Applying the House-Tree-Person Test in Haiti: Measuring Children's Resilience and Vulnerability

Gargi Roysircar-Sodowsky
Antioch University New England

Ashland Thompson
Antioch University New England

Purpose

The purpose of the study was to explore and illuminate the configuration between five scales by means of classical multidimensional scaling (MDS). The scales were the HTP Resilience and Vulnerability indexes, Hare Self-Esteem Scale (HSS), Child Self-Concept Scale (SC), and Child Report of Posttraumatic Symptoms (CROPS)

Participants

Children from three urban settings and an orphanage around Port-au-Prince, Haiti, were assessed in 2013 (n=34) and 2014 (n=54). For 2013, there 19 boys and 15 girls (Damien M age = 8.15, Canaan M age = 8.13, Blanchard M age = 8.15, Providence Orphanage M age = 8.89); and for 2014, there were 24 boys and 30 girls (Damien M age = 9.00; Canaan M age = 9.00, Blanchard M age = 9.00, Providence Orphanage M age = 8.70).

Procedures

An NGO in Blanchard that served the children's communities did the recruitment. Data collection occurred in the NGO's primary care clinic in Blanchard, its Canaan community center, and The Providence orphanage, also served by the NGO. A group administration of the HTP was conducted with small groups of 4-6 children. A trained Haitian translator gave the drawing directions to each group. The children were given a piece of paper for each drawing and colored crayons. The translators told the children in Créole "Draw a house. Draw a tree. Draw a person. There is no right or wrong house, tree, and person. We want to look at the picture of any house [any tree, any person]." The other measures, the self-reports CROPS, HSS, and SC were administered individually by the translator after a child had completed the HTP drawings. The translator read aloud each item and wrote next to an item the child's stated level of endorsement.

Measures

The HTP is a culturally adapted pictorial assessment for use with Haitian children (Roysircar et al., 2016) that measures quantitatively Resilience (RES) and Vulnerability (VUL) with 31 items that rate for the presence (1) or absence (0) of certain drawing features. The CROPS, a 22-item self-report, assesses the detrimental effect of traumatic events on children. The CROPS asks children about their concentration ability, somatic symptoms (e.g., stomach aches, headaches), worries that bad things will occur, sad feelings, low energy, bad dreams, etc.) The Hare Self -esteem Scale (HSS) is a 15-item self-report of peer and familyesteem of the child. The Child Self-Concept Scale (SC), a 21-item self-report, uses adjectives to assess children's self-beliefs, e.g., "I am friendly," I am bashful," "I am helpful," etc.

Results

• The reliability for SC was the highest with α = .93, and for HTP Resilience the reliability was α = .85. HSS, CROPS and HTP Vulnerability reliabilities were adequate at α = .73, .70, and .75, respectively. See Table 1.

• The total scale alpha as a unitary measure encompassing all five measures was very good, α = .87. Very good or high reliability indicates that as a body of measures, there is consistency in results derived from the various instruments' methodology.

• MDS analyses allowed further understanding or judgments of similarities or dissimilarities between the scales. MDS does not provide reasons or suggest causal-effects. It maps a visual presentation of the proximities and allows for informed judgments about dimensions. See Table 2.

• The first visual indicator of dimensionality from an MDS analyses output is the scree plot or stress plot. The scree clearly supported a two-dimension solution for the dataset. See Figure 1.

• The distance matrix shows the distances between variables RES, VUL, CROPS, SC, and HSS. The two least similar variables (greatest distance) appear to be RES and VUL, while VUL is equidistant from CROPS and SC. HSS is equally distant from both RES and VUL. The most outstanding between-variable distance is for VUL, which has the greatest distance between all variables, thus seeming most dissimilar.

• Statistically the common space plot also supports a two-dimension solution. However, the two clusters or dimensions could be perceived with different configurations (See Figs. 2 and 3).
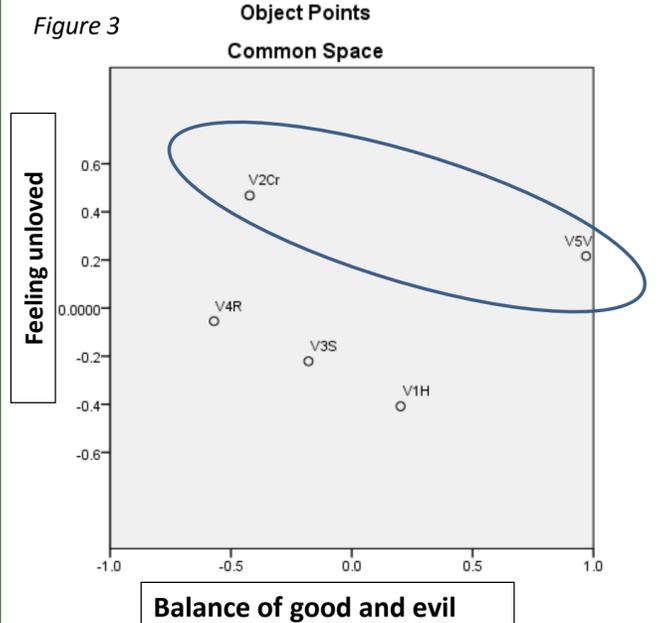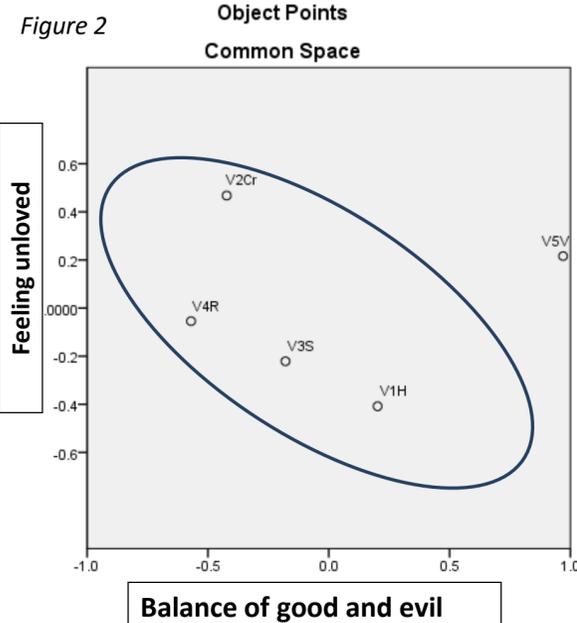
Figure 2 — Object Points Common Space. Feeling unloved (y-axis) / Balance of good and evil (x-axis)

Figure 3 — Object Points Common Space. Feeling unloved (y-axis) / Balance of good and evil (x-axis)

Table 1: Scale Analyses and Reliabilities

		Self-Reports			Drawing Ratings	
		HSS	CROPS	SC	HTP Resilience	HTP Vulnerability
Sample						
	Number of Cases	79	78	74	85	86
	Number of items	**15**	**22**	21	14	12
Scale (Raw Scores)						
	Mean	35.30	40.18	53.92	6.28	3.43
	Variance	30.14	51.19	101.67	10.89	5.06
Scale (Standardized Scores)						
	mean	.11	.14	.25	.12	.05
	variance	46.59	65.60	182.90	65.71	38.67
Reliability						
	Alpha (α)	.69	.69	.92	.85	.75
	alpha (std. items)	.73	.70	.93	.85	.75

Table 2: Proximities

	HSS	CROPS	SC	RES	VUL
HSS	.				
CROPS	10.98	.			
SC	6.82	10.30	.		
RES	10.77	10.30	10.04	.	
VUL	10.78	12.15	12.04	15.32	.

Figure 1 — Scree Plot. Normalized Raw Stress (y-axis) / Dimensionality (x-axis)

Conclusion

Based on the data provided for five measures completed for 74-86 children in Haiti, several statistical procedures (descriptive, item analysis, reliability, multi-dimensional scaling, and confirmatory factor analysis) were used to assess the relationships between the observed variables and theoretical constructs. It is most likely that collectively the HTP Resilience and Vulnerability indexes, Hare Self-esteem Scale (HSS), Child Self-Concept Scale (SC), Child Report of Posttraumatic Symptoms scale (CROPS) measure two latent structures or dimensions relevant to the overarching content or constructs.

Discussion

Informed selection or interpretations should be grounded in theory and contextual knowledge of the instruments, the participants, and the extenuating circumstances or conditions.