J Youth Adolescence (2011) 40:263–277
DOI 10.1007/s10964-010-9578-6

EMPIRICAL RESEARCH

Adolescent Thriving: The Role of Sparks, Relationships, and Empowerment

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Received: 15 July 2010 / Accepted: 21 July 2010 / Published online: 3 August 2010

Abstract Although most social science research on adolescence emphasizes risks and challenges, an emergent field of study focuses on adolescent thriving. The current study extends this line of inquiry by examining the additive power of identifying and nurturing young people's "sparks," giving them "voice," and providing the relationships and opportunities that reinforce and nourish thriving. A national sample of 1,817 adolescents, all age 15 (49% female), and including 56% white, 17% Hispanic/Latino, and 17% African-American adolescents, completed an online survey that investigated their deep passions or interests (their "sparks"), the opportunities and relationships they have to support pursuing those sparks, and how empowered they feel to make civic contributions (their "voice"). Results consistently supported the hypothesis that linking one's spark with a sense of voice and supportive opportunities and relationships strengthens concurrent outcomes, particularly those reflecting prosociality, during a key developmental transition period. The three developmental strengths also predicted most outcomes to a greater degree than did demographics. However, less than 10 percent of 15-year-olds reported experiencing high levels of all three strengths. The results demonstrate the value of focusing on thriving in adolescence, both to reframe our understanding of this age group and to highlight the urgency of providing adolescents the opportunities and relationships they need to thrive.

Keywords Positive youth development · Adolescents · Well-being · Thriving · Support · Sparks

Until quite recently, social science research on adolescence largely has emphasized the risks and challenges young people face, and how to prevent them from engaging in high-risk behaviors or help them become resilient in the face of risk (Benson et al. 2006). Indeed, in their seminal writing on positive psychology, Seligman and Csikszentmihalyi (2000) argued that attention to pathology and deficit has driven psychology as a whole for at least the last 50 years. Over the past two decades in particular, however, there has emerged a science of Positive Youth Development (Benson et al. 1998, 2006; Damon 2004; Larson 2000; Lerner et al. 2002) and adolescent *thriving* (Benson and Scales 2009; Lerner et al. 2002; Scales et al. 2000) that have begun to focus the attention of scholars and practitioners on what young people need for their optimal development.

A primary example of Positive Youth Development theory and application is the framework of developmental assets created by Search Institute in 1990, articulating 40 relationships, opportunities, values, skills, and self-perceptions that the research literature consistently shows are related to positive development (Scales and Leffert

This research was supported by a generous grant to Search Institute from the Best Buy Children's Foundation. In addition to the authors, three other scholars served as research advisors for the study, and their advice and counsel are greatly appreciated: Obie Clayton of Morehouse College, Jacque Eccles of the University of Michigan, and Michael Rodriguez of the University of Minnesota. The opinions expressed herein, however, are solely those of the authors.

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2004). These are arrayed heuristically into eight categories, with Support, Empowerment, Boundaries and Expectations, and Constructive Use of Time representing "external" assets that adults and peers provide for adolescents, and Commitment to Learning, Positive Values, Social Competencies, and Positive Identity representing "internal" assets adolescents develop as part of their gradual path toward self-regulation. Studies collectively of nearly 3 million middle and high school students since 1990 have repeatedly found that the more of these assets adolescents have, the better off they are on a variety of concurrent and longitudinal academic, social-emotional, psychological, and behavioral outcomes, with these patterns holding across gender, race/ethnicity, and socioeconomic status (e.g., Benson 2006; Leffert et al. 1998; Scales et al. 2000, 2006). Two comprehensive reviews of the youth development literature have concluded that the total number of positive developmental nutrients, resources, or assets youth report having is related to both positive and negative outcomes, and that specific kinds of developmental influences also matter, depending on the outcome in question (Benson et al. 2006; Eccles and Gootman 2002). These nutrients, resources, or assets are not simple counts of the number of times a youth goes to a museum, or the number of times an adult says hello to them. Rather, each single resource or nutrient is intended to capture complex patterns of experience, such as the multiplicity of caring adults in a given youth's world, or the time they spend in a typical week—throughout the year—in high-quality youth programs. Typically, young people with 31–40 assets do better than those with 21–30, who in turn do better than those with 11–20, and all those youth tend to do better than youth with 0–10 assets.

Similar linear patterns have been found in studying the "5C's of positive youth development (competence, confidence, connection, character, and caring—Lerner et al. 2009), and the five "promises" that the America's Promise Alliance advocates all children and youth should experience: Caring adults, safe places, a healthy start, effective education, and opportunities to make a difference. The more children and youth are exposed to the 5C's or the five promises, they better off they are. For example, in a national sample of 12–17 year olds, their parents, and the parents of 6–11 year olds, children and youth with 4–5 of the five promises typically had better scores on more than one dozen concurrent academic, social-emotional, psychological, and behavioral outcomes than did those with 2–3 of the promises, who in turn tended to do better developmentally than those with none or only 1 of the promises (Scales et al. 2008). In this National Promises Study, the researchers also found that experiencing high levels of the promises had a compensatory effect. Males, adolescents of color, and low-income youth overall had lower levels of the academic, social-psychological, and behavioral outcomes studied. But if they had high levels of the promises, then males, adolescents of color, and low-income adolescents generally had the same level of outcomes as females, white adolescents, and more affluent youth. So, whether they are operationalized as the 40 assets, the 5C's, or the five promises, the sheer number of youths' positive developmental experiences matters, both for absolute levels of well-being and also for reducing disparities in well-being among groups of young people.

The work of scholars such as Csikszentmihalyi (1990) on "flow," and Larson on "initiative" (2000) reveals further features of the developmental landscape that make a difference, beyond the general idea of developmental assets. Using constructive use of time, for example, the sheer numbers of hours a week youth participate in constructive activities matters, but engagement by youth in activities that are challenging, require intense concentration for success, and the profound attention which arises from intrinsic motivation, all are features that add depth, and so define the *optimal* use of time.

Benson (2008) and Benson and Scales (2009) have elaborated this concept further in their description of "thriving" in adolescence. Central to the notion of thriving is an adolescent's "sparks." Sparks are described as a passion for a self-identified interest, skill, or capacity that metaphorically lights a fire in an adolescent's life, providing energy, joy, purpose, and direction. Thriving is then seen as the combination over time of sparks, and the action that the youth and others take to support, develop, and nurture those sparks.

Thriving as so described emphasizes the bidirectional development of both person and context. As Lerner noted (2004), such adaptive developmental regulation is seen as occurring when there is a balance between the development of individual strengths and capacities and the development of strength in the contexts youth inhabit, namely, their families, schools, peer groups, and communities. Simply, thriving persons are nurtured by their contexts and also make positive contributions to those contexts. Extending this thinking, Benson and Scales (2009) specifically frame the "development of prosocial and altruistic capacity and action as an outgrowth of the identification and nurturing of an individual's particular talents and interests" (p. 94). In other words, the aspects of thriving that reflect agency for social change, doing things for others, and making a difference in society—all of which may be thought of as aspects of empowerment—grow out of adolescents' being able to identify and nurture those passionate personal interests—sparks—that are intrinsically energizing to them. The development and nurturing of those sparks in relationships experienced throughout the adolescent's contexts helps them to construct a confident and secure "idealized personhood" (Lerner et al. 2002) that is better

oriented toward generosity of spirit and empathetic response to others than are the identities of adolescents who do not have the intrinsic mooring, direction, and social embeddedness that come from knowing one's true sparks and having them nurtured throughout one's social ecology. In this manner, sparks, relational opportunities, and empowerment are hypothesized to work together to influence growth in adolescents' prosociality.

All of these elements of adolescents' developmental experience may be especially salient during key periods of transition in adolescence, particularly as adolescents negotiate the (often competing) developmental tasks of connection to others and development of relative autonomy (Collins and Steinberg 2006). One of those periods occurs around the age of 15. In the United States, age 15 represents a critical transition time in growing up. When they are 15, teenagers typically move into high school. Students who engage well (academically and socially) during their first year of high school are much more likely to stay in school and to be academically successful. A recent report, for example, concluded that the biggest loss of students in the graduation pipeline occurs for most districts in the 9th grade, as many students turn 15 (Editorial Projects in Education 2009). By this age, they have been through significant physical changes, including puberty. They have begun developing adult reasoning capabilities, although they are still learning how to exercise judgment. Fifteen-year-olds are exploring how and why they matter, what they value, and who and what they believe in. They become more independent. Many 15-year-olds begin to drive, work, and spend more time on their own and with their peers. They take on more leadership roles. Finally, they are exposed to more high-risk behaviors, such as sexual activity, violence, and alcohol, tobacco, and other drug use, and increasingly are called upon to make significant decisions about whether to engage in such behaviors.

As adolescents grapple with their own identity and voice during early adolescence and the transition to mid-adolescence and high school, the issues of sparks and empowerment become even more vital developmentally, and could play important roles in their movement toward adulthood. Longitudinal analyses also have shown that the developmental assets that provide protection and promote positive development tend to decrease over the middle school years (Scales et al. 2006; Roehlkepartain et al. 2003), leaving the typical 15-year-old with a lower level of assets, and therefore greater vulnerability, than she or he will experience at any other time in the adolescent years.

Thus, previous research leads to the central theoretical organizing principle of this article. The identification and development of one's sparks in contexts that are filled with supportive relationships and opportunities for empowerment appears to be an especially powerful developmental experience that orients adolescents toward being on a thriving path. A thriving path or orientation, in contrast to a floundering path or even a merely adequate or "ok" path, is characterized by mutual person-context growth, that is, both personal and societal well-being. These issues may have particular developmental salience for adolescents around age 15, when they are undergoing significant changes and transitions, and are experiencing fewer developmental supports than when they were younger, and, based on prior research, they should hold for youth across racial/ethnic, gender, and socioeconomic diversity.

Hypotheses and Focus of the Study

Our focus in the current study was on these three interrelated but distinct concepts: Adolescents' deep personal interests or sparks; the opportunities—most often realized through significant relationships—youth have to identify and develop those sparks, talents, and interests; and their self-perception of being empowered or having "voice." Based on the literature reviewed above, we posed two general hypotheses. First, accumulation of these strengths among 15-year-olds, as seen in other research on developmental nutrients, assets, and promises, will be associated with generally more positive academic, social, emotional, and behavioral concurrent outcomes, and especially more positive specific developmental outcomes connected to contribution to society, including leadership, prosocial values such as helping others, and the importance they give to civic engagement. Second, the experience of all three of these three developmental strengths (sparks, relational opportunities, and empowerment) will contribute more to concurrent outcomes than do gender, race/ethnicity, or socioeconomic status.

Methods

Sample

Respondents for this survey were selected from among the Harris Poll Online database, which includes several million people who have agreed to participate in Harris Interactive online surveys. Because the sample is based on those who agreed to be invited to participate in an online research panel, no estimates of theoretical sampling error can be calculated. Email invitations were sent to thousands of potentially eligible households (i.e., those believed to have a 15 year old in the household), but unless an error message flagged an undeliverable email, there was no way to tell if potential respondents actually read the invitation, and thus no way to calculate a traditional response rate. Harris Interactive's estimate is that about 10% of invitees to such

online surveys actually participate (conversation with Dana Markow, June 25, 2009). Qualified respondents were US residents who were 15 years old. A representative sample of 1,817 US residents age 15 was surveyed online, including 1,023 white respondents (56%), 301 Black/African American respondents (17%), 302 Hispanic respondents (17%), and 90 Asian/Pacific Islander respondents (0.5%).

Data were weighted by Harris Interactive researchers to reflect the population of 15-year-olds in the US according to three race/ethnicity groups: Hispanic, Black/African American, White/Other (including Asian/Pacific Islander). Each group was weighted according to key demographic variables (gender, race/ethnicity, region, and parents' highest education [a proxy for household income]). These variables were weighted to known parameters in the United States. A post-weight was applied to bring the data from all three groups in line with their proportion in the total population of 15-year-olds in the US, based on race/ethnicity and gender.

Measures

The survey was self-administered online via the Internet, averaging about 23 minutes per respondent. Password protected e-mail invitations asked respondents to participate in a survey about current events. Survey items were taken or modified from numerous existing surveys, and some were created for this study. A number of new questions were generated through discussions among the Search Institute research team, research advisors from the University of Michigan, the University of Minnesota, and Morehouse College, and staff members from the Best Buy Children's Foundation, sponsor of the survey. Search Institute created the survey, and worked with Harris Interactive research staff to refine and pretest the items to achieve maximum reliability, validity, and efficiency of administration.

Sparks

Early questions in the survey asked the youth about their talents, interest, and hobbies. To determine whether they had a talent, interest, or hobby that met the criteria for being named a "spark," we asked a follow-up question taken from the Search Institute *Thriving Orientation Survey* (TOS, Benson and Scales 2009) that included a description of those criteria:

> "When people are really happy, energized, and passionate about their talents, interests, or hobbies, we say they have a "spark" in their life. This spark is more than just interesting or fun for them. They are passionate about it. It gives them joy and energy. It is a really important part of their life that gives them real purpose, direction, or focus. Do you have **this** kind of spark in your life?"

Respondents could answer with yes, no, or not sure. Those who answered "yes" were counted as having a spark.

Relational Opportunities and Empowerment

Table 1 displays the constructs and sample items that comprised the Relational Opportunities Index (ROI) and the Teen Voice Index (TVI).

Relational opportunities. The ROI was constructed by determining whether adolescents experienced nine features in their lives that reflected supportive relationships and chances to develop their interests. The number of constructs in the index may at first suggest that the index lacks focus, but upon examination, all can be seen to centrally reflect either key relationships or life opportunities, or both. The relationships dimension was captured through items that focus on youth as resources, the degree to which the community values youth, and adolescents' experiences of supportive adult relationships. The opportunities dimension was captured by examining the availability and use of neighborhood resources, the degree to which youths' interests help them achieve at school or learn skills useful in a job or career, and the actions they personally take to develop their talents. Time spent in after-school programs, and participation in high-quality after-school programs were seen as strongly reflecting both relationships and opportunities. The index was called "relational opportunities" because these distinctions about which items tap relationships and which tap opportunities are more theoretical than practical: The relationships adolescents develop enhance the likelihood of their having more opportunities to grow and pursue their interests, and the opportunities they have invariably introduce them to potentially helpful relationships.

In general, youth had to score the equivalent of an "agree" on a strongly agree-strongly disagree scale, or average that level of response to multi-item constructs, in order to be scored as "having" that feature of the index. This essentially reflects a standard of meeting about 75% of the criteria in order to be counted as experiencing the measure, a common standard that has been shown to predict levels of well-being among diverse samples of youth (see Scales et al. 2008). Youth then received one point for each ROI feature they experienced. Low scorers had 0–3 points; medium had 4–6; and high had 7–9. In addition, one point was subtracted from the total score if a youth said they received *active discouragement* from pursuing their sparks from their family, other adults, or their friends. For youth who had been actively discouraged, the modified

Table 1 Table of constructs for ROI and TVI measures

Constructs	#/Source of items	Sample item
Relationships and opportunities index		
Youth as resources	3/Search Institute *Profiles of Student Life: Attitudes & Behavior* (A&B) survey (Benson et al. 1998; Leffert et al. 1998)	I'm given lots of chances to help make my town or city a better place in which to live
Community values youth	4/A&B survey	Adults in my town or city listen to what I have to say
Weekly time in after-school programs	1/National Promises Study (Scales et al. 2008)	How many hours in an average week, including weekends, do you spend doing the following activities?
		*Sports-related clubs, teams, or organizations
		*Art, music, or drama lessons, clubs, or performances
Participation in high-quality after-school programs	7/National Promises Study	When you spend time in after-school or community programs, how often does each of the following happen? You…
		*Develop warm and trusting relationships with adults.
Availability of neighborhood resources	9/New	What kinds of easy to get to resources are there in your neighborhood/community for pursuing your talents, interests, or hobbies? Easy to get to means you can walk or bike to them, take public transportation without traveling a long time, or have someone who can take you there
		*Youth programs, such as YMCAs, Boys & Girls Clubs, or Scouts
		*Libraries
Use of neighborhood resources	9/New	How often have you used these resources in the last 3 months?
Supportive adults	3/Search Institute *Thriving Orientation Survey* (Benson and Scales 2009)	How often do the following people help you develop your talents, interests, or hobbies by giving you encouragement or support, or by pushing you to get better at those talents, interests or hobbies?
		*Teachers, counselors, or other adults at your school
		*A religious leader or youth leader, coach, or teacher in a religious organization
Connection of interests to life	4/New	How much has pursuing your talents, interests, or hobbies done each of the following for you?
		*Given me skills that will help me in a job or career
		*Helped me get along with other people or deepened my friendships
Personal actions to develop talents	*7/Thriving Orientation Survey*	I take the initiative to develop my talents, interests, or hobbies
Teen voice index		
Personal power	2/A&B survey	When things don't go well for me, I am good at finding a way to make things better
Community problem-solving belief	1/Monitoring the Future (Johnston et al. 2006)	Thinking about the problems you see in your community, how much difference do you believe you can personally make in working to solve them?
Political activity	7/National Youth Survey (Keeter et al. 2002)	Have you ever done or do you plan to do the following things?
		*Write to public officials
		*Give money to a political candidate or cause
Ideas for the President	1/New	Which 3 issues do you want the next president to address? If you can not think of any issues, please type 'None' in the first box

ROI scores yielded low scorers with between 0 and 2 points, medium scorers with 3–5 points, and high scorers with 6–8 points.

Empowerment. The TVI was constructed by determining if 15-year-olds experienced four features in their lives presumed to reflect aspects of empowerment*: Personal*

power or self-efficacy, community problem-solving belief, political activity, and ideas for the president. The latter was an open-ended question asking adolescents to name three things they most wanted the next US President to deal with (the poll was held shortly before the November 2008 presidential election). If they could describe at least one such idea as simply as "the economy," or "health care," they received credit for having this feature of "voice." Scoring followed the same algorithms as described for the ROI. Young people then received one point for each feature whose criterion level they reached. Low scorers had 0–1 point, medium had 2 points, and high had 3–4.

These measures were designed as indexes, rather than as scales, and their quality is judged somewhat differently as a result. Indexes are not the same as "scales," and so standard parameters for estimating scale reliability and validity are not appropriate as applied to indexes. Nevertheless, each of the components in each index is clearly related to the umbrella label given the index, suggesting prima facie evidence for content validity (e.g., leadership is certainly a reflection of a young person having "voice" or the expression of their opinions and influence, and being in quality after-school programs is certainly a reflection of having "relationships" and "opportunities" for learning and growth). Moreover, most of the items were taken or modified from previous surveys with known, acceptable psychometric properties, providing evidence of construct validity. However, unlike what would be expected in a true scale, each of the components of an index is not necessarily highly related to or correlated with all of the other components of that index, particularly in the relationships and opportunities index. Treating these items as a scale implicitly assumes more internal consistency than there may be, and because some components of the index may be quite unrelated, the alpha or internal consistency *reliability* of a group of index items, when treated inaccurately as a scale, could be low. In treating the component items as elements of an index rather than as elements of a scale, we allowed differing profiles of experiencing relationships, or voice (i.e., differing combinations of index items) to result in a qualitatively equal score (i.e., low, medium, or high) on the TVI or ROI. In this way, variability of individual experience could be reflected between two adolescents, and yet each attain an identical level of judged quality in their experience of relationships or voice.

In order to assess the robustness of the indexes, an independent Confirmatory Factor Analysis and Rasch analysis was conducted on the two indexes by one of the study's scientific advisors, suggesting that the indexes, component indicators, and items generally functioned quite well (Rodriguez 2009), with consistent evidence of both acceptable reliability and validity. Finally, post-hoc evidence for the predictive validity of these two indexes is found in the results we describe below, showing that young people with higher levels of the TVI and ROI consistently scored better on a dozen outcome indicators of developmental well-being. Thus, although they are not scales, these index measures have acceptable psychometric properties for this analysis.

Outcomes. Twelve outcomes were measured. The outcomes covered the four primary domains of youth development that typically are the targets of most youth development programs and the outcomes measured in key PYD studies (Catalano et al. 2004; Eccles and Gootman 2002; Roth and Brooks-Gunn 2003; Benson et al. 2006; Scales et al. 2008) including aspects of academic, psychological, social-emotional, and behavioral well-being. The alpha reliability of the outcome measures was acceptable to good, ranging from .73 to .89.

Academic Outcomes. To calculate *GPA*, youth were asked in how many classes "in your most recent school marking period" they received grades of A, B, C, D, or below D. Four points were awarded for As, 3 for Bs, and so on, and GPA was calculated as the mean grade for the total number of classes. (The number of classes taken was controlled for in these calculations, so that small numbers of classes did not artificially inflate a student's GPA.) *Mastery goals* was a 3-item scale adapted from Anderman et al. (2005), asking how much statements like this described the youth: "One of my goals in school is to learn as much as I can."

School engagement was a single item from the National Promises Study (Scales et al. 2008) asking how often the respondent works up to his or her ability at school, on a 4-point never-very often scale. *Attendance* was a single item taken from the Search Institute A&B survey (Benson et al. 1998) asking how many days of school a youth skipped in the last 4 weeks.

Psychological Outcomes. *Sense of purpose* was a 6-item measure taken from the Search Institute TOS (Benson and Scales 2009), which incorporated conceptual aspects of purpose described in Damon et al. (2003). It was comprised of two items on a 4-point scale from "does not describe me at all" to "describes me a lot," one item on a 5-point scale from "not at all certain" to "extremely certain," and three items on a 4-point scale from strongly agree to strongly disagree. Items asked whether the respondent had a sense of purpose, and for how long they have felt a sense a purpose. *Ethnic identity* was modified from Phinney's Multi-Group Ethnic Identity Measure (Phinney 1992), and consisted of three items asking how much youth agreed or disagreed with statements such as, "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs." *Worries* was a modified version of items asking about possible worries or concerns, taken from the Washington Post/Kaiser Family

Foundation/Harvard University African-American Men Study (Washington Post/Kaiser Family Foundation/Harvard University 2006). Seven items came from that earlier study, and three new ones developed, asking how worried they were about things such as their family not having enough money, or being a victim of crime.

Social Outcomes. Six items measuring *prosocial values* were taken from the Monitoring the Future study (Johnston et al. 2006), asking how important it was to the youth to improve race relations, or help people who are poor. *Civic engagement values* was measured with three items taken from Flanagan's Adolescent Civic Commitments Scale (Flanagan et al. 2007), asking how important it was to youth that they do such things as make a contribution to society, or being a leader in their community. *Volunteering* was a single item taken from the National Promises Study (Scales et al. 2008), asking youth how many hours in an average week, including weekends, they spend doing "volunteer work to help other people or to help make your community a better place." *Racial respect* was comprised of one item measuring the degree to which youth perceived being treated fairly as a person of their race (Sellers et al. 1997; using a 4-point scale from strongly agree-strongly disagree), and six items measuring their experience of racial/ethnic discrimination (using a 4-point scale from never-very often, with five items taken from the Washington Post/Kaiser Family Foundation/Harvard University African-American Men Study (2006), and one new item).

Behavioral Outcomes. *Leadership* and *anti-social behavior* each were taken from the Search Institute A&B survey. They were measured with single items on a 5-point scale from "never" to "5 or more times," asking, respectively, how many times in the last year youth had been a leader in a group or organization, and how many times in the last year they had damaged property just for fun (such as breaking windows, scratching a car, putting paint on walls, etc.).

Analysis Plan

Hypothesis 1 predicted that the accumulation of the three strengths of sparks, relational opportunities, and empowerment would be associated with better well-being. To explore hypothesis 1, five groups were formed: (1) Adolescents who did not meet the criteria for having high levels of any of the three strengths; (2) Those who had high levels only on Sparks; (3) Those who had only high levels of TVI or ROI; (4) Those who had high levels on Sparks plus either TVI or ROI; and (5) Those who had high levels of all three of Sparks, TVI, and ROI. (No youth fell into a sixth possible group: having high levels of TVI and ROI but not of Sparks.) We then conducted Anovas comparing the mean scores of these five groups on all outcomes. Because 12 Anovas were conducted, we applied a Bonferonni correction to guard against Type I errors, thereby yielding a $p \leq .004$ for an F-value to be significant. Tukey HSD post-hoc comparisons were conducted to clarify the sources of significant F-values.

Hypothesis 2 predicted that the developmental strengths would predict the developmental outcomes more strongly than would demographics. To explore hypothesis 2, we conducted regressions using the demographic variables of gender, race/ethnicity, and SES, as well as the total number of the three strengths, to predict the outcomes. Demographics were entered first as a block. We then compared the β and amounts of variance of each outcome contributed by demographics and the number of strengths. Additionally, we tested for moderation effects of the demographic variables. To reduce multicollinearity effects, we centered the variables by subtracting the sample mean for each case on both the number of strengths variable, and the SES variable, and creating dummy variables for gender (male = 0, female = 1), and two for race/ethnicity (white = 0, other = 1; African American = 0, other = 1). We then conducted regressions entering the demographic variables first, then the number of strengths, and then the four interactions of each demographic variable (SES, gender, and two race/ethnicity dummies) with the number of strengths.

Results

Relationship of Strengths to Individual Outcomes and Societal Contribution

Table 2 shows the results of the Anovas, with F-values and means presented for each of the developmental outcomes. The top row of the table shows that only an extreme minority of adolescents—9%—experiences a high level of all three of the strengths. Another 21% experience two of the three, but nearly three in ten 15 year olds (28%) did not experience any of these developmental strengths at a high level. The number of strengths makes a considerable difference in these concurrent outcomes. For 9 of the 13 outcomes (69%), youth with high levels on all three of the outcomes fared better than youth with high levels on none or just one of the strengths (they were also higher on not being worried, but after the Bonferonni correction was applied, the p-value was no longer significant). Very few of these young people missed any days of school in the last month, or committed acts of vandalism, and so no statistically significant differences were observed regardless of levels of Sparks, TVI, or ROI (there were no overall differences on perceived racial respect, but a separate analysis showed that for white youth, racial respect was higher among those with at least one strength). In addition, on

Table 2 Effect of accumulation of strengths on concurrent developmental outcomes

Percentage of sample	Not high on any of the three 28%	Only Sparks 38%	Only TVI or ROI 5%	Sparks + TVI or ROI 21%	Sparks + TVI + ROI 9%
Outcomes/F-values					
Grade Point Average F (4,1792) = 21.13*	3.11c	3.23c,b	3.37b,a	3.47a	3.55a
*Leadership (Have served as leader in the past year) F (4,1799) = 72.18**	*−.42d*	*−.17c*	*−.07c*	*.31b*	*.80a*
Mastery goals (Have goals to master what they study at school) F (4,1799) = 86.96*	−.41e	−.05d	.18c	.40b	.64a
Purpose (Have a sense of purpose & hope for future) F (4,1799) = 140.59*	−.53d	−.07c	.01c	.31b	.64a
School engagement (Work up to their ability at school) F (4,1798) = 52.93*	−.43d	−.09c	.04c	.30b	.63a
Ethnic identity (Have a positive sense of their ethnic identity) F (4,1352) = 76.69*	−.40d	−.08c	.04c	.36b	.73a
*Prosocial values (Believe it is important to help others and correct social inequalities) F (4,1799) = 74.96**	*−.25d*	*−.06c*	*.03c*	*.29b*	*.57a*
*Civic engagement values (Believe it is important to be involved in community issues) F (4,1799) = 68.38**	*−.25c*	*−.06c*	*.19b*	*.32b*	*.74a*
*Volunteering F (4,1247) = 21.80**	*−.28c*	*−.13c*	*.17b*	*.26b,a*	*.50a*

All means but GPA standardized. GPA based on A = 4 points, B = 3 points, etc

Cells with different superscripts are significantly different from each other (within the row). Differences in percentages without superscript numbers were not statistically significant from other percentages in that row

Outcomes without significant differences among groups are not shown here (school attendance, vandalism, worries and concerns, and racial respect)

Italicized rows: Outcomes that particularly reflect prosociality

* $p \leq .0001$

seven of the 13 outcomes (54%), those strength-rich youth also fared better than adolescents who experienced any two of the three strengths.

In Table 2, four outcomes specifically related to prosociality are highlighted: Leadership, civic engagement values, prosocial values about such issues as working for social justice, and volunteering weekly. On three of these prosociality outcomes (75%), adolescents who enjoyed all three strengths had significantly higher mean scores than all other groups of young people, and on the fourth, those with all three strengths volunteered more than those with none or just one of the strengths. These outcomes reflect prosociality and social integration—the societal well-being side of the person-context dynamic of thriving—and so these results provide moderate to strong support for the hypothesis predicting that accumulation of these strengths in youth benefits not only the individual youth, but the larger societal context as well.

Relative Contribution of Strengths and Demographics to Outcomes

Table 3 shows that for eight of the 13 outcomes (62%), the number of strengths contributes more to outcome variance than do demographics: The four prosociality outcomes (leadership, prosocial values, civic commitments, and volunteering); purpose; two outcomes connected to school success (mastery goals, and school engagement); and ethnic identity. The number of strengths also contributes more than demographics to anti-social behavior, but even together, the strengths and demographics explain barely one percent of variance. The two predictors of strengths and demographics contribute about the same level to school attendance, but together barely explain two percent of that outcome's variance. As noted earlier, these results for anti-social behavior and attendance are to be expected, since there was very little variation across the sample in the percentage of youth experiencing those outcomes. Demographics explain just slightly more of GPA than does the number of strengths. Only for racial respect was there a clear dominance of demographics as a predictor, with race/ethnicity the strongest contributor.

The number of strengths also had a larger β than any of the demographics (not shown here) in 9 of the 13 outcomes predictions (69%), even when the number of strengths did not contribute as much to variance as did demographics. Only for school attendance (whites had slightly more attendance), antisocial behavior (neither demographics nor

Table 3 Relative contribution to outcomes variance made by demographics and number of developmental strengths

Outcome	Predictors	ΔR^2	β
GPA	Step 1 demographics[a]	.041	.224***
	Step 2 # strengths	.038	
	Total R^2	.079	
	n	1,792	
Attendance	Step 1 demographics[a]	.011	.014
	Step 2 # strengths	.010	
	Total R^2	.021	
	n	1,792	
Leadership	Step 1 demographics[a]	.032	.317***
	Step 2 # strengths	.095	
	Total R^2	.127	
	n	1,799	
Anti-social behavior	Step 1 demographics[a]	.000	−.011
	Step 2 # strengths	.004	
	Total R^2	.004	
	n	1,799	
Purpose	Step 1 demographics[a]	.006	.357***
	Step 2 # strengths	.109	
	Total R^2	.115	
	n	1,799	
Mastery goals	Step 1 demographics[a]	.026	.290***
	Step 2 # strengths	.112	
	Total R^2	.138	
	n	1,799	
School engagement	Step 1 demographics[a]	.019	.166**
	Step 2 # strengths	.058	
	Total R^2	.078	
	n	1,798	
Ethnic identity	Step 1 demographics[a]	.016	.335***
	Step 2 # strengths	.124	
	Total R^2	.146	
	n	1,352	
Prosocial values	Step 1 demographics[a]	.023	.225***
	Step 2 # strengths	.063	
	Total R^2	.086	
	n	1,799	
Civic engagement values	Step 1 demographics[a]	.017	.286***
	Step 2 # strengths	.075	
	Total R^2	.092	
	n	1799	
Worries and concerns	Step 1 demographics[a]	.043	.052
	Step 2 # strengths	.007	
	Total R^2	.050	
	n	1,799	
Racial respect	Step 1 demographics[a]	.062	.126*
	Step 2 # strengths	.016	
	Total R^2	.078	
	n	1,799	

Table 3 continued

Outcome	Predictors	ΔR^2	β
Volunteering	Step 1 demographics[a]	.031	.307****
	Step 2 # strengths	.100	
	Total R^2	.131	
	n	1,247	

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

[a] Demographics included SES, gender, and race/ethnicity

number of strengths were significant), worries (whites, males, and more affluent youth had fewer worries), and racial respect (whites reported more racial respect) did any demographics have a larger β than did the number of developmental strengths experienced. The effects of the number of strengths also were largely similar across demographic groups. After the Bonferonni correction was applied, there was only one significant interaction (not shown), between gender and the number of strengths as predictors of hopeful purpose, suggesting that girls with a high number of strengths had more hopeful purpose than did boys with a high number of strengths. Overall then, hypothesis 2 received substantial support.

Discussion

The emergence of Positive Youth Development as a broad theoretical and applied framework for understanding and influencing adolescent development—a focus on their optimal development and not only on prevention and reduction of risk behaviors—has been a relatively recent phenomenon, and within PYD, the articulation of the concept of adolescent thriving is an even newer area of theoretical and applied focus, with a research base that is still small, but that is growing rapidly. In this study, we examined how adolescents' experience of three developmental strengths that communities can promote is related not only to adolescents' own, individual well-being, but to the betterment of wider society, a combination of outcomes that is a defining feature of thriving. We posed two specific hypotheses. First, we predicted that the accumulation in youth of the strengths of sparks or deep interests, relational opportunities to nurture those sparks, and empowerment is associated with concurrent academic, psychological, social-emotional, and behavioral well-being, and that the socially integrative nature of these strengths should be reflected in the linkage they have with outcomes reflecting youths' actual and potential contribution to society. Second, we predicted that the number of the three developmental strengths youth experience is more important in predicting most outcomes than are the demographics of gender, race/ethnicity, or SES. The data presented here strongly support both of these hypotheses.

Validity of the Results

Before addressing the implications of the findings, an additional discussion of the validity of the results, beyond the index psychometrics presented earlier, is warranted. The extremely low percentage with all three strengths (9%) begs the question, were the scoring guidelines for these measures unrealistically stringent? We think not. The criteria for the Teen Voice Index describe adolescents who have confidence, who believe they are resources, who want to be involved as problem solvers, and who have at least a minimal knowledge of public affairs such that they could name just one issue, even in very general terms (e.g., "education," "health care") for a new president to tackle. These hardly seem to be overly ambitious hopes for adolescents. In the same way, the Relational Opportunities Index criteria describe youth who have support to develop their talents and interests, and whose pursuit of those interests, helps them prepare for a career, improve their relationships, stay motivated to learn, and have opportunities to contribute. They feel respected as youth with something to offer, and useful in their families, schools, and communities. They live in communities with plentiful resources, and they use those resources. They participate at a modest couple hours a *week* in after-school programs that help them learn useful skills, have good relationships, and make some decisions. If anything, these standards for a "high" ROI score seem more like the minimum level of hopes and aspirations we as a society should have for the relationships and opportunities available to all our youth. Recall too that youth needed only meet three of every four criteria here, not all of the criteria, in order to obtain a "high" score on the TVI or ROI. That so few were able to say they meet these generous standards underlines the wide gap between our hopes and adolescents' realities, and the nature of the challenge we must meet.

If there is any good news in the low figures for "high" scoring on these indexes, it is that 29% of the sample got medium scores on the TVI and 33% on the ROI. This suggests that, with a fairly modest social commitment to build these strengths, many of those in the medium groups could be propelled into the most developmentally advantaged "high" group. Nevertheless, even if all those scoring at the medium level suddenly enjoyed a high level of these strengths, that still would leave roughly half of American

15-year-olds experiencing a low level of developmental strengths, a level significantly linked with poor developmental outcomes.

The Accumulative Power and Socially Integrative Nature of the Three Strengths

These findings are consistent with a large body of research showing the value to adolescents of their experiencing across multiple contexts a variety of developmental assets or nutrients such as empowerment, supportive and caring relationships, and opportunities to use their time constructively (reviewed in Benson et al. 2006, 2003; and Eccles and Gootman 2002). This study extends that research by introducing the effects of "sparks" into that equation: When empowerment and relational opportunities are combined with adolescents having and pursuing a spark or deep passion, the likely benefit connected to such positive experiences does not accrue only to youth, but to larger civil society.

These results support the theory of thriving articulated by Benson and Scales (2009), and their initial research findings on adolescent thriving: Adolescents who can identify a spark or passionate interest, and who have people in their lives who help them nurture that spark (as measured in the current study by the Relational Opportunities Index), also are more likely to have other values and commitments to social contribution that bring benefit to their communities and wider society. Having passionate interests or sparks, alone, offered about the same benefit to individual well-being as having relational opportunities or empowerment, alone. But the highest levels of potential benefit to others, as reflected in young people's leadership, prosocial values, and civic engagement intentions, occurred only among those with all three of the strengths, and volunteering, the other outcome reflecting societal contribution, was highest among those with two or all three strengths. In the current study, adolescents experiencing all three strengths at high levels were much more likely to report being leaders in the last year, to have prosocial values around the importance of helping others and working to promote social justice, and to have commitments to be involved civically, both currently and in the future. They, and those with two of the strengths, also were more likely to volunteer weekly. Thus, the accumulation of the particular strengths studied here—sparks, relational opportunities, and empowerment—may help to produce the bi-directional positive growth of both the individual and his/her social context that Lerner (2004) has described as the essence of thriving and adaptive developmental regulation. In other words, when inner strengths, such as sparks, are aligned with positive ecologies, as reflected in plentiful relationships and opportunities, adolescents are empowered not only to pursue their own interests but also to use those interests and passions to contribute to the social good. It is notable that having high levels of two of the three strengths was good enough for youth to be in the high outcome group for most outcomes. But it was only those with high levels on all three strengths who were in the highest group on three of the four specifically prosocial outcomes. Although not definitive, this result suggests that individual well-being may be promoted by experiencing a good but not outstanding level of developmental strengths, but that *societal* well-being is better promoted when youth experience a very high level of all of these developmental strengths.

This study confirms that not just the accumulation, but also the nature of, positive developmental experiences is important. It is noteworthy that all of the developmental assets, 5C's, and five promises frameworks of Positive Youth Development include emphasis on caring relationships, opportunities for constructive use of time, and empowering adolescents through making them feel valued, capable, and useful as resources to others, elements also stressed in the foundational review of research on community youth programs prepared by the National Research Council (Eccles and Gootman 2002). But not all experiences in ostensibly youth-oriented settings are "positive youth development" experiences that promote such assets. For example, participation in "youth programs" is one of the 40 developmental assets that Search Institute has identified, and a simple measure of hours per week that youth spend participating in such programs has indeed been related to numerous positive outcomes for young people (Benson et al. 1999). More recently, some evidence has been found that high levels of activity involvement may be inversely linked to positive youth development for girls in high-asset neighborhoods, and for boys in low-asset neighborhoods (Urban et al. 2009). But research does generally find that even simple measures of youth activity involvement are a net positive. Nevertheless, Roth and Brooks-Gunn (2003) showed that many "youth programs" are not truly functioning to their full potential as youth *development* programs because they fail to embed sufficient features shown to be more associated with positive outcomes, such as opportunities for youth empowerment and skill-building, and supportive relationships. Thus, participation by itself carries some developmental value as an asset, but participating in *high-quality* programs as we defined them in this study, that is, characterized by caring relationships and empowerment opportunities, provides even greater value.

The Relative Influence of Developmental Strengths Over Demographics

The results of this study also suggest, with some exceptions, that the three strengths might play a role in helping to

promote equality of developmental outcomes across race/ethnicity, gender, and SES. A large proportion of policy and program attention at all levels of civil society, of course, is paid to attempting to ameliorate differences in educational achievement and health status, among other outcomes, that are associated with those three aspects of an individual's social location. Thus, it is important to investigate whether a youth development approach appears to be efficacious only for certain groups of young people, or whether it has promise for diverse youth. For example, nurturing a young person's sparks could be seen, in a Maslovian sense, as akin to helping young people with their self-actualization processes when, for disadvantaged youth, more pressing instrumental needs exist. But we found that, regardless of their race/ethnicity, gender, or SES, youth with high levels of the strengths generally did better, and youth with lower levels, worse, on nearly all the outcomes studied. We of course could not determine cause and effect in this cross-sectional study, but the consistency of these results and their alignment with similar previous findings about the explanatory power of developmental assets over demographics (Leffert et al. 1998; Scales et al. 2000, 2006) do suggest that the benefit of experiencing these strengths accrues to youth across a wide variety of gender, racial/ethnic, and socioeconomic diversities.

This study's results are particularly salient, given the important developmental transitions that are occurring to many adolescents around the age of 15, the focus age of this sample. That sparks, relational opportunities, and empowerment together weave this developmentally supportive web of purpose, connectedness, and contribution at a time of such potential vulnerability for youth is thus a finding with special applied resonance. For example, it argues for the likely positive contribution that targeted "asset-building" programs can make to helping keep students "on track" in the first year or two of high school. One such program, in fact, the Building Assets-Reducing Risk program of St. Louis Park (MN) high school, has achieved recognition in the National Registry of Evidence-Based Programs and Practices as a promising approach through its focus on promoting these strengths among 9th grade students (Johnston and Jerabek 2007).

Improving Relationships and Programs Through Promoting These Strengths

Because this was not a longitudinal study, the results can allow us only to speculate about how the three strengths of sparks, relational opportunities, and empowerment may be enhanced through informal adult-youth relationships and formal youth development programs. But these speculations are firmly grounded in both the scientific literature on positive youth development and PYD programs (Benson 2006; Eccles and Gootman 2002), as well as in applied experience working with thousands of organizations and community coalitions on initiatives to build developmental assets and enhance youth thriving (Benson 2008, 2006). In analyses of several national and other large databases of adolescents developed over the last 5 years, for example, we have shown that about 66–80% of youth can name at least one spark they have (depending on how "spark" is defined for them), but that less than half experience relational opportunities to develop that spark (Benson and Scales, in press). In another national study of US adults, we concluded that less than 10% of adults have both a strongly favorable personal attitude toward engaging with adolescents outside their families, and a perception of social permission or expectation from others to do so (Scales et al. 2003). In day-to-day interactions, then, there is little normative support for anything but superficial connection between most adults and teenagers. Even in schools, youth organizations, and religious congregations, where adults are permitted and expected as part of their job descriptions to get to know youth more personally, only minorities of adolescents say someone knows their spark there and helps support it, and less than 20% say their neighbors do (Scales et al. 2009).

Based on the solid documentation of this quite limited depth and quality of adult-youth relationships, we speculate that simply asking adolescents six "essential questions" (Benson 2009) in organizations and programs, and informally in neighborhood relationships, could go far in making an impact on two of the three strengths in this study (sparks and relational opportunities), which arguably could also help contribute to the third strength (empowerment):

1. "What is your spark?"
2. "When and where do you express it?"
3. "Who knows your spark?"
4. "Who nourishes your spark?"
5. "What gets in your way?"
6. "How can I help?"

As noted above, after-school and community programs are important sources of all three strengths, but although participation at all in such programs is common, participation in *high-quality* programs is not. Other analyses of this study's data showed that, although 68% participated in such programs, only 35% were in high-quality programs that emphasized the three strengths of sparks, relational opportunities, and empowerment. Counting those who did not participate at all, one can conclude that just 23% of the nation's 15 year olds participate in such high-quality programs (Scales et al. 2009). This estimate is consonant with the 4-H Study of Positive Youth Development's finding that only about one-third of 6th graders were in after-school programs that emphasized the 5C's (Balsano et al.

2009). More programs—and organizations as a whole—could be improved by strengthening the elements of program operation we used to define "high quality": the degree to which adolescents develop warm and trusting relationships through those programs, are involved there in pursuing their sparks as something they are passionate about, and have opportunities for feeling empowered through learning teamwork or leadership skills and being allowed to help make decisions.

Study Limitations

The limitations of the study pertain to the sampling and to the study's cross-sectional design. The sample was limited to 15-year-olds, and so the findings cannot necessarily be generalized to adolescents of other ages. The sample also was drawn from 15-year-olds whose families were already part of an ongoing panel that receives attention and award incentives as inducements to enroll in the panel and participate in various research studies. Their willingness to be so involved, especially at a time when researchers are noting decreasing levels of participation in recent years in both public opinion surveys and epidemiologic studies (Keeter et al. 2000; Morton et al. 2006), may point to a systematic difference between such participants and the general population. The raw sample prior to weighting also was more highly educated than US averages, particularly among the parents of African-American and Hispanic youth. The sample was weighted to align with census proportions on a number of salient demographic categories, which partially ameliorates the bias in the raw sample proportions, but these 15-year-olds still might not be representative of US 15-year-olds by virtue of their willingness to participate in an ongoing panel of this type. However, if anything, that willingness to participate in surveys, and their higher than average family education level, may mean that these 15-year-olds were relatively *less vulnerable* and *more developmentally advantaged* than a truly representative sample of US 15-year-olds would have been. If this reasoning is valid, then it actually underscores and heightens the importance of the findings. If only 9% of a relatively more highly educated and less vulnerable population reported experiencing high levels of all three strengths, the proportion of those who would say they do in a true representative sample would likely be even less.

The other principal limitation of this study is that the design was cross-sectional, and so the linkage documented between experiencing the three strengths and experiencing positive development is based on correlational data and thus cannot conclusively be said to be causal. However, the pattern of these relationships is indeed consistent with that found in a longitudinal study of developmental assets and school success (Scales et al. 2006), and in more than two-dozen longitudinal studies by other scholars that examined the link between positive developmental constructs very similar to these three strengths, and outcomes such as those studied here (reviewed in Scales and Leffert 2004). The likelihood, therefore, is considerable that these developmental strengths do not merely correlate or co-vary with positive outcomes, but actually contribute to those outcomes.

Conclusion

We found, as predicted, that the accumulation of three broad strengths in adolescents—their sparks or deep passions, their relational opportunities, and their sense of empowerment—are strongly associated with better academic, psychological, social, and behavioral well-being for adolescents, and, specifically, with prosocial outcomes that reflect engagement with and contribution to community and society. Moreover, the three strengths generally explain those concurrent outcomes more strongly than do demographics such as gender, race/ethnicity, or socioeconomic status.

Although more study is needed to corroborate these cross-sectional findings, especially by employing longitudinal designs, the evidence is quite promising that helping adolescents identify their sparks, and providing them caring relationships and opportunities for empowerment during this particularly challenging time of transition in adolescence, may be a fruitful strategy for advancing positive youth development, and, more specifically, stimulating youth contribution to society, regardless of youths' race/ethnicity, gender, or socioeconomic status. The data are sobering, however, in showing that only 9% of these youth reported experiencing high levels of all three of the developmental strengths, whereas nearly three in 10 reported high levels of none of the strengths.

These results demonstrate both the value and the shortage of these developmental nutrients among US 15-year-olds, and the urgency of providing youth the opportunities and relationships they need to thrive. Policies, organizations, and programs that affect youth should be reviewed and improved to accomplish three aims suggested by this study. First, increase the extent to which individuals, organizations, and programs help adolescents identify and then nurture their sparks. Second, heighten the degree to which adolescents have caring, supportive relationships and opportunities to develop the talents that interest them deeply and which spark a sense of passion and purpose in their lives. Third, enhance adolescents' sense of feeling empowered to participate in community and civic life. These results suggest that the real "ROI"—return on investment—and benefit to improving youths'

experience of these developmental strengths will be to both adolescents and the communities in which they live.

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