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Brief report: Assessing youth well-being in global emergency settings: Early results from the *Emergency Developmental Assets Profile*

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ABSTRACT

The 13-item *Emergency Developmental Assets Profile* measures the well-being of children and youth in emergency settings such as refugee camps and armed conflict zones, assessing whether young people are experiencing adequate positive relationships and opportunities, and developing positive values, skills, and self-perceptions, despite being in crisis circumstances. The instrument was found to have acceptable and nearly identical internal consistency reliability in 22 administrations in non-emergency samples in 15 countries (.75), and in 4 samples of youth ages 10–18 (n = 1550) in the emergency settings (war refugees and typhoon victims, .74) that are the measure's focus, and evidence of convergent validity. Confirmatory Factor Analysis showed acceptable model fit among those youth in emergency settings. Measures of model fit showed that the Em-DAP has configural and metric invariance across all emergency contexts and scalar invariance across some. The Em-DAP is a promising brief cross-cultural tool for assessing the developmental quality of life as reported by samples of youth in a current humanitarian crisis situation. The results can help to inform international relief program decisions about services and activities to be provided for children, youth, and families in emergency settings.

Tens of millions of children and youth worldwide are victims of humanitarian crises, including natural disasters and armed conflict emergencies (UNICEF, 2009). Although World Vision International (WVI) and other international relief and development organizations have been working to develop inter-agency assessments to gather relevant information about child well-being in such settings, most of those measures are focused on physical safety and child protection, and not on the quality of their psycho-social development while in crisis.

Search Institute and WVI thus collaborated to create a brief version of the institute's reliable and valid *Developmental Assets Profile* (DAP– Scales, 2011; Scales et al., 2013; Scales, Roehlkepartain, & Fraher, 2012; Search Institute, 2005). The DAP assesses

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children's experience of a variety of "developmental assets". Developmental assets reflect the relationships and opportunities young people are provided by adults and peers, and the values, skills, and self-perceptions they develop internally as they become more self-regulating. The more developmental assets youth have, the better off they are, on nearly every academic, behavioral, psychological, or social-emotional outcome measured (see Benson, Scales, Roehlkepartain, & Leffert, 2011; Benson, Scales, & Syvertsen, 2011). Even at a relatively brief 58 items, the full DAP is too lengthy to use in emergency settings that typically have high levels of chaos and disorganization, and only a brief window in which children and youth might be assessed. The 13-item Em-DAP is meant to be used in those conditions. Our hypothesis was that the Em-DAP would be found cross-culturally useful and psychometrically robust in emergency settings.

Method

Participants

The sample consisted of Syrian refugees in Iraq (n = 368, ages 12–16, 52% female), Jordan (n = 480, ages 10–18, 51% female), and Lebanon (n = 105, ages 10–17, 58% female), and youth in areas of the Philippines ravaged by Typhoon Haiyan in fall 2013 (n = 597, ages 11–18, 51% female, 88% in school).[1]

Em-DAP measure

The Em-DAP is comprised of 14 items from the 58-item full DAP (two items are combined to make the Em-DAP a 13-item tool). Criteria for items were: 1) each of the eight categories of assets was to be represented (e.g., Support, Positive Values—see Table 1); 2) items had a strong correlation with the full 58-item DAP in previous studies; 3) the items could be translated relatively effectively and efficiently (based on our previous experience with two-dozen DAP translation projects); and 4) the set of items would have acceptable reliability across countries. Ten initial items were selected for pilot testing with Somali refugees in Ethiopia. In addition, WVI conducted qualitative interviews with 106 children and youth (mean age 12), in refugee camps and other emergency settings (displacement due to armed conflict, or to drought) in the Democratic Republic of Congo, Pakistan, Ethiopia, Lebanon, and Somalia, asking them in individual interviews, "in this current situation, what it is like for a child who is doing well?" Children made 1395 statements in response, with 995 being about aspects of well-being that go beyond basic necessities such as shelter, food, and health. Pilot results led Search Institute and WVI and WV staff in those countries to revise the Em-DAP to be more culturally responsive, by replacing some items and rewording others, to emphasize more the interview-generated themes of the importance of play, friends, and teachers. Some of the original DAP items also were reworded to reflect the uncertainly and instability of emergency settings such as refugee camps or armed conflict (e.g., feeling safe "where I currently live," instead of "at home"). The final set of items had a mean alpha reliability of .75 in secondary analysis of existing non-emergency DAP data across 15 countries (e.g., Bangladesh, Honduras, Jordan, and Rwanda—Technical Supplement Table 1), and is shown in Table 1.

Each item is answered on a four-point scale from Not at All/Rarely to Extremely/Almost Always, and given a score of 0–3. Scores are averaged and multiplied by 10 (for ease of communication with practitioner and policy audiences), to be parallel with scoring of the parent DAP survey, to yield total Em-DAP scores between 0 and 30. Differing score levels (established to be identical to the DAP's score levels) describe a developmental status that is Good (score of 26–30), Adequate (21–25), Vulnerable (15–20), or Highly Vulnerable (0–14) in experience of developmental assets. Interpretation of what is "Adequate" or "Vulnerable" may vary across cultures. Nevertheless, these four levels in the DAP, the parent instrument, have shown cross-cultural validity, in that they consistently have been linked to significantly different well-being outcomes among youth across diverse cultures, in both developed and developing, conflict and post-conflict countries (Scales, 2011; Scales et al., 2012, 2013). For example, those with successively higher DAP scores have significantly higher workforce development skills, knowledge of how to access medical services, and academic confidence, and less normative acceptance of violence (Scales et al., 2012). In addition, in evaluation of a six-month intervention program with 663 Congolese refugees in western Uganda (children ages 6–12), caregiver-reported Em-DAP scores of those who never attended dropped over the three months from 15.33 to 14.01 ($p < .001$), while the Em-DAP scores for children who attended the Child Friendly Spaces program (including attendance even as little as "sometimes"), whose scores were significantly lower than controls at baseline, rose from 14.02 to 15.33 ($p = .041$, Personal communication from Janna Metzler, Oct. 31, 2014, and Metzler et al., 2013).

Procedure

Search Institute works with in-country partners to translate the items to the local language (and back-translate to English), to achieve a balance of fidelity to the English meaning and cultural face validity in the indigenous setting. In emergency settings where it is difficult or impossible to know youths' literacy levels, the Em-DAP typically is administered through

[1] A version comprised of 10 of the 13 Em-DAP items also was used in a Columbia University-World Vision International study of 633 Congolese refugees in western Uganda, with parents of children ages 6–12, yielding an alpha reliability of .80. The same 10 items used by WVI in a study of 126 Somali refugee youth in Ethiopia yielded an alpha of .74.

Table 1
Items and factor loadings for Search Institute's 13-Item Emergency Developmental Assets Profile (Em-DAP).[a]

Item	Asset category	Factor loadings			
		Iraq	Jordan	Lebanon	Philippines
Alpha reliability:		.69	.77	.73	.76
1. I feel good about my future. (original DAP item 12)	Positive identity	.212	.514	.693	.554
2. I think it is important to help other people. (DAP 16)	Positive values	.468	.557	.648	.534
3. I feel safe and secure where I currently live. (DAP 17)	Empowerment	.328	.499	.466	.430
4. I resolve conflicts without anyone getting hurt. (DAP 20)	Social competencies	.389	.531	.443	.497
5. I am actively engaged in learning new things. (DAP 26)	Commitment to Learning	.504	.575	.428	.627
6. I am involved in a religious group or activity. (DAP 31)	Constructive use of time	.779	.547	.364	.474
7. I do music, dance, drama, art, sports, or other play. (DAP 34 + 40)	Constructive use of time	.565	.436	.407	.478
8. I am involved in meaningful tasks. (DAP 36)	Empowerment	.335	.448	.344	.539
9. I am eager to do well in school. (DAP 38)	Commitment to learning	.563	.644	.682	.583
10. I have friends who set good examples for me. (DAP 43)	Boundaries and expectations	.551	.565	.397	.440
11. I have adults who are good role models for me. (DAP 45)	Boundaries and Expectations	.596	.563	.452	.520
12. I have support from teachers and adults, other than my parents. (DAP 51)	Support	.115	.522	.374	.382
13. I have a family that gives me love and support. (DAP 54)	Support	.387	.550	.445	.553

[a] All factor loadings significant at $p \leq .001$, except Q12 for Iraq ($p = .072$). Complete table including standard errors available in Technical Supplement Table 2.

individual interview, which generally lasts 8–10 min, with each question on a large card. A field administration guide provides detailed guidelines for selecting survey administrators, arranging space, and helping youth understand the four-point response scale so that youth feel confidentiality is protected, and to promote honest and valid responses. For example, games and visual aids, such as piles of coffee beans or other locally-available material, are used to depict the points on the scale (World Vision International, 2012).

Results

The EM-DAP mean alpha reliability was an acceptable .74 in these four diverse samples of youth (range .69–.77), per George and Mallery's (2003) guidelines for interpreting alpha. Table 1 shows that item-factor loadings clustered around .50; of the 52 loadings (13 items × 4 country samples), only one (Q12 in Iraq) was not significant at $p \leq .001$. Table 2 shows that the response variability in these crisis settings also is good, with 73% of the scores in the middle two Em-DAP levels, and the remainder split almost evenly into the most extreme levels (Highly Vulnerable, and Good). In the Philippines, reliabilities and mean scores were also about the same across three different age groups (11–13, 14–15, 16–18) and four local language groups (available from authors). Confirmatory Factor Analysis conducted with these emergency samples showed that the data fit a unidimensional factor structure very well, per Brown's (2006) guidelines (RMSEA = .053, CFI = .931, TLI = .917). Following the recommendation of Hu and Bentler (1999), we use a two-index model fit presentation strategy (RMSEA plus SRMR) to examine model fit in each country. These model fit statistics (Supplemental Tables 3–5) showed acceptable to good RMSEAs (.046–.063) and SRMRs (three of four countries < .09) across the countries (Note 1). Finally, we ran a MultiGroup CFA in R that showed acceptable model invariance using the Hu & Bentler 2-index model presentation strategy (RMSEA = .056, 90% confidence interval = .049–.063, and SRMR = .049), although the CFI result of .877 was slightly lower, in the "just ok" range rather than the slightly higher acceptable range starting at .90 (Little, 2014). That RMSEAs were especially consistently good across countries and in the MGCFA are particularly important results, given that RMSEA is the most widely-used model fit index (Kenny, 2014) and considered one of the most informative (Hooper, Coughlan, & Mullen, 2008; Hu & Bentler, 1999). In Iraq, Jordan, and Lebanon, the Em-DAP was correlated with other measures, and showed convergent validity, with moderate to strong correlations and in the predicted directions, with the Arab Youth Mental Health Scale (Makhoul et al., 2011) in Lebanon (.35), the troubling thoughts subscale of the Middle East PsychoSocial (PS) Questionnaire (http://www.unicef.org/

Table 2
Mean percentage of youth in four emergency settings at Em-DAP score levels, 13-item Em-DAP.

Score level	Percentage at Em-DAP score level Youth 10–18 (n = 1550)[a]
Highly Vulnerable	13
Vulnerable	39
Adequate	34
Good	15

[a] Aggregate sample of Syrian refugees in Iraq (n = 368, α = .69), Jordan (n = 480, α = .77), and Lebanon (n = 105, α = .73), and youth in areas of the Philippines ravaged by Typhoon Haiyan in fall 2013 (n = 597, α = .76).

oPt/FINAL_OPT_psychosocial_evaluation.pdf) in Iraq and Jordan (−.28 and −.19), the PS positive and negative coping skills subscales in Iraq (.48 and −.38), and the PS resilience subscale in all three countries (.55–.63, all available from authors).

Conclusions

The Em-DAP is a promising brief cross-cultural tool for assessing the developmental quality of life as reported by diverse samples of 10-to-18-year-old youth in current crisis situations. The instrument shows acceptable internal consistency and variability of response distribution across culture, language, and youth age, convergent validity by virtue of its correlation with measures of mental health and resilience, and a good model fit for a unidimensional factor structure. The unidimensionality is reproduced in each sample (configural invariance), and metric invariance shows each group is being measured acceptably on the same scale. Scalar invariance was not demonstrated, suggesting that cross-country comparison of means is not appropriate at this time. However, the purpose of the Em-DAP is not to enable such comparisons, but only to be used by field workers in a specific emergency setting to learn what youth in *that* specific emergency setting are experiencing that may relate to their well-being, so that field workers in that specific setting can address those specific results in their program responses. The configural and metric invariance, generally acceptable within-country model fit indeces, acceptable reliabilities, and convergent validity provide significant evidence to support the use of the Em-DAP for such within-country purposes for which it was intended, but not yet for cross-country comparisons. Additional research is needed to determine if the slightly weaker results for Iraq are anomalies or are reproduced in other countries (Note 2). For now, the Em-DAP can be validly used to create a one-time snapshot of how youth in emergency settings are faring in core developmental strengths known to be linked to numerous well-being outcomes. Exploratory use as a supplemental measure in impact evaluations in emergency settings is also appropriate. Comparison of results across settings is not yet recommended, pending additional research. The results can help to inform international relief program decisions about services and activities to be provided for children, youth, and families in emergency settings.

Notes

1. The SRMR for Lebanon was slightly larger, at .103, but Lebanon had an n of only 105, and it is known that smaller sample sizes artificially inflate the SRMR (Hooper et al., 2008). Although Hu and Bentler (1999) do not require them, Supplemental Table 3 also shows acceptable or good CFIs and TLIs in Jordan (.941 and .930) and the Philippines (.954 and .946), an acceptable CFI and nearly acceptable TLI in Lebanon (.901 and .881), and a nearly acceptable CFI and slightly weaker TLI in Iraq (.886 and .864), with differences in across-country invariance largely due to lower factor loadings for two items (1 and 12) in Iraq.
2. There is considerable debate among methodologists about the value of strict adherence to model fit cutoff points, especially due to the increased risk of Type I errors (incorrectly rejecting a model when it is in fact acceptable) (Hooper et al., 2008; Hu & Bentler, 1999), and to the fact that fit index cutoffs derived from simulations vary so much depending on aspects of the model, that they often have "limited generalizability in many types of measurement models in applied research (Little, 2013, p. 264). Barrett (2006) argues that there is no "substantive scientific consequence" (p. 819) associated with accepting a model with slightly lower model fit indeces than another model. Little (2014) also explicitly advises that for new measures or new applications such as the Em-DAP, it is advisable to be "more liberal in evaluating fit" and allow for "'poor' fitting models" (slide 33).

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Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.adolescence.2015.09.002

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