

# Aligning Youth Development Theory, Measurement, and Practice Across Cultures and Contexts: Lessons from Use of the *Developmental Assets Profile*

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**Abstract** The development of youth has implications across all sectors of societies, and thus, holistic approaches to promoting positive youth development that take an across-sectors perspective may be more effective and cost-efficient ways of investing in youth. The current interest in collective impact to improve outcomes for young people intersects with growing interest in a diverse array of social-emotional, non-cognitive, or “soft” attitudes and skills that are increasingly recognized as being foundational for multiple educational, workforce, and livelihoods outcomes. But these “intangible” factors are difficult to measure well, particularly when compared to observable behaviors or testable knowledge and skills. This challenge is exacerbated in lower and middle-income countries where there is limited research, and there are even fewer consistent, validated measures that examine personal strengths—particularly ones that are consistently contextualized and tested across cultural and language differences. For the past decade, Search Institute and several partners have utilized a broad measure of positive youth development, the *Developmental Assets Profile (DAP)*, in a series of studies in a wide range of international agencies, countries, languages, and program contexts. This paper draws on 50 datasets from 31 countries, involving more than 25,000 young people, ages 9–31, to more comprehensively describe the strengths and issues involved in using the DAP for measurement of child well-being across cultures and language groups. In the process, it reports on the link between crosscutting elements of well-being and critical international development priorities across sectors. The longevity and breadth of this ongoing effort offers insights and lessons for more

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recent efforts to develop, operationalize, and validate practice-focused measures across multiple contexts and languages. It serves as a case study in the challenges and opportunities of developing and utilizing shared measures across multiple countries, cultures, and language groups.

**Keywords** Developmental assets · Cross-cultural youth development · Developmental relationships · Cross-cultural measurement · Character strengths · Youth well-being

Investment in providing supports and opportunities through which young people develop critical skills, attitudes, and other strengths is a critical strategy to advance human well-being. With half the world's population under 30, and half of that youth bulge between ages 10–24, the health, education, and positive development of young people is critical to the social and economic well-being of developing countries where a majority of the world's youth live (USAID 2012). Great strides have been made in recent decades in investing in the well-being of the world's young children; however, much of that progress could be undone given the relative “paucity” of resources devoted to the world's 1.2 billion adolescents ages 10–19, 90 % of whom live in the developing world (UNICEF 2011, 2012).

## 1 Cross-Sector Collaboration and Collective Impact

The development of youth has implications across all sectors of societies. Thus, cross-sector approaches to promoting and measuring youth development and well-being hold promise in the alignment of both measurement and development strategies. As a result, recent years have seen an increasing interest in approaches to youth development and education that focus on collective impact, or “the commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem” (Kania & Kramer 2011, p. 36). Collective impact initiatives bring together community leaders and groups to work on a common agenda, shared measurement, and mutually reinforcing activities across multiple agencies and strategies in the community in order to achieve shared goals or outcomes.

This approach echoes the premise that “important programmatic and policy links among formal and informal education, youth development, civic, and livelihood initiatives can produce useful results that cut across traditional sectors—including economic growth, education, democracy and governance, health, and even security concerns” (EDC 2011, p. 3). USAID expresses collective impact in even broader terms in its Youth in Development policy, noting its priority of incorporating “youth development practices across systems and into areas of escalating investment such as food security, global health, child protection, and climate change, while promoting gender equality and embracing science and technology by and for youth” (USAID 2012, p. 9). Indeed, not just technology, but social-emotional communication skills “that facilitate cross-cultural interactions have become a global necessity” for both within-country and international communications (Matusitz and Musambira 2013, p. 43).

The interest in collective impact intersects with growing attention to the need to develop positive skills and attitudes that, in addition to technical skills and knowledge, are integral to multiple educational, workforce, and livelihoods outcomes (Farrington

et al. 2012; Heckman and Kautz 2012; Lippman et al. 2015; OECD 2015; Sheckman et al. 2013). Further, there is growing evidence of the economic benefits of investing in these social-emotional attitudes and skills (Belfield et al. 2015).

## 2 Measurement of Ecological and Character Strengths

A challenge, however, is that these individual or person-based factors have been given a cacophony of labels. Across different contexts and settings, they have been variably described as soft skills (Lippman et al. 2015), non-cognitive skills (Kautz et al. 2014), character skills (Heckman and Mosso 2014), twenty-first century skills (Ananiadou and Claro 2009), social-emotional learning (OECD 2015; Zins et al. 2004), and foundational components (Nagaoka et al. 2015), among others. Though each current approach has different starting points, emphases, focus areas, and outcomes of interest, they overlap in that they seek, in part, to articulate critical individual factors for development that go beyond subject-matter knowledge (such as reading or math) and technical skills (such as computer use). This paper uses the term “character strengths” as a placeholder term while the field sorts through this language, drawing on frameworks that emerged out of positive psychology and its antecedents (e.g., Park et al. 2004; Peterson and Seligman 2004).

A related—potentially more problematic—issue is that these intangible factors are difficult to measure well, particularly when compared to observable behaviors or testable knowledge and skills (Duckworth and Yeager 2015; Kautz et al. 2014; OECD 2015) and particularly in efficient ways in program, school, or community contexts (rather than in a clinical or laboratory setting). This challenge is exacerbated in lower and middle-income countries where there is limited research, and there are even fewer consistent, validated measures that examine character strengths—particularly ones that are consistently contextualized and tested across cultural and language differences.

Contemporary approaches to measuring character strengths, although offering fresh perspectives, build on at least three decades of research on the more comprehensive *combined* effects of person (character strengths) and ecology (relationships and other supports). These approaches are reflected in the movement over the last two decades toward subjective and ecological measures of child well-being (Ben-Arieh et al. 2014), and find expression in positive youth development theory and research (Benson et al. 2006; Catalano et al. 2004; Eccles and Gootman 2002; Naudeau et al. 2008; Roth and Brooks-Gunn 2003), resilience (Masten 2014; Rutter 1987; Werner and Smith 1982), and other theoretical approaches to youth development and, more broadly, human development, including the 5C’s of youth development (Pittman et al. 2001; Lerner et al. 2005), self-determination theory (Ryan and Deci 2000), and positive psychology (Seligman et al. 2005). (For a summary of the field, see Benson et al. 2006.) One of the most widely used frameworks for positive youth development over the last 25 years has been the Developmental Assets approach, which is the focus of this paper.

For the past decade, Search Institute and several partners have utilized a broad measure based on this framework, the *Developmental Assets Profile (DAP)*, in a series of 50 studies in a wide range of international agencies, countries, languages, and program contexts. The longevity and breadth of this ongoing effort offer insights and

lessons for more recent efforts to develop, operationalize, and validate practice-focused measures of youths' relationships, opportunities, and character strengths. It also complements and extends knowledge gained from other international child well-being data collection efforts, such as the Children's Worlds Reports on 53,000 children ages 8, 10, and from 16 countries (Rees and Main 2015). The lessons from the DAP experience serve as a case study in the challenges and opportunities of developing and utilizing shared measures across multiple countries, cultures, and language groups in community and school settings.

The current paper, which builds on Scales's (2011) earlier analysis of data from five studies, begins by reviewing the theory and empirical evidence supporting the Developmental Assets framework. Then it draws on 50 datasets from 31 countries, involving more than 25,000 youth and young adults ages 9–31 to more comprehensively describe the strengths and issues involved in using the DAP for measurement of character strengths and family, school, and community supports across cultures and language groups. In the process, it reports on the link between cross-cutting elements of well-being and critical international development priorities across sectors.

### 3 Developmental Assets: Relationships, Opportunities, and Character Strengths

Developmental Assets are the relationships, opportunities, and character strengths that are strongly related to children and youths' well-being (Benson 1990, 2006; Benson et al. 1998; Benson et al. 2006; Benson et al. 2011a; Scales and Leffert 2004; Scales et al. 2004; VanderVen 2008). Eight broad categories of assets are conceptually organized into (a) *external assets*: relationships, supports, experiences, and opportunities provided by people in the young person's family, community, school, or peer network; and (b) *internal assets*: beliefs, attitudes, and behaviors within a young person that can be more broadly understood as character strengths. Thus the framework reflects ecological (Bronfenbrenner 1979, 2005) and developmental systems (Ford and Lerner 1992; Lerner 1998) theories of human development. These theories emphasize interactions and mutual influence among biological, cognitive, psychological, and societal factors in development—none of which acts “either alone or as the ‘prime mover’ of change” (Lerner et al. 2001, p. 12).

It also integrates theory building in positive youth development (e.g., Benson et al. 2006); applied measurement for descriptive and evaluative purposes (e.g., Benson et al. 2011a; Scales 2011); and an equal focus on utilization in various practice settings, including schools (Starkman et al. 2006), community coalitions (Benson 2006), faith-based organizations (Roehlkepartain 1998), and prevention (Benson et al. 2004; Benson and Scales 2009). In addition, the framework spread internationally to be utilized across multiple cultures and languages outside of the United States (Benson et al. 2011a; Scales 2011).

Higher levels of these Developmental Assets have been linked to numerous critical outcomes in cross-sectional and longitudinal U.S. samples, now totaling more than 5 million children and youth, including better school grades ((Scales and Benson 2007; Starkman et al. 2006; Scales et al. 2006), higher levels of purpose (Scales et al. 2008; Scales 2011), positive emotions (Scales 2011), citizenship/civic engagement (Scales

et al. 2008; Scales 2011; Scales and Roehlkepartain 2004), and avoiding violence (Benson and Scales 2009; Benson et al. 2011a). Moreover, the pattern of higher levels of assets being related to better youth well-being is replicated in the United States across diversity in gender, race/ethnicity, urbanicity, and socioeconomic status (Benson et al. 2011a; Benson et al. 2011a, 2011b; Scales et al. 2006; Scales et al. 2005).

The Developmental Assets framework focuses on positive socialization and developmental processes, and how experientially and relationally “rich” the developmental infrastructure is for young people. This contrasts with the physical and financial assets that represent the traditional economic definition of wealth (e.g., Deere et al. 2012) as well as technical skills and cognitive knowledge that are a primary focus of educational systems. These other resources and skills are obviously critical. But, consistent with other theories focused on personal strengths and human development, we posit that the developmental relationships, social experiences, and character strengths reflected in the Developmental Assets framework are also key and, in many cases, have been under-represented in research, policy, and practice.

Thus, these areas of human development complement economic, educational, technical, and other forms of development. Furthermore, the framework posits that these personal and relational strengths are important for youth across differences in background, culture, socioeconomic status, gender, and other diversities.

#### 4 The Developmental Assets Profile (DAP)

A primary measure of Developmental Assets is the *Developmental Assets Profile* (DAP). The DAP is composed of 58 items assessing young people’s experience of both internal assets (character strengths), and external assets (social relationships and opportunities). External assets include the areas of Support, Empowerment, Boundaries & Expectations, and Constructive Use of Time. Internal assets encompass Commitment to Learning, Positive Values, Social Competencies, and Positive Identity. The assets framework captures the individual level as well as the broader ecological, relational contexts of young people’s lives (e.g., social or peers, family, school, community). All DAP items are answered on the following scale: Not At All or Rarely, Somewhat or Sometimes, Very or Often, Extremely or Almost Always. (Further details are found in Scales 2011.)

Originally developed and used in English in the United States, several international agencies have partnered with Search Institute to adapt, pilot, validate, and use the instrument in a variety of other countries and languages. Consistent with guidance in cross-cultural research (e.g., Beaton et al. 2000; Sousa and Rojjanasrirat 2011), the basic steps in the language and cultural adaptation process have been:

- Collaboration with the country-based team, either with local language capacity or the ability to contract out translators, and who work directly with young people in the country. The efforts are most successful when the teams become grounded in a positive youth development approach through training and coaching.
- Qualitative groundwork, usually focus groups, to assess what local parents, youth, and community members would identify as keys to successful youth development. These insights are then used to bridge from the meaning and intent in the English

items to the local language and culture, with effort to maintain adequate consistency in meaning while also being culturally responsive.

- An iterative process of translation and independent back-translation to develop a culturally relevant survey instrument that reflects original DAP constructs.
- Testing of the survey with youth, by subgroups, to assess validity, reliability, and stability.
- Discussion with country teams of challenges and implications for revising translation or modifying administration guidelines.
- Working with in-country partners to interpret and utilize the findings from the surveys for planning, improvement, and evaluation.

In all datasets, data have been collected by local in-country facilitators or enumerators who were selected and/or employed by our international partners in this work, the majority by World Vision International and their national offices, and also including Save the Children International, Save the Children Canada, and several regional offices of Save the Children, and in-country colleagues of Education Development Center, Georgetown University's Institute of Sexual and Reproductive Health, TechnoServe, the University of Calgary, the University of Mississippi, Yamaguchi Prefectural University, and the American University of Beirut.

Training for data collectors typically has been provided by those partners, often but not always with collaboration from Search Institute staff, and consisted of in-person and/or online workshops on the DAP, Developmental Assets framework, standards for survey administration and protection of youth confidentiality, and procedures for sending data to Search Institute for analysis. In all but a handful of countries, frequent contact with Search Institute staff ensured that in-country colleagues had plentiful opportunities for technical assistance and support throughout the process, from translation and back-translation to receiving reports on their survey results and using the results for planning and evaluation.

## 5 Scope of International Use of the DAP

As summarized in Table 1, the data and conclusions in this paper come from 50 administrations of the DAP (and one DAP-Preteens) in 31 countries<sup>1</sup>, and 30 languages other than English (49 of the survey administrations being outside the United States). More than 25,000 youth and young adults ages 9–31, mostly ages 11–19 were surveyed in Albania, Armenia, Bangladesh, Bolivia, Bosnia, Burkina Faso, Cambodia, China, Egypt, El Salvador, Ethiopia, Georgia, Ghana, Honduras, Iraq, Japan, Jordan, Kazakhstan, Laos, Lebanon, Malawi, Mexico, Mongolia, Nepal, the Philippines, Rwanda, South Africa, Sri Lanka, Tanzania, Uganda, Vietnam, and Yemen. DAPs have been carefully adapted and validated with sample sizes of 100 or more in the following languages other than the original English: Acholi, Albanian, Amharic, Arabic, Armenian, Bengali, Bosnian, Chichewa, Dioula, French, Georgian, Japanese, Kazakh,

<sup>1</sup> The samples are not representative of any of the countries, so conclusions should not be drawn about a country's youth based on the data from those samples. Typically, the samples were drawn from participants in World Vision International, Save the Children International, Save the Children Canada, or Education Development Center humanitarian relief or youth development programs, or from a variety of local youth programs.

Khmer, Kinyarwanda, Kiswahili, Lao, Luo, Lhukonzo, Mandarin, Mongolian, Nepalese, Russian, Sinhala, Spanish, Tagalog, Tamil, Vietnamese, and Zulu.<sup>2</sup> The country and age range of the DAP samples adds emphasis on adolescent and young adult subjective well-being, and a broader diversity of countries, that complements data on the subjective well-being of pre-adolescents and the 15 countries included in the Children's Worlds survey (Rees and Main 2015). Moreover, as Rees & Main note, those data were collected largely from children in mainstream school settings, and so under-represent more marginalized children. In contrast, the majority of the country samples in the 50 DAP datasets were obtained in collaboration with international humanitarian and relief organizations that specifically target for assistance the most vulnerable and marginalized young people.

Surveys were administered in a wide variety of settings, including schools, out of school youth development programs, humanitarian relief locations, and workforce development programs. The great majority of the surveys were administered by youth reading the items themselves and responding on survey forms or tablets provided to them. About 20 % of the surveys were administered orally, due to the relatively lower literacy levels of the youth involved. In these cases, youth still responded themselves, but instructions and questions were read aloud to them. Most oral administrations were done one-on-one, although some were done in small groups of 5–8 youth, with attention paid to providing sufficient spacing to minimize youth feeling uncomfortable when responding (in many cases, where indoor space was insufficient, the surveys were administered orally outdoors). Consent to participate in the research was obtained consistent with the regulations and conventions in the participating countries, communities/villages, and schools/programs, and was supervised by Search Institute's in-country partners.

## 6 Data Quality

Given the large range of country contexts, samples, and administration processes represented in these cases, data quality could vary widely, and so it is important to examine whether these data are of sufficient quality to warrant confidence in their accuracy. We report on several aspects of quality here: response variability, internal consistency reliability, stability reliability, and validity.

### 6.1 Variability of Response Distribution

In examining response variability, we wanted to see most Developmental Assets scores being in the middle of the distribution, rather than at the extremes, which would suggest youth may have been responding in a biased way, with response sets. DAP scores are

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<sup>2</sup> The English DAP also has been used in Australia, Canada, and the United Kingdom, and translated into additional languages. However, some of the translations have either not had consistent Search Institute collaboration on the translation, which leaves uncertain the confidence we can have in that adaptation (e.g., Croatian in Croatia, Portuguese in Mozambique, Malay in Malaysia, Arabic in Gaza), and/or there were not yet adequate data sets in that language at the time of writing (e.g., Spanish in Chile, French in Mauritania and Niger, Krio in Sierra Leone, Dutch in Belgium, Portuguese in Portugal, Spanish in Paraguay, Bengali in India) to understand whether these other DAPs function well, psychometrically.

**Table 1** Countries and languages where the DAP has been validated

Region	Country	Survey Language	Sample Size	Age Range	Partner and Notes
Africa	Burkina Faso	Dioula/French	126	15–20	Save the Children Canada (SCC)-Youth in Action (YIA)
	Egypt <sup>a</sup>	Arabic	139	13–20	SCC-YIA
	Egypt <sup>b</sup>	Arabic	156	12–15	SCC-YIA
	Ethiopia	Amharic	153	13–20	SCC-YIA
	Ghana	English	149	12–18	World Vision
	Malawi	Chichewa	198	14–19	SCC-YIA
	Rwanda <sup>a</sup>	Kinyarwanda	658	16–28	EDC
	Rwanda <sup>b</sup>	Kinyarwanda	250	16–31	Technoserve (Pre)
	Rwanda <sup>c</sup>	Kinyarwanda	94	16–31	Technoserve (Post)
	South Africa	Zulu	505	12–18	University of Calgary
	Tanzania	Kiswahili	1241	11–18	University of Mississippi
	Uganda <sup>a</sup>	English	68	11–18	University of Mississippi
	Uganda <sup>b</sup>	Acholi	135	14–19	SCC-YIA
	Uganda <sup>c</sup>	Luo	941	10–14	Institute for Reproductive Health
	Uganda <sup>d</sup>	English	169	14–19	TechnoServe (Pre)
Uganda <sup>e</sup>	English	51	16–31	TechnoServe (Post)	
Asia	Bangladesh <sup>a</sup>	Bengali	997	12–18	Save the Children
	Bangladesh <sup>b</sup>	Bengali	464	10–18	Save the Children (Pre, Cohort 2)
	Bangladesh <sup>c</sup>	Bengali	464	10–18	Save the Children (Post, Cohort 2)
	Bangladesh <sup>d</sup>	Bengali	198	10–18	Save the Children (Pre, Cohort 1)
	Bangladesh <sup>e</sup>	Bengali	198	10–18	Save the Children (Post, Cohort 1)
	Cambodia	Khmer	424	11–18	World Vision



Table 1 (continued)

Region	Country	Survey Language	Sample Size	Age Range	Partner and Notes
	China	Mandarin	119	11–18	World Vision
	Japan	Japanese	13,946	10–18	Yamaguchi Prefectural University
	Laos	Lao	317	11–16	World Vision
	Mongolia <sup>a</sup>	Mongolian	299	10–17	World Vision (Rural)
	Mongolia <sup>b</sup>	Mongolian	267	12–18	World Vision (Urban)
	Nepal	Nepalese	345	12–18	World Vision
	Philippines <sup>a</sup>	Tagalog	703	10–18	EDC (Pre)
	Philippines <sup>b</sup>	Tagalog	703	10–18	EDC (Post)
	Sri Lanka <sup>a</sup>	Sinhala	241	10–20	World Vision
	Sri Lanka <sup>b</sup>	Tamil	115	11–18	World Vision
	Vietnam <sup>a</sup>	Vietnamese	108	12–17	World Vision (Rural)
	Vietnam <sup>b</sup>	Vietnamese	254	12–17	World Vision (Urban)
	Vietnam <sup>c</sup>	Vietnamese	100	12–14	World Vision (Urban)
Central and South America	Bolivia	Spanish	153	9–17	World Vision
	El Salvador	Spanish	301	10–11	World Vision (DAP-P)*
	Honduras	Spanish	534	14–25	EDC
Europe	Albania	Albanian	259	10–18	World Vision
	Armenia	Armenian	136	11–18	World Vision
	Bosnia and Herzegovina	Bosnian	299	11–18	World Vision
	Georgia	Georgian	100	12–18	World Vision
	Kazakhstan <sup>a</sup>	Kazakh	631	15–20	Save the Children
	Kazakhstan <sup>b</sup>	Russian	185	16–23	Save the Children
Middle East	Iraq	Arabic	736	15–25	Save the Children

**Table 1** (continued)

Region	Country	Survey Language	Sample Size	Age Range	Partner and Notes
	Jordan	Arabic	959	12–18	Save the Children
	Lebanon	Arabic	1,050	12–18	American University of Beirut
	Yemen	Arabic	564	11–24	Save the Children
North America	Mexico	Spanish	371	11–18	World Vision
	United States	English	1,312	11–19	Search Institute

Notes: For countries with both pilot and field tests, only the field test scores, reflecting the final development of the survey, are represented in this table. Superscripts from this table (a, b, c, etc.) are used in Table 5 to identify the specific data source of the result listed in Table 5.

\*DAP-P = *Developmental Assets Profile for Preteens*, a developmentally-appropriate adaptation for youth ages 8/9–11.

divided into four levels, signifying highly vulnerable, vulnerable, adequate, and good levels of Developmental Assets. The four levels of Developmental Assets have shown consistent validity in that they are correlated with significantly different levels of well-being outcomes (Benson et al. 2011a). Table 2 shows that the survey has shown good response distribution across these 31 countries, with the majority of scores in the middle of the possible range of scores (in the lower portion of the “adequate” level). This suggests that youth are making distinctions among items as they respond, and that the survey is sensitive to detecting differences in those across-country samples.

For example, 24 administrations show a mean at the medium “Adequate” level, the middle of the scale, 13 administrations show a lower mean (Vulnerable and Highly Vulnerable), and 13 administrations show a higher mean (Good). Five of the highest means are from countries in Africa. Debriefing from indigenous partners suggests that there are strong social norms to respond in favorable ways in these countries, thereby potentially producing a positive bias to the asset scores in those settings [Ghana, Uganda (three administrations), and Tanzania]. The common one-on-one oral administrations in those settings may also promote such socially desirable responses. One of the highest means was among an unusually young sample, a sample of 10–11 years old in El Salvador, and younger children in both U.S. and international studies typically report higher levels of these developmental relationships, opportunities, and character strengths (Benson et al. 2011a; Scales et al. 2012).

## 6.2 Reliability

### 6.2.1 Internal Consistency Reliability

How dependably do the scales measure developmental relationships, opportunities, and personal strengths? The total DAP is by far the most widely used score, not the scores for the Internal and External assets, the eight asset category scales or the five asset context scales. The total DAP is highly reliable in all countries, no doubt in part because of its length, being comprised of all 58 items. But Table 3 shows that the other 15 subscales also have shown good internal consistency cross-culturally. The subscales are highly reliable in 24 administrations in 16 countries (75 % or more of the scales acceptably reliable), moderately reliable in 18 administrations in 15 countries (half to 75 % of the scales acceptably reliable), and inconsistently reliable in just eight administrations in six countries (less than half the scales acceptably reliable—details available from authors). Five of the six countries with inconsistent reliability to date have been in Southeast Asia (Bangladesh, Nepal, the Philippines, Sri Lanka, and Vietnam [rural sample], with the sixth being Egypt). Specifically, 68 % of the alpha ( $\alpha$ ) reliabilities for the total DAP, assets category, context, and Internal and External sub-scales have been acceptable, good, or excellent,  $\alpha \geq .70$  (543 of 800 total alphas), and 20 % have been promising, with  $\alpha = .60$ – $.69$  (161/800). Just 12 % have been unacceptable, with  $\alpha < .60$  (96/800) (detailed tables available from authors). Nearly half of those unacceptable alphas have been from one sub-scale, Constructive Use of Time, a sub-scale that intentionally is multi-dimensional, and so, by its intent, structurally encouraging a lower alpha; it is also the subscale least commonly experienced according to these youth reports (Table 4).

Although the total DAP score is the most widely used, the various developmental asset and developmental context scales are of considerable interest to many, offering

**Table 2** Descriptive statistics and reliability for total DAP scores, by country and sample

Region	Country/Sample	Mean ( <i>M</i> ) (Range: 0–60)	Standard Deviation ( <i>SD</i> )	Internal Consistency ( $\alpha$ )	Stability Level*
Africa	Burkina Faso	41.75	6.67	.93	
	Egypt <sup>a</sup>	44.65	6.72	.88	
	Egypt <sup>b</sup>	41.30	6.89	.88	Inconsistent
	Ethiopia	44.10	8.13	.94	Inconsistent
	Ghana	45.87	8.72	.95	
	Malawi	39.75	10.21	.94	
	Rwanda <sup>a</sup>	36.61	6.80	.95	
	Rwanda <sup>b</sup>	35.53	6.53	.89	
	Rwanda <sup>c</sup>	37.01	6.07	.89	
	South Africa	36.30	11.10	.93	
	Tanzania	46.29	7.27	.94	Moderate
	Uganda <sup>a</sup>	48.51	6.52	.91	
	Uganda <sup>b</sup>	46.99	7.86	.96	
	Uganda <sup>c</sup>	44.43	9.17	.94	
	Uganda <sup>d</sup>	42.45	8.54	.94	
	Uganda <sup>e</sup>	45.25	7.59	.94	
	Asia	Bangladesh <sup>a</sup>	42.52	6.66	.89
Bangladesh <sup>b</sup>		36.72	8.51	.90	Inconsistent
Bangladesh <sup>c</sup>		44.42	8.87	.90	
Bangladesh <sup>d</sup>		33.42	6.85	.92	
Bangladesh <sup>e</sup>		43.42	6.21	.94	
Cambodia		42.53	7.26	.94	Moderate
China		43.00	7.22	.92	High

Table 2 (continued)

Region	Country/Sample	Mean ( <i>M</i> ) (Range: 0–60)	Standard Deviation ( <i>SD</i> )	Internal Consistency ( $\alpha$ )	Stability Level*
	Japan	34.76	9.41	.95	
	Laos	41.61	7.39	.91	Low
	Mongolia <sup>a</sup>	43.20	7.41	.93	High
	Mongolia <sup>b</sup>	41.01	6.87	.91	High
	Nepal	41.57	6.04	.90	High
	Philippines <sup>a</sup>	36.91	7.13	.92	Inconsistent
	Philippines <sup>b</sup>	41.39	8.53	.94	
	Sri Lanka <sup>a</sup>	45.11	5.64	.90	
	Sri Lanka <sup>b</sup>	46.30	6.19	.90	High
	Vietnam <sup>a</sup>	39.64	5.54	.87	High
	Vietnam <sup>b</sup>	38.07	7.78	.91	High
	Vietnam <sup>c</sup>	35.15	6.58	.89	
Central and South America	Bolivia	38.65	8.44	.91	
	El Salvador	47.98	7.28	.91	
	Honduras	41.44	8.41	.94	
Europe	Albania	41.75	6.56	.89	Moderate
	Armenia	44.09	7.09	.91	High
	Bosnia and Herzegovina	45.94	6.17	.90	High
	Georgia	43.06	5.96	.89	
	Kazakhstan <sup>a</sup>	47.67	8.78	.95	High
	Kazakhstan <sup>b</sup>	45.35	7.15	.93	High
Middle East	Iraq	45.02	8.36	.95	Inconsistent

Table 2 (continued)

Region	Country/Sample	Mean ( <i>M</i> ) (Range: 0–60)	Standard Deviation ( <i>SD</i> )	Internal Consistency ( $\alpha$ )	Stability Level*
	Jordan	41.34	8.53	.94	
	Lebanon	39.99	8.04	.92	
	Yemen	42.15	9.55	.89	
North America	Mexico	34.51	9.86	.94	
	United States	43.31	9.99	.97	High

Stability levels: High = 12 of 16 DAP scales with T1-T2 Intraclass Correlation Coefficient  $\geq .60$ ; Moderate = 8–11 DAP scales with T1-T2 Intraclass Correlation Coefficient  $\geq .60$ ; Inconsistent = < 8 DAP scales with ICC  $\geq .60$  but 12 of 16 at least ICC  $\geq .40$  or acceptable level; and Low = < 8 DAP scales with ICC  $\geq .60$  and < 12 scales  $\geq .40$ . Stability tests were not conducted with all samples

**Table 3** Summary of internal consistency of DAP subscales across samples

	Number of Administrations at Specific Reliability Levels		
	Acceptable ( $\alpha \geq .70$ )	Promising ( $\alpha = .60-.69$ )	Unacceptable ( $\alpha < .60$ )
Overall DAP Scale	50	0	0
External and Internal			
External (supports & relationships)	50	0	0
Internal (character strengths)	50	0	0
Asset Categories			
Support	29	16	5
Empowerment	11	13	26
Boundaries & Expectations	36	13	1
Constructive Use of Time	2	8	40
Commitment to Learning	32	15	3
Positive Values	36	14	0
Social Competencies	20	19	11
Positive Identity	12	23	14
Developmental Contexts			
Personal	35	14	1
Social	44	6	0
Family	45	4	1
School	46	4	0
Community	41	9	0

more granular information to inform program and policy actions aimed at improving youth development and outcomes. As might be expected, there is more variability in reliability across countries at this subscale level than at the total assets level. Table 3 shows that the most reliable asset category subscales across countries are Boundaries & Expectations, Commitment to Learning, and Positive Values, while the least reliable asset category subscales are Constructive Use of Time (which is multidimensional and so is expected to have lower internal consistency) and Empowerment. Social Competencies and Positive Identity fall in-between, with acceptable reliability in many countries, but less acceptable coefficients in a minority of others. By context, the most reliable asset context subscales are Family and School, and the least consistently reliable context scales (although still overwhelmingly reliable at acceptable levels) are the Personal and Community contexts, with the Social context in-between.

### 6.2.2 Stability Reliability

How much fluctuation in Developmental Assets scores is there over 1–2 weeks? Short-term fluctuation should be minimal, in order for the instrument to be adequate to use in pre-post testing or program evaluation, which is a highly-valued application for

**Table 4** Most and least experienced asset categories and contexts

	Most Consistently Experienced (Times in top 2 asset categories or the top context scale, by mean scale scores)	Least Consistently Experienced (Times in lowest 2 asset categories or the lowest context scale, by mean scale scores)
Asset Categories		
Support	11	5
Empowerment	4	13
Boundaries & Expectations	25	0
Constructive Use of Time	0	42
Commitment to Learning	32	1
Positive Values	7	10
Social Competencies	7	3
Positive Identity	5	18
Developmental Contexts		
Personal	6	1
Social	2	2
Family	16	0
School	24	0
Community	0	44

assessment measures among our international partners. Test-retest administrations have been done in more than one-third of the countries using the survey. Table 2 shows that across 21 administrations in 18 countries, 11 are highly stable, with good stability coefficients in 75 % of more of the subscales, three are moderately stable, with half to three-quarters of the scales at a good level of stability, four are inconsistent, and just one is low. Using the Intraclass Correlation Coefficient (ICC), which is more conservative than the more common Pearson correlation coefficient, we have found that 32 % of 1 to 2-weeks test-retest ICCs are  $\geq .80$  or excellent (109/336), 31 % are  $.60-.79$  or good (105/336), 31 % (103/336) are  $.40-.59$  or acceptable (ICC test-retest acceptability standards per Üstun et al. (2005) guidelines for United Nations surveys). Just 6 % (19/336) of the international ICC test-retest coefficients are found to be unacceptable ( $<.40$ ) (detailed tables available from authors). Three of the 5 countries with inconsistent or low stability reliability are in Southeast Asia (Bangladesh, Laos, and the Philippines). These results suggest that the translated and adapted survey is acceptable to use in pre-post or program evaluation applications in almost all countries that have stability reliability data, although further testing is advised in Southeast Asia.

### 6.3 Concurrent and Predictive Validity

Substantively, the results of most interest to the international relief and development organizations that have been our most common partners are those that show the linkage of young people's levels of developmental relationships, opportunities, and character strengths with a variety of human and economic



development outcomes. In this large dataset, correlations of the DAP with other conceptually related measures of both risk behaviors and positive indicators of youth well-being are almost always significant and in the predicted direction, in both U.S. and international samples, suggesting strong cross-cultural validity for the translated and culturally adapted DAPs.

### 6.3.1 U.S. Samples

The Search Institute *Profiles of Student Life: Attitudes and Behaviors* survey (A & B) measures 40 individual assets, as contrasted with the DAP, which measures eight asset categories which reflect the essence of the 40 individual assets measured in the much lengthier A & B survey (Benson et al. 1998; Leffert et al. 1998; Scales et al. 2000). In the U.S., the correlation between the DAP *Total Asset Score* and the total number of assets derived from the A & B survey was  $r = .82$  ( $p \leq .001$ ) (Search Institute 2005). This correlation was very consistent for males and females analyzed separately, and for students in grades 6–8 versus 9–12. The total DAP score also correlated as expected,  $r = -.49$  ( $p \leq .001$ ) with 10 risk behavior patterns, such as use of alcohol, cigarettes, or drugs; drinking and driving; school discipline problems and truancy; aggressive behaviors, violence, and antisocial behavior; and sexual activity and  $r = .65$  ( $p \leq .001$ ) with eight indicators of thriving, also as predicted, including school grades, healthy behaviors, informal helping of others, valuing of diversity, resilience, and leadership. Convergent validity also was assessed, with the DAP Positive Identity sub-scale correlating  $r = .70$  with the Rosenberg Self-Esteem Scale, and  $.72$  with Harter's Global Self Worth Scale (both at  $p \leq .001$ ).

### 6.3.2 International Samples

**Cross-Sectional Results** In addition to the original United States DAP datasets, data bearing on the DAP's *cross-cultural validity* have now been collected from 15 studies. These were a Search Institute study with EDC and Save the Children for the U. S. Agency for International Development (USAID) in Bangladesh, Honduras, Jordan, and Rwanda (Scales et al. 2012), and studies in Albania (with World Vision International); Burkina Faso (with Save the Children Canada); Bolivia (with World Vision International); Egypt (with Save the Children Canada); Ethiopia (with Save the Children Canada); Malawi (with Save the Children Canada); Rwanda (with TechnoServe); Tanzania (by the University of Mississippi); and Uganda (four studies, one by the University of Mississippi, one by Search Institute with TechnoServe, one by Search Institute and Georgetown University's Institute for Reproductive Health, and one by Search Institute and Save the Children Canada).

Across these 15 studies, the total Developmental Assets score, the external and internal assets score, and sometimes the other 13 subscales (far less commonly used as predictors than the total assets score), have been correlated with several dozen academic, psychological, social-emotional, and behavioral outcomes. Our general hypothesis has been that, consistent with U.S. results, higher Developmental Assets scores would be related cross-culturally to better well-being outcomes.

Table 5 shows that correlations of Developmental Assets with other measures of positive youth development in these studies consistently have been in the predicted

direction and usually significant, often at quite meaningful effect sizes, although small sample sizes in some countries have sometimes precluded the results from reaching statistical significance. For example, correlations of .30 or greater between Developmental Assets and outcomes are quite common in Table 5 (59/123, or 48 % of total DAP correlations with outcomes), and a correlation of that level corresponds to an effect size of .50, per Cohen's (1988) guidelines. Given also that the U.S. Department of Education considers an effect size of .25 to be of "substantive importance" (What Works Clearinghouse 2008; corresponding to a correlation of just .124), then an overwhelming majority of the correlations in Table 5 may be considered substantively meaningful (70 % above .20 (86/123) and another 22 % (27/123) at or above the DOE level of  $\geq .13$ ). Of course, cross-sectional results do not by themselves demonstrate that these developmental relationships, opportunities, and character strengths contribute to the outcomes, but a vast literature does convincingly show these kinds of causal linkages in longitudinal studies (see, for example, reviews in Scales and Leffert 2004; Scales et al. 2004; Catalano et al. 2004).

Moreover, Table 5 shows the balance of influence between external developmental relationships and opportunities (external assets), and character strengths such as motivation, values, interpersonal skills, and positive outlook (internal assets) in statistically predicting youth outcomes. For nearly all the significant correlations of DAP with outcomes, there also are significant correlations, usually of comparable size, between the external and internal assets and the identified outcome measure.

**Longitudinal Results** In addition, three studies suggest the feasibility and validity of measuring developmental relationships, opportunities, and character strengths as indicators of *change over time*. For example, Search Institute conducted studies with TechnoServe in Rwanda and Uganda of a workforce and career development program for youth and young adults. Logistic regressions showed (Scales and Shramko 2014a, b) that an increase over about 3 months of  $\geq .25$  standard deviations in DAP score from baseline to post-program (shown in previous research to be related to significant gains in Grade Point Average among U.S. middle and high school students; Scales et al. 2006) was associated with significantly greater odds of young people having at post-test:

- Enough capital for a business (Uganda,  $\text{ExpB} = 2.42$ ,  $p = .01$ ; Rwanda,  $\text{ExpB} = 3.71$ ,  $p = .005$ )
- A total workforce development outcome made up of having enough capital, having a job certification, and having a safe and productive job (Rwanda,  $\text{ExpB} = 2.93$ ,  $p = .015$ ), and
- Functional numeracy (Uganda,  $\text{ExpB} = 3.73$ ,  $p = .001$ ).

Additionally, in Rwanda, youth who increased in their developmental assets over the several-month program period were 65 % more likely at post-test to have a safe and productive job ( $\text{ExpB} = 1.65$ ), and 48 % more likely to be functionally literate at the end of the program ( $\text{ExpB} = 1.48$ ), than youth who did not increase in those assets. The relatively small Rwanda sample sizes (<50 in each of the increased and did not increase groups) precluded those results from reaching the .05 level of significance. Nevertheless, increases of 65 and 48 % clearly are meaningful increases in the odds of positive

**Table 5** Correlations of *Developmental Assets Profile* (DAP) with concurrent outcomes in international samples

Covariate	Correlation			Country
	Total	External	Internal	
Workforce development (A global measure of financially positive and safe employment, sufficient capital for a business, and job certifications)	.28**	.25**	.28**	Rwanda <sup>a</sup>
	.34**	.32**	.32**	Bangladesh <sup>a</sup>
	.42**	.37**	.42**	Honduras
	.57**	.51**	.56**	Jordan
	.43**	.44**	.32**	Rwanda <sup>c</sup>
	.68**	.65**	.65**	Uganda <sup>d</sup>
• Safe and productive employment	.14*	.16*	.10	Honduras
	.33**	.34**	.29**	Jordan
	.35**	.39**	.27	Egypt <sup>a</sup>
• Sufficient capital for a business	.41**	.44**	.45**	Uganda <sup>c</sup>
	.32**	.28**	.32**	Rwanda <sup>a</sup>
	.49**	.43**	.43**	Rwanda <sup>c</sup>
	.37**	.33**	.36**	Bangladesh <sup>a</sup>
	.42**	.36**	.43**	Honduras
• Has recognized job certification	.06	.04	.07*	Jordan
	.10*	.05	.14**	Rwanda <sup>a</sup>
	.47**	.48**	.40**	Uganda <sup>d</sup>
• Workplace teamwork and drive	.44**	.42**	.42**	Uganda <sup>b</sup>
	.51**	.55**	.38**	Malawi
	.27**	.38**	.37**	Egypt <sup>a</sup>
	.40**	.36**	.38**	Egypt <sup>b</sup>
	.28**	.28**	.24**	Burkina Faso
• Comfort managing money	.34**	.27**	.37**	Ethiopia
	.22**	.23**	.19*	Uganda <sup>b</sup>
	.23**	.21**	.27**	Malawi
	.23**	.21**	.23**	Egypt <sup>b</sup>
	.30**	.26**	.30**	Malawi
• Budgeting skills	.17*	.17*	.15	Uganda <sup>b</sup>
	.41**	.34**	.44**	Ethiopia
	.29**	.28**	.27**	Egypt <sup>b</sup>
	.28**	.32**	.20*	Burkina Faso
	.31**	.41**	.23*	Malawi
• Savings skills	.35**	.24	.43*	Egypt <sup>a</sup>
	.18*	.18*	.16*	Ethiopia
• Adequate savings	.35**	.35**	.30**	Malawi
• Adequate access to credit	.44**	.41**	.42**	Malawi (only significant for females)
• Family support for work development	.33**	.42**	.18	Ethiopia
	.65**	.69**	.55**	Uganda <sup>b</sup>

**Table 5** (continued)

Covariate	Correlation			Country
	Total	External	Internal	
	.53**	.57**	.38**	Malawi
	.53**	.53**	.42**	Egypt <sup>a</sup>
	.70**	.69**	.63**	Egypt <sup>b</sup>
	.60**	.62**	.52**	Burkina Faso
• Community support for work development	.60**	.60**	.55**	Uganda <sup>b</sup>
	.35*	.51**	.31**	Ethiopia
	.51**	.50**	.40**	Egypt <sup>a</sup>
	.27**	.28	.24	Egypt <sup>b</sup>
	.69*	.67**	.62**	Burkina Faso
	.48**	.48**	.40**	Malawi
Educational attainment (A global measure of literacy, numeracy, age-appropriate schooling level, academic self-confidence)	.19**	.12**	.14**	Bangladesh <sup>a</sup>
	.20**	.16**	.24**	Honduras
	.33**	.25**	.35**	Rwanda <sup>a</sup>
	.42**	.39**	.45**	Jordan
• Achievement motivation	.29**	.25**	.29**	Armenia
• Has completed age-appropriate level of schooling	.15**	.03	.11*	Rwanda <sup>a</sup>
• Functional numeracy	.26**	.20**	.18**	Uganda <sup>c</sup>
	.27**	.20*	.30**	Rwanda <sup>b</sup>
	.14**	.10**	.15**	Bangladesh <sup>a</sup>
	.18**	.15**	.18**	Honduras
	.34**	.32**	.34**	Jordan
	.22**	.19**	.22**	Rwanda <sup>a</sup>
• Functional literacy	.27**	.29**	.24**	Uganda <sup>c</sup>
	.18*	.04	.23*	Rwanda <sup>c</sup> (only significant for males)
	.27**	.22**	.26**	Jordan
	.17**	.13**	.19**	Rwanda <sup>a</sup>
	.10**	.09*	.09*	Bangladesh <sup>a</sup>
• Academic self-confidence	.13**	.13**	.12**	Bangladesh <sup>a</sup>
	.29**	.23**	.33**	Honduras
	.46**	.43**	.44**	Jordan
	.34**	.28**	.37**	Rwanda <sup>a</sup>
Health Promotion (A global measure of hygiene and access to medical care)	.15**	.09*	.20**	Rwanda <sup>a</sup>
	.16**	.12**	.18**	Bangladesh <sup>a</sup>
	.29**	.24**	.31**	Honduras
	.42**	.38**	.37**	Jordan
• Hygiene (hand-washing knowledge and practice)	.14**	.08*	.17**	Bangladesh <sup>a</sup>
	.23**	.18**	.25**	Honduras
	.35**	.31**	.31**	Jordan

**Table 5** (continued)

Covariate	Correlation			Country
	Total	External	Internal	
	.13**	.09*	.15**	Rwanda <sup>a</sup>
• Knowledge of how to access medical care	.13**	.12**	.12**	Bangladesh <sup>a</sup>
	.31**	.28**	.30**	Honduras
	.41**	.37**	.39**	Jordan
	.23**	.17**	.26**	Rwanda <sup>a</sup>
• Sexual and reproductive health				
- Accurate knowledge of HIV	.13**	.08*	.18**	Uganda <sup>c</sup>
- Accurate knowledge of puberty	.10**	.07*	.11**	Uganda <sup>c</sup>
- Confidence accessing sexual and reproductive health services	.11**	.08**	.12**	Uganda <sup>c</sup>
- Supportive relationships for discussing puberty and feelings <sup>a</sup>	.11*(f) .17***(m)	.09*(f) .14***(m)	.11*(f) .17***(m)	Uganda <sup>c</sup>
- Intentions to delay sex and use condoms	.18**	.12**	.19**	Uganda <sup>c</sup>
Violence mitigation (A global measure of not being involved as a perpetrator or a victim, low normative acceptance of violence, and frequent interaction with differing cultural groups)	.09*	-.03	-.04	Honduras
	.10**	.07	.04	Rwanda <sup>a</sup>
	.17**	.12**	.18**	Bangladesh <sup>a</sup>
	.37**	.36**	.33**	Jordan
• Neither a victim nor perpetrator	.27**	.23**	.28**	Honduras
	.24**	.23**	.19**	Jordan
	.14**	.13**	.13**	Rwanda <sup>a</sup>
• Frequent interaction with other cultural groups	.13**	.10**	.14**	Bangladesh <sup>a</sup>
	.09*	.10*	.06	Honduras
	.11**	.12**	.09*	Jordan
	.12**	.11*	.11*	Rwanda <sup>a</sup>
• Low acceptance of violence <sup>b</sup>	.13**	.11**	.13**	Bangladesh <sup>a</sup>
	-.43**	-.40**	-.41**	Honduras
	.33**	.37**	.31**	Jordan
	-.11**	-.08*	-.13**	Rwanda
Civic engagement (A global measure of frequency volunteering, and confidence in influencing community affairs)	.10**	.10*	.09*	Rwanda <sup>a</sup>
	.23**	.21**	.22**	Bangladesh <sup>a</sup>
	.30**	.28**	.30**	Jordan
	.40**	.36**	.39**	Honduras
• Civic action	.40**	.37**	.37**	Uganda <sup>a</sup>
• Political awareness	.25*	.28*	.20	Uganda <sup>a</sup>
• Sense of community	.42**	.40**	.38**	Tanzania
• Confidence influencing community affairs	.20**	.17**	.20**	Bangladesh <sup>a</sup>
	.35**	.31**	.34**	Honduras
	.23**	.19**	.24**	Jordan
	.09*	.10*	.06	Rwanda <sup>a</sup>
• Frequency volunteering	.18**	.17**	.16**	Bangladesh <sup>a</sup>

**Table 5** (continued)

Covariate	Correlation			Country
	Total	External	Internal	
	.32**	.28**	.31**	Honduras
	.26**	.27**	.24**	Jordan
Psycho-Social Development				
• Positive emotionality	.51**	.38**	.56**	Bolivia
• Social support	.36**	.40**	.24**	Bolivia
• Ethnic identity	.47**	.47**	.41**	Tanzania
• Self-efficacy	.44**	.41**	.44**	Tanzania
• Interpersonal problem solving skills	.38**	.29*	.43**	Uganda <sup>a</sup>
• Leadership	.31**	.19	.40**	Uganda <sup>a</sup>
• Transcendent awareness	.47**	.40**	.48**	Bolivia

Note: Data for Table 5 came from Drescher et al. 2012; Scales 2011; Scales et al. 2012; Scales et al. 2013; Scales and Shramko 2014a and Scales and Shramko 2014b; Scales et al. 2016; and more than two-dozen Search Institute country reports to World Vision International and Save the Children Canada, as well as from additional analyses conducted for this paper

<sup>a</sup> Question was asked separately for males and females

<sup>b</sup> Negative correlations were observed in Rwanda and Honduras between assets score and acceptance of violence as a way of resolving conflict

\* $p \leq .05$ , \*\* $p \leq .01$

outcomes for youth in a practical sense, if they increased their developmental relationships, opportunities, and character strengths.

Notably, given the systemic inequality and discrimination faced by girls and young women in many developing countries, the linkages of these individual and social assets with positive outcomes in these studies tends to be as strong for females as for males, and in some cases, stronger. For example, in a study of 10–14 year olds in Uganda, we found that, of 38 significant correlations of the eight asset category scales (e.g., Support, Commitment to Learning) with eight sexual and reproductive health outcomes (e.g., accurate knowledge of puberty, intention to delay sexual intercourse), 14 were significant for both males and females, but 16 were significant for girls only, compared with 8 significant for boys only (Scales et al. 2016). Even in more developed countries, girls may benefit even more from increasing personal and relational assets. For example, in a large UNICEF study of adolescents in the European Union and Organization of Economic Cooperation and Development countries, girls reported increasingly lower life satisfaction than boys as they age from 11 to 13 and 15, a trend observed “nearly everywhere” (UNICEF Office of Research 2016, p. 32).

The last of the three longitudinal studies, a collaboration of Search Institute and Save the Children in Bangladesh, also suggests that developmental relationships, opportunities, and character strengths can be materially increased through program efforts, and the increase can be detected by the DAP survey. Scales and colleagues (2013) studied more than 600 intervention youth in a 6–9 months youth empowerment program for Bangladeshi girls, and 400 control girls (M age = 13.5). The researchers

found a significant increase in project girls' developmental relationships, opportunities, and character strengths, over and above any control group changes, with a mean increase of 22 % over 2 years of cohorts, including improvements of roughly 30 % in feelings of being relationally supported and empowered. The average effect size, net of contamination and control group scores, was .80, conventionally considered a large effect size (Cohen 1988). These results from program exposure of 6–9 months suggested the project's effectiveness in improving human and social capital for some of the most vulnerable young people in the world, adolescent girls living in rural Bangladesh villages. The results also suggest the utility of measuring developmental relationships, opportunities, and character strengths as holistic, cross-culturally relevant indicators of changes in positive youth development.

A new Search Institute longitudinal study in progress takes this research further. We are linking DAP scores and changes in DAP scores among 12–14 and 15–18 years old in the Youth in Action workforce and literacy development program sponsored by Save the Children Canada and the MasterCard Foundation, with a variety of subsequent self-report workforce development measures, and independent, objective measures such as literacy and numeracy. Multiple cohorts totaling 800 youth in each of Burkina Faso, Ethiopia, Egypt, Malawi, and Uganda are being studied over a several-year period, with final results expected after 2018.

## 7 Descriptive Results: Insights for Practice

In addition to the consistent linkage of the DAP to both concurrent and longitudinal well-being, these datasets yield other substantive findings. For example, the above validity results show that youth at higher assets score levels enjoy significantly better correlated well-being outcomes. Yet, in the great majority of international survey administrations (79 %), the mean Developmental Assets score is less than 45 out of 60. This signifies a barely adequate level of youth experiencing these assets, because this level is correlated with less-than-desirable levels of well-being indicators.

Despite the great diversity of culture, language, and economic development status of the countries involved, these results suggest that youth worldwide need a good deal more of these positive life nutrients, including both external relationships and opportunities as well as internal character strengths. These needs may partially be met through high-quality educational and youth development programs as well as efforts to strengthen families and other socializing systems in young people's lives.

In addition, there are clear patterns across this country-sample diversity about which categories of assets and which ecological contexts youth experience as most and least promoting of their positive development. As Table 4 shows, the asset categories most consistently experienced by youth around the world are Boundaries & Expectations, and Commitment to Learning, and the contexts in which youth experience the most assets are Family and School. On the other end of the continuum, the asset categories least experienced by youth around the world are Constructive Use of Time, and Positive Identity, and the ecological context in which youth experience the least assets is Community. By comparison, the Children's Worlds survey showed both similarities and differences with the DAP results. For example, just as in the DAP findings, in the

15 Children's Worlds survey countries children were most satisfied with family life, and least satisfied with their "local area" where they live, i.e., their communities (Rees and Main 2015). In contrast, less than 10 % of the Children's Worlds survey participants had low subjective well-being, whereas, as measured by the DAP, the average response was barely above the level of vulnerable well-being. The CWS results also suggested that older youth, the 12 year olds, were less satisfied overall than those who were 10 years old. This pattern of less subjective well-being among older youth may be reflected as well in the DAP results, in that the greater variability and lesser positive skew of the DAP results, compared to CWS, may be due both to the more comprehensive questions asked on the DAP, as well as to the older age of the DAP samples. Using an age range of 12–24 that is more similar to the DAP's, for example, the Global Youth Wellbeing Index of 30 countries that represent 70 % of the world's youth concluded that just 15 % had high or upper-middle level well-being, a finding more like the DAP results than the CWS results (Goldin et al. 2014).

Each of these findings offers perspective to practitioners and policy makers who are increasingly examining youth issues cross-sectorally through the lens of collective impact. For example, World Vision International is using the DAP in conjunction with other measures to assess how its humanitarian and relief efforts are promoting child well-being. In Albania and Kosovo, results showed that Constructive Use of Time was the least experienced asset category. By the next year, after staff had used the results to expand and refine programs in life skills, art and sport, spiritual nurture, and advocacy, youth reported a 20 % increase in the asset of constructive use of time (World Vision International 2015). Collectively, our findings reinforce the critical need to attend to young people's developmental needs holistically and not just in schools, but across the ecological contexts of their lives, including families, schools, programs, and communities.

## 8 Challenges in the Cross-Cultural Measurement

Given the large diversity of cultures, languages, and social mores represented across these datasets, it is notable that acceptable levels of reliability and validity have been so common for the adapted and translated DAP in 31 countries other than the United States. Yet, there also have been stubborn challenges that represent threats to reliability and validity of this holistic measurement of developmental relationships, opportunities, and character strengths.

### 8.1 Item Translation

The most common is that a number of items in the original English have proved difficult to render into some languages, either because some phrases have idiomatic meanings in American English, or because words or phrases are interpreted differently within the context of other cultures. An example of the former issue, idiomatic uniqueness, is the item, "I stand up for what I believe in." "Stand up for" is notoriously difficult to render accurately outside of a native English-speaking context. The best back translations get at the notion of "defend" or "speak to others about" one's values. For the phrase, "what I believe in," the phrase "my ideas or convictions" is an acceptable substitute.



An example of the second issue, variable meaning in different cultures, is the DAP item “I feel in control of my life and future.” In some countries, the best back translation reflects “have influence on” or “help to shape” my life and future, rather than “control.” Another approach that we approved was “My life and future depend on me.” “Control” is too egocentric a word to be relatable and valid in many cultures, and so a softening of the meaning from the original English has been necessary.

A third challenge is when the concept itself is difficult to express in the local language, or when the point of reference an item uses is uncommon. For example, the item “I care about school” has sometimes been problematic for two reasons. In some countries and/or languages, there is not a good way to express *emotional* connectedness to school as a concept, a building, or a group one feels a part of, all of which are connotations in the English “care about.” The closest acceptable back translations in such cases have expressed more the idea that “My school is important to me.” In addition, in some samples, a not-insignificant percentage of the youth do not go to “school.” In those cases, this item has been translated as something more like “my learning center,” or “the places where I learn things.” In these cases, it can also be difficult to interpretively distinguish responses to this revised item from another item on the survey, “I enjoy learning.”

## 8.2 Scales or Constructs

Moreover, although the internal consistency reliability of the adapted and translated assets survey has been broadly acceptable across the great majority of countries and cultures, some subscales, especially in a number of Southeast Asia countries, have been less consistently reliable. The Empowerment and Positive Identity scales have been particularly vexing in this regard. Empowerment combines items that tap youths’ perceptions of safety, as well as their perception that they are valued and given useful tasks and responsibilities. In the U.S. and the majority of countries where the survey has been administered, items tapping these somewhat differing perspectives on “empowerment” have tended to hang together adequately as a scale. But in Southeast Asian countries especially, indigenous colleagues have suggested that youth tend to feel safe, yet expressions by adults of letting youth know they are valued are not culturally emphasized. Thus, Empowerment is likely a different construct in those countries, and so these items do not correlate well with each other in those settings. For Positive Identity, the issue seems to be less about conflicting sub-concepts within the asset category, and more about the egocentric nature of the identity items not aligning well in cultures with more collectivist traditions. Positive Identity in those cultures may be less about individual self-concept and efficacy than about attachment to and harmony within social groups, which makes it a different underlying construct than what is currently measured in the *Developmental Assets Profile*.

Future translations of these items may need to incorporate a more emic approach initially, using indigenous interviews, observations, and focus groups, for example, to surface the more natural ways that a given culture defines and that youth in that cultural context perceive the broad constructs of identity and empowerment. This combined emic-etic approach has been used successfully, for example, by Search Institute in collaboration with World Vision International in creating a very brief 13-item version of the DAP, the Emergency-DAP, for use in measuring developmental relationships,

opportunities, and character strengths in immediate crisis situations, such as with youth displaced by armed conflict or natural disasters (Scales et al. 2015, 2016). Nevertheless, our essentially etic approach to translation and adaptation of the DAP (using the U.S. original as the template for all other countries, despite some underlying construct variability as illustrated above) has been shown to have considerable merit. Most of the subscales have acceptable internal consistency and stability, as well as evidence of convergent validity, across a wide diversity of cultures, languages, and countries, as well as obvious cross-cultural face validity as reflected in the sheer volume of countries in which the holistic approach to measuring relational and individual assets has been used.

Given the manifest challenges in cultural adaptation, the process of translating, back-translating, reviewing and suggesting changes, and retranslating and re-back-translating and reviewing can go on for several cycles before consensus is reached that this is the best translation that can be achieved. The process is easier for root languages which are widely read and spoken around the globe, such as Spanish or Arabic, such that a new country can begin with an approved Spanish or Arabic version and tweak that for accuracy with local dialects, rather than starting with the original English. But even for those languages, variations in dialect can sometimes be significant, and even native speakers of the languages have at times disagreed on which alternative translation and back-translation is the more accurate rendition of the original English. Ultimately, the deciding criterion in such cases is whether the adaptation of the survey has reached a point where it has valid utility for the purposes for which the in-country partnering organization wishes to use it, not whether more effort could bring about an incremental improvement in linguistic accuracy. But determining when that moment occurs is as much a matter of art and collaborative diplomacy as it is of science.

### **8.3 Administration Challenges Affecting Response Variability and Validity**

Another less common challenge is that in some contexts, it is culturally impolite or prohibited for youth to seem to criticize family, school, or community (i.e., by giving a low rating to developmental relationships and experiences in those contexts), or to appear to be bragging about oneself or being prideful (i.e., by giving high ratings about one's internal strengths). Thus, sometimes we observe an absence of very low responses, because low responses would suggest youth are not experiencing families that love them, or schools that help them achieve. Or we may have an absence of high responses on other items, for example, that would suggest youth consider themselves good at making decisions and planning ahead, or highly confident of their personal efficacy. On the other hand, customs of politeness in some cultures can lead to a tendency for youth to provide the responses youth think the survey administrators want to see, which then tend to be highly positive evaluations of youths' character strengths and social relationships and opportunities, no matter what the actual reality is. The net result of these dynamics tends to lead to bias in a positive direction, reflected in high DAP scores that indigenous colleagues think are less likely to be valid capturing of youths' realities than the products of cultural issues around responding. As noted, most of the high mean survey scores that partners believe are due to these cultural dynamics have occurred in administrations in some African countries, specifically in Ghana, Tanzania, and Uganda (but these positive bias dynamics do not seem to have occurred in other African countries). In those and similar cultural settings, we have encouraged

special attention to then be placed on emphasizing to youth in future survey administration the acceptability of giving honest answers, and the protections that have been established for youths' confidentiality.

In addition, training the data collectors is often quite challenging. When we are in-country, in each country and depending also on the degree of rurality, we have seen huge variation in enumerators' average level of education (from high school graduates to Masters- and PhD-level training) and their previous experience collecting data, and/or working with young people. We usually spend a full day to 2 days training and helping the data collectors become familiar with the survey. At this stage, we often get new feedback about the quality of the translation, start to understand new challenges regarding writing down a language that might in practice be more oral, and satisfying data collector questions and concerns. If we don't address them in the training, data collectors often find their own way to deal with them – which can involve them skipping or modifying items, or adding their own personal interpretation onto each question, all of which affects reliability and validity. In these field visits, we also emphasize research ethics and specific approaches for engaging young people, and keeping them motivated.

During survey administration in developing countries, there also are many things that are difficult to control. The weather and the distance youth have to travel to be surveyed affects attendance, and affects the ability to collect data. It is sometimes difficult to control who is nearby, which can affect youths' focus, and/or their willingness to respond honestly. In some countries, too, plans must be made for how best to support youth taking the survey who are themselves also parents, and what care can be provided their young children while they complete the survey. Finally, challenges exist around mobilizing multiple stakeholders to *use* the data, including youth participation in determining how to act on the results, as well as clearly linking this kind of broad, holistic measure to the more narrowly focused program objectives on which most of our international colleagues are used to focusing. Although perspectives are indeed changing toward more holistic, positive youth development thinking and measurement, traditional problem-focused approaches to working with youth still hold considerable appeal because they are familiar, and deeply embedded in how youth development workers are trained and socialized, and how they and their organizations are held accountable.

Finally, there are two limitations to our survey approach that should be mentioned. First is that the DAP is a self-report measure. The Children's Worlds survey has a similar self-report limitation. The utility and validity of youth self-reports has long been established, particularly in areas of subjective well-being (Duckworth and Yeager 2015; Sandvik et al. 1993). For example, UNICEF found that youth in relatively affluent countries with low subjective life satisfaction scores were 2–3 times more likely to be victims or perpetrators of bullying, to smoke regularly, and to have a higher level of injuries (UNICEF 2016). Moreover, the Global Youth Wellbeing Index (which its authors note was based in part on the *Developmental Assets Profile*) found that, when subjective well-being measures such as youth's perception of how much society values them or their stress levels are removed from the index (leaving only objective economic, educational, health, and safety indicators), the mean well-being score for the 30 countries rose (Goldin et al. 2014). This suggests that youth worldwide are less than satisfied with their lives and that well-being measures that exclude subjective indicators are likely over-stating degrees of youth well-being. Nevertheless, it would also be

advantageous to further corroborate these results with more objective measures, especially when correlating the DAP with other measures of well-being outcomes, to avoid the shared error variance of using all self-reports. As an example, more objective measures of workforce development and literacy are being correlated with the DAP in Africa in Save the Children's Youth in Action project described above.

A second issue is the DAP's relative brevity. No doubt, a lengthier instrument could collect data providing a more comprehensive portrait of youths' developmental relationships, opportunities, and character strengths. But the relative brevity of the instrument reduces the burden on youth as well as staff, a not unimportant consideration, especially in a program evaluation context in which data collection is considerable, and/or in which many youth may have low literacy levels. Even in this relatively brief form, however, the DAP has provided a more comprehensive 360° view of young people's contexts and developmental domains than is common in youth well-being surveys.

## 9 Conclusion

A large trove of data from 31 countries and 50 survey administrations in 30 languages plus English, and involving more than 25,000 youth and young adults, shows that Search Institute's *Developmental Assets Profile* is, with few exceptions, a cross-culturally highly reliable, stable, and valid tool. It is psychometrically and culturally acceptable to use both for one-time descriptions of the condition of a country's youth, and for tracking change over time in young people's developmental relationships, opportunities, and character strengths in pre-post testing and program evaluations.

Despite this great diversity across cultures and samples, the results show that whether in developed or developing countries, young people tend to experience just a barely adequate level of the developmental relationships and opportunities, and positive internal values, skills, and self-perceptions that have repeatedly been shown to be associated with and contributing to well-being. And with few exceptions, young people across these countries tend to report similar patterns of these Developmental Assets: Family and School tend to be bulwarks of positive influence, especially in terms of providing youth with rules and expectations for behavior. Most young people also report having a solid internal commitment to learning, including such assets as having achievement motivation, feeling engaged in learning, and liking reading. Those positive educational experiences and attitudes about learning are especially critical for youth in the developing world, for whom, especially among girls and young women, education is the single best vehicle for raising their odds of having a satisfying and productive life.

Less favorably, youth the world over tend to describe their communities and villages as the places where they are least likely to experience these critical developmental relationships and opportunities, and their out-of-school time as less than constructively filled. And although they report more or less adequate levels of relational support, empowerment, positive values, and social competencies, there is still considerable room worldwide for youths' experience of those specific individual and social assets to improve. It may take a village to raise a child, but the 25,000 children, youth, and young adults we have surveyed report overwhelmingly that their villages are not doing all that they can to promote young people's well-being. The Children's Worlds survey

also found that children were least satisfied with the local area where they live, and that barely half of the children surveyed believed that adults in their countries respect children's rights (Rees and Main 2015). The general weakness of the role adults outside the family and school context play in promoting positive youth development is not just seen in the developing countries comprising the bulk of these datasets, but in the developed world as well, as shown repeatedly in both scientific studies (e.g., Scales et al. 2003) and popular treatments (e.g., Putnam 2015).

When young people do enjoy higher levels of these developmental relationships, opportunities, values, skills, and self-perceptions, the research summarized here shows that the relationship of those Developmental Assets to measures of well-being seen repeatedly in the United States and in a handful of other countries in earlier research is not a culturally limited finding but rather is almost surely a more universal phenomenon. The most important conclusion from this research is that *where data have been collected, youth with more of this multidimensional and multicontextual measure of developmental relationships, opportunities, and character strengths are better off, in terms of their mental and physical health, education, civic engagement, and workforce readiness, even in the most challenging environments.*

In addition, these data show that for almost any academic, psychological, social-emotional, or behavioral outcome, neither relationships and opportunities nor character strengths are expendable; both are significantly correlated with dozens of positive youth development outcomes, and both must be nurtured. These results underscore the importance of the recent movement to apply to international youth development intervention and measurement efforts a 360° strategy that better reflects a true bioecological and developmental systems perspective than the sector- or skill-based emphasis of traditional international youth development programming. In our future international youth development work, as well, we will be focusing even more deeply on the specific ways young people experience truly *developmental* relationships *across their personal ecologies*. This will involve measuring how much youth experience adults expressing care and providing support to them, challenging them to grow, sharing power with them, and expanding their possibilities, actions that we already have found are strongly linked to character strengths and well-being among children and youth in a U.S. national sample (Pekel et al. 2015).

Two other important substantive conclusions are warranted, albeit each with a successively smaller database to support this conclusion. Young people who *increase* their level of developmental relationships, opportunities, and character strengths over the course of a positive youth development program have better odds of enjoying better well-being post-program than young people who do not increase their assets (two studies). Finally, programs of 6–9 months duration can stimulate a significant and large size increase in the level of individual and social assets highly vulnerable young people experience in a developing country setting, thereby materially enhancing the well-being of those youth (one study). Clearly, more longitudinal studies are needed to further confirm the linkage of increases in individual and social assets with positive youth development outcomes, and of the potential for programs to significantly increase those assets. Nevertheless, these results are provocative, and consistent with the large body of positive youth development literature from developed countries.

These results add support for the intentional building of both developmental relationships and opportunities, and also character strengths, as a positive youth

development strategy more globally, evidence noted by USAID in support of promulgating its first-ever policy on investing in international positive youth development (USAID 2012). USAID noted that “although youth embody the means and assets that societies need to build prosperous futures, societies will only realize these gains when they invest in youth development” that is concerned with both “internal (e.g., self motivation, responsibility, decision-making) and external (e.g., safe schools, caring neighborhoods, parental involvement, positive peer influence) [assets] that facilitate their ability to succeed regardless of gender, socioeconomic status and ethnicity” (pp. 12–13).

International youth development programs have tended to focus on prevention of a single problem, or the promotion of youth development in a single outcome area such as education or HIV/AIDs prevention. A focus on broader positive youth development and the collective impact of cross-sector resources for children and youth does not substitute for those targeted focuses. Rather, a broad positive youth development approach supplements targeted programs in ways that can increase programs’ effectiveness, by holistically improving youth development across family, school, and community contexts, across domains of development (e.g., intellectual, physical, social-emotional, psychological, spiritual), and across outcomes critical to building and strengthening civil society, from education to violence prevention to civic engagement.

A database accrued through administration of the *Developmental Assets Profile* suggests that youths’ broad developmental ecology can be measured in a cross-culturally reliable and valid yet relatively brief measurement tool. It can document both youths’ status on developmental relationships, opportunities, and character strengths, and their changes over time brought about by interventions. Finally, it can provide youth perspectives across environmental contexts, domains of development, and critical outcomes. Such holistic but brief measurement is a potentially valuable tool for collective, coordinated action by practitioners and policymakers in the movement to promote the well-being of children, youth, and young adults around the world.

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