CHAPTER 21

American Cultural Models of Early Influence and Parent Recognition of Developmental Delays

Is Earlier Always Better Than Later?

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There comes a time for some parents which they never forget. It is when they first come to have a serious concern about their child's health and normal developmental status. Parents may recall this time as a series of events, or as a particular moment when they talked with a relative, friend, physician, teacher, or psychologist and had prior suspicions confirmed or doubts mirrored. It is the time when parents recognize that their child may have a serious developmental problem. Such concerns about one's child combine profound emotional dread and fears, uncertainty, and informational ambiguity and confusion. Parents begin to recognize that the child may not be able to learn skills necessary to be able to earn a living or marry. They have concerns that the child will not have sufficient social and cultural knowledge and communicative skills to enable it to act in the world as a competent, morally appropriate person. These concerns strike at every parents' hopes for

their child's very survival, and at parents' goals for their child's competence and the continuity of family. Such goals are what parents everywhere want for their children, and are a part of every society's cultural models of normal development. These concerns are at the core of what LeVine (1977, 1988) has identified as universal goals parents everywhere have for their children—survival and health, subsistence competence, and social and moral appropriacy.

Initial concerns and recognition of delay are like "flashbulb memories" (Neisser, 1982) of unique and emotionally powerful events, never forgotten. Although there might be a particular period that parents remember as the time when they had their first real concerns, or had concerns confirmed by professionals, such concerns usually develop gradually and depend on their child's age, their access to information, the nature of the child's developmental delays, and many other circumstances. There may be stages in the development and evolution of such concerns and the responses to them in the United States. Miller (1993), for example, suggests that there are four: surviving, searching, settling in, and separating. Although in this broader sense there is no defined beginning or end of "recognition" and its continuous negotiation, our families do recognize a delimited period of time when their concerns began. Here are some family situations and parents' comments about that initial recognition.

> Jimmy was born full-term, by Caesarean section due to fetal distress. He experienced anoxia and had seizures while in the hospital. The parents were told, "Well, he is maybe going to live and maybe going to die." After he had stabilized, according to father, "They painted a picture for us that he was going to be in a really bad mental condition, possibly [go] straight into a mental institution." Jimmy came home from the hospital with a diagnosis of severe cerebral palsy and severe mental retardation.
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> In the case of Annie G, there was nothing remarkable about mother's pregnancy, labor, or delivery. The parents thought she was a normal baby. They first became concerned between 6 and 8 months, when they noticed that Annie was much less active than her cousin, who was only 6 weeks older. She "wasn't moving and getting around." This is when their initial concern began. Their physician, a general practitioner, told them not to worry: "She's going to get up with the other kids, she's going to be fine." But their recognition that their child might be delayed gradually grew from that time. By the time Annie was 15 months they were "real worried," and were being urged by friends and family members to have her seen by someone else. They switched to a pediatrician

who "knew right away something wasn't right" and referred them to a pediatric neurologist. The neurologist diagnosed Annie as hypotonic and referred her to physical therapy. The parents described their reaction as "'Oh my God—now what do we do?' We just didn't know what to think."

"Sharon was born fine. She came out healthy. She was about 14 months before she really started walking. She was slow, but, you know, so was my son. When she was about 2 years old, we started noticing that she was talking like my son when we first noticed his problem. And we found out that there were speech problems in the family that we weren't even aware of. We were hoping Sharon didn't have it. And sure enough about 2 years old we noticed the problem. And we started early with therapy."

Brett's family did not begin to worry until he was 3. Brett was the second of three children with disabilities (his older and younger sisters both had significant hearing losses). In part because of the attention focused on the older sister, the parents were not concerned about Brett in his first 2 years; in fact, they felt very fortunate that he did not have a hearing loss. Mother had some concerns regarding difficult behavior from about 18 months on, but it was a surprise and a shock to her when the older sister's teacher suggested Brett might be "aphasic" when he was 3. An evaluation at the university clinic confirmed the teacher's hunch, and Brett started in a special education preschool. His mother expressed concerns about the future: "I look at Ellen [older sister] now and I say, 'She's a normal kid except her ears don't work.' She's normal in every way . . . but with Brett it's a little harder, because I'm not sure that he will be normal. . . . I'm going to give myself time to see how it goes."

By age of recognition we mean the age of the child when the parents' concerns emerged and were mirrored or negotiated with professionals. In Jimmy's case, parents were aware right at birth that their child might have developmental problems of some kind. Such children typically require biomedical interventions very early. Annie's, Sharon's, and Brett's parents were unaware of any developmental problems until they became concerned later on or a teacher or doctor or relative noticed something and asked the parents about the child. The age of recognition ranged in these four families from birth, about 8 months, about 2 years, and age 3. Such a range is not uncommon in studies of the emergence of these kinds of developmental concerns.

Does earlier or later age of recognition make a difference in how families adapt to their child with delays or in children's developmental status? Recognition at earlier rather than later ages seems almost self-evidently desirable because earlier recognition fits with both professional models of intervention and folk cultural models of development. These models can be summarized as follows: The earlier the age of recognition the better because the early months and years of life are uniquely important stages for human development, and so the sooner we recognize delay, the better for interventions and parental adaptive responses, because parents and family members would respond even more urgently and deeply to their child's problems. However, another hypothesis, derived from ecocultural theory, is that a child growing up in the midst of a family practicing its implicit, normative cultural model of family life and development *is* protected. A young child's everyday participation in that family's daily routine is protective even when, later on, the child will be identified as delayed in some way. Excluding families with clear family pathology or abuse or those children with early biomedical concerns, and with certain other cautions, our prospective longitudinal study of families with children with delays tends to support the latter hypothesis.

This chapter first considers the professional and folk cultural model, that early recognition and response are better. Then we review ecocultural theory, which provides a rationale for why earlier is not always or necessarily better. We then describe our sample of 102 families with children with delays that were recognized at different ages and present evidence that the children's developmental status, and the family's adaptation to their child, is not uniquely influenced by the age of recognition (leaving aside that group of children with biomedical problems recognized at birth or soon thereafter). We conclude with implications for parents and for policy.

Cultural Models and Early Recognition of Delays

D'Andrade (1987) defines a cultural model as "a cognitive schema that is intersubjectively shared by a social group" (p. 112) and which is hierarchically organized. Cultural models motivate actions because they include cultural and personal goals that organize action (D'Andrade, 1992, p.28). "Buying something," for example, is a cultural activity that is schematically organized, involves shared knowledge, and includes such concepts as money, seller, price, and so on, organized in a hierarchy of such schemata. Similarly, "early stimulation and attention to a child" is a cultural activity that includes (in Euro-American middle-class culture and also in other groups) verbal stimulation, mirroring, contingent responsiveness, treating the child as imagined coequal interlocutor, intentional changes by caretakers in the child's physical environment and visual field for the purpose of enrichment, and so forth. These activities are part of the cultural model of appropriate parenting, and the model includes the goal of enhancing social and intellectual competence later in life. "Stimulation" of infants and young children very *early* in life is an inherent part of this model because the early stages of life are thought to be uniquely important and the effects of inattention may be irreversible later on.

One reason cultural models (e.g., the notion that the very earliest periods of life are the most important) are so powerful is that they are implicit or procedural rather than explicit, formalized, and declarative (D'Andrade,1987). Implicit cultural models include deep cultural rules and beliefs underlying actions, which cannot necessarily be fully articulated even when researchers try to elicit them. They are "transparent" most of the time; they are taken to be reality (D'Andrade, 1992, p. 38). Implicit cultural models are in many ways even more forceful in directing behavior than models consciously held and explicitly analyzed and articulated. As D'Andrade (1992) states, "The very transparency of some schemas helps give them motivational force because, although the person sees the world a particular way, it is experienced as an undeniable reality" (p. 38).

Another reason for the power of cultural models is that they are tools for the mind–they assist in personal and familial adaptation to life. Cultural models matter for family adaptation. These models evolved in part in response to human problems, and they serve as tools to solve human problems. As tools for family adaptation, then, cultural models have a dual implication for families recognizing delays in their children at different ages. On the one hand, existing cultural models and family adaptations have a protective value for parents and children and might well have this same result for a child with delays. On the other hand, when concerns about possible developmental delay for the child appear, these implicit, understood cultural models, used as tools for assisting families in parenting, at the least will be questioned and probably will be changed in some ways by parents. Professionals and others may encourage changes in parents' beliefs and practices. New cultural models (of delay, handicap, special needs, etc.) will then emerge and interact with existing models. These new models do not replace more general ones but rather are applied specifically to the child with delays. Earlier recognition of delay may or may not be more adaptive for families and children generally, depending on whether the changes, absence of changes, or use of new, specific cultural models assists in family adaptation to the child with delays.

When parents recognize delays, implicit cultural models shift to explicit and are forced to change. Such shifts can be difficult and dangerous and produce suffering and dis-ease in their own right. But parents' cultural models change continually in any case. Establishing and sustaining any cultural model involves continual social construction. Harkness, Super, and Keefer (1992) studied U.S. parents with infants and toddlers, for instance, and note that "learning cultural knowledge is an active, constructive process that continues throughout the life-span . . . [and] the system from which cultural knowledge is drawn is itself dynamic and constantly changing" (p. 176). The emergence of enduring concerns about one's child's development (as painful as this is), and the resultant changing understandings based on that recognition, seem to be based on these more general processes of establishing and maintaining a cultural model of parenting and family life, rather than being dramatically different from them.

The cultural model of parenting and early child development emphasizing early stimulation and recognition of delays or developmental problems is associated with a number of ecological and sociohistorical circumstances. These include declining mortality threats and total fertility; changing work and work scheduling requirements for men, women, and children alike; increasing years and universality of schooling for children; and increasing biomedicalization and professionalization of birthing and child development practices, among other reasons (e.g., Ehrenreich & English, 1978; Mintz & Kellogg, 1988; Shorter, 1975). Of course, this contemporary model of infancy and childhood developmental periods and of the family have changed historically and vary dramatically cross-culturally (e.g. Scheper-Hughes, 1990). Although threats to infant mortality have dramatically declined for Euro-Americans, birth and infancy are still seen as potentially dangerous periods of life for mortality and health, as well as a time of unique and irreplaceable learning and stimulation opportunities for children.

The importance of early recognition and response, including the unique dangers and importance of very early periods in development, seems to be a widely shared cultural model in North America–important in scientific research and among professional clinicians, as well as among parents and laypersons. Professional or scientific models of early intervention influence folk models and vice versa; they share the same sociohistorical context and so have many concerns in common. But, of course, they differ in many other ways–evidentiary bases, methods, breadth of knowledge, and the way information is stored and presented, for example. We are not conflating professional/scientific with folk/cultural models by pointing to the similar emphasis on early recognition and responsiveness common to both but rather observing how these different but related bodies of knowledge have mutually influenced one another and share the same sociohistorical context.

Scientific and folk models share the implication, for instance, that earlier recognition of delays might be more conducive to family adaptation, cognitive precocity, a more secure sense of self, and physical health, compared to later ages of recognition. The folk/cultural model that earlier recognition is always better certainly fits with some research findings. The infant and toddler appear in contemporary research as precocious learners, actively exploring their environment (e.g., Kaye, 1982). Verbally responsive interactions and the developmentally sensitive mirroring of the child's explorations by caregivers are widely shared contemporary cultural models for optimal infant and young child care among professionals and parents alike (e.g. White, Kaban, & Attanucci, 1979). A virtually unchallenged scientific point of view in the field of developmental delay assumes that awareness and recognition at an earlier age leads to earlier action and intervention, which in turn leads to benefits (Cunningham, Morgan, & McGucken, 1984). For instance, Bristol and Schopler (1985) and Seligman and Darling (1989) suggest that the earlier parents become aware of a developmental problem, the better, since the process of redefining as disabled a child previously defined as normal is very difficult. This position assumes that awareness of delay is accompanied by a diagnosis, and that a convincing diagnosis, no matter how bleak, may reassure parents who have begun to question their competence as caregivers due to the developmental delays of their child (Featherstone, 1980). The earlier a family receives a diagnosis in this view, the earlier intervention can begin, and the less likely it is that the diagnosis will have a deleterious effect on parent–child interaction.

There is no question that a number of benefits of early intervention have been documented. For instance, children in early intervention spend fewer years in special education (Garland, Stone, Swanson, & Woodruff, 1981), and the special education services they require are less intense than those required by children who never get it. There are other associations between early intervention and somewhat better developmental and educational outlooks for children (Moxley-Haegert & Serbin, 1983; Shonkoff & Hauser-Cram, 1987; Shonkoff, Hauser-Cram, Krauss, & Upshur, 1988; Weiss, 1981). Thus, there are certainly reasons to encourage early recognition of delays, in cases in which such interventions would substantially increase the child's and family's ability to survive, function, and adapt.

Other studies in the early intervention and special education fields, however, suggest that for some children with developmental delays, earlier recognition does not lead to normal cognitive scores later on (Bernheimer & Keogh, 1988). The great majority of such children end up in special education in any event (88% in our sample, for instance) (Bernheimer, Keogh, & Coots, 1993). Hence, although early recognition and intervention clearly have considerable value for many children and families, they are not likely to lead to a normal developmental status later on for most children. Further, for some kinds of delays, it may not matter whether the benefits of intervention begin at, say, age 3 months or 18 months for the same ultimate benefits to accrue later on for the child and family. These data are congruent with another view of development in infancy and early childhood: that normative cultural models and family adaptations that go with these models are themselves protective of children, even if it is later recognized that the child has a delay.

If our evolved normative cultural models can have this protective use for parents, then early recognition, particularly when associated with early labeling of the child as delayed, may lead to less than optimal actions and attitudes on the parents' part. Early recognition can alter what would have been parents' normal family routines of everyday life with their child and change their otherwise implicit cultural models, schemata, and scripts for parenting. Without early recognition, the child would be nested within the larger family system, and the family's resources and energy would be spread across all members and perhaps other kin as well, thereby benefiting the wider family system within which the young child is embedded. Parents' everyday routines, absent any recognition of delays, presumably would not involve more than the normal, expectable stress and struggle involved in establishing and sustaining the family routine of life. Nor would there be any of the possible stigma that might attach to the child or family. The costs of early interventions for families might be greater than the benefits *if* there is no evidence that interventions would substantively increase the child's and family's abilities to function and adapt in their communities, and if there is an absence of compelling medical/physical reasons to intervene early. Early recognition could in such situations produce more problems for families and children than solutions, as long as recognition eventually occurred at a later time appropriate for that child and family.

Ecocultural Theory, Family Adaptation, and Age of Recognition

Our interest in the importance of cultural models, the ecocultural circumstances of families, and their effects on family adaptation to children with delays is based on more than 8 years of longitudinal studies of 102 Euro-American families and children in the Los Angeles, California area participating in Project Child (Weisner, 1984; Gallimore, Weisner, Kaufman, & Bernheimer, 1989; Gallimore, Weisner, Guthrie, Bernheimer, & Nihira, 1993; Nihira, Weisner, & Bernheimer, 1994). Project child focuses on families with a young child who exhibits developmental delays of unknown or uncertain cause (Bernheimer & Keogh, 1982, 1988). Delays can occur in speech, motor, cognitive, behavioral, or socioemotional behavioral domains. Studies of family adaptation processes in these families in fact have found that even after concerns appear and delays are recognized, families select and implement changes and new practices drawn from the same cultural repertoire of family practices that is found generally in Euro-American culture (Gallimore, Weisner, Kaufman, & Bernheimer, 1989). This repertoire seems to be similarly available to parents regardless of the age of recognition of the delay. Of course, substantial changes in family adaptation also occur due to having a child with delays, although these changes seldom involve an entirely new repertoire (Gallimore et al., 1989; Gallimore et al., 1993; Weisner, 1993). It seems that most families with children with delays alter neither their basic cultural model of parenting and development nor their repertoire of cultural practices. Rather, changes are usually specific to the situations of their child and family. The proactive change efforts families make to alter their everyday routines we call family accommodation.

This adaptive task of accommodation occurs in a local cultural ecology (Weisner, 1984, 1993; Gallimore et al., 1989; Keogh & Weisner, 1993). Ecocultural theory proposes that the adaptive problem faced by families with children with delays is the same as that faced by all families: *constructing and sustaining a daily routine of life that has meaning for culture members, and that fits with the competencies of available members of the family and community*. Cultural models provide families with powerful, socially and historically inherited tools to assist in this adaptive task in a local ecocultural niche. The construction and maintenance of a meaningful daily routine is an adaptive problem that challenges all families, whether or not they have a child with developmental delays. "Sustaining" a daily routine means adapting it to a local ecology and the family resource base. That is, it refers to survival, work, and wealth. To sustain a routine means dealing with the resources and constraints available and perceived in the world. It requires an assessment of class, gender, and power and the physical and geographic ecology surrounding the family and community. A "meaningful" routine is one that has moral and cultural significance and value for family members. It is also a routine of life that is interpretable within some shared cultural model in a community. The "competencies" of family members are defined by such maturational and cultural indicators as age, gender, temperament, kinship status, cultural beliefs about competencies and status, the developmental status of children, and many others. Competencies include those that emerge as a part of a child's culturally defined developmental career, as well as those individually inherited capacities afforded by genetic inheritance. Competencies within a developmental period such as infancy and early childhood can be defined either as a maturational, biological period in the life course or as a "stage" defined within a particular cultural tradition (Harkness et al., 1992, p. 177). In either case, however, these require responses by the family.

Ecocultural theory draws on anthropological and cross-cultural human development research (Whiting, 1976, 1980; Whiting & Edwards, 1988; Munroe, Munroe, & Whiting, 1981; LeVine, 1977; Nerlove & Snipper, 1981; Super & Harkness, 1980, 1986; Weisner & Gallimore, 1985; Weisner, Gallimore, & Jordan, 1988; Whiting & Whiting, 1975). The focus on cultural context, parental goals and family adaptation, the daily routine, and behavior settings–and their power to shape interaction and cognition–comes from this research tradition. The ecocultural model also draws on sociocultural and activity theory and research (e.g., Ochs, 1988; Vygotsky, 1978; Cole, 1985; Rogoff, 1982, 1990; Tharp & Gallimore, 1988; Wertsch, 1985). This work emphasizes the socially constructed nature of cognition and mind, as well as the role of activities and practices as the constitutive elements of the daily routine producing developmentally sensitive interactions.

Ecocultural theory treats families as proactive agents, not hapless victims of implacable social and economic forces. Families do not merely "have" an ecology and a daily routine around them; they also actively create their family ecology and routine (Weisner, 1986). The notion of "constructing" a routine reminds us that families shape, as well as are shaped by, the social world around them as they create their routines. It also emphasizes, of course, the power of cultural models, because these models are tools parents use to construct their routines. Ecocultural theory proposes that cultural models are powerful tools for adaptation, but only insofar as they can be found instantiated somewhere in the child's and family's everyday routine. From the perspective of ecocultural theory, a child's participation in his or her routine, everyday family activities is the preeminent experience shaping the child's development. The construction of the daily routine by families provides these activities for children.

The cultural place and daily routine are certainly not the only important influences on child development and family adaptation, however. Ecocultural theory requires a multidetermined approach to the course of developmental delay. Cultural models and the age of recognition have their effects within a multivariate set of causes. With regard to the *relative* importance of cultural models particularly, the following remark is *apropos*:

> As most anthropologists in moments of intellectual sobriety recognize, action, the self, emotion, etc., are influenced by many things besides culture—the way the human body is constructed, the way the brain works, social factors of many kinds, economic considerations, individual interests, etc. To trace out the process by which culture influences action requires a theoretical multi-causal vocabulary which can encompass variation and similarity. . . . (D'Andrade, 1992, p. 41)

Parents' Cultural Models and Adaptive Responses to Children with Delays: A Prospective Naturalistic Longitudinal Study of the Effects of Differing Ages of Recognition

Our studies in Project Child show that parents' cultural models are absolutely critical to family adaptation. Parents do implement a common cultural repertoire of practices and beliefs in adapting to their child with delays. For instance, we studied the influence of religious commitment—belief, formal affiliation, prayer, attendance at a church or temple—on family accommodation to children with delays (Weisner, Beizer, & Stolze, 1991). The more religious parents had a clearer sense of the meaning of why they had a delayed child and reported a greater peace of mind about what they were trying to do with regard to accommodations, professional involvements, supports, and so forth. But these families did not in fact have more support as measured by independent questionnaire and interview data. Their children were not easier to handle according to other fieldwork data, nor did their children have higher developmental assessments according to a completely independent testing assessment. Nor did these families have more professional involvements or more income. It was their construction of the meaning of their child's condition that gave them a greater sense that they did have many of these things in their life.

We also examined the parents' beliefs regarding the roles of siblings (Weisner, 1993). Here again, parents' cultural models of sibling's roles clearly influenced their practices. When the child with delays was age 3, parents were concerned about "equal treatment" of siblings and giving "attention" to siblings; siblings were also used as a normative developmental reference standard. By age 6, parents were more concerned about providing meaningful activities for their family as a unit and handling behavior management problems. Family adaptation and goals relating to interdependence increased, whereas concerns over equal treatment and normative development declined.

Cultural models of "careerism" also influenced parents' adaptations. Mothers' goals of having a career, rather than "just having a job" or being a homemaker, led to extensive accommodation activities by families when children were age 3—an effect stronger than that of socioeconomic status itself (Gallimore et al., 1993).

Finally, we also have found that it is the parent's perceptions of the child's impact on the family daily routine—the child's "hassle" and social and physical disruptiveness—that matters most in terms of patterns of family adaptation. "Hassle" is a term we borrowed after hearing it used by a number of our parents. It describes the parents' and other family members' experience of managing the daily routine with a sometimes difficult and disruptive child. This is relevant to our more general argument regarding the importance of cultural models for family adaptation because parents' beliefs about hassle are more strongly associated with family adaptation than standardized developmental test scores for the children.

Because differences in parents' cultural models clearly do matter for family adaptation to delay, would the age at which parents recognized the possibility of delay influence family adaptation and cultural models as well? Would children with later-recognized delays have similar developmental outcomes, and would their patterns of family adaptation, ecocultural circumstances, beliefs about development, and patterns of interaction with their child be similar to those of children recognized earlier? To explore these questions, we required a prospective, naturalistic, longitudinal design such as Project Child's, in order to compare families in which parents' initial age of recognition differed.

An ideal design, however, would randomly assign children with similar delays recognized at different ages to different families, perhaps first controlling for gender, socioeconomic status, or other features. Such a design, of course, is ethically and practically impossible. Hence, of necessity, the kind of delay the child has is confounded with the age of recognition and the family's response. For instance, children born prematurely, with medical problems at birth or in the early months, immediately were of concern to parents and physicians and others, and so had ages of recognition beginning at birth or very soon thereafter. Children not born prematurely, or with more subtle cognitive, speech or motoric delays, had later ages of recognition. These children varied in age of recognition across a three-year age range. This group of children not recognized right around birth provides a rough (albeit not the ideal) kind of natural experiment. These children grew up for varying lengths of time in families in which their parents had a normative cultural model of parenting and development for their child. Given this variation in age of recognition, did subsequent patterns of family adaptation, or child status, differ due to the age at which parents developed their recognition of delay?

Sample[1]

Each family in Project Child has a child with delay. "Developmental delay" is a term of relatively recent vintage and lacks definitional specificity (Bernheimer & Keogh, 1986). The term is essentially a nonspecific "clinical" one with less ominous overtones for the future than "retarded." There is much less information about the developmental course of these children as compared to children with other developmental disabilities (e.g., Down Syndrome and cerebral palsy). Children with developmental delays of uncertain etiology comprise the majority of school-age children with "mental retardation." The longitudinal data from Project Child indicate that whereas some children with early delays "catch up," the majority continue to lag behind age norms on standardized tests of development and cognition, and the majority are placed in special education classes once they enter school (Bernheimer, Keogh, & Coots, 1993).

Each family in our cohort has a child who had been judged to be "developmentally delayed" by a professional or an agency by the age of 3 or earlier. Children were excluded from the sample if they were known to have chromosomal abnormalities and/or genetic conditions associated with mental retardation, or if the delay was associated with known prenatal drug or alcohol usage or postnatal neglect or abuse. Hence, this group of children does not necessarily have a single clear "diagnosis" and known etiology; their delays can be quite ambiguous and uncertain. Unlike parents of children with Down syndrome, cerebral palsy, or autism, parents of children with developmental delay have no books or parent groups to turn to for specific information and support. Thus there is no preexisting specific set of beliefs and practices already set down, socially modeled, and available to these parents from which to directly model their own changing beliefs and practices. Given our interest in understanding a wide range of family adaptations, this seemed an appropriate population from which to draw a sample.

One hundred and three children in 102 families were recruited into our cohort. Seventy-three different agencies in the greater Los Angeles metropolitan area assisted in the assembly of the cohort. Public schools and private intervention programs constituted two-thirds of the

cooperating agencies. Only 5% of an original pool of 313 children was not included due to self-selection (the parents declined to participate, or the agency "decided" the parents would not be interested). All the remaining cases initially mentioned or referred that did not eventually participate in the study did not participate because they did not meet our screening criteria. This suggests that selection bias is present in the final cohort, but at an acceptable level of 5%.

At entry, the mean child chronological age was 41.8 months (*SD* = 6.2; range = 32 to 55). The mean Gesell developmental quotient (DQ) was 72.32 (*SD* = 15.97; range = 38 to 117). All but 18 of the children had DQs below 90, and all 103 had significant delays in one or more areas (motor, speech, behavior, or cognition) in spite of some relatively high DQs; 58.3% of the children were boys. At age 6–7, the mean Stanford–Binet IQ was 71.40 (*SD*=18.26; range = 24 to 114). The cognitive–developmental scores were remarkably stable (Bernheimer et al., 1993) with a correlation from entry to the second data collection period 3 years later of .69, although, of course, individual children had moved up or down.

The 102 families in our study cohort consisted predominantly of married couples in their thirties in middle-class circumstances; however, there is a wide range of variation and heterogeneity surrounding this central tendency. For example, 12% were mothers living independently (due to divorce, separation, widowhood, or never having married) or in a variety of other residential and marital circumstances (e.g., living with parents). Altogether, 19.4% of the children were in a single-parent household (mother, father, grandmother, or other relative). About 25% of the mothers were employed full-time when the children were age 3–4. The mean family socioeconomic level, assessed with the Hollingshead, was 44.7 ("middle-middle-class"), with a range from below poverty level in a number of families to a family with income over $150,000 a year. About 25% described practices and beliefs that indicated strong religious commitment to Protestant, Catholic, and Jewish traditions, and about 25% indicated little or no such commitment, with those families in between reporting moderate levels of religious beliefs and practice.

Methods

Interviews

All families were visited by a trained interviewer when the developmentally delayed child was ages 3–4 and 6–7. The interviewer conducted semistructured interviews with the parents; each interview was tape recorded and lasted 2 to 3 hours. Interviewers were provided both open-ended and specific questions and topics to be covered regarding ecocultural constraints and opportunities, accommodation to the delayed child, child behavioral problems and hassles encountered in raising the child, and family functioning and adaptation. Interviewers were trained to use systematic probes to ensure clarity and comparability of data obtained from all families and to ensure that there would not be missing information on any specific topic at the conclusion of the interview and family visit. The interview materials were then scored for content, including parents' reports regarding their developmental beliefs and the extent of their active efforts to change their family practices and daily routine due to the delayed child. Most parents spontaneously brought up the process by which they became concerned about their child's development. We also probed systematically for diagnoses, length of time the process took, and professional contacts.

Reliability of Interview Scoring

Coders reviewed all the tape-recorded interview and written field note materials, and scored each family using a coding manual. Reliability was established by independent, "blind" rating of 12.5% of the cases ($N = 13$). Each case was coded by at least two blind raters, trained by one of the authors (T.S.W.). The raters were blind to the research questions and had no knowledge of the specific purposes of their task. No items used in research studies had reliability under 70% agreement; overall reliability averaged 82%.

Family and Child Assessment Data

Information obtained from formal measures, standardized scales, and independently rated tasks was used in statistical analyses of the influence of the age of recognition. This information included several measures.

Interactional Measures

We used measures developed by Levine, Schneider, Haney, and Hall (1987), who examined mother–child interaction by coding behaviors during a book-sharing task when the child was between 3 and 4 years of age (Hecht, Levine, & Mastergeorge, 1993). Variables included number of mothers' directives, number of mothers' requests for responses from the child, number of child responses, and total numbers of mother and child utterances. These measures were used in order to investigate potential differences in mother–child interaction style relating to age of first concern. The interactional measures were done by independent raters using videotape analyses. These researchers were entirely unaware of the other measures being used to explore the effects of age of recognition.

Children's Assessments

To obtain a standardized measure of child status, each child was tested by a trained psychologist using the Gesell (age 3–4) or Stanford–Binet (age 6–7) and Vineland. These developmental assessments were obtained by independent testers. These testers were entirely unaware of the other measures being used in the study and did not know the parents' age of recognition.

Family Assessments

Three formal measures of family and child functioning were used. These measures included the Family Environment Scale (FES; Moos, Insel, & Humphrey, 1974), the Family Adaptability and Cohesion Evaluation Scale (FACES; Olson, Parnter, & Lavee, 1985), and the Home Observation for Measurement of the Environment (HOME; Caldwell & Bradley, 1983). The FES and FACES were administered to parents in a mailout questionnaire when children were age 3–4 and again at age 6–7.[2] The HOME was completed by fieldworkers at both age points.

Dimensions of Family Adaptation and Parental Beliefs

Dimensions used in our analyses cover a wide range of information regarding families' circumstances, beliefs, and actions which may be influenced by age of recognition. The dimensions included the following measures.

Family Accommodation

Our measures of family accommodation to the child with delays have been presented in Gallimore et al. (1993). We used a set of 12 domains likely to be important in family accommodation (described in Gallimore et al., 1989) and scored each family for the amount of accommodation activity in that domain on a 9-point scale. Two domains were ultimately dropped, one due to low variance and one due to low item reliability.

A higher accommodation score in a given domain indicates a greater amount of activity in that domain related to the delayed child.[3]

Ecocultural Factors

Details of the construction of the 12 ecocultural factors have been reported in Nihira et al. (1994). Briefly, 127 items from our interview and questionnaires were subjected to factor analyses using the theoretical model derived from ecocultural theory. The maximum likelihood factor extraction and varimax rotation yielded a total of 12 statistically significant and interpretable factors, which we used in our analysis of the effects of age of recognition regarding delay on family adaptation.[4]

Parents' Developmental Beliefs

We discussed seven beliefs about general child development with parents. The beliefs we asked parents to discuss included the importance of early experiences, the salience of parental versus societal responsibility for the child's development, whether or not the family should adjust to the child's needs, the significance of environmental versus genetic influences; the importance of integration into the nonhandicapped world, whether the child should or should not be independent as an adult, feelings about the opportunity versus burden of childrearing, and whether or not religion is a positive force in coping with a handicapped child. We also asked about what parents thought their child's future developmental course would be and whether the child would be in regular educational classes or whether the child would be in some kind of special educational program. General ratings of parents' expectations of their child's educational future were collapsed into three categories at age 3 (Parents are uncertain, Child will be mainstreamed/integrated but may still have some problems, and Child will outgrow problems) and four categories at age 6 (Parents are uncertain, Child will be mainstreamed/integrated but may still have some problems, Child will outgrow problems, and Parents consider that their child is developing normally).

Child Status Groups

The children were grouped into one of four categories, depending on the type of problems and the degree of impact on the family's daily routine: high medical problems/high impact on the daily routine; high behavioral problems/high impact; low(mild) developmental delay/low impact; and high (significant) developmental delay/low impact (Bernheimer, Gallimore, & Kaufman, 1993). These groups were unrelated to both children's test scores and to family socioeconomic status.

How Does Recognition of Delay Develop in Parents' Experience?: Five Age Periods of Recognition

We defined an *initial* concern as that point at which the concerns appeared to parents as persistent rather than transient and they were unable to quickly dismiss their initial worries. Concern may have been expressed first by parents or professionals. However, if professionals expressed concerns first, parents had to express agreement with concerns (either explicitly or indirectly by following professional recommendations). For example, after a pediatrician tells a parent that the child is developmentally delayed, parents indicate that "that's when we recognized that she was behind in certain areas."

If first concerns were biomedical, the problems appeared to parents as life-threatening or serious and ongoing in nature and involving major surgery, extended hospital stays, long-term medication, and/or home treatment (e.g., apnea monitors, oxygen, shunt implantation, heart or kidney surgery, and seizure activity). Medical problems that resolved or were seen as transient or normal (e.g., a "cold") were not included. Biomedical problems trigger recognition of a delay right at birth or before (although later speech or behavioral concerns may not develop), motor problems during the first year and communication and behavioral concerns in the second and third years. However, many children show several kinds of delays, and parents' adaptations, in most cases, are subsequently based on multiple problems.

If first concerns were nonbiomedical, parents said that their child did not appear to be developing as expected in some or all areas (motor skills, language skills, social skills). Less specific comments by parents, for instance, "we knew something was wrong," also seemed to be evidence of initial concern at that age.

Recognition and subsequent labels, diagnosis, and validation by others occurred slowly, in stages, and through negotiation by all parties. Being social constructions, concern, recognition, diagnosis, and validation shift and change in the minds of parents. Hence, only a few families identified a single point at which the parents came to recognize that their child was delayed. Further, parents' recognition of delays involved their prior cultural model regarding normative development, as well as their own expectations regarding goals for their child. Recognition as a process often involved matching this prior cultural model and particular developmental beliefs to their child's development, as some of our quotes from parents illustrate. Consequently, we did not usually find a single, exact age of recognition measured in months or days.

Instead, families were grouped into five age ranges as follows: Recognition at birth; Recognition at or by year 1; Recognition at or by year 2; Recognition at or by year 3; and finally a group with No parental recognition, even though there were professional concerns and diagnoses.

In the Recognition at birth group ($N = 29$), many of the children were born prematurely or were born with medical complications. Although most families became concerned because of something they were told by professionals (usually physicians), some families suspected on their own that "something was wrong." The group included children who were given a poor prognosis for survival ("the doctors told us he might not make it"), children with extremely negative developmental prognoses (a doctor saying "the child will be a vegetable"), and children born with hydrocephaly or heart problems requiring surgery. Other children in this group included those whose parents had general concerns about their prematurity and those whose parents had an immediate feeling that "something is wrong" ("she seemed funny looking").

In the group with Recognition at or by year 1 ($N = 40$) most infants had delayed or atypical motor development ("he did funny creeping"). Several of these parents reported comparing their child's development unfavorably with that of an older child, usually a sibling or a relative or friend's child ("the other baby was active, kicking the arms, moving the head, and facial movements and stuff and Mark just lay there, not trying to pull his arms up, but just lay there"). In other cases, concerns were recognized after a discrete event (e.g., the child was given a routine DPT shot, followed by seizures). There were also general developmental concerns represented in this group ("the tracking [visual] thing was one of the things we noticed she wasn't doing"). Although some of these parents became concerned within a couple of months of birth (and so were quite similar to the Recognition at birth group), others raised their child as a normal infant right up to the end of the first year.

In the group with Recognition at or by year 2 ($N = 20$) concerns were focused primarily on atypical or delayed communication, with a smaller subset concerned about behavioral characteristics ("we thought he was deaf because he didn't acknowledge anything . . . he was just like in his own little world"). Again, many parents began to recognize delays because of comparisons with other children ("I knew I had several friends who had children within a month of Danny and they were just going in leaps and bounds in language and . . . he wasn't"). All the parents in this group raised their infants without any recognition regarding delays well into the second year of life, and many only developed recognition of delays later in the toddler stage.

Whereas the majority of parents recognized concerns by 24 months, there were two remaining groups. The Recognition at or by year 3 ($N = 4$) group included families who were not concerned until a professional suggested there might be a problem. As with the year 2 group, concerns tended to be communicative or behavioral ("[the doctor] . . . was starting to compare my son with other average kids . . . he said he [should] be able to phrase stuff"). The final group, No recognition of delay ($N = 5$) includes a group of our parents who expressed no developmental concerns regarding their children, although in all these cases, the possibility of developmental problems had been raised by others. In some cases these professional concerns resulted from a premature birth; in other cases professionals noticed and commented on developmental delays or differences. The parents, however, were confident that their child would catch up, or they did not agree with the professional assessments.

Does Age of First Recognition Influence Subsequent Child Developmental Status and Family Adaptation?

Using these five age-of-recognition groups we looked for possible variance due to the different ages of recognition, in mother-child interactions, family home environment, family accommodations and ecocultural resources and constraints, parental beliefs about development, and the child's developmental status.

Mother-Child Interactions

Analysis of variance revealed no significant differences among the five recognition groups on the ways mothers interacted with their children on the reading task for any of the five interactional measures scored from the videotapes.[5] These results are particularly important, because they represent completely independent data on the children and families. The raters of videotapes were unaware of the age of recognition categories we subsequently developed and were not involved in the interviews with families.

However, there were significant associations between age of recognition and developmental test scores at child age 3-4 and 6-7 years (Table 21.1). Children with concerns at birth or within the first year had lower Gesell or Stanford-Binet scores, with the order of magnitude of the difference being from a half to a full standard deviation, due

Table 21.1. Developmental Test Scores at Ages 3-4 and 6-7 by Age of First Concern

	Concern at birth	Concern 1-12 mos.	Concern 13-24 mos.	Concern 24 mos./none	*F*
Gessell DQ	68.26*a*	69.37*a*	82.58*b*	76.78	4.12^{*}
Age 3-4	(14.5)	(16.2)	(15.0)	(16.2)	
Stanford-Binet IQ	68.51	68.09	81.29	86.83	4.09^{*}
Age 6-7	(14.3)	(17.5)	(17.6)	(23.1)	

Note. Means with different subscripts are significantly different.
$^{*}p < .01$.

primarily to their biomedical problems and prematurity complications. However, most pair-wise comparisons between means within each child age were not statistically significant. Furthermore, DQ scores were not related to other measures of child functioning: the DQ scores at age 3-4 were unrelated to the child's "hassle" level ($r = -.05$), for example. By age 6-7, hassle was statistically associated with IQ ($r = -.33$), however, because school entry decisions evidently made such scores more salient for parents.

Home Environment

We compared the recognition groups by scores on several of our standard measures of the quality of the family home environment. We also looked at our own judgments of the families' adaptation over time, which were constructed by fieldworkers from qualitative information regarding family strengths and vulnerabilities. Analyses of variance again indicated that none of these measures were directly related to age of first recognition of delays. No particular group of families showed significant differences in the ways they arranged their home environments or in the specific adaptive strengths they possessed as families, due to the age of recognition.

Family Accommodation and Ecocultural Resources and Constraints

Next, we looked for associations between age of recognition and family resources/constraints and their use and the activities families instituted in their daily routines to accommodate to the delayed child. Specifically, we wanted to know whether parents who were concerned at earlier ages made more, fewer, or different changes in their daily routines (our Accommodation Scales) or made differential use of resources (our Ecocultural Scale dimensions) compared to parents whose concerns originated later in their children's lives.

Results of analyses of variance indicated no statistically significant differences among the five recognition groups on any accommodation domains when children were ages 6-7 or 3-4 (Figure 21.1 illustrates the age 6-7 data). Parents whose recognition that they had a delayed child began very early in the child's life did *not* adjust the daily routines of their families significantly more or less, or in a different pattern, than parents whose recognition did not arise until the child's second or third year. However, Figure 21.1 shows clearly that there is a trend for accommodation activities by parents (i.e., adaptive efforts made due to their child with delays) to become proportionally less the later the age of recognition. Moderate accommodation activity by parents steadily declines as age of recognition increases. High activity, however, declines less consistently.

Two significant effects were noted for our ecocultural measures of resources and constraints, however. For Socioeconomic Status and Use and Availability of Services families who expressed concern by the age of 12 months (i.e., earlier in the child's life) received higher scores than did families who did not express concern ($F[4,86] = 2.5, p < .05$; $F[4,95] = 4.43, p < .01$, respectively) until later. Families who showed concern at earlier ages tended to be from higher socioeconomic levels, and made greater use of services for their delayed children than did families who did not express concern about their delayed children as early. It is of interest to note that the 10 other domains of ecocultural resources and constraints were *not* associated with age of recognition.

Parental Beliefs about Development

Next we looked for possible associations between parents' beliefs, attitudes, and expectations about their delayed children on one hand and the age of first recognition on the other. We assessed (1) cultural models reflected in parent's general beliefs about child development (the seven beliefs described in the methods section) and (2) specific parental beliefs and attitudes regarding their own child's delayed status, as well as a general rating of how optimistic parents were about their child's future at child ages 3-4 and 6-7 years, specific beliefs about whether children would "outgrow" their handicaps, and whether their child would remain in special education throughout their school careers (rated at child age 6-7 years only).

Analyses of variance indicated no significant relations between beliefs about child development in general, and age of recognition. We

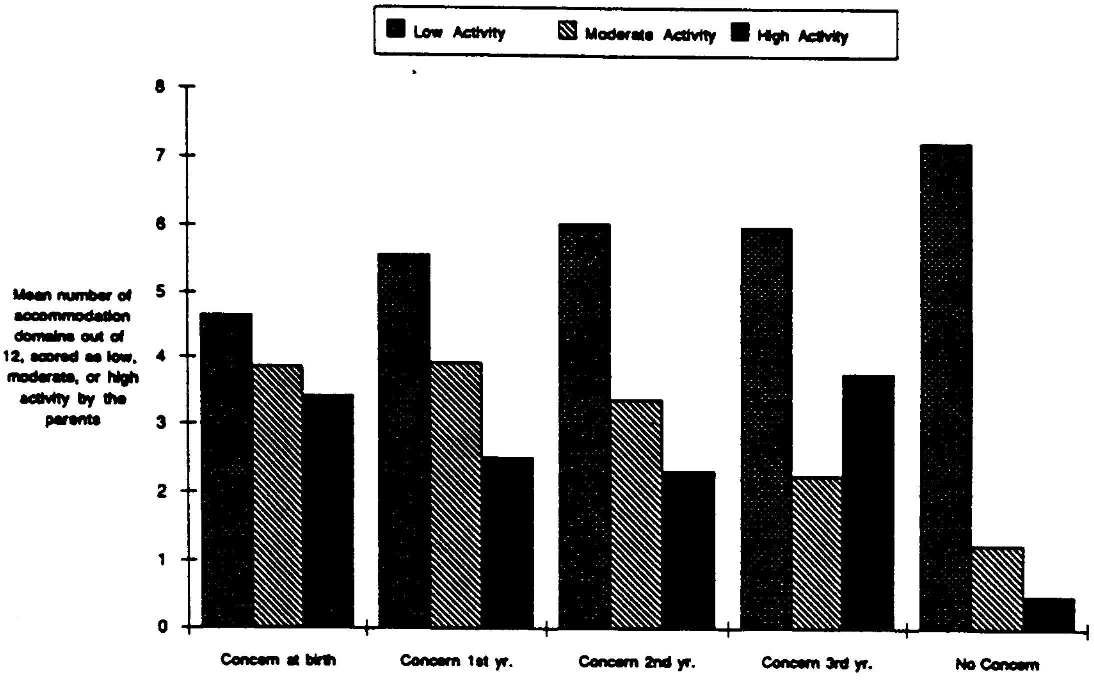
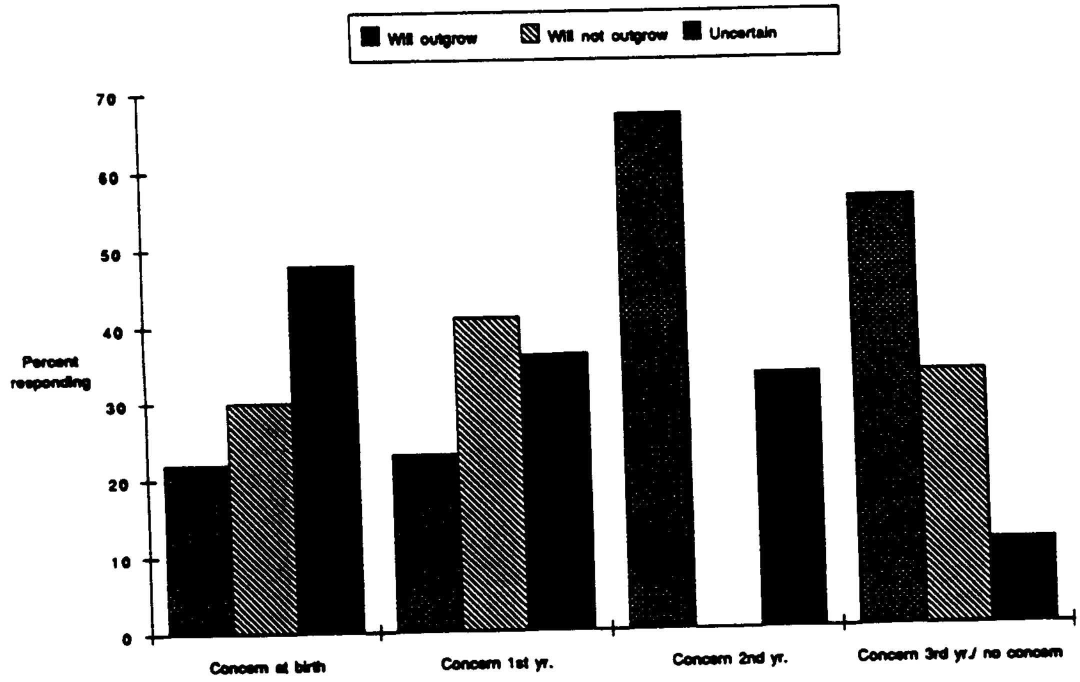
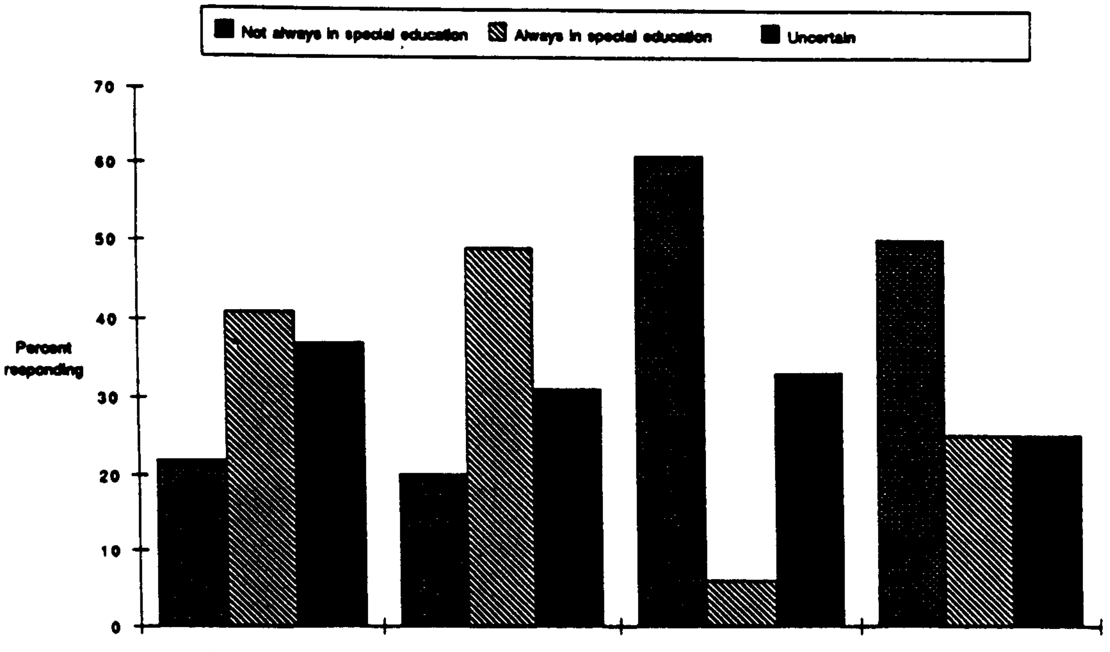


FIGURE 21.1. Amount of accomodation activity at child age 6-7 by age of first concern.



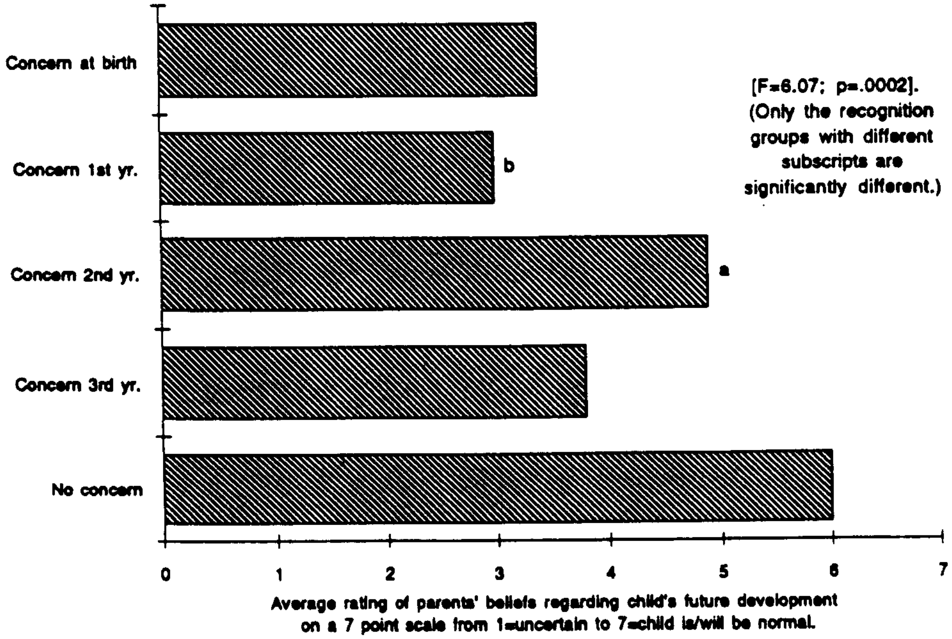
Note. X2=19.09**, n=93

FIGURE 21.2. Parents' beliefs about child's future development by age of first concern about the child.



Note. X2=15.30*, n=92

FIGURE 21.3. Parents' beliefs about use of special education by age of first concern about the child.



[F=6.07; p=.0002].
(Only the recognition groups with different subscripts are significantly different.)

FIGURE 21.4. Average parent rating of child's future development at child age 6-7 by age of first concern.

believe this to be an important result: It suggests that these parents' cultural models regarding normal development have not significantly shifted due to having a child with delays, regardless of the age of recognition for that child and regardless of the nature and severity of the delay.

However, a number of significant results were noted for beliefs *related specifically to their child with delays*. Chi-square analyses indicated significant differences in parent beliefs about outgrowing handicaps and staying in special education which were related to the age of recognition. Parents whose concerns did not originate until the child's second year of life or later were significantly more likely to believe that their child *would* outgrow his or her problem or handicap ($\chi^2 = 19.1$, $p < .01$) and be placed in regular education ($\chi^2 = 15.3$, $p < .05$) than were parents whose recognition of the child's delays originated at birth or in the first year of life (Figures 21.2 and 21.3).

Analyses of variance also showed significant differences between the recognition groups for parents' ratings of their child's future development, both at child age 3-4 years and at 6-7 years (Figure 21.4). Parents who did not become concerned until their child's second year gave more positive, optimistic ratings regarding their child's future at later child ages than did parents who became concerned during their child's first year (at child age 3: $F = 4.43$, $p < .01$; at child age 6: $F = 6.07$, $p < .001$).

Developmental Status

Parental beliefs and age of recognition are of course also influenced by the nature of the child's delay: The child's medical status, after all, is confounded with age of recognition, particularly for any child with birth complications or more severe and visible delays. To compare children's developmental status and parents' beliefs, we grouped families according to the severity of the child's developmental and/or medical disabilities. There was indeed a pattern of associations between the impact of the child's problem and the parent's rating of the child's future. Parents with a child whose delays were biomedically based and had a high impact on the family tended to rate their children *less* optimistically. However, close to half (46%) of even these highly impacted parents felt at child age 3 that their children *would* be mainstreamed, integrated in school, or outgrow their problems. This number decreased at child age 6, to 33%, probably reflecting some degree of reaction to experience with professionals and schools. Similarly for the *low*-impact groups, one-quarter of the parents still felt *uncertain* about their child's future development, both at age 3 and at age 6.

Furthermore, parents' developmental expectations clearly seemed influenced by much more than DQ or IQ alone. Recall from Table 21.1 that there were only scattered associations between DQ or IQ scores and the age of recognition. Although the *F*'s are significant at both ages, small differences in these test scores were unlikely to be noticeable in everyday interactions. Furthermore, some parents were not even aware of these scores, and there were children with test scores even a half standard deviation below or above what would be expected who nonetheless felt their children would or would not outgrow problems. For instance, there were some parents with children with DQ or IQ scores substantially lower (or higher) than would be expected based on the mean scores for their age of recognition group who nonetheless felt their children would outgrow their delays (or, conversely, thought their child would always be in special education) even though their child's test score was lower (or higher) than expected.

Finally, a recent study conducted by Keogh and Bernheimer (1994) supports the relatively weak associations between age of recognition, family adaptations, and standardized DQ or IQ tests (except for those children recognized at birth). They compared cognitive and behavioral characteristics of two etiology groups in the Project Child sample at ages 3-4 and 6-7. The first group consisted of 28 children with clear evidence of perinatal or neonatal stress. The second sample was composed of 41 children with no histories of early biological stress—the children in our study with truly "unknown" etiology. *There were no significant differences between the two etiology groups on DQ or IQ measures of cognitive development.* Of course, by definition there was substantial overlap between the 28 children in the perinatal or neonatal etiology group and our Recognition at birth group. However, the 41 children with no etiological histories of early biological stress were spread across all four of our later recognition groups (i.e., all the groups other than our Recognition at birth group). These findings suggest that DQ or IQ measures, although certainly not entirely irrelevant to age of recognition, are unlikely to represent a major confounding influence on our findings regarding relationships between age of recognition, parental beliefs, and family adaptation.

Although the nature of the child's medical conditions influenced both the age of recognition and parents' beliefs about their child's developmental future, much more was involved. Parents varied widely in their developmental beliefs within each age-of-recognition category, for instance. Age of recognition influenced beliefs net of biomedical severity, as confirmed by our qualitative data and case materials. Parents' age of recognition, family resources and constraints, and cultural models of development and parenting appear to play complementary roles and interact in shaping parents beliefs and new cultural models of development of their child with delays.

Conclusion: Family Adaptation, Cultural Models, and Age of Recognition of Delays

This pattern of findings supports the view that a young child's everyday participation in his or her family's daily routine can be protective even when, later on, the child will be identified as delayed in some way. Our study found, for instance, that ecocultural circumstances, parents' beliefs about their child's delay, and the nature of the child's delay were stronger influences on family adaptation than was age of recognition. A recognition, or "labeled" identification, of a child as potentially or actually delayed is a deeply powerful message for parents. But the age at which this occurs during the first 3 years of life, excluding biomedical concerns and conditions of family pathology or abuse, does not seem to matter as much as the family's overall adaptation in their daily routines. The lack of association between age of recognition on the one hand and a variety of other measures of children's development and families' adaptations is a very consistent finding. For example, a summary list of our findings on which measures of children and families were *not* associated with the five age-of-recognition groups includes: mother–child interaction in a structured book-reading situation, the family and home environment assessed using standard scales, family use of supports, resources and constraints, family accommodations in response to their child's delay, and parents' *general* beliefs about child development.

Nor had the parents in our study *replaced* a prior, standard cultural model of development with a different model once they recognized they had a child with delays. This standard model presumably operated before the parents developed a concern about their child and still is present after the recognition of delays, regardless of the age when concerns emerged. Families also used culturally available adaptive strategies, rather than culturally unusual ones. This suggests that the changes in parents' more specific developmental beliefs regarding their delayed child that did occur were focused primarily on their delayed child's particular developmental course, not on beliefs about development generally.

There were some relationships between age of recognition and certain parental beliefs or concerns, however. Particularly for those parents with recognition at birth or soon thereafter, age of recognition and the nature of the delay are confounded (these children have more immediate and severe biomedical and related developmental problems, for instance), and such circumstances did influence subsequent beliefs and adaptations although they were certainly not determinative. Our findings also suggest that parents with later ages of recognition were more likely to believe that their child will outgrow some problems and be in regular classes. In general, however, these associations between specific developmental beliefs about one's child on the one hand and age of recognition on the other were the exceptions.

All the children in our study *had* been recognized as delayed or possibly delayed by ages 3 to 4, and most were receiving some sort of professional assistance. Hence, when we talk about correlates of earlier or later age of recognition, this should be understood within the context of our sample—a group of children who all had eventually been identified by age 3 to 4. We are not suggesting, obviously, that if these children had never been recognized, this nonrecognition would have made no difference to the child's development and to the family's cultural beliefs and adaptive responses. To the contrary, we feel certain that for the great majority of these children and families, recognition of delays was important for parents and children alike.

Whenever the age of recognition, recognition always led parents to seek some sorts of assistance, unless of course, as sometimes occurred, professionals had already initiated the first concerns. The impact of that assistance depends on its quality and availability. Our study is in the context of the *existing* levels of social investment in families and children in Los Angeles County. One might imagine a far deeper, better-funded network of comprehensive and continuous interventions, services, schools, and parental supports. If such a network existed, it might make earlier interventions more effective and, hence, earlier ages of recognition more relevant for some children. In such a situation, an earlier age of recognition might have made a difference for the children or families, but we have no way of knowing this.

More funds and personnel do not necessarily lead directly to better family adaptations and child status, however. Even if more money and people were to be available, the question would remain: What kinds of interventions would work best for these children and families? For this question as well, we believe that cultural models and ecocultural theory have much to offer. Any intervention has to diffuse into the existing everyday routines and parental cultural models present in a community. No matter how desirable interventions might be, they will not assist in family adaptation if they do not diffuse in families and communities and motivate parental action. Interventions and services have to fit into the slots in families' daily routines and fit into the goals and schemata and cultural models that motivate parents (Gallimore, Goldenberg, & Weisner, 1993).

In this respect, as in others, ecocultural research with families with children with delays has implications similar to those for all families. Cultural models assist in a challenge facing all families, whether or not they have children with delays: the families' adaptive task of organizing their everyday routine, gaining new information, and reallocating their ecocultural resources and constraints. It is this human adaptive task that cultural models assist in achieving. The role of general cultural models as well as more specific parental beliefs in this adaptive process would be a fruitful topic for new research to assist in improving the quality of life of *all* families and children.

Parents of children with delays sometimes worry that they should have recognized the possible delays in their child earlier than they in fact did. These concerns originate from the very cultural model among so many parents (and scientific model among researchers and professionals)—"the earlier and more the stimulation, the better." Our data suggest that parents and professionals did remain appropriately vigilant regarding these children's development—after all, the children in our study *were* identified by age 3. For the later-age-of-recognition groups, our data suggest that parents who developed concerns somewhat later should not worry that they became concerned "too late." For that particular subgroup of children (those without biomedical or other conditions requiring very early intervention), the age of recognition does not appear related directly to subsequent child developmental status or family adaptation. Parents of children with delays certainly have many very real concerns and difficult adaptations to make, but it appears from our prospective longitudinal data that differences in age of initial recognition for children without biomedical or related conditions necessitating specific interventions need not be one of those worries. To a measurable degree, these parents already offer protection to their children by undertaking their common cultural project of shaping a sustainable, meaningful daily routine for their families.

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Notes

1. Sample description adapted from Weisner, (1993).

2. Scores were obtained for all 18 subscales. The HOME consists of eight subscales which we used in our analyses: Learning Stimulation, Language Stimulation, Physical Environment, Warmth and Affection, Academic Stimulation, Modeling and Encouraging of Social Maturity, Variety in Experience, and Acceptance.

The FES consists of 10 dimensions of "social climate in the home":

Cohesion, Expressiveness, Conflict, Independence, Achievement Orientation, Intellectual-Cultural Orientation, Active-Recreational Orientation, Moral-Religious Emphasis, Organization, and Control

3. The 10 accommodation domains scores used in our analyses were: Family subsistence base, Services, Home/neighborhood, Domestic workload, Child-care tasks, Child peer groups, Marital roles, Instrumental/emotional support, Father/spouse role, Parent information.

4. The 12 ecocultural factors were: Socioeconomic Status, Career Orientation of Couple, Use/Availability of Services, Attempts to Structure Home Environment for Delayed Child, Family Workload Related to Delayed Child, Use and Availability of Help for Family, Use and Availability of Help within Family, Connectedness of Family, Amount and Variety of Formal/Instrumental Support for Family, Involvement of Child into Non-Handicapped Networks, Involvement of Child into Handicapped Networks, Information-Seeking from Professionals Regarding Delayed Child.

5. *F*-tests ranged from 0.41 for children's responsiveness, to 2.60 for mother's requests for verbal responses from the child; all p levels were greater than .05.

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