

TEXTBOX A.3
EXAMPLE OF CREATING RECOMBINED MEASURES:
PRACTICAL SUPPORT

Step 3: Internal Coherence and Consistency

Did the survey items and indicators that were thought to measure the same element in the model "hang together" and show sufficient internal consistency (i.e., did individuals scoring high or low on one item or indicator tend to score similarly on other items or indicators thought to measure the same thing)?

Once we had a set of items that met face validity criteria and which had a good distribution of responses, we examined the inter-correlations among the items and conducted a reliability analysis to determine the internal consistency of this set of items. Using Cronbach's alpha as a measure of internal consistency, we found that the four items related to talking with parents about issues had an alpha coefficient of .69. (In general, values of alpha that exceed .60 are considered acceptable.) Thus, we combined these four items to create a composite measure of "parents talk with youth."

This was just one of five practical support composite measures created. For each of these composites, we followed a similar procedure of first determining the face validity of each item, examining the distribution of responses and conducting a reliability analysis before creating the composite measure.

Step 4

Associations with Criterion Measures – did the items and indicators and combinations thereof correlate with measures of elements in the framework they were supposed to predict? For example did combinations of items measuring how productive youth were correlate with how economically self-sufficient they were as young adults?

In order to maximize the association between measures of the framework's elements, we retained measures that predicted most strongly and removed those that didn't. The stronger the associations between measures of earlier elements in the model and measures of later elements, the more confident users of measures can be that these measures "matter." See Textbox A.4 for example.

Items and indicators making it through this selection process were retained for the subsequent secondary analyses. Framework outcomes, indicators and the measures selected for each indicator from each of the two data sets are presented in Table II.2 in Chapter II of this report.

Setting Thresholds on "New" Measures

In preparation for the analyses examining strength of association between measures of elements and sub-elements in the framework,[22] we attempted to define cut points or thresholds on these continuous measures (typically combinations of survey items or administrative record indicators).

There were two reasons for defining these thresholds:

- First, to create maximum association with the measures of framework elements and sub-elements they were supposed to predict. We wanted to strengthen the association between measures of the framework's elements by identifying points along the distribution of each measure where differences between individuals scoring above this point and below that point were as large as possible on a criterion measure. For example, it makes a bigger difference in youth's overall adjustment to have at least one adult in their life who they go to for guidance,

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> **TEXTBOX A.4**
> **EXAMPLE OF CREATING RECOMBINED MEASURES:**
> **PRACTICAL SUPPORT**
>
> **Step 4: Associations with Criterion Measures**
> Did the items and indicators and combinations thereof correlate with measures of elements in the framework they were supposed to predict? For example did combinations of items measuring how productive youth were correlate with how economically self-sufficient they were as young adults?
>
> Following the first three steps discussed here resulted in a set of composite measures that we believe are reasonable measures of the various constructs in the framework. But if these measures are not related to later elements in the framework, if we cannot use these measures to predict later outcomes, then they are of little value. Thus, the final step in the process of indicator development was to examine the relationships – the correlations – between our created measures and other measures in the framework. In the case of practical support, we examined the correlations among each of the five composite measures and the Box B indicators – learning to be productive, learning to connect and learning to navigate.
>
> In general, measures that were not significantly correlated with later elements in the framework were dropped from further analyses. All else being equal, those items and indicators that maximally predicted later outcomes in the framework were retained over those that showed little or no prediction.[1] With the practical support indicators, we retained measures of "talking with parents," "obtaining help from teachers" and "obtaining help from friends." The remaining two indicators – "obtaining help from parents around schoolwork" and "obtaining help from parents on non-school issues" were dropped because they were not related to the Box B indicators.
>
> ---
> [1] For measures of young adult outcomes, measures were selected using associations at two points in time (at age 20 and again at age 23 and up) between the young adult outcomes overall and the sub-elements (i.e., economic self-sufficiency, healthy family and social relationships and community involvement). Only the MSALT data set had these longitudinal data so only MSALT data were used for determining which items and indicators maximized associations.

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[22] Elements of the framework are supports and opportunities, youth development outcomes and early adult outcomes *[see Figure I.1, page 5]*. Sub-elements are more specific constructs under each of these elements *[also see Figure I.1]*.

emotional security, and information – versus having no adults to go to – than it does between having two or three adults – versus one adult – who provide these supports. So, having one or more adults who provide these supports is the "threshold" on this measure of supportive relationships. These cut points or thresholds then were used to create categories that could be used to classify individuals.

- The second reason for creating thresholds is to give us ways to combine numerous items and indicators into simpler measures with meaningful categories for use in subsequent analyses. By forming these categorical measures we can then define "strength of association" between elements and sub-elements in the framework in different and more useful ways. We can also provide simple but rich measures of the framework's elements and sub-elements that are clearly interpretable by practitioners and policy makers.

The end result of these analyses was a set of categorical measures that defined groups of individuals as either optimal (in good shape with respect to this element or sub-element of the framework) or at risk (having difficulty in this area).

How Were the Data Analyzed to Estimate the Strength of Relations Between the Framework's Elements?

The basic data for these analyses were: the percentages of youth in optimal and risk categories on the element in the framework (for example, **developmental outcomes**); and percentages of youth in these categories for sub-elements (for example, **learning to be productive** is a sub-element of **developmental outcomes**).

Strength of association was determined by examining whether and how much being in one or the other of these two categories (optimal or risk) at one point in time helped or hurt youth's chances at a later point in time of being in these categories on a different element. For example, how much does it help youth as a young adult to be positively connected to adults and peers in high school?

We defined "helping youth's chances" as increasing the likelihood at the later time that the youth would be in the optimal category or decreasing the likelihood at the later time that the youth would be in the risk category. If a particular element or sub-element did either or both of these things it was considered a **resource**.

We defined "hurting youth's chances" as increasing the likelihood at the later time that the youth would be in the risk category or decreasing their chances at the later time that the youth would be in the optimal category. If a particular element or sub-element did either or both of these things it was considered a **liability**.

The strength of a particular element or sub-element as a resource or liability was determined by:

- The **baseline probability** that any given youth would be classified as either optimal or risk on one of the framework's elements or sub-elements; and

- The **conditional probability** that youth with optimal or risk classification on an earlier element or sub-element would end up in these later classifications (see Text Box A.5 and A.6 for examples).

TEXTBOX A.5
SAMPLE CALCULATION OF RESOURCES:
EFFECT OF LEARNING TO BE PRODUCTIVE
ON YOUNG ADULT OUTCOMES

A. Increase In Optimal Status on Young Adult Outcomes

Baseline Probability

- **Numerator** = Number of youth[1] who are optimal on young adult outcomes
- **Denominator** = Number of youth with all levels (optimal, risk, indeterminate) of young adult outcomes

$$\frac{458}{947} = 48\%$$

Conditional Probability

- **Numerator** = Number of youth who are optimal on productive and optimal on young adult outcomes
- **Denominator** = Number of youth who are optimal on productive

$$\frac{177}{264} = 67\%$$

% Conditional Probability	–	% Baseline Probability	=	% Change in the Probability

67% – 48% = 19% Change

% Change in the Probability	=	% Increase in Probability of Optimal
% Baseline Probability		

$$\frac{19\%}{48\%} = 39\%$$

B. Decrease in Risk Status on Young Adult Outcomes

Baseline Probability

- **Numerator** = Number of youth at risk on young adult outcomes
- **Denominator** = Number of youth with all levels of young adult outcomes

$$\frac{153}{947} = 16\%$$

Conditional Probability

- **Numerator** = Number of youth who are optimal on productive and at risk on young adult outcomes
- **Denominator** = Number of youth who are optimal on productive

$$\frac{12}{264} = 4\%$$

% Conditional Probability	–	% Baseline Probability	=	% Change in the Probability

4% – 16% = -12% Change

Change in the Probability	=	% Decrease in Probability of Risk
Baseline Probability		

$$\frac{-12\%}{16\%} = -75\%$$

[1] To be included in any calculations, youth must have data on earlier and later elements in the framework.

TEXTBOX A.6
SAMPLE CALCULATION OF LIABILITIES:
EFFECT OF LEARNING TO BE PRODUCTIVE
ON YOUNG ADULT OUTCOMES

A. Increase in Risk Status on Young Adult Outcomes

Baseline Probability

- **Numerator** = Number of youth[1] who are at risk on young adult outcomes
- **Denominator** = Number of youth with all levels (optimal, risk, indeterminate) of young adult outcomes

$$\frac{153}{947} = 16\%$$

Conditional Probability

- **Numerator** = Number of youth who are at risk on productive and at risk on young adult outcomes
- **Denominator** = Number of youth who are at risk on productive

$$\frac{65}{189} = 34\%$$

% Conditional Probability	–	% Baseline Probability	=	% Change in the Probability

34% – 16% = 18% Change

% Change in the Probability	=	% Increase in Probability of Risk
% Baseline Probability		

$$\frac{18\%}{16\%} = 112\%$$

B. Decrease in Optimal Status on Young Adult Outcomes

Baseline Probability

- **Numerator** = Number of youth who are optimal on young adult outcomes
- **Denominator** = Number of youth with all levels of young adult outcomes

$$\frac{458}{947} = 48\%$$

Conditional Probability

- **Numerator** = Number of youth who are at risk on productive and optimal on young adult outcomes
- **Denominator** = Number of youth who are at risk on productive

$$\frac{56}{189} = 30\%$$

% Conditional Probability	–	% Baseline Probability	=	% Change in the Probability

30% – 48% = -18% Change

Change in the Probability	=	% Decrease in Probability of Optimal
Baseline Probability		

$$\frac{-18\%}{48\%} = -37\%$$

[1] To be included in any calculations, youth must have data on earlier and later elements in the framework.

We looked first at what the **baseline probability** of a particular outcome was on one of the framework's key elements or sub-elements – for example, the sub-element, economic self-sufficiency. We asked "what percentage of young adults in the total sample were in the optimal classification and what percentage were in the risk classification on economic self-sufficiency?" This percentage represents the likelihood that any given youth in this sample would end up in either the optimal or risk classification.

Next, we looked at the percentage of youth in the optimal classification and risk classification for the same element or sub-element only for those youth classified as optimal on an earlier element or sub-element in the framework – for example, learning to be productive. This percentage is called a **conditional probability** – it is the probability of being classified as optimal or risk on economic self-sufficiency **conditional upon** classification on another element or sub-element in the framework.

Finally, we took the difference between the conditional probability and the baseline probability for a given element or sub-element. This difference represents the increase or decrease in the likelihood of being classified as either optimal or risk due to the earlier element or sub-element. We then divided that difference by the baseline probability to estimate the relative size of the increase or decrease.

Appendix B: Literature Review Methodology

A systematic and extensive literature review was completed for two purposes: to examine evidence supporting the Community Action for Youth Development Framework, and to catalogue tested and reliable measures of framework outcomes. Social science research indices, applied research catalogues and websites were searched to identify and obtain all books, articles and reports that contained relevant evidence of linkages in the community action framework for youth development shown in Figure I.1 in Chapter I of this report.

Each article and report was read by a senior research associate and rated for:

1. Its direct relevance to the framework (how closely tied are the findings to the hypothesized linkages among the framework's elements – Boxes A, B, C, D and E – and the outcomes within each of the elements);

2. The quality of the study methods; and

3. The strength of the findings related to linkages in the framework.

These ratings were sorted first by the links in the framework addressed by the study; and, within each of these categories, by study quality and strength of evidence. This information was used in three ways: 1) to create an annotated bibliography of framework evidence; 2) to create a master chart showing where the strongest framework evidence exists and where the largest gaps exist in the literature reviewed; and 3) to create tables and summaries for use in upcoming publications on the state of evidence in support of the framework.

Each article and report was also rated for its use of replicable measures of outcomes in the framework. These measures were reviewed and catalogued to identify gaps in measures of each of the framework's elements across the different youth development settings (i.e., family, neighborhood, schools and gap-time activities).

One of the major limitations encountered in reviewing measures for framework outcomes is that a large proportion of studies combine indicators of outcomes within a framework element. For example, within Developmental Outcomes indicators of productive (grades) and navigate (risk behavior) are combined into a single measure of youth adjustment or well-being. Or, other studies combine outcomes across elements of the framework, (e.g., across Supports and Opportunities (adult support) and Developmental Outcomes (strong attachment to adults)) are combined into a single measure, for example, of positive interpersonal relationships. Use of these approaches limits the number of distinct measures we were able to evaluate as valid and reliable indicators of framework outcomes.

Search Methodology

We conducted a multi-step search of the literature to locate empirical evidence supporting each Box (A-E) of the youth development framework. The search began with the standard medical, public health, education, psychology, and sociology databases, as well as federal repositories up through the beginning of 2002.[23] See Table B.1 for a sample list of the keywords used for searching. The sparse number of evaluations located through the database searches was supplemented by searching youth development-oriented institutes and organizations available on the Internet. Internet searches involved using a variety of search engines including, but not limited to: Yahoo, Excite, Snap, Alta Vista, Infoseek and America Online.

Those searches were supplemented with identification of review articles in the published literature, as well as unpublished reviews contained in pertinent federal governmental and private foundation grant and contract reports. We also followed-up on relevant published and forthcoming studies which were cited in the previously identified articles and contacted researchers and program evaluators in our professional networks for additional literature.

Criteria for inclusion in this literature review included: (a) methodological rigor and (b) target population. First, only studies employing either experimental or quasi-experimental designs were chosen. If the study looked at a program or strategy, there had to be some kind of evaluation. If

TABLE B.1 EXAMPLES OF KEYWORDS USED TO TARGET THE VARIABLES INCLUDED IN THE MODEL		
Generic Terms	• Adolescents • Youth • Adolescent development • Youth development • At-risk students	• Evaluation • Research • Program • Initiative
Box A	• Educational attainment	• Occupational attainment or achievement
Box B	• Academic achievement • Activities • Athletic participation • Citizen participation	• Out-of-school activities • Sports • Sports for children
Box C	• Decision-making • Interpersonal competence • Leadership • Leadership development • Peer relations • Social capital	• Social participation • Social support • Socialization • Socialization agents • Support
Box D	• Family strengthening • Family resiliency • Housing and quality housing • Parks	• Recreation • Health • Education • School

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[23] The most relevant databases proved to be Educational Resources Information Center (ERIC), Education Abstracts, Social Science Abstracts and Sociological Abstracts.

there was only one site in an evaluation, there had to be more than one year of implementation for the program. We also decided to exclude curricula-only programs because of the large number of school-based prevention curricula, such as Drug Abuse Resistance Education, that consist of one or two sessions, and do not take a youth development approach. Second, the population of the study had to be either urban, rural, or a combination of urban, rural, AND suburban. The population must also include some minority participants (with the exception of rural studies), and must target adolescence (e.g., no elementary or pre-school studies). Programs designed for pregnant and parenting adolescents, high school dropouts, and youth already involved with the criminal justice system were not included in this literature review.

The 500+ studies reviewed varied in the quality of their design, the appropriateness of the data collection measures, and the validity of their conclusions based on the data presented. Too often, pieces of information needed for our task of understanding the links between outcomes in the youth development model were missing. For example, not all reports included basic demographic information about the youth. This was true of both published and unpublished evaluations. Similarly, many failed to describe the methods used to collect and analyze the data, or how they reached their conclusions.

Additional difficulties encountered when reviewing the empirical studies providing support for the framework include:

- Several studies did not include the specific measures used to collect data making it difficult to determine if they were measuring the construct as we define it. Without the inclusion of measures, it was difficult to place the study within the youth development framework.

- Often, what an author considered to be a single construct was composed of several constructs as defined by the youth development framework. In these cases, we agreed to keep the study in the literature review only if the components of the construct stayed within a single box (e.g., A-E) in the framework. If the components of the construct were split across more than one box, the study was excluded from the review.

- Some articles created indices of positive and negative behavior. Again, because these indices invariably contained more than one construct from our framework, we only included the studies that analyzed the individual components of the indices. Studies that only conducted statistical analyses on the positive or negative index were not included in the literature review.

The youth-serving programs reviewed for Box D varied in their resemblance to the youth development framework. Programs were most likely to differ in their goals for the participants. Although some of the programs focused on enhancing competencies to promote positive behaviors, it soon became clear that the majority of programs followed a deficit-model approach by stressing the prevention of multiple (e.g., dropout and early pregnancy) or single risk behaviors (e.g., drug use). These deficit-model programs vary in their efforts at providing needed opportunities and supports. Some programs strove to augment participant's supports and opportunities in numerous domains, such as family, school and community. Others focused primarily on improving youths' social and personal skills to resist risk-taking behavior within a prescribed number of sessions. An emphasis on the deficit-model approach can also be observed among the non-programmatic research supporting the constructs in the framework. Because the research is driven by negative outcomes, we can mainly talk about how to reduce the negative rather than support the positive.

Classification of Articles Reviewed

Step 1

Each article or program was identified according to the box or boxes within the framework for which it provided evidence *[see Figure I.1, page 5].*

Step 2

The strength of each study was then classified using the criteria of target population, methodological design, and strength of evaluation.

   a. Population
- Must be either urban, rural or a combination of urban, rural and suburban.
- Must include some minority participants (unless rural).
- Must target adolescents/youth, not elementary or pre-school children.

   b. Evaluation
- If the article looks at a program or strategy, there must be some kind of evaluation.
- If there is only one site in an evaluation, there must be more than one year of implementation.

Step 3

The strength of the findings within each article was also rated as a function of both quality of the analytic strategy and the significance levels of the relationships within the article.

   1. Strength of analysis:
- Strong: longitudinal and multivariate
- Medium: cross-sectional and multivariate
- Weak: cross-sectional and correlational

   2. If the study was an evaluation, we also considered:
- Strong: longitudinal and random assignment
- Medium: cross-sectional and comparison group
- Weak: cross-sectional and pre- post-test

   3. Significance Level of results:
- Strong: $p < .001$
- Medium: $p < .01$
- Weak: $p < .05$

Step 4

From the classifications obtained in steps one through three, two summary categorizations were created for each set of constructs within the framework:

1. **Overall strength of relationship:** for each set of constructs, the strength of relationship ratings across individual studies were averaged to create the overall strength of relationship.

2. **Overall strength of evidence:** using the individual studies strength of study rating, the following criteria were applied to designate the overall strength of evidence as weak, medium, or strong.

    • Strong: two or more strong data sets OR one strong dataset and more than one medium or weak data set.

    • Medium: one strong dataset OR more than one medium data set

    • Weak: one weak or medium data set

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Appendix C: Detailed Threshold Descriptions

Box A	
Economic Self-Sufficiency	
RISK	**OPTIMAL**

Has at least one of the following:
  • Education level of a high school diploma or less.
  • Unemployed or works part-time but not in school or in school part-time but not in work.
  • Often unsatisfied with job.
  • **Often has money problems (e.g., trouble paying bills).**
  • **On welfare in last 12 months.**
AND:
  • Does not meet optimal criteria for any.
	Has at least one of the following:
	  • Attending a four-year college.
	  • Employed full time or homemaker or part-time work/part-time school, AND earning more than $20,000.
	  • Often satisfied with job.
	AND:
	  • Does not meet risk criteria for any.

Bold = MSALT data set only. *Italics = MADICS data set only.* Regular = Both MSALT and MADICS data sets.	
table continues . . .	

Box A, *continued*	
Healthy Family and Social Relationships	
RISK	OPTIMAL

Has two or more of the following:
1. Has two or more of the following relationship characteristics:
  • Not very supportive relationship with parents and family.
  • **Friends sometimes exert negative pressures and rarely provide positive support.**
  • *Most of friends are not supportive and talk about life issues less than once a month.*
  • Romantic partner is occasionally affectionate/supportive OR often coercive OR violent act once every three months.
2. Has two or more of the following mental health characteristics:
  • Only occasionally deals well with problems.
  • **Frequently feels isolated.**
  • Sometimes feels out of control anger.
  • At least sometimes depressed.
  • Often self-conscious in public (e.g., speaking in public, talking in front of group, writing while someone watches).
3. Has either a or b:
  a: • Has fair or poor health; OR
    • Got drunk/did drugs at least three times a month but less than once a week;
  OR:
  b: • **Eats a healthy meal one-two times a month or less; AND**
    • **Exercises less than once a month.**
OR:
  • Meets above criteria for at risk relationships.
OR:
  • Meets above criteria for at risk mental health.
	Has two or more of the following:
	1. Has two or more of the following relationship characteristics:
	  • Very supportive relationships with parents and family.
	  • **Friends provide positive support almost daily and rarely exert negative pressures.**
	  • *More than half of friends are supportive and often talk about life issues.*
	  • Romantic partner is almost always affectionate/supportive and is not often coercive or violent.
	2. Has two or more of the following mental health characteristics:
	  • Frequently deals well with problems.
	  • **Experiences few feelings of isolation.**
	  • Almost never experiences out of control anger.
	  • Almost never experiences depression.
	  • Rarely self-conscious in public (e.g., speaking in public, talking in front of group, writing while someone watches).
	3. Meets all of the following physical health characteristics:
	  • Has very good or excellent health.
	  • **Eats at least one healthy meal per day.**
	  • **Exercises at least once a week.**
	  • *Gets seven hours of sleep/enough sleep most days;*
	OR:
	  • Meets above criteria for optimal relationships.
	OR:
	  • Meets above criteria for optimal mental health.

Community Involvement	
RISK	OPTIMAL

• Commits four or more illegal activities in a six-month period.
AND:
  • Does not meet optimal criteria on any indicator.
	• Commits no more than one illegal activity in six months.
	AND has one or more of the following:
	  • Religion has at least some importance and he/she attends church semi-regularly or more. **At least moderately involved in one or more community organization.**
	  • *Either involved in political organization or activism every other month or volunteers one day a week AND does some volunteering and has some participation in political organizations.*
	  • **Assumed leadership role in at least one community organization.**
	AND:
	  • Does not meet risk criteria on any indicator.

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Box B	
Productive	
RISK	**OPTIMAL**
EITHER: • Has a GPA of a C or below; OR • Is not engaged and skipped two days a month or more.	Has two or more of the following: • GPA of a B or better. • Is engaged and skipped three or fewer days of school in the past year. • Spend at least some time in sports and hobbies and not much time in passive entertainment (e.g., watching TV). AND: • Cannot be at the risk level on the third criterion.
Connected	
RISK	**OPTIMAL**
Has one or more of the following: • Not very close to, or overly identified with, parents *(and family).* • Not very close to, or overly identified with, friends. • **Parents often don't like or approve of friends.** • *Parents occasionally like some of youth's friends.* • *Does not have close relationship with teachers.*	Has two or more of the following: • Very close to, but not overly identified with/dependent on, parents. • Close to, but not overly identified with, friends. • Parents like and approve of almost all of youth's friends. • **Spends two and one-half or more hours/week volunteering or doing religious activities.** • *Frequent participation in both volunteering and religious activities.* • *Has close relationship with teachers.* AND: • Cannot be at the risk level on the other criteria.
Navigate	
RISK	**OPTIMAL**
Has one or more of the following: • Nine or more risky behaviors a month (e.g., shoplift, fight, cheat, use drugs, got drunk, vandalism, etc.); OR • Often feels unable to cope (e.g., lose appetite, feel discouraged, worry about future, think about suicide). • *Sometimes or almost never deals well with problems.* • *Feels very nervous in the classroom.* • *Often/almost always feels out of control anger.* AND: • Cannot meet optimal criteria on any other criteria.	Has one or more of the following: • Fewer than one risky behavior a month (shoplift, fight, cheat, use drugs, got drunk, vandalism, etc.); OR • **Rarely feels unable to cope (e.g., lose appetite, feel discouraged, worry about future, think about suicide).** • *Feels able to cope most of the time (e.g., feels things will work out, eats well, has fun in school, rarely fights, never thinks about suicide).* • *Consistently deals well with problems.* • *Doesn't feel, or feels a little, nervous in the classroom.* • *Almost never feels out of control anger.* AND: • Cannot meet risk criteria on any of the other criteria.
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Box C	
Support	
RISK	OPTIMAL
One or more of the following: • **Parents almost always criticize or punish unnecessarily.** • *Parents are overprotective, have inconsistent or harsh rules and consequences at least half of the time.* • *Parents only occasionally show an interest in their child's activities or know what they are doing with their time.*	Has two or more of the following: • **Rarely argue with parents about how to behave or what to do.** • Parents almost always provide positive emotional support (e.g., praise, encourage and get along, show they care, try to understand you, explain decisions/rules). • Parents almost always show interest in youth's activities and know what s/he is doing with his or her time. • *Parents, teachers and friends often provide practical support (help with schoolwork, plans for future, personal problems).* • *Parents rarely criticize or punish unnecessarily.* • *Parents are rarely overprotective or have inconsistent rules.* AND: • Doesn't meet risk criteria on any indicator.
Meaningful Involvement	
RISK	OPTIMAL
• **Youth is never involved in decision-making at home.**	• **Youth is always involved in decision-making at home.**
Challenging Activities	
RISK	OPTIMAL
• *School is occasionally challenging.*	Has all of the following: • Youth finds schoolwork (math, science, English) interesting and somewhat useful for post-graduation. • *School is almost always challenging (e.g., students learn a lot and often discuss their work).* • *Math and science classes almost always teach meaningful issues that are related to everyday life.*
Bold = MSALT data set only. *Italics = MADICS data set only.* Regular = Both MSALT and MADICS data sets.	

Appendix D: Analysis Sample Sizes for Chapters III and IV

FIGURE D.1					
TOTAL NUMBER OF YOUTH WITH OPTIMAL AND RISK CLASSIFICATIONS					
Framework Element	**N**	**Framework Element**	**N**	**Framework Element**	**N**
Overall A	1939	Overall B	1516	Overall C	N/A
Economic Self-Sufficiency	2595	Productive	1564	Supportive Relationships	2282
Healthy Relationships	2048	Connected	2111	Challenging Activities	2473 *
Community Involvement	2173	Navigate	1859	Meaningful Involvement	2183

*1057 for Risk Levels of Challenging Activities

TOTAL NUMBER OF YOUTH WITH RESOURCE AND LIABILITY EFFECTS			
Framework Link	**Baseline N**	**Resource Effect N**	**Liability Effect N**
Overall B ➜ Overall A	931	236	110
Productive ➜ Overall A	947	264	189
Connected ➜ Overall A	606	411	284
Navigate ➜ Overall A	1272	443	273
Supportive Relationships ➜ Overall B	1075	174	193
Challenging Activities ➜ Overall B	1119	204	266
Meaningful Involvement ➜ Overall B	1181 *	178	145

* Baseline N for liability effect = 662

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