

Historical Perspective of Subjects as Children

50's Nature/Nurture debate (re growth + development including: learning (early + late) + future ed attainment, "emotional health" and SES) Nurture was "tops"

Important sensory loss + neuro. disease (hand) In evaluating Learning Problems in Children (usually difficulty with learning to talk, to understand language concepts, ^{not} to read,) the differential Dx was M.R. versus "emotional block" (afraid to lose "learning" ^{psychoanalytic theory})

Concept pervaded school system in SF + Bay Area. Intelligent children with reading difficulties referred to Child Guidance Clinics for therapy + taught in "Opportunity Classes" with emphasis on improving attitudes toward learning. ^{Difficulties in 1st, 2nd grades attributed to "late bloomers" - he'll read when he's ready.}

late 50's Those with more "minimal neural disease" e.g. "mild" C.P., mild sensory disorders, "mild" post encephalitis were studied + treated as Brain Damaged. Straus + Lehtinen

Paucity of papers on Reading Disorders in pediatric literature (of child psych. / psyc.) Crossman

early 60's This concept expanded to include language and reading disorders in non-retarded children ($\bar{S}$ sensory loss or classical C.P. or neural disease) under the label Minimal Brain

Damage. A continuum of CNS damage was postulated from "severe MR ^{to CP}" to mild M.R. ^{to CP} to Learning Disorders or clumsy children.

Concept widely promoted - as an organic argument (nature) against the previous emotional argument in the nature/nurture debate. Pediatricians, neurologists, ^{speech + pathologists, many professionals}

some psychiatrists, some educators / most ch. psych., soc. workers, psychologists, educators

TABLE 7

MANN-WHITNEY U TEST OF SIGNIFICANCE

PRETERM INFANTS AT THEIR CHRONOLOGICAL AGE
COMPARED WITH TERM INFANTS

N=8

	Experimental				Control				U
Gestural Communication	0	0	1.33	0	0	2.33	5.33	0	.557
Language Complex	0	0	0	.33	0	1.00	4.00	.67	.171
Phonological Production	1.00	1.00	1.00	1.67	1.00	1.67	3.33	1.00	< .557
Play Schemes	2.00	2.00	2.00	2.00	2.00	2.67	3.00	3.00	.171
Total Test	3.00	3.00	4.33	4.00	3.00	7.34	15.67	4.67	.171

~~At this~~

Emphasis ~~at~~ in the early sixties (and the
beginning growth of publications on Reading
Disorders) was on ~~visuomotor~~ visual perception,
visuomotor, fine motor coordination
and Language was ^{given less attention} neglected.

Chapter 4: RESULTS

TESTS OF DIFFERENCES AMONG TWO GROUPS OF INFANTS

The Mann-Whitney U Test was completed for each subtest and the total test to evaluate the performance differences between the preterm infants at their chronological age of 12 months with term infants. This test of significance was also computed to compare the performance of preterm infants at their chronological age of 12 months with their adjusted age of 12 months and the preterm infants at their adjusted age with the term infants.

An analysis of the U test for preterm infants at the chronological age of 12 months and the adjusted age of 12 months showed significant differences on the subtest of gestural communication at .029 and for the total test at .014 as seen in Table 6. This suggests there are significant differences in the preterm infants performance from their chronological age to their adjusted age for these two measures.

Table 7 shows the comparisons between the preterm infants at the chronological age of 12 months with the term infants. Significant differences were not noted between these two groups for any subtest or for the total test.

Table 8 shows the non significant Mann-Whitney U scores for each subtest and the total test comparing the preterm infants at their adjusted age of 12 months with full term infants. One subject in the preterm infants at her adjusted age, A, was extremely competent and performed better contrary to the hypothesis.

This is where we entered the scene with the
beginning ¹⁹⁶¹ of our program for evaluating ^{children} hearing disorders
which leads to the LEO program beginning in 1965.

~~Origin of personnel + general approach
to evaluation. Emphasis on teaching + pt. care.~~
P. M. H. U. ^{origin 1948} Training residents in ^{normal} ^{gr + dw} interviewing, ^{skills}
+ understanding + evaluating ^{various} ^{aspects of} ^{normal dw} ^{and} ^{development}
^{and} ^{development} ^{dw deficits}, chronic illness, environmental stresses.
^{phys + mental handicap}

~~Founder - Prof. George Schede -~~

These programs primarily ^{concerned} ^{with} teaching ^{pk} (housestaff
and medical students) and patient care. ~~and~~

^{Multidisc} Team developed in early 60's to '64 (one of 1st in U.C.
Ped Center + in U.S. ^{Pediatric Departments})

~~Pediatrician trained in gr. dw, interviewing~~

~~Phys. Social Worker - background in
nursery school + primary teacher~~

~~→ Hearing + Speech Consultant.~~

~~Psychologists trained in developmental
assessment - not psychoanalytical formulations~~

~~Educational Consultant ^{originally} trained in~~

~~teaching deaf + hard of hearing and
later training in reading difficulties~~

~~Neurobiologist - special interest in hearing
disorders~~

^{Unique features}
Our ^{early} concern with language disorders as ^{the} ^{one} ^{of} ^{the} ^{most} ^{important} ^{factors} in ^{specific} ^{hearing} ^{difficulties}.
Use of Speech and Language and Educational Consultant
as part of evaluation ^{emphasis on} ^{social} ^{styles} ^{and} ^{weaknesses} ⁱⁿ ^{CVS} ^{skills}
Development of team - long chance to demonstrate how

TABLE 6

MANN-WHITNEY U TEST OF SIGNIFICANCE

PRETERM INFANTS AT THEIR CHRONOLOGICAL AGE
 COMPARED WITH THEIR ADJUSTED AGE
 N=8

	Experimental				Control				U
Gestural Communication	.67	1.67	3.00	2.33	0		1.33	0	.029
Language Complex	0	.33	1.00	1.33	0	0	0	.33	.243
Phonological Production	1.67	1.67	1.00	1.33	1.00	1.00	1.67	1.67	.443
Play Schemes	2.00	2.67	3.00	3.00	2.00	2.00	2.00	2.00	.171
Total Test	4.34	6.00	8.00	7.99	3.00	3.00	4.33	4.00	.014

these children could be helped even tho
fun for 2-3¹ hours ^{2+3x} per week. & school

Taking on the commitment to educate
the ~~N. Calif~~ ^{School + Pediatric} community about ~~specific~~ ^{specific} hearing
children's hearing disorders.

Not enough time for research - So
this longitudinal study is now being planned
at the wrong end

TABLE 5

CORRELATION BETWEEN EACH SET OF JUDGES
FOR THE COMMUNICATIVE INDEX

	Judge 1	Judge 2		Judge 1	Judge 3		Judge 2	Judge 3
<u>Communicative</u> <u>Index</u>								
Mean	2.42	2.42		2.33	2.25		2.42	2.25
Standard Deviation	.67	.67		.65	.45		.67	.45
Correlation	1.00			.93			.83	

late 60's inception of special programs in
70's school system EH classes in California

70's Research emphasizes ~~the~~ ^{on} Language disorder
aspects of dyslexic children and decreased
or non existence of perceptual-motor
visuospatial-practical aspects

~~The~~ Realization that Dyslexic children
not homogeneous - Search for sub groups

80's Continuing Search for sub groups
Being post mortem studies of brains of dyslexics
Beginning non intrusive studies of dyslexics
PET Scans - Magnetic Resonance Imaging
finding ~~the~~ gross anatomical differences
as well as microscopic differences
in brains

Delineation of "Executive Functions"
Initiate (Plan, Organize) Sustain (Concentration - Vigilance)
Inhibition (Self control - ^{Self monitoring}) Shift (Cognitive Flexibility)

D. Correlations Between Each Set of Judges for the Communicative Index.

The communicative index was found to be a reliable instrument for assessment of infant performance as determined by the between judges reliability scores. Correlation between judges 1 and 2 was 1.00, between judges 1 and 3 was .93 and between judges 2 and 3 was .83. (See Table 5.) This data affirms the utilization of this instrument for infant behavior related to communication.

Summary

The data from the reliability and validity studies indicates the methodology as utilized in this study is sound and worthy of application on additional subjects. Each item and subtest measures a discrete area of language related infant behaviors which can be observed and documented by both professional and trained, naive judges.