

Post Visit Inventory-Parent
Kindergarten / Year 1
Fast Track Project Technical Report
Mark Greenberg, Craig Mason and Lili Lengua
November 15, 1995

Contents:

- I. Source
- II. Scale Derivation
- III. Missing Data
- IV. Descriptives
- V. Intercorrelations
- VI. Site and Site x Intervention Differences

I. Source

The Post Visit Inventory (Dodge et al., 1990) is completed by the parent interviewers within 24 hours after each visit. It was developed to provide staff ratings of the family physical environment, the child's behavior toward the parent during the visit, the mother's and father's behavior toward the child during the visit, parental behavior toward the visitors and probable validity of the data. This report describes the Contextual subscales, therefore only ratings of the home and neighborhood physical environment were used (items 1-10, 12-18). The Parent Behavior and Child Behavior subscales are described elsewhere.

II. Scale Derivation

A series of analyses examining the physical context items on the "Post Visit Inventory" based on Year One, Cohort One Normative Sample data were conducted. The first analysis was a principal components analysis with varimax rotation of items #12 ("How clean is this dwelling") through #18 (The safety of the neighborhood ..."). For all items, a response of "0" ("Can't rate") was treated as missing data. Item #15 was recoded in the reverse direction. Responses to Item #16 (The street on which this dwelling is located is:") were modified to a four point scale from (1) rural to (4) mostly commercial. This principal components analysis resulted in two factors with eigenvalues greater than one, accounting for 65% of the variance. The factors were labeled Quality of the Home Environment and Quality of the Neighborhood Environment.

Items #1 ("Child has an indoor play area") through 11 ("Basic hygiene...") were not included in the principal components analysis, as they were dichotomous variables. These variables were recoded "0" or "1", with "1" indicating that the item did not apply to a family. Items #1-10 theoretically grouped into two subscales, Child-Friendly Home Characteristics and Utilities. Item #11 was not included on any subscale. Although it conceptually belonged with the Home Environment items, it was of a different response format. Also, it did not fit conceptually with the other dichotomous items. Both of these sets of analyses are presented in the following two tables:

Scale Name	Items	Fact	Fact	Item Description	Scale Alpha	Mean Inter-Item Correlation
Home Environment	01BHE12	.87		How clean is this dwelling	.63	.37
	01BHE13	.86		How safe is interior / dwelling		
O1Bhehom	01BHE14	.46		How many rooms in dwelling		
Neighborhood Environment	01BHE17	-.47	.83	Noise-level in neighborhood	.75	.42
	01BHE16	-.65	.81	Street where dwelling is loc.		
O1Bhenei	01BHE18		.60	Safety of neighborhood		
	01BHE15		.54	How safe is outside dwelling		

NOTE: Values less than 0.4 have been printed as 7.

Scale Name	Items	Item Description	Scale Alpha	Mean Inter-Item Correlation		
Child-Friendly Home Interior	01BHE1	TC has indoor play area	.77	.34		
O1BHEINT	01BHE2	Age appropriate toys avail.				
	01BHE3	TC has secure place for personal things				
	01BHE4	Environment allows free movement				
	01BHE5	TC has an outdoor play area				
	01BHE6	Family has a pet				
	01BHE8	At least 8 books visible				
	01BHE9	At least 2 children's books visible				
Utilities Available	01BHE7	Family has a telephone			.16	.20
O1Bheut	01BHE10	Family has TV, stereo, radio				

Summary scores for the factor-based and theoretically derived subscales were calculated using weighted sum scores by: 1) summing the non-missing items on each scale, 2) dividing by the number of items present for each subject, and 3) multiplying by the number of items on the scale. Because of the very high number of missing responses (i.e., can't rate responses), a criteria of 50% of the items was used for missing data (i.e., the scale was considered missing if 50% or more of the items on the scale were missing). **Higher scores on the variables indicate greater problems or risk in the physical context.**

III. Missing Data

At the item level, there was a very large amount of missing data on these scales as a result of the "can't rate" response option, particularly for the Child Friendly Interior scale (listwise deletion of missing subjects results in an N=125 for the Normative sample, N=90 for the High-risk sample) and the Home Environment scale (listwise deletion of missing subjects results in an N=210 for Normative sample, N = 166 for High-risk sample). For the Utilities subscale, N=370 for the Normative sample and N=290 for the High-risk sample. For the Neighborhood Environment subscale, N=340 for the Normative sample and N=277 for the High-risk sample.

At the scale level, a 50% criteria for missing data was used for the subscales, which resulted in some improvement of the missing data figures. In addition, **for cross-sectional analyses only**, missing year 1 data were replaced with year 2 PVI data, when available. It was assumed that the general characteristics of the physical home and neighborhood environments would not change dramatically from one year to the next. However, **for longitudinal analyses, missing year 1 data replaced with year 2 data should be reset to missing.**

IV. Descriptives

Descriptive statistics are based on the data including replacement of missing Year 1 data with Year 2 data. The mean, standard deviation, skewness and kurtosis of each of the subscales for the Normative and High-Risk samples are presented in the following table. Only the distribution of the Utilities subscale deviated somewhat from a normal distribution, but this was not a marked deviation, and most analytic approaches, such as regression, are robust to moderate deviations from normality.

Subscale.	N	Mean	S.D.	Skew	Kurt
Normative Sample					
Home Environment	385	9.36	2.10	-1.07	0.72
Neighborhood Environ.	385	8.78	2.43	0.22	-0.41
Child Friendly Interior	383	2.84	2.22	0.45	-0.67
Utilities	384	0.13	0.35	2.52	5.51
High-Risk Sample					
Home Environment	307	9.00	2.01	-0.96	0.53
Neighborhood Environ.	308	9.17	2.34	0.28	-0.23
Child Friendly Interior	305	3.41	2.19	0.21	-0.65
Utilities	307	0.17	0.39	2.09	3.35

V. Intercorrelations

Normative:

	OIBHEINT	OIBHEUT	OIBHENEI	OIBHEHOM
OIBHEINT	1.00000	0.28781	0.49758	-0.47849
	0.0 383	0.0001 380	0.0001 381	0.0001 381
OIBHEUT	0.28781	1.00000	0.26388	-0.27471
	0.0001 380	0.0 384	0.0001 382	0.0001 382
OIBHENEI	0.49758	0.26388	1.00000	-0.54654
	0.0001 381	0.0001 382	0.0 385	0.0001 385
OIBHEHOM	-0.47849	-0.27471	-0.54654	1.00000
	0.0001 381	0.0001 382	0.0001 385	0.0 385

High-Risk:

	OIBHEINT	OIBHEUT	OIBHENEI	OIBHEHOM
OIBHEINT	1.00000	0.24302	0.44911	-0.51904
	0.0 305	0.0001 303	0.0001 304	0.0001 303
OIBHEUT	0.24302	1.00000	0.23096	-0.21629
	0.0001 303	0.0 307	0.0001 306	0.0001 305
OIBHENEI	0.44911	0.23096	1.00000	-0.53840
	0.0001 304	0.0001 306	0.0 308	0.0001 307
OIBHEHOM	-0.51904	-0.21629	-0.53840	1.00000
	0.0001 303	0.0001 305	0.0001 307	0.0 307

VI. Site Differences

Mean Site differences were explored using PROC GLM in SAS. In the Normative sample, for the Home Environment subscale, the mean for Nashville was significantly lower than the means for the other three sites. For Neighborhood Environment and Child-Friendly Interior, the means for Nashville were significantly higher than the other sites, whereas the means for Penn State were significantly lower than the other sites. For Utilities, only the means for Penn State and Washington did not differ. The means for Durham and Nashville were the highest and second highest, respectively.

In the High-risk sample, there were no significant intervention or site x intervention effects. There were no site differences for Home Environment or Neighborhood Environment. There was a significant site difference for Child-friendly Interior such that the means for Penn State and Washington were significantly less than the mean for Durham, and the mean for Penn State was significantly less than the mean for Nashville. For Utilities, only Penn State and Washington did not differ significantly. The means for Durham and Nashville were the highest and second highest, respectively.

Normative Sample

Home Environment		
Neighborhood Environ.	6.33	.0003
Child-Friendly Interior	11.83	.0001
Utilities	17.38	.0001
	14.57	.0001

Level of SITE	N	Mean	SD	Mean	SD
DURH	100	8.86666667	2.53593699	9.58000000	2.08253924
NASH	100	9.63000000	2.14140676	8.65000000	2.47257687
PENN	98	7.68367347	2.62832071	9.86734694	1.85498912
WASH	87	8.94252874	1.90852501	9.36781609	1.69208103

Level of SITE	N	Mean	SD
DURH	99	2.87349687	2.22293609
NASH	99	3.88696489	2.15482401
PENN	98	1.73712342	1.81809753
WASH	87	2.87214012	2.14700798

Level of SITE	N	Mean	SD
DURH	100	0.30000000	0.50251891
NASH	98	0.16326831	0.37150787
PENN	98	0.03061224	0.17315041
WASH	88	0.02272727	0.14988676

High-risk Sample

Home Environment	0.76	.5176
Neighborhood Environ.	2.19	.0897
Child-Friendly Interior	7.98	.0001
Utilities	21.17	.0001

Level of SITE	N	O1Bhehom	
		Mean	SD
DURH	78	8.91025641	2.21527107
NASH	80	8.98750000	1.89599011
PENN	79	9.27848101	2.05180789
WASH	70	8.82142857	1.87669868

Level of SITE	N	O1Bhenei	
		Mean	SD
DURH	78	9.34615385	2.44444318
NASH	80	9.48333333	2.08665979
PENN	80	8.61666667	2.79747726
WASH	70	9.24761905	1.82281631

Level of SITE	N	O1Bheint	
		Mean	SD
DURH	77	4.08893012	2.12034660
NASH	78	3.80195360	2.01642013
PENN	80	2.55654762	2.31664319
WASH	70	3.20231293	1.99757218

Level of SITE	N	O1Bheut	
		Mean	SD
DURH	77	0.41558442	0.52190865
NASH	80	0.21250000	0.44133715
PENN	79	0.03797468	0.19235637
WASH	71	0.00000000	0.00000000