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Printed: 1/3/2023 12:44:53 PM

Trans. #: **1745785**

Lending String: CAJS

Patron:

Journal Title: American journal of mental deficiency.

Volume: 84
Issue: 3
Month/Year: 1979

Pages: 235-eoa

Article Author: Bradley,Robert

Article Title: Home Observation for Measurement of the Environment: A Revision of the Preschool Scale

Imprint: info:sid/primo.exlibrisgroup.com:primo4-article-cLinker

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American Journal of Mental Deficiency
1979, Vol. 84, No. 3, 235–244

Home Observation for Measurement of the Environment: A Revision of the Preschool Scale

ROBERT H. BRADLEY AND BETTYE M. CALDWELL
University of Arkansas at Little Rock

Information pertaining to a revision of the Caldwell HOME Inventory for use with families of children ages 3 to 6 was presented. Factor and item analyses were used as a basis for reducing the number of items from 80 to 55. The items were clustered into eight subscales. Kuder-Richardson 20 coefficients for the scale ranged from .53 to .93. Concurrent and predictive validity studies indicated that the HOME scales significantly correlated with IQ (as high as $r = .58$). Low to moderate correlations were obtained between HOME scores and SES measures, with significant correlations ranging from .30 to .65.

Parmalee, Sigman, Kopp, and Haber (Note 1) recently noted that because the majority of children identified as belonging to a particular "at risk" group do sufficiently well on outcome measures taken later in childhood, they cannot be considered truly handicapped. As a result, they concluded that "the manpower required for intervention programs with the truly handicapped infants is critically diluted" (p. 2). Thus, there is need to develop screening and diagnostic procedures that more accurately specify children at risk. To accomplish this aim, designers of many screening batteries and cumulative-risk indices have begun to include sensitive measures of a child's developmental environment.

The principal reason for including measures of the home environment in screening and diagnostic batteries is that a substantial percentage of developmental problems stem from inadequacies in the social/cognitive environment (Meier, 1976). Furthermore, even when problems do originate from such factors as poor prenatal care, obstetric complications, substandard nutrition, inadequate medical care, or biological abnormalities, the quality of a child's environment may determine in large measure the degree of actual risk for that child. As a case in point, Werner, Bierman, and French (1971) presented data pertaining to the relation of perinatal stress, environmental factors, and intelligence among Hawaiian children. From their data they concluded: "it is quite apparent that the difference in mean IQs between children growing up in the most and least favorable home environments from 2–10 years was much larger than that between children from the most and least severely stressed perinatal groups" (p. 73). In effect, environmental factors tend to interact with various risk conditions to determine the likely course of development. In the best of circumstances, good environmental inputs will serve to ameliorate biological problems partially; a healthy, intact organism will be less prone to suffer from an inadequate environment. Under the worst of circumstances, poor environmental conditions prior to birth will increase the probability of biological problems, biological problems will make the organism more vulnerable to environmental deficit, and environmental deficit will exacerbate biological problems. In some cases, environmental deficits are associated with certain health and developmental problems so regularly that it is possible to predict the eventual occurrence

This research was partially supported by grants to the authors from the Office of Child Development (No. SF–500), the Carnegie Foundation, and the Bureau for the Education of the Handicapped (No. G008800627). A preliminary draft of this paper was presented at the annual meeting of the Mid-South Educational Research Association, New Orleans, 1978. The authors thank Judith Freund for her careful reading and useful suggestions regarding an earlier version of the manuscript.

of such problems prior to their manifestation or prior to their being able to be measured. For example, Cravioto and DeLicardie (1972) found that clinical malnutrition as diagnosed at age 4 could be predicted with a fairly high degree of accuracy by using Home Observation for Measurement of the Environment (HOME) Inventory [1] scores obtained prior to age 1.

Based on his conclusion that environmental factors and organic factors tend to interact in their effect on development, Meier (1976) recommended the inclusion of an environmental assessment as part of a multiphasic diagnostic and treatment approach with high-risk children. Some screening batteries have included relatively gross structural indices such as social class or socioeconomic status; however, these indices tend to mask a lot of within-class variability (Bloom, 1964). Moreover, it is difficult to determine from status measures precisely how the child's development was fostered (Caldwell, Bradley, & Elardo, 1975; Deutsch, 1973). Partly for these reasons, the use of environmental process measures has substantially increased. Process measures index certain moment-to-moment transactions, day-to-day events, and common objects that occur in the developmental environment of young children. They contain such things as the type of language stimulation available, incidence of punishment and affection, frequency of out-of-home activities, number and kind of play materials present, type of reinforcement provided. Direct measurement of environmental processes usually results in a more accurate appraisal of the quality of the developmental environment than do inferences based on structural measures. When environmental process measures and socioeconomic status measures have been compared with respect to their association with measures of cognitive development, the former are almost always shown to be superior (Bradley, Caldwell, & Elardo, 1977; Marjoribanks, 1972; Moore, 1968). One additional related advantage to the use of environmental process measures is that they can often be helpful in designing an educational strategy for the family assessed (Bradley & Caldwell, 1978).

Our purpose in this paper is to describe some validity information about the preschool version of the HOME Inventory. This inventory is one of the most widely used environmental process measures. Validity information has previously been reported for the version of the inventory to be used with families of children from birth to age 3 (Bradley & Caldwell, 1976a, 1976b, 1977; Elardo, Bradley, & Caldwell, 1975, 1977; Ramey, Mills, Campbell, & O'Brien, 1975).

The HOME Inventory was designed to sample certain aspects of the quantity and quality of social, emotional, and cognitive support available to 3- to 6-year-old children within their home. The selection of items for the inventory has been guided by the empirical evidence of the importance of certain types of experiences for nourishing the behavioral development of children. Included are such things as the importance of an opportunity to form a basic attachment to a mother or mother substitute; an emotional climate characterized by mutual pleasure, sensitive need gratification, and minimization of restriction and punishment; a physical environment that is both stimulating and responsive, offering a variety of modulated sensory experience; freedom to explore and master the environment; a daily schedule that is reasonably orderly and predictable; and an opportunity to assimilate and interpret experience within a consistent cultural milieu (Caldwell, 1968).

In generating items for the HOME, the scale's designer (Caldwell) originally intended that all items should be based on direct observation of actual transactions between the major caregiver (usually the mother) and the child. A large pool of items was developed, all of which required naturalistic observation of mother–child interaction; but a conceptual examination of the items suggested that many important areas of a child's experience such as out-

[1] Copies of the HOME Inventory can be obtained from the authors at the Center for Child Development and Education, University of Arkansas at Little Rock, 33rd and University Ave., Little Rock, AK 72204.

of-home activities and visits from relatives were unfortunately excluded by this restriction on constructing items. Accordingly, items requiring interview data were added as the Inventory was refined.

The HOME Inventory is administered in the home at a time when the child is present and awake. Care is taken to set up the interview at a time that is convenient to the parent. The content of the instrument and instructions for administration provide structure for the visit; however, informality is stressed so as to reduce threat and increase probability of realistic responses. The items are binary-choice format, a yes indicating that the family is credited with providing the type of input required by the item, a no indicating no credit.

Characteristics of the Scale

The present 55-item version of the HOME Inventory for families of children age 3 to 6 years was developed from a longer (80 item) version. The chief intent in reducing the number of items was to increase the efficiency of the scale since it is primarily intended as a screening instrument. The 80-item scale was developed from an even longer (144 item) version through a process of factor analysis and item analysis. Thus, the current 55-item version represents a second major revision of the scale.

The first step in producing a more efficient instrument involved conducting a factor analysis on data gathered from 232 volunteer families in Little Rock, Arkansas. The 80-item version of the Preschool HOME Inventory was used in this procedure. A description of the sample is contained in Table 1. About 60 percent of the sample took part in the preschool program at the Center for Early Development and Education; the remaining 40 percent were obtained from one of two longitudinal control groups followed by the Center. The sociodemographic characteristics of families whose children attended preschool and those who served as controls were

TABLE 1
CHARACTERISTICS OF THE SAMPLE (N = 232)

Data	Black	White	Total
Family[a]			
Percentage on welfare	44	00	30
Percentage of fathers absent	32	15	28
Maternal education[b]	11.2	14.1	11.4
Paternal education[b]	10.7	13.8	11.2
Paternal occupation	Unskilled to clerical	Skilled craftsman to professional	Unskilled to professional
Child[c]			
Number of girls	88	36	124
Number of boys	69	39	108
Mean Binet IQ at 36 months	90.3	115.0	98.3
Standard deviation of IQ	15.3	14.1	14.8
Percentage of first borns	42	61	48
Percentage of second or third borns	32	32	32
Percentage of fourth or later borns	26	07	20

[a] Complete data were not available on all families. Specifically, in several instances where fathers were not present in the home, complete educational and occupational data on fathers were not obtainable. Family data figures are estimates based on the available information.

[b] Mean number of years.

[c] Complete birth-order data were not available on all children, particularly in several cases where there was a large diverse extended family situation. Birth-order data figures are estimates based on the available information.

quite similar. Black participants were predominantly lower to lower–middle class—albeit some middle-class black families were involved. White participants came mostly from lower–middle and middle-class families. An examination of the distribution of HOME total scores for the following subsamples indicated that they were nearly normal, with a tendency toward a slightly negative skew: black females, black males, white females, white males. The subsamples representing each of the three age groups also displayed nearly normal distributions on the HOME total score.

Families were assessed on a regular basis by research assistants from the Center as long as they remained in the study. All research assistants received extensive training with the HOME Inventory and were verified as reaching at least a 90 percent level of agreement with criterion testers. The typical level of agreement was about 95 percent.

The purpose of the factor analysis was to aid in eliminating unproductive items while maintaining sufficiently high internal consistency within subscales. Preliminary analyses of the 80-item version of the HOME Inventory had revealed that some of the subscales did not have a high enough level of internal consistency given the number of items they contained. Thus, there was need to eliminate some items and to determine whether some reorganization of subscales was warranted. A second principal reason for reducing the number of items was to make the scale more economical in terms of the amount of time needed for administration. The scale is conceived as primarily a screening instrument, and it was therefore considered desirable to minimize the time needed to administer it. In this context, factor analysis was seen as a useful way to reduce scale length without sacrificing important areas of content. It was not intended that the factor analysis would produce an instrument composed of several independent factor subscales, but rather that it could help in the construction of consistent, interpretable item clusters (see Walberg & Marjoribanks [1976] for a discussion of this point).

Since information on individual items was needed to eliminate those that were least productive, the factor analysis used individual items as the unit for computation even though items are scored in a dichotomous manner. In essence, factor analysis was employed in a heuristic rather than a strict decision-making fashion. We felt that the procedure would be helpful in the development of interpretable item clusters and was defensible in that the underlying distribution for individual items was assumed to be normal.

A varimax rotation was performed using an eigen-root cut-off of 1.0. The analysis produced seven factors that contained at least 4 items each plus a number of factors composed of 1 or 2 items. Forty-six items having a loading of .30 or better on these seven factors were retained. In addition, 9 items were retained on the basis that they were significantly correlated with achievement. These items compose the subscale Variety of Stimulation. Thus, the present scale contains 55 items. Loadings for each item on the factor that defines the subscale it is in are displayed in Table 2. Factor loadings are not listed for items in the Variety of Stimulation subscale since these items were not taken from a single factor.

As a result of the scale-reduction process, items are now clustered into eight subscales: Stimulation through Toys, Games, and Reading Materials; Language Stimulation; Physical Environment; Pride, Affection, and Warmth; Stimulation of Academic Behavior; Modeling and Encouraging of Social Maturity; Variety of Stimulation; and Physical Punishment.

A number of validity and reliability studies were done on the Preschool Home Inventory using data from the 232 families described previously. Each of the studies involved a somewhat different subsample; however, the sex, race, and socioeconomic status (SES) characteristics of the subsamples were about the same as those of the total sample, with the exception of the samples for 5- and 6-year-old children. This latter sample contained a higher percentage of black children (70 percent) and children attending some type of preschool (95 percent).

TABLE 2

LOADINGS FOR ITEMS IN HOME SUBSCALES ON THE FACTOR THAT DEFINES THE SUBSCALE

Subscale/Item	Factor loading
Stimulation through Toys, Games, and Reading Materials	
Toys to learn colors, sizes, & shapes (pressouts, play school, peg boards)	.59
Three or more puzzles	.63
Record player and at least five children's records	.66
Toy or game permitting free expression (finger paints, play dough, crayons, paint and paper)	.32
Toys or games necessitating refined movements (paint by number, dot book, paper dolls, crayons and coloring books)	.50
Toys or game facilitating learning numbers (blocks with numbers, books about numbers, games with numbers)	.53
Ten children's books	.65
At least ten books are present and visible in the home or apartment	.61
Family buys a newspaper daily and reads it	.57
Family subscribes to at least one magazine	.63
Child is encouraged to learn shapes	.56
Language Stimulation	
Parent teaches child about animals through books, games, puzzles	.62
Child is encouraged to learn alphabet	.75
Parent teaches child some simple manners (to say "Please," "Thank you," "I'm sorry")	.76
Language Stimulation	
Mother uses correct grammar and pronunciation	.52
Parent encourages child to relate experiences or takes time to listen to him/her relate experiences	.32
When speaking of or to child, mother's voice conveys positive feeling	.85
Child is permitted some choice in mealtime menu	.80
Physical Environment: Safe, Clean, and Conducive to Development	
Building has no potentially dangerous structural or health defect (plaster coming down, stairway with board missing, rodents)	.66
Child's outside play environment appears safe and free of hazards (no outside play area requires automatic "no")	.39
Interior of the home or apartment is not dark or perceptually monotonous	.41
Neighborhood has trees, grass, birds—is esthetically pleasing	.35
At least 100 square feet of living space per person in the house	.32
In terms of available floor space, rooms are not overcrowded with furniture	.36
All visible rooms are reasonably clean and minimally cluttered	.73
Pride, Affection, and Warmth	
Parent holds child close 10 to 15 minutes per day (during TV, storytime, visiting)	.33
Mother converses with child at least twice during visit (scolding and suspicious comments not counted)	.79
Mother answers child's questions or requests verbally	.78
Mother usually responds verbally to child's talking	.71
Mother spontaneously praises child's qualities or behavior twice during visit	.32
Mother caresses, kisses, or cuddles child at least once during visit	.35
Mother sets up situation that allows child to show off during visit	.35
Stimulation of Academic Behavior	
Child is encouraged to learn colors	.35
Child is encouraged to learn patterned speech (nursery rhymes, prayers, songs, TV commercials)	.34
Child is encouraged to learn spatial relationships (up, down, under, big, little)	.52
Child is encouraged to learn numbers	.58
Child is encouraged to learn to read a few words	.30
Modeling and Encouraging of Social Maturity	
Some delay of food gratification is demanded of the child (not to whine or demand food unless within ½ hour of mealtime)	.34
Family has TV, and it is used judiciously, not left on continuously (no TV requires automatic "no," any scheduling scores "yes")	.61
Mother introduces interviewer to child	.44
Child can express negative feelings without harsh reprisal	.32
Child is permitted to hit parent without reprisal	.44

(Continued)

TABLE 2 *(Continued)*

Subscale/Item	Factor loading
Variety of Stimulation[a]	
Real or toy musical instrument (piano, drum, xylophone)	NA[b]
Family member has taken child on one outing at least every other week (picnic, shopping)	NA
Parent tries to get child to pick up and put away toys after play session—without help	NA
Mother uses some complex sentence structure and some long words in conversing	NA
Child's art work is displayed some place in house (anything that child makes)	NA
Variety of Stimulation	
Parent lets child choose certain favorite food products or brands at grocery store	NA
Child has been taken by family member on a trip more than 50 miles from home during past year (50-mile radial distance not total distance)	NA
Child has been taken by family member to a scientific, historical, or art museum within the past year	NA
Physical Punishment	
Mother does not scold (yell) or derogate child more than once during visit	.28
Mother does not use physical restraint, shake, grab, or pinch child during visit	.64
Mother neither slaps nor spanks child during visit	.75
No more than one instance of physical punishment occurred during the past week (accept parental report)	.42

[a] Not a factor subscale.
[b] Not available.

Item Analysis and Reliability

Item analyses and reliability estimates were computed for the HOME Inventory based on a sample of 117 (64 percent black, 52 percent female) families from the study. The 117 families were used rather than the 232 described for the factor analysis because a greater quantity of repeated environmental and developmental measures were available for the 117. For most of the remaining 115 families (68 percent black, 53 percent female), only a single Home Inventory was administered and in some cases no developmental data were available. There were no significant differences between the 177 families used for item analyses and the 115 additional families used for factor analyses on characteristics such as sex, race, and social status.

Item Analysis

Point-biserial item correlations with the total scale score and each subscale score were computed for the 117 families. The coefficients were moderate to high (.2 to .7). In most instances the correlations between an item and its subscale score was greater than the correlation between an item and the total scale score. In all cases the point-biserial correlation between items and subscale scores was greater than .30. This indicates that items are basically valid in so far as they measure the same content as the total subscale.

The percentage of the tested families who received credit for each item was also computed. For about two-thirds of the items, a moderate percentage of families (from 30 to 80 percent) received credit; such a range of difficulty level is generally considered good from a psychometric point of view; however, over 80 percent of the tested families received credit on the remaining one-third of the items. An examination of these items indicates that many involve the kinds of environmental stimulation that, if missing, would indicate a rather severe deficiency; e.g., "mother neither slaps nor spanks child during visit." Failure on these items reflects a very unresponsive home environment, one lacking in essential supports for development. In other instances, the item, although passed by a high percentage of families, still does a relatively good job of discriminating among high and low scorers and is substantially correlated with subscale score.

Reliability

Internal consistency. Internal consistency estimates were made for the total

scale and each subscale based on the Kuder-Richardson 20 formula. The coefficients ranged from .53 to .83 for the HOME subscales, while the internal consistency estimate for the total scale was .93. Considering the length of the subscales, these reliability estimates appear to be at an acceptable level.

Stability. For 33 of the 117 families, HOME data were obtained when the children were 3 years old and again when they were 4.5 years old. The stability of HOME scores was examined using those data. Coefficients for the eight subscales plus total score ranged from .05 to .70. These figures may represent somewhat low estimates given the brevity of the subscales and the 18-month interval between assessments. These findings do point out, however, the need for continued assessments of the same household over time.

Validity

Correlation with Socioeconomic Status

As part of the procedure for establishing the validity of the HOME Inventory for the families of preschool-age children, correlations were obtained between HOME scores and five SES indices: maternal education, maternal occupation, paternal education, paternal occupation, and the amount of crowding in the home. Complete data from 53 of the 117 families were available and were used in these analyses.

Almost all of the correlations between HOME scores and SES indices were in the expected direction; the remainder were nonsignificant (see Table 3). Generally speaking, the correlations between both mother's occupation and father's occupation and the home environment were negligible. Moderate correlations were recorded between the remaining three SES factors and several HOME subscales. The highest observed correlation was that between maternal education and the HOME subscale Toys, Games, and Reading Materials.

Correlation with Mental Test Scores

One of the most important criteria used to assess the validity of the HOME Inventory was the relation between HOME scores and measures of cognitive development. For present purposes we used the Stanford-Binet Intelligence Scale. HOME Inventory scores obtained at different ages were correlated with this measure in order to judge the validity of the Stanford-Binet. The samples used at each of four criterion age levels varied somewhat from age to age. HOME and Stanford-Binet data were not available on all 117 families at each of the four criterion age points. All data available at each age point were used in the analyses. No significant race or sex differences were noted in the composition of samples at the four age points with one exception: a

TABLE 3

CORRELATIONS BETWEEN 3- TO 6-YEAR HOME INVENTORY SCORES AND SES VARIABLES

HOME subscales	SES variables				
	Maternal education	Maternal occupation	Paternal education	Paternal occupation	Crowding ratio
Stimulation through Toys, Games, and Materials	.65**	.07	.45**	.18	−.35*
Language Stimulation	.48**	.02	.30*	.09	−.28*
Physical Environment	.17	.22	.30*	.09	−.31*
Pride, Affection, and Warmth	.22	.11	.23	−.04	−.37*
Stimulation of Academic Behavior	.16	.09	.10	−.07	−.17
Modeling and Encouraging of Social Maturity	.06	.14	.20	−.10	−.30*
Variety of Stimulation	.51**	.06	.41**	.27	−.42**
Physical Punishment	.31*	.03	.21	.01	−.06
Total scale	.57**	.14	.47**	.11	−.47**

* $p < .05$.
** $p < .01$.

somewhat higher percentage of lower-class black children were included in the 5 to 6 year sample. An examination of the mean scores of families of girls and families of boys revealed no sex differences.

Three-Year HOME and IQ. Table 4 contains the Pearson product-moment and multiple correlations between 3-year HOME scores and 3-year IQs based on 91 of the 117 cases described above (62 percent black, 52 percent female). Three subscales showed especially substantial correlations: Stimulation through Toys, Games, and Reading Materials; Pride, Affection, and Warmth; and Variety of Stimulation. These same three environmental variables also showed substantial correlations with IQ at age 4.5 years. In addition, however, the subscale Stimulation of Academic Behavior was moderately correlated with 4.5-year IQ. The 3-year HOME scores showed approximately the same degree of relation to both 3-year and 4.5-year IQ. The total HOME score shares over 25 percent common variance with IQ at both criterion age points. Thus, the test may be useful in screening home environments in an effort to identify children "at risk" for developmental problems.

Four-and-a-Half-Year HOME and IQ. Pearson product-moment coefficients and multiple correlation coefficients between 4.5-year HOME scores and 4.5-year IQs are displayed in Table 4. The 51 cases used (60 percent black, 51 percent female) were taken from the sample of 117 described above. The highest correlations were those between IQ and the following HOME variables: Stimulation through Toys, Games, and Reading Materials; Language Stimulation; Stimulation of Academic Behavior; and Variety of Stimulation. The total HOME score was correlated .58 with IQ. Several of the HOME subscales, which when measured at 3 years were significantly related to 4.5-year IQ, when measured at 4.5 years were no longer significantly related. The results obtained may be a function of slight differences in samples at two time points or due to out-of-home (particularly preschool education) experiences becoming of greater importance (see also Bradley & Caldwell, Note 2).

Five-to-Six-Year HOME and IQ. Pearson product-moment and multiple correlation coefficients between 5- to 6-year HOME scores and 6- to 10-year IQs are shown in Table 4. These coefficients are based on relatively small samples and, thus, are subject to more error than are the validity coefficients reported prevously. The 34 cases (70 percent black, 54 percent female) were taken from the 232 mentioned above. Despite the limitations of these data, several notable findings emerged. First, the subscale Stimulation through Toys, Games, and Reading Materials continued to demon-

TABLE 4

CORRELATIONS BETWEEN HOME INVENTORY SCORES FOR FAMILIES WITH PRESCHOOL-AGE CHILDREN AND IQ

HOME subscales	3-year HOME vs. 3-year IQ (N = 91)	3-year HOME vs. 4.5-year IQ (N = 46)	4.5-year HOME vs. 4.5-year IQ (N = 51)	5- to 6-year HOME vs. 6- to 10-year IQ (N = 34)
Stimulation through Toys, Games, and Reading Materials	.47**	.48**	.55**	.50**
Language Stimulation	.39**	.37*	.40**	.30
Physical Environment	.25*	.31*	.22	.23
Pride, Affection, and Warmth	.43**	.37*	.27	.32
Stimulation of Academic Behavior	.29**	.41**	.47**	.28
Modeling and Encouraging of Social Maturity	.37**	.17*	.21	−.15
Variety of Stimulation	.45**	.47**	.51**	.36*
Physical Punishment	.23*	.32*	.08	.15
Total score	.55**	.54**	.58**	.58**
Multiple correlation	.61**	.58**	.62**	.67*

* $p < .05$.
** $p < .01$.

strate a substantial relation to IQ, as did the subscale Variety of Stimulation; however, most of the coefficients were lower in absolute value, with the most notable exceptions being the correlation for total score and the multiple correlations between HOME subscale scores and IQ. Indeed, these correlations remained remarkably consistent given changes in the time of HOME measurements, changes in the time of IQ measurements, changes in the length of time intervening between measurements, and changes in the samples used. Thus, while the pattern of relations between HOME subscale scores and IQ appears to vary somewhat with the samples used, the total scale score as an index of environmental quality appears to retain a very consistent level of relation to IQ.

Summary and Conclusions

The following is a list of key points pertaining to the development of the HOME Inventory (for families of children aged 3 to 6): (a) Item analyses indicate a reasonably high degree of internal consistency for the instrument; (b) the HOME scores for families of young girls and boys do not appear to differ appreciably; (c) there are indications of a reasonable level of stability for HOME scores; (d) low to moderate correlations were obtained between HOME scores and SES measures; and (e) HOME scores appear to be substantially related to cognitive measures; the concurrent and predictive validity of the instrument appear substantial.

The data developed pertaining to the preschool version of the HOME Inventory suggest that the instrument may be useful in screening the developmental environments of children from 3 to 6 years of age. Correlations with cognitive measures were relatively strong; however, the validity of HOME with respect to social development and academic achievement is yet to be established.

One of the most fruitful areas for further studies involving the HOME Inventory and other environmental process measures is the validity of such measures as predictors of school failure. The Education for All Handicapped Children Act (P.L. 94–142) has catalyzed the implementation of increasing numbers of preschool intervention programs. Information is needed to determine whether environmental process measures can be useful as part of wide-scale screening efforts, such as Child Find, that are mandated by this recent legislation.

R. H. B.
Center for Child Development
and Education
University of Arkansas at Little Rock
33rd and University Ave.
Little Rock, AK 72204
Manuscript submitted 2/9/79.

Reference Notes

1. Parmalee, A., Sigman, M., Kopp, C. & Haber, A. *The concept of a cumulative risk score for infants.* In Aberrant Development in Infancy. Symposium presented at the Gatlinburg Conference on Mental Retardation. Gatlinburg, TN, 1974.
2. Bradley, R., & Caldwell, B. *Home Observation for Measurement of the Environment: A restandardization of the preschool scale.* Paper presented at the annual meeting of the Mid South Educational Research Association. New Orleans, 1978.

References

Bloom, B. *Stability and change in human characteristics.* New York: John Wiley & Sons, 1964.

Bradley, R., & Caldwell, B. The relation of infants' home environments to mental test performance at fifty-four months: A follow-up study. *Child Development,* 1976, 47, 1172–1174. (a)

Bradley, R., & Caldwell, B. Early home environment and changes in mental test performance from 6 to 36 months. *Developmental Psychology,* 1976, 12, 93–97. (b)

Bradley, R., & Caldwell, B. Home Observation for Measurement of the Environment: A validation study of screening efficiency. *American Journal of Mental Deficiency,* 1977, 81, 417–420.

Bradley, R., Caldwell, B., & Elardo, R. Home environment, social status and mental test performance. *Journal of Educational Psychology,* 1977, 69, 697–701.

Bradley, R., & Caldwell, B. Screening the environment. *American Journal of Orthopsychiatry,* 1978, 48, 114–130.

Caldwell, B. On designing supplementary environments for early child development. *Boston Association for the Education of Young Children (BAEYC) Reports,* 1968, 10, 1–11.

Caldwell, B., Bradley, R., & Elardo, R. Early stimulation. In J. Wortis (Ed.), *Mental retardation and*

developmental disabilities (Vol. VII). New York: Brunner/Mazel, 1975.

Cravioto, J., & DeLicardie, E. Environmental correlates of severe clinical malnutrition and language development in survivors of kwashikor and marasmus. In *Nutrition: The Nervous System and Behavior* (Scientific Publication No. 251). Washington, DC: Pan American Health Organization, 1972.

Deutsch, C. Social class and child development. In B. Caldwell & H. Riccuitti (Eds.), *Review of child development research* (Vol. 3). Chicago: University of Chicago Press, 1973.

Elardo, R., Bradley, R., & Caldwell, B. The relation of infants' home environments to mental test performance from six to thirty-six months. A longitudinal analysis. *Child Development*, 1975, 46, 71–76.

Elardo, R., Bradley, R., & Caldwell, B. A longitudinal study of the relation of infants' home environment to language development at age three. *Child Development*, 1977, 48, 595–603.

Marjoribanks, K. Environment, social class, and mental abilities. *Journal of Educational Psychology*, 1972, 43, 103–109.

Meier, J. *Developmental and learning disabilities*. Baltimore: University Park Press, 1976.

Moore, T. Language and intelligence: A longitudinal study of the first eight years. Part 2—environmental correlates of mental growth. *Human Development*, 1968, 11, 1–24.

Ramey, C., Mills, R., Campbell, F., & O'Brien, C. Infants' home environments: A comparison of high-risk families and families from the general population. *American Journal of Mental Deficiency*, 1975, 80, 40–42.

Werner, E., Bierman, J., & French, F. *The children of Kauai: A longitudinal study from the prenatal period to age ten*. Honolulu: University of Hawaii Press, 1971.

Walberg, H., & Marjoribanks, K. Family environment and cognitive development: Twelve analytic models. *Review of Educational Research*, 1976, 45, 527–552.