Child Abuse and Neglect: 
Effects on Bayley Scale Scores

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Compared to controls, children who were diagnosed as victims of Nonaccidental Trauma or Failure to Thrive had depressed Bayley Scale Mental Index scores, p < .002 and p < .0001, respectively. Failure-to-Thrive children also had depressed Bayley Scale Motor Index scores, p < .0001. Nonaccidental-Trauma children had Mental and Motor Scale range scores, as determined by differences between basal and ceiling items on the Mental and Motor scales, that were a function of measured Mental and Motor Index Scores. Specifically, Nonaccidental-Trauma children with lower Mental Index scores had higher Mental Scale range scores than Nonaccidental-Trauma children with higher Mental Index scores, p < .003. Control children had Mental Scale range scores that did not differ between the high-low Mental Index score conditions. On the Motor Scale, range scores of Nonaccidental-Trauma children in the high-low Motor Index score conditions did not differ. However, children with higher Motor Index scores had higher Motor Scale range scores than control children with lower Motor Index scores, p < .02. In addition, the Infant Behavior Record of the Bayley Scales revealed behavior ratings of Nonaccidental-Trauma and Failure-to-Thrive children that differed from Mental and Motor Scale scores on several dimensions. These differences may reflect differential effects of the Nonaccidental-Trauma and Failure-to-Thrive conditions.

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Certain salient characteristics of a child's environment and a child's relationships with caretakers exert a strong influence on concurrent and subsequent mental test performance. Assessment of the characteristics (i.e., relationship with mother, punishment, and so on) of a young child's home environment that are related to mental functioning are significantly related to later mental test scores (Elardo, Bradley, & Caldwell, 1975; Hanson, 1975). Bayley (1969) reported significant but moderate relationships between early Bayley Mental Index scores and later Stanford-Binet IQ scores suggesting that the function of infant tests and IQ tests are somewhat different. However, when the environment of the child is held constant, the strength of the relation between early Bayley Mental Index scores and later Stanford-Binet IQ scores is increased (Ramey, Campbell, & Nicholson, 1973).

It seems evident that developmental test results would reflect caretaker behaviors toward the child and the condition of his primary environment. Evidence of the depressing effects on mental functioning due to the maternal deprivation syndrome or Failure to Thrive (FTT) was presented by Ramey, Starr, Pallas, Whitten, and Reed (1975). They reported a mean Mental Development Index (MDI) score as measured by the Bayley Scales of Infant Development (BSID) for FTT children to be 60 at the time of initial assessment. The concurrent mean of Psychomotor Development Index (PDI) scores was 61. Evidence for the effects of physical abuse of children was presented by Kempe and Helfer (1972). They found, in a follow-up study of 42 abused children, that one-third were functioning in the retarded range (below 80 in IQ or developmental quotient scores). Elmer and Gregg (1967), in a study of 50 physically abused children, included a history of assault or gross neglect in the diagnostic criterion for abuse. Physical abuse of a child or Nonaccidental Trauma (NAT) is usually preceded by a history of neglect. Kempe and Helfer (1972) in their description of the "battered child" consider physical abuse and neglect in the same category. Physical abuse and neglect may be described as child battering, but the distinction is worth maintaining for investigative purposes.

It also seems evident that a child's test-taking behaviors would reflect the condition of his primary environment and caretaker behaviors. Matheny, Dolan, and Wilson (1974) identified four primary cognitive behaviors (object orientation, goal directedness, attention span, and reactivity to test materials) on the Infant Behavior Record (IBR) of the BSID that were strongly related to concurrent and predictive of subsequent mental test scores. They identified IBR extraversion behaviors (responsiveness to examiner, cooperativeness, and general emotional tone) that were related to concurrent mental test scores for girls but not for boys. But how does a pathological environment affect test-taking behaviors? How do the abnormal behaviors of the caretaker toward the child in the child's primary environment affect test-taking behaviors? How does caretaker response, nonresponse, or inconsistent response affect the child's test-taking behaviors?