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Learning in Cultural Context

Family, Peers, and School

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Chapter 2

Sustainability of Daily Routines as a Family Outcome

Thomas S. Weisner, Catherine Matheson,
Jennifer Coots, and Lucinda P. Bernheimer

A mother of a nine-year-old boy says

"Monday, I do carpool duty and so I have to drive into Burbank. I pick up my [age 11] son at 1:00, then we dash over to Burbank and pick up 6 kids and they all get off at different times. Even on days that it's not my carpool day, I still have an hour and fifteen minutes drive to pick up my son. Some days it's really hectic. There are days when I have a night class, so we stop and get dinner on the way home, but that's only one day a week. Then, we do homework, I get the kids bathed and in bed. And we found a new, more appropriate school for [my daughter]. We have an impossible schedule. We had to reshuffle our whole lives. We had to give up a lot to have her go to this school, but I felt like for years we'd given up so much to take care of my son's therapy and she [the older sister] was miserable. I thought we've got to try something else. Every once in a while, I get really tired of the 2 hour drive, and then my daughter will say 'Please, I'll do anything, don't pull me from the school. I've never been happier in my life.' Well, as a result, I get up at 4:30 in the morning, and then I don't get to bed until after midnight. We probably have the worst life of all the parents in your study. We are going to die young. As far as sleep, we don't sleep. We exist. I'm lucky, because I'm kind of a night person, but we tend to get sick easily."

INTRODUCTION

The time when parents recognize their child has a developmental delay is one they never forget. In addition to dealing with the emotional consequences, parents begin to reorganize their resources, their family activities, and their goals and priorities. Parents begin to reshape their daily family routine to accommodate to their child with delays, using what resources they have, responding to the nature of their child's conditions. This is an achievement worthy of our respect and worthy of scientific inquiry.

The mother whose voice we hear in the opening quote has a 9-year-old son with ADD and pervasive developmental disorder. She does not work outside the home, due to the fact that, in addition to her son, she has 2 daughters (ages 11 and 7) with hearing impairments and mild learning disabilities. However, she recently started back to school to earn her bachelor's degree. She volunteers in her son's class as much as she can, and actively monitors all 3 children's school placements. Her desire to find the best programs for her children led to both her daughters being placed in a school district over 50 miles away from the family home. Her husband just accepted a new full-time job with a very long commute, so while he is supportive, he will be less available than before. The family is high moderate in SES, and the father's new job provides insurance coverage that they didn't have previously. Mother is always upbeat and has seemingly endless energy. However, with all that this family tries to do, their daily routine shows obvious strains, conflicts, and struggles.

We call this ongoing project of reshaping the family daily routine, sustaining a family social ecology. Our qualitative and quantitative measures of sustainability, and their associations with other measures of family ecology and environment, are the subject of this chapter. The comparative advantage of understanding and assessing sustainability is that a family's own cultural goals are central to the construct and its measurement, and that it is a holistic and contextualized assessment of family strengths. Barring substantial pathology of some kind in individuals or in family life, all families manage to sustain a routine of life of some sort. At the same time, daily routines depend on several dimensions of coherence and integration—that is, sustainability varies across families in a community, and across communities around the world. A family that has a more sustainable daily routine has a family ecology that 1) fits with available resources; 2) has meaning with respect to goals and values; 3) balances inevitable family conflicts; and 4) provides some stability and predictability for family members.

Development Along Pathways

Sustainability of family life puts developmental research and the study of learning squarely in the context of children and families engaged in activities within a cultural community. Development occurs along pathways given to us by culture and society, and actively chosen and engaged in by parents and children within some particular cultural ecology. Imagine these pathways as consisting of everyday activities (getting ready for bed, sleeping, having breakfast; going to church; sitting in classrooms; visiting relatives; playing video games; doing homework; hanging with your friends; going to the mall; dating; "partyng", watching TV). Those activities and their cultural and ecological contexts are the "stepping stones" we traverse as we move along a pathway through the day and the day's routine. These activities make up our life pathways, which we engage in each day. This activities-on-a-pathway conceptual framework is not only useful for thinking about human development; it encourages and expects the use of multiple methods. How can one conceptualize development as such a journey on a pathway consisting of activities in some specific cultural-ecological context, and imagine that we could use only one method to find out about it (Weisner, 2002; also drawn from Weisner, in press)?

A pathways framework encourages understanding what children do in their everyday activities, grasping the personal experiences of parents and children in those contexts, and knowing the cultural psychology—the shared beliefs, motives, and scripts organizing behavior and thought—of the communities the parents and children are in. Children not only actively and joyously engage in those activities, they also resist and transform them as active agents.

Children's daily engagement in these routines is an important part of child development. Communities share patterned features of daily routines and a cultural psychology, though of course there are local, familial, and individual variations of them. These are the "population-specific" patterns that shape the local pathways of life children engage:

No account of ontogeny in human adaptation could be adequate without the inclusion of the population specific patterns that establish pathways for the behavioral development of children. (LeVine et al., 1994, p. 12)

LeVine describes the socialization of children as "... the intentional design of psychologically salient environments for children's development." (LeVine, 2003, p. 1). Population-specific, shared patterns are a powerful way in which environments are designed. The sociocultural perspective situates human development in the population-specific,

intentionally-designed everyday worlds and paths through life. These provide the cultural careers (Goldschmidt, 1992) that families and societies afford us.

The developmental pathway approach to human development comes at an important time. New conceptions of development and new methods are being called for in many fields, but there are as yet few examples of findings based on those concepts and methods. Journals and research funders are looking for better ways to include mixed methods as the standard for research, rather than an occasional add-on—but are unsure how to evaluate such work if made standard. Diversity in the United States and elsewhere is increasing, demographic "majority minorities" are emerging in states throughout the country, yet ways to understand these communities are lagging behind. Schools and other institutions that support families are looking for better ways to train and assist children and their families, but are struggling to find policies that work. How can we enhance the chances for success in youth development—that is, the provision of supports and opportunities that can guide children onto successful pathways and help keep them there—unless we fully and holistically study those pathways in the first place?

A sociocultural perspective on development also offers ways to conceptualize and assess child and family outcomes missed by individualistic, non-contextual perspectives. Well-being for children, for example, can be viewed as the engagement by children and parents in everyday routines and activities, part of a life pathway of such activities, that are deemed desirable by them and their community. These kinds of engagement produce the positive psychological experiences (effectance, pleasure, attachments, flow, competence) that go along with sociocultural well-being. Empirical study of how to promote the supports and opportunities for children that contribute to successful pathways and promote more engagement in them, requires integration across the methods in the social sciences. In this chapter, for example, we use a fieldwork and interview procedure, the Ecocultural Family Interview, that taps the family daily routine of activities. The interview ensures that content specific to the community being studied is incorporated into the data (Lieber, Weisner, & Pressley, 2003; Weisner, 2002).

Sustainable Family Routines and Families with Children with Developmental Disabilities

Focusing on the family routine as a way into understanding family social ecology is not a new idea in the field of developmental delays, but it is of relatively recent vintage. Historically, research on outcomes for

families adapting to children with developmental delays featured mental health outcomes, usually of parents, or focused on stress and coping. While mental health is an important and significant outcome, too exclusive focus on mental health can lead to the notion "that a family with a child who has a disability is a family with a disability" (Glidden, 1993). A growing body of work questions this model of "expected impairment" (Boyce & Barnett, 1993), as well as the association between adapting to childhood disability and increased family maladjustment or dysfunction (Dyson, 1991; Hanson & Hanline, 1990; Keogh, Bernheimer, Gallimore, & Weisner, 1998; Sloper, Knussen, Turner, & Cunningham, 1991). Keogh, et al. (1998), among others, have pressed for consideration of other, more positive family outcomes. Response to stress and major perturbations of life through effective coping no doubt is an important family capacity, but the family ability to sustain a daily routine of life that is viable the rest of the time, surely deserves serious study and increased recognition as a complementary family strength.

Of course, effective coping as a response to various forms of stress certainly can be a way for parents to construct a supportive, protective social ecology (Baldwin, Baldwin, & Cole, 1990; Bristol, 1984; Caldwell & Bradley, 1994). Many approaches to family ecology begin with the classical model of response to crisis, and examine family ecology in terms of coping and stress (Hill, 1949; McCubbin & Patterson, 1983; Patterson 1988). Another way to measure supportive family circumstances is to index them by family income, social class, or social support scales (Cohen & Syme, 1985; Crnic, Dunst, Trivette, & Deal, 1988; Dunst & Trivette, 1990; Friedrich, & Greenberg, 1983). Family environment scales focus on interactional quality and literacy-related stimulation such as the FES (Moos & Moos, 1986), and HOME (Caldwell & Bradley, 1984). These measures index aspects of family status related to interactional quality among family members and child stimulation.

As useful and productive as these approaches have been, they have limitations. First, the structural/categorical variables, such as SES or income or ethnicity, are only proxies for the processes and activities of the family social ecology. Income level may correlate with better child outcomes, but why, and at what cost for other family members, or at what opportunity cost for pursuing other activities? Second, most of these proxies tap material aspects of life, as opposed to cultural and family values, beliefs, or other "family capacity" variables which can be powerful mediators of child outcomes (Gallagher, 1989). Third, some measures of family environment define the "goodness" of the social ecology for only one individual, e.g. the child with delays, thereby confounding a potential family outcome with one focused on a single member. Since a family outcome is always concerned with outcomes for all members, and since family members

are to some extent in competition and conflict as well as cooperation, it is dubious to use as a family outcome a measure that taps how "good" the social ecology is only for a single individual. Family adaptations have a collective outcome benefiting or harming each member somewhat differently. Excessive focus on cognitive or socioemotional stimulation benefiting primarily one particular child ignores the collective goals of family adaptation.

And finally, the relevance for policy and intervention of these other approaches is limited. Distal structural features (income, employment prospects, community supports, service availability, insurance policies) indeed are important and may require systematic change, yet not be within our or the family's power to change very easily, except through longer term political and community involvement. Similarly, interactional characteristics of families and overall family climate are consequential, but, taken out of the context of the daily routine, they may be hard to change or even identify. Focusing on everyday family routines and activities meaningful to parents and children can be a useful level of analysis for intervention (Moes & Frea, 2000). A sociocultural theory of family learning based on child and parental engagement in developmental pathways in cultural context can have policy relevance.

Sustaining a Meaningful Family Routine: Definition and Examples from Families with Children with Disabilities

Sustaining a daily routine is a universal adaptive problem for all families, and emerges out of ecological-cultural (hereafter ecocultural) theory (LeVine, 1977; Munroe, Munroe, & Whiting, 1981; Weisner, 1984, 1993; Whiting, 1976; 1980; Whiting & Edwards, 1988). Ecocultural family theory applies Super and Harkness' notion of a developmental niche for the child (Super & Harkness, 1980; 1986), to the study of the family. A culture is conceptualized as practices and activities embedded in everyday routines, and the shared cultural models and interpretative meanings those activities have in a community (Weisner, 1997). Ecocultural theory combines social ecology indicators known to influence development (such as basic health and mortality threats, material and social resources, social support for mothers, peer networks, and so forth) with measures of activities and shared cultural meanings. Parents' goals for family life, parenting and development drawn from their cultural niche, are important to understanding family ecology. Family daily routines represent the operationalization or instantiation of what cultures and parents jointly have constructed to achieve these personal and cultural goals. The Ecocultural Family Interview taps this dimension of family life.

Sustainable Daily Routines: A Definition

The unit of analysis in assessing sustainability is neither individual behavior, nor the family social address (e.g., SES level, single mother, Euro-American). Instead, it is the daily routine of activities and events. Sustainability of family routines differs from the stress and reactions attending the crisis of the discovery of delay and the psychology of coping with these stressors. Sustainability captures another, more enduring project: juggling ongoing demands and meeting long term goals, rather than coping with crisis and stress (Gallimore, Bernheimer, & Weisner, 1999; Glidden, 1993). This project is of course common to all families everywhere, not uniquely different for families with children with delays (although demands and stress are clearly often high in these families), and so families with children with delays should respond in similar, more than in unique, ways to the challenge.

Sustainable routines of daily activities share at least these four features, which affect the well being of family members.

Social Ecological Fit. Parents have to balance their family ecology with available resources and limitations. For instance, how should parents allocate scarce time and money and attention to their child with delays and other family members? Should they focus on their work, on health insurance, on stimulation for the child with delays, on siblings, on the spouse, on seeking services and information, on friends, on church or other areas? Ecological fit means to find stability given family resources, competing interests, and goals, to be able to juggle and balance these resources in a functional adaptation.

Ecological fit does not just mean more resources; it means that the resources available roughly match and support the activities that the family weaves into a daily routine. Although more income and wealth and greater education and job status certainly matter for sustainability, our theory specifically differs from those in which more is better—where merely having more income, for instance, would be the central feature associated with a more sustainable routine, or better developmental outcomes. Our theory suggests that even families with limited income can organize a sustainable routine.

Congruence and Balance. Parents have to assess the inevitably competing interests of family members. Which family members' concerns should take precedence, when there are always inconsistent, conflicting concerns among family members? Some parents strive for a cultural ideal of "equal" treatment of siblings for example, or spend nearly all their time with the child with disabilities because the child needs so much more attention. Neither of these ways to balance conflicting needs are easy to sustain. Sustainable routines show the results of parental efforts to fit

their routines to individual needs and competencies of different family members.

Meaning. Parents try to organize their routine in a personally, culturally, and morally right way. After all, there are many possible ways to respond to their child and organize their family life, but only a small set of ways would be acceptable to any particular family—that would meet the criterion of being meaningful or appropriate for that family and its cultural community. In whatever ways families respond to their concerns about their child—will they feel that they have made the right choices? The right choices are those that will be more meaningful, choices, which fit with morally and culturally significant values and goals. These are experienced as meaningful in part because they are concordant with implicit and explicit cultural models of parenting and development shared by parents in a community. Meaningfulness involves asking parents about the interpretive meaning of their routine. Does the routine meet the goals of and for development and family life from the points of view of family members, rather than from the points of view of service providers, researchers, or others. Sustainability is greater if family ecology has meaning with respect to personal goals.

Stability/predictability. Change is required for sustainability of daily routines, and is often a positive sign. Sustainability requires adaptation and is a dynamic process. However, constant change without meaning or fit or balance is not a sign of sustainability, and is not good for children or parents. Frequent change in a chaotic, unpredictable daily routine is not a sign of sustainability.

RESEARCH QUESTIONS

Five research questions regarding sustainability are considered in this chapter. Each of these questions offers a sociocultural perspective on family life and child development:

- Is sustainability of family routine a goal families talk about, is it understandable to them, and can it be reliably rated? If not, then use for research and practice will be restricted and it is largely perhaps of conceptual but not substantive interest. Is it meaningful to parents' concerns? If so, it should be given serious attention, but if it is confusing and distant from what matters to parents and families, it might not be worth the effort to assess.
- What are the descriptive, qualitative characteristics of families with different patterns of sustainability?

- How is sustainability related to parental education, SES and other variables? Is it merely a proxy for family SES and resources? If so, then the notion of sustainability might still be useful to discern the mechanisms through which resources matter in families and development, but its status as an additional, complementary family assessment weakens. Our expectation is that higher SES, and more years of formal education are not going to be strongly associated with sustainability, except when resources are very few and formal education precludes sustainability due to associated poverty. Workload and social network connectedness, however, are more likely to show associations, because they are more proximal measures that directly impact the daily routine and its activities.
- How is sustainability related to conventional measures of family functioning and home environment (e.g. the HOME, FES, FACES)? If it is highly correlated with existing questionnaire measures of family functioning across child ages, this is of interest for validity reasons, but for ease of measurement, we might as well use existing family measures.
- How does sustainability change or remain stable in families over a 10 year period? Sustainability does not mean life is unchanging, but rather dynamic adaptation and balance, and it may well change as children get older or other family circumstances change. Are families with resource fit, balance, meaningfulness with respect to goals, and relative predictability when children are age 3, still like that when their child is 13?

We show that sustainability can be assessed, is meaningful to parents and reflects their concerns, is not strongly related to existing family measures, and is not simply a proxy for SES, and is fairly stable for 75% of families. Hence we argue that on conceptual and empirical grounds, a holistic, sociocultural assessment of the family project of sustaining a meaningful routine of life deserves consideration.

SAMPLE AND MEASURES

Sample

We used data from Project CHILD, a 10 year study of families of children with delays living in Southern California (Gallimore, Coots, Weisner, Garnier, & Guthrie, 1996; Gallimore, Weisner, Kaufman & Bernheimer, 1989; Gallimore, Weisner, et al, 1989; Nihira, Weisner, and

Bernheimer, 1994; Weisner, 1993; Weisner, Beizer, & Stolze, 1991; Weisner, Matheson, & Bernheimer, 1996). A cohort of 102 Euro-American families with delayed children aged three to four years old were recruited into a longitudinal study in 1985-86 (there were 103 children—one family had twins, both delayed). The children and their families were recruited through Regional Centers, early intervention programs, community preschools, and pediatricians.

Parents were primarily in their early to mid-30's when we first contacted them, with 12% single mothers. If there was a divorce or separation during the course of the study, we stayed with the child and his/her main caregiver(s). 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 initially, and about 50% by age 13. The mean family socioeconomic level, assessed with the four-way Hollingshead (a standard scale combining education and employment status), 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.

Each family in our sample has a child who had been judged to be "developmentally delayed" by a professional or an agency. Developmental delay is a term of relatively recent vintage and lacks definitional specificity (Bernheimer & Keogh, 1986). It is essentially a nonspecific "clinical" term with less ominous overtones for the future than "retarded" (Bernheimer & Keogh, 1988; Bernheimer, Keogh, & Coots, 1993). Children with known genetic abnormalities were excluded from the sample, as were children whose delays were associated with either known prenatal alcohol or drug usage, or with postnatal neglect or abuse (Bernheimer and Keogh 1986, 1982).

At entry the mean child chronological age (CA) 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). At entry, 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. When the children were between 67 and 99 months old (mean = 84; $SD = 6$), another round of testing was conducted in a manner that replicated the original procedures. The mean Binet IQ was 71.40 ($SD = 18.26$, range = 24 to 114). At age 11, the children were tested again with a mean Binet IQ of 66.68 ($SD = 20.29$, [range 27 to 122]). The cognitive/developmental scores were quite stable with a correlation from age 3 to 7 of .69 (Bernheimer, Keogh, and Coots, 1993) and from age 7 to 11 of .83 (Gallimore, et al, 1996).

Attrition has been remarkably low. Out of 102 initial families, 6 were lost or declined contact by age 13, and 3 children are deceased. We have maintained contact with 91% of the sample. At age seven $N = 97$ and at age

11 $N = 95$. At age 13, a 50% sample (45 families) was randomly selected for interviews. (Age 13 data are representative of our total sample, but should be viewed as tentative due to reduced sample size.)

Measures

We developed qualitative and quantitative assessments of family sustainability, and have independent measures of family ecology, accommodations, environment, demographics, and child characteristics, which we then related to family sustainability.

Assessment of Family Sustainability

Sample families were visited by a trained interviewer at child ages 3, 7, 11, and 13. These interviewers conducted semi-structured interviews with the parents, the Ecocultural Family Interview (EFI); each interview lasted from one to three hours. Parents were encouraged to "tell their story" about their child and about how they were or were not adapting their family routine, and in response to what or whom. There were no false negatives; if parents did not bring up topics, we used probes that carefully covered standard ecocultural domains (resources, supports, child services, siblings, work schedules, goals, etc.). Each family also completed a questionnaire covering standard demographic information and socioeconomic status characteristics of the family. Field notes were also compiled for each family. For additional information on the various methods used in the study, see Gallimore, et al, 1993; 1996; Nihira, Weisner, & Bernheimer, 1994; Weisner, 1984; Weisner et al, 1996.

Our fieldwork staff held a series of meetings to discuss, case by case, the nature of sustainability and well being across the families. We attempted to develop specific indicators that would differentiate what we knew of family strengths and weaknesses, within the overall framework of ecocultural theory. The typology we eventually developed emerged from these dynamic discussions, closely related to our comprehensive knowledge of the families and children. Fieldworkers and interviewers carefully reviewed each family, using the four criteria for assessing a daily routine (ecological and resource fit, balanced interests, meaningfulness, and stability/predictability). Assessments were made at child ages 3, 7, 11, and 13. Fieldworkers doing assessments had no knowledge of test scores, scores on other family assessment measures, or any of the quantitative measures of family or child status subsequently related to our sustainability judgments. (Additional details regarding coding and reliability are available from the authors.)

Qualitative assessment of each family required contextual knowledge about each family as well as across families; depth of understanding; breadth of knowledge about the family; and accuracy and precision about what such features as material and social resources, or family goals, or the child's behavioral problems actually look and feel like in the context of everyday family life (Becker, 1996; Weisner, 1996).

Ecocultural Features

SES, workload, social supports, and other indicators were scored using interviews and questionnaires (Gallimore, et al, 1989; Weisner, 1993). Twelve ecocultural domains were assessed: socioeconomic status; career work orientation; efforts to structure the home environment; help for family; help available within the family; workload related to the child; connectedness of the family; formal/support assistance; integration of child into nondisabled networks; integration of child into disabled networks; and use of information from professionals. Internal-consistency reliability was established for the EFI domain scores and is reported in Nihira, Weisner, & Bernheimer, 1994. Three summary ecocultural factors (SES/Resources, Family Workload, and Connectedness/Family Help) were derived at each time period from the ecocultural domains.

Assessment of Family Accommodation

Accommodation is defined as a family's functional responses or adjustments to the demands of daily life with a child with delays (Gallimore, et al., 1989; 1993; 1996). Accommodations include actions taken, avoided, or delayed in order to create and sustain a daily family routine. Accommodations that were wholly or mainly made to other family members, such as siblings, were excluded. Reliabilities of these ratings were: age 3-78%; age 7-70%, and age 11-82% (Gallimore, et al., 1993, p. 192; Gallimore, et al., 1996, p. 222; Weisner, et al., 1991, p. 654):

Four measures of accommodation were used: Internal Accommodation, External Accommodation, Accommodation Intensity, and Accommodation Frequency (Gallimore et al, 1996; Keogh, Bernheimer, & Guthrie, 1997). These measures are available at ages 3, 7, and 11 only. Internal and External factors reflect accommodations directed within the family and those directed outside the family respectively. Accommodation Intensity was rated on a 9-point scale from low to high. Accommodation Intensity measures the extent to which accommodations across all the accommodation domains was a theme or dominant *focus* of family adaptation to childhood disability. Accommodation Frequency reflected the total number of family accommodation activities that fit within 82 categories of family accommodation scored for all families.

Family Environment Scales

Measures of family and home environment included the Home Observation for the Measurement of Environment (HOME) (Caldwell & Bradley, 1984), the Family Adaptability and Cohesion Evaluation Scale (FACES) (Olsen, Partner, & Lavee, 1985), and the Family Environment Scale (FES) (Moos & Moos, 1986). The HOME was rated by fieldworkers following family visits. The FACES and FES were administered to parents in a mail-out questionnaire when children were age three and seven only.

Child hassle

"Hassle" is an ethnobehavioral term often used by parents to describe child problems that have an impact on the daily routine of family life. We rated each child on a 9-point scale from low to high across six areas: medical, behavioral, communication, interaction rate, responsiveness, and behavioral appropriateness. Reliabilities are: age 3 (88%), age 7 (77%) and age 11 (93%) (Gallimore, et al., 1996).

RESULTS

Sustainability of Family Routines: Meaning to Parents; Reliability

Parents' narrative accounts of family adaptation confirmed at least one theoretical assumption—a sustainable daily routine of family life is a readily articulated parental goal. Parents understood the task of sustaining a routine, and spontaneously would talk about it. Asking parents to "walk me through your day", or "tell me how things have been going", or "what has been working for you and what hasn't" will lead to a rich, often emotional account. We identified five overall patterns of family sustainability, which were comprehensively described and reliably rated using qualitative case and pattern analyses. Raters were able to assess the components of sustainability as well as ecocultural features influencing sustainability, such as loss of jobs or child services, or changes in supports. The final criteria we used for placing a family in one of five overall sustainability groups is presented in Appendix A, for children at age 11 (fieldworkers took into account variations in families and children reflecting differences in developmental concerns at each age). Appendix A also summarizes the family constellation among resources, conflict, meaning, and stability characteristic of that sustainability group. Disagreements regarding sustainability processes and overall criteria for sustainability were initially discussed in fieldworker meetings and resolved by one of the authors (CM). We were successful in achieving interrater agreement in judging these five groups.

An independent blind rater reviewed a randomly selected set of 10% of the interviews and fieldnotes with 74% agreement at age 3, 67% at age 7, 74% at age 11, and 100% at age 13.

Sustainability: Five Qualitative Patterns

The four holistic family adaptive patterns that make up sustainability for each family varied within and across the families. Some families struggled with resources yet had quite high meaningfulness and stability, but considerable conflict, for instance. Others had seemingly very adequate resources but the couple argued over what to do about their child, changed their routines a lot, and did not report that they had much "peace of mind" with regard to their family routine.

Although there was a fair amount of independence across the holistic patterns, these were patterns. Families with less conflict did tend to have more meaningfulness, somewhat more resources, and somewhat more stability, for instance. Hence, differences in overall sustainability could be discerned looking across each adaptive concern. The processes that lead to differences in sustainability were clustered together to some extent.

Multiply Troubled—Low Sustainability Families (Age 3–1%; Age 7–8%; Age 11–8%; Age 13–2%)

The families with the lowest levels of sustainability of a routine would be recognizable even without extensive qualitative or quantitative assessments. We described their family routines as multiply troubled. They had problematic fit with their ecology and resources, little balance or stability, and the lowest sense that their routine fit their goals and was meaningful for them. Stability was an ongoing concern of parents.

A few of these parents had serious personal problems, such as alcoholism, or experiences of spousal abuse, or had disabilities themselves. In addition, parents had few religious contacts or other forms of social support. Parents often seemed overwhelmed, responding reactively rather than proactively. As would be expected, the daily routines of these families were unstable, unpredictable, sometimes chaotic; some fieldworkers called these families' circumstances "precarious". There was little balance across different family members' interests.

These parents and their children had multiple, severe problems in at least three and often more, of the following areas: resources (jobs, income, financial and health insurance), child hassle, marital relationships, the extent of the family workload, social and familial support, and the health problems of the parent him or her self, or the sibs. For example one family

Sustainability of Daily Routines as a Family Outcome

was living on \$12K–\$15K a year, with the father's business failing, few supports, parents angry and upset, siblings rebellious (one with developmental delays of his own), with their child diagnosed with "autistic-like" behaviors, needing constant supervision. Over ten years, these troubles never really improved; family routine could not fit with their resources, their family could not develop a balance and coherence, and their expressed goals and values were unrealized in their routine of life.

Vulnerable but Struggling—Low-Moderate Sustainability (Age 3–16%; Age 7–16%; Age 11–17%; Age 13–9%)

These families were sometimes described as "hanging on". They usually missed the Multiply Troubled classification because of a focus on goals and meaning-related strengths. These parents were more likely to be actively religious, for instance. They sometimes talked about just "taking things as they come", or being "slow and steady", to endure or accept what their problems are. These families, unlike Low sustainability family situations, had at least one domain of life in which they seemed to be doing fairly well. As one mother said to us about her struggles, "This is all the reasons why I need God.... you either go crazy or you question why and you find out why and you find the peace and the help that is out there just sitting there waiting for you and so that's how I came to have God mean so much to me." Their resources and resource fit are still quite precarious, and they have significant difficulties in sustaining their routines in 3 or even more of the domains indicated in Appendix A—financial resources, jobs, connectedness in the family, connections outside the family, services, marital or couple relationships, and others. Balance and stability are difficult to sustain at times, but show intermittent improvement.

One family struggled with a child with significant behavioral problems, committing to a time and effort-consuming series of interventions over many years, which caused family discord and low balance amongst family members. Ecological and resource fit was adequate but the family had to move closer to father's work, which was disruptive.

Improving/Resilient—Moderate Levels of Sustainability (Age 3–32%; Age 7–25%; Age 11–29%; Age 13–32%)

These parents had resource fit problems, but in fewer domains than the Troubled or Struggling groups. They also reported that things were improving over time. Their balance and stability was higher, and they reported feeling less overwhelmed, although they reported being busy and active. It took effort and "grit", proactivity and some good fortune at times to sustain their routine. The sense of meaning and fit with goals was not very high however—few of these families had real peace of mind with

respect to their goals. Families in this group showed effective adaptive responses in the face of threat—that is, they had some resilience, but not an easily sustainable routine. In some other cases these parents thought that their child was making good enough progress, or thought their child was nearly normal in development, so that active accommodation and concern was not particularly important in parents' opinions (although not always according to others' opinions, such as teachers, professionals, other family members, or fieldworkers). These parents may not have as many resources, and may have more conflicts and difficulties in their families, and less balance, than parents in our higher sustainability groups. On the other hand, they do not report high levels of dissatisfaction with their lives, nor with special services they have obtained. A fairly common reason for this is that some do not believe their child is on a particularly delayed developmental path.

One family had financial struggles and uncertain income from the entertainment industry, yet managed to make ends meet, and received help from relatives. These parents have a child that is average in terms of behavioral hassle but with serious speech and communication problems. The child was able to benefit from special services from the school in their local area. Parents agreed generally on what to do, and the two children from the mother's first marriage help out some in caring for the child with disabilities. The parents compare their situation favorably with that of other families: "...even though we have a problem, it's lighter than anyone else's....he's a handful, but I can imagine what it is for some of the others."

Active—Moderately High Sustainability (Age 3–18%; Age 7–18%; Age 11–17%; Age 13–18%)

These families are dissatisfied with the balance amongst differing family members' goals (reported conflicts and disagreements are relatively high), and in the meaningfulness of their routines. At the same time, their resource fit is the highest of any of our sustainability groups. Some of these parents do not have a sense of peace of mind regarding their family routine. Some continue to be concerned over schools, placements, services, or what it has taken for them to monitor the sometimes, difficult behavior of their children. A number of parents in this group have struggled to balance career and work with their child. Compared to the first three groups, these parents are likely to have a higher functioning, lower hassle child, few or no job, income or work-related problems, fewer marital problems, better personal health, and on average, more of a support network consisting of at least one of the following: spouse, live-in help or roommate, extended family, church, or professionals.

One family has quite high income, and the mother spends full time as a homemaker and advocate for her son, who has developmental delays and communication problems. But she doesn't feel that the services she has found are meeting her child's needs: "...even though [these service providers] are special educators and psychologists," they "...continually try and tell us what is best for [our son]." She has spent considerable time in his classroom "training" teachers, as well as her relatives and friends, in how best to work with her son. The family has met some goals and values in their everyday lives, but not others, and there is an imbalance in how they have distributed their time and energy, and a continuing dissatisfaction with their routine.

Stable/Sustainable—Highest Sustainability (Age 3–34%; Age 7–32%; Age 11–28%; Age 13–49%)

This group shares many features of the Moderately High group, but this group has an underlying attitude of satisfaction or contentment regarding their child's situation, their ongoing family adaptation, and the way the child's needs are fit into the daily routine of the entire family. Most of the families in this group have reduced needs for services, better assistance with care, less need for career changes and acceptance of the choices made in the past. These families are similar to the Moderate group with quite similar levels of family adaptive challenges. But they differ in the meanings and goals they have. They frame their challenges as opportunities, as being "acceptable", with the result generally meeting their own sense of balance and meaningfulness. These families are not spending much time getting involved with the child's schooling nor with most other services. There is also little sense of tension and conflict regarding finances, marital adjustment, or siblings. Balance among competing family interests exists but at low to modest levels. In general, these families could be described as having high "peace of mind" regarding their family accommodation and the meaningfulness of what they have done to alter their daily family routines. These families have adapted most clearly in a sustainable, meaningful, and congruent way, although by no means easily or without proactive efforts. Their routines are relatively stable, and they show resilience when changes come.

One family combined active church membership, a successful business, and declining involvement in direct care or teaching for their child, who has significant speech and language difficulties. The daily routine is described as relaxed, quiet, and busy. "Either I'm just getting used to it [her child's delays and their routine], or it's not as bad, I don't know which," the mother remarked. The younger brother spends time with the child with delays and with parents. Their social network outside of church is not strong, nor is family support, but they say that will come eventually.

How is Sustainability Related to Parental Education, SES, Workload, and Social Network Connections?

We next turned to the associations of family sustainability with other common indicators of social ecology and family circumstances. Mothers with high school or less education were more often in the Low and Low Moderate sustainability groups, and fewer were in the Moderately High group than expected by chance at ages 3 and 7. College-educated fathers were more likely to be in the Moderately High group and less likely to be in the Moderate group. Overall, mothers' levels of education were significantly related to our five sustainability groups when children were 3 ($X^2 = 31.99, n = 98$) and 7 ($X^2 = 26.22, n = 98$), but not at age 11. Fathers' education showed a significant difference only at 11 ($X^2 = 31.54, n = 84$). Sustainability shows some associations with parents' formal education, but at the same time, sustainability is not the purview only of more educated families.

Single parents had more difficulties sustaining a daily routine however. There were more single parents ($X^2 = 17.80, n = 100$) in the Low Moderate and Moderate groups when children were 3 and 11. Expanded families (usually single parents living with their own parents or other kin) were also more likely to have more difficulties in family sustainability at age three, but not later ages ($X^2 = 15.39, n = 100$). Conjugal/married families show no significant differences in their levels of sustainability—for instance, there were proportionately as many couples in the Vulnerable/Struggling and Improving/Resilient groups as in the Stable/Sustainable group.

Family SES and Resources

Sustainability is certainly related to family resources. More resources translate into better resource fit, but only to a limited extent does this relationship extend into other sustainability patterns. The first rows of Table 1 for ages 3, 7 and 11 shows significant mean differences in socioeconomic status. (Too few families were in the lowest group to include them in the analysis at age 3.) However, note that the Moderate, Low Moderate and Low groups are not significantly different from each other on SES. The High and Moderately High families differ on SES only at child age 7. The High groups are actually lower in SES than the Moderately High. Overall, SES distinguishes the two highest groups from the three lower sustainability groups, but otherwise characteristics of families other than SES come in to play in shaping family sustainability.

There are a number of families with relatively low income, who nonetheless appear to have constructed a reasonably sustainable daily routine even while struggling with fitting together scarce resources.

Table 1. ANOVAs Comparing Sustainability Ratings and Ecocultural Ratings at Ages 3, 7, and 11

Ecocultural Ratings	Sustainability Ratings					
	Low		Moderate		High	F
	Low	Moderate	Moderate	Moderate	High	
Age 3						
Socioeconomic Status	NA	44.15 ^{ab}	46.53 ^{cd}	53.30 ^{ac}	53.20 ^{bd}	7.28***
Family Workload	NA	48.58	49.60	54.29	48.57	
Connectedness	NA	45.00 ^{ab}	45.53 ^{cd}	54.59 ^{ac}	53.76 ^{bd}	7.73***
Age 7						
Socioeconomic Status	42.82 ^{ab}	49.02 ^c	47.71 ^d	56.77 ^{acde}	51.12 ^{be}	4.14**
Family Workload	46.69	55.11 ^{ab}	48.06 ^{ac}	54.49 ^{cd}	46.57 ^{bd}	3.10*
Connectedness	46.11	49.32	48.40	51.02	51.38	
Age 11						
Socioeconomic Status	40.91 ^{ab}	48.74 ^{cd}	45.73 ^{ef}	57.03 ^{ace}	55.40 ^{bdf}	8.51***
Family Workload	51.10	53.86 ^a	48.02 ^b	55.29 ^{bcc}	46.04 ^{ac}	3.14*
Connectedness	41.83 ^{ab}	48.86	46.88 ^c	52.28 ^d	54.91 ^{bc}	3.98**

Note. Means followed by the same superscript differ significantly in pairwise posthoc tests. *** $p < .001$, ** $p < .01$, * $p < .05$.

Religion provides meaning in some families, and leads to a belief that they have an opportunity, not a burden, to care for their child. Many of these lower income/higher sustainability families are typically troubled by only one additional issue, for example a child that is high in behavioral or medical problems, or marital discord, but no other issues. These families seemed able to concentrate their accommodation efforts and limited resources on this one central problem. Further characteristic of these families, one parent (usually the mother) is either unusually proactive and dynamic, or slow and steady, just taking things one day at a time. In relatively lower SES families, parental goals and temperaments often allow for a relatively sustainable routine.

Family Workload and Connectedness

When family workloads are very high or unpredictable, family routines are more difficult to sustain. However, the absolute amount of workload, (except at very high or very low levels), is not the key for sustainability. Rather, workload influences family sustainability through the way the workload is integrated, balanced, shared, and its meaning constructed by parents. The High sustainability group is different from the Moderately High in having a relatively low workload, but this group also

has the highest average Connectedness score of the five groups at all three child ages. The level of Family Workload involving the child with delays discriminates sustainability groups at ages 7 and 11, and Connectedness does so at ages 3 and 11 (the second and third rows under each age in Table 1).

How is Sustainability Related to Conventional Measures of Family Functioning?

Traditional Family Measures

We expected that there would be relatively few and scattered relationships between these standard family measures and sustainability, and that is generally what we find when we compared a wide range of subscales of traditional family assessment scales to overall sustainability. Table 2 shows mean scores for FES, HOME, and FACES on each subscale for ages three and seven (data were not collected at age 11). Three FES scales, eight HOME scales, and two summary FACES scores were compared to sustainability. None of the FES scales are related to sustainability at age three, and the Expression scale is the only one significant at age seven (i.e., only one of six Anovas is significant). Three of eight HOME subscales are significant at child age three, and four at age seven (i.e., seven of a possible sixteen). Only the FACES Cohesion scale is significant at age three and no FACES scale is significant at age seven (i.e., only one of four FACES scales was significant). At age seven, the Lowest sustainability families score significantly lower than the other four groups on the FES or HOME subscales five of 13 times. The other four groups of families, however, are either indistinguishable or only weakly differentiated by the traditional measures, even though, in fact, daily life is very different across these four groups according to our sustainability assessments.

The Lowest sustainability group accounts for nearly all of the statistically significant group differences. The Low sustainability families at age seven have somewhat lower scores on HOME subscales. This is consistent with our fieldwork reports: it is not difficult to spot concerns in the Lowest sustainability group. But to discern the strengths and concerns of families in the other four groups, conventional family assessment questionnaires seemed insufficient. Understanding meaning/goals, balance, and stability was required. In addition, it is striking that no one sustainability group contributes disproportionately to the Anova differences for FES, HOME, OR FACES measures. Active Stable families for example, are not uniformly high across the various scales in traditional family measures.

Sustainability is certainly not a proxy for traditional family measures. Families relatively low in sustainability can and do offer their children

Table 2. ANOVAs Comparing Sustainability Ratings and FES, HOME, & FACES Ratings at Ages 3 and 7

FES, HOME, & FACES	Sustainability Ratings				F
	Low	Moderate	Moderate	High	
Age 3					
FES Achievement	NA	4.59	5.39	5.33	5.58
FES Expression	NA	4.91	5.67	6.04	6.48
FES Religion/Morality	NA	1.69	1.52	1.83	1.78
HOME Learning Stimulation	NA	7.82	8.26	9.61	9.18
HOME Language Stimulation	NA	5.59 ^a	5.63 ^b	6.50 ^{ab}	6.12
HOME Physical Environment	NA	6.12	5.97 ^{ab}	6.94 ^a	6.72 ^b
HOME Warmth & Affection	NA	6.47	6.32	6.67	6.54
HOME Academic Stimulation	NA	2.65	2.94	3.50	3.24
HOME Modeling	NA	3.35	3.77	4.17	4.03
HOME Variety in Experience	NA	4.71 ^{abc}	6.00 ^b	6.89 ^b	6.24 ^c
HOME Acceptance [*]	NA	5.50	5.33	7.20	6.17
FACES Cohesion	NA	36.19 ^{ab}	38.25 ^{cd}	44.11 ^{ac}	42.39 ^{bd}
FACES Adaptation	NA	22.69	23.07	22.50	22.45
Subsample <i>n</i>		<i>n</i> = 17	<i>n</i> = 31	<i>n</i> = 18	<i>n</i> = 33
Age 7					
FES Achievement	5.04	5.12	5.07	5.38	4.79
FES Expression	3.33 ^a	6.23	6.63 ^a	6.30	6.21
FES Religion/Morality	6.75	6.58	6.20	6.42	6.93
HOME Learning Stimulation	6.75 ^{abcd}	9.07 ^a	9.28 ^b	9.75 ^c	9.52 ^d
HOME Language Stimulation	6.25	6.53	6.67	6.94	6.72
HOME Physical Environment	4.50 ^{ab}	6.27	6.17	6.75 ^a	6.52 ^b
HOME Warmth & Affection	4.50 ^{ab}	5.87	6.39 ^a	6.25 ^b	6.08
HOME Academic Stimulation	4.00	4.07	4.72	4.69	4.52
HOME Modeling	3.25 ^a	4.47	4.11	4.88 ^a	4.28
HOME Variety in Experience	6.25	6.47	7.17	7.44	7.44
HOME Acceptance	3.50	3.87	3.89	3.94	3.80
FACES Cohesion	37.20	40.15	41.63	41.94	41.40
FACES Adaptation	24.20	25.32	24.01	22.19	24.82
Subsample <i>n</i>	<i>n</i> = 5	<i>n</i> = 15	<i>n</i> = 19	<i>n</i> = 18	<i>n</i> = 25

Note. Means followed by the same superscript differ significantly in pairwise posthoc tests.

Results for Age 3 HOME Acceptance represent reduced samples: Low Moderate-*n* = 4, Moderate-*n* = 12, High Moderate-*n* = 5, adn High-*n* = 12.

****p* < .001, ***p* < .01, **p* < .05.

similar levels of stimulation and warmth in the home compared to families with higher sustainability. Families with varied levels of sustainability of family activities and routines, can nonetheless show similar levels of cohesion and adaptation. This is an important result: quality of interaction, or home environment characteristics, are not the same as sustainability of a daily routine (except perhaps among Multiply Troubled families), and sustainability should not generally be confused with these kinds of assessments of family environments.

Stability of Sustainability Over 10 Years

Are families relatively stable in their patterns of family sustainability over time? We are able to compare sustainability at four points in time, from age three to 13. Our central finding is that families remain fairly stable over this 10-year period in sustainability, although there is a significant increase in families with High sustainable routines from age 11 to 13. Basically about 75% of the families have a quite similar pattern over time.

But there are shifts. Gina and her family exemplify a situation in which sustainability went up and down over the years. When Gina (pseudonym) was 3, her family was well established in an area they liked, with a good deal of social support. Father had a good job with benefits, Gina's seizures were under control, she was making good progress in her early intervention program, and her older brother was quite helpful with her. The family was excited about their impending purchase of a new, larger home nearby. Their sustainability rating: Stable/High.

By age 7, Father's job situation had become unpredictable, and Mother had to return to work to help with mortgage payments and insurance benefits. Gina's seizures had increased, she was diagnosed with CP, and she was having serious difficulties with self-esteem. Mother found she had to push hard to get the right school placement and equipment for Gina. In general, the family's situation was much less stable, their routine had become much more demanding, less congruent with parental goals, less fitted to their configuration of resources. Their sustainability overall went to Vulnerable but Struggling, and Low-Moderate Sustainability.

When Gina was 11, both parents had jobs with good benefits, but Father was becoming increasingly dissatisfied with his career. Gina's self-esteem had been built back up through intense intervention. Mother continued to do battle with the school system to obtain appropriate services, and searched out the best therapies, even if it meant long drives. The older brother continued to be of great help with Gina, and was doing well in school. Sustainability moved again to Active—Moderately High Sustainability.

At age 13, Mother was quite satisfied with Gina's school, and her full-time income was supporting the family while Father went back to school for a career change, which both Mother and Father had agreed on. Mother had established an excellent network of support and information for herself and Gina through her work. As Gina embarked on her adolescent years, her daily routine was back to being Stable/High.

Families of course did shift from one sustainability group to another over time, like Gina's family, but about 75% remained fairly stable until early adolescence. Families starting out with relatively sustainable routines

are likely to continue on that path. Families with lower levels of sustainability are more likely to vary, struggle in the middle childhood years, but in some cases, show moderately higher sustainability at child age 13. The highest correlations between age periods are between ages 3 and 7 (.57) and ages 11 and 13 (.61). The seven to 11 period shows somewhat lower correlation (.41) suggesting greater change in patterns of family sustainability during the early grade school years. Parents described several reasons that might account for changes in family sustainability during this period, including the adjustment to school, which frequently included decisions about special education and programs, and the increasing recognition that their child was not delayed but disabled and unlikely to catch up.

To better understand change over time, we categorized the families for whom we had complete data into four groups based on their pattern of change from age 3 to 15: Stable Low Sustainability; Unstable Moderate to Lower; Improving Over Time; and Stable High. Stable Low families ($n = 30$, 32%) had low or low/moderate sustainability ratings at all time periods. Unstable Moderate/Low families ($n = 15$, 16%) typically improved from low to moderate between 3 and 11, but by age 11 and 13 dropped lower again. Improving Over Time families ($n = 22$, 23%) started out with lower levels of sustainability, but ended up moderately high or high by 11 and 13. Stable High families ($n = 28$, 29%) remained moderately high or high at all age periods.

We then ran a series of Anova analyses using the same set of measures (demographic, ecocultural, and family measures) used to compare the original five sustainability groups. (We present only the measures with significant differences in Table 3.) The major finding is that the Stable Low ($n = 30$) families appear to have significantly fewer resources than other families, engage in less accommodation and child stimulation activity, and have children rated as more disruptive of their daily routine. Beyond this pattern, however, few of our measures distinguished the other change patterns from each other.

More families have achieved Highly sustainable routines at age 13 than at earlier ages: from 28% at age 11 to 49% at age 13. We reviewed each of these cases, using data from interviews and field notes, and examined the pathways they followed. Why the increase in sustainability, when adolescence is often seen as a time of increased concern? One reason actually is that early adolescence for most of these children, is not yet that time of increased concern for parents of children with disabilities as it might be for typically developing children. However, early adolescence is a time when many of these parents seemed to have completed changes in their daily routines. Some families finally felt their child had a confirmed diagnosis and this brought a sense of closure, leading them to make clearer

Table 3. Significant ANOVAs Comparing Sustainability Change Groups by Ages 3, 7, and 11

	Sustainability Change Groups				
	Stable Low	Unstable to Lower	Moderate Improved	Stable High	F
Age 3					
Ecocultural Ratings					
Socioeconomic Status	43.37 ^{abc}	50.12 ^{cd}	49.75 ^{bc}	56.51 ^{cde}	11.60 ^{***}
Connectedness	44.17 ^{abc}	51.28 ^a	51.40 ^b	54.41 ^c	6.49 ^{***}
HOME & FACES					
HOME Learning Stimulation	7.87 ^a	9.07	8.68	9.36 ^a	3.64 [*]
HOME Language Stimulation	5.40 ^b	6.00	6.05	6.29 ^a	4.91 ^{**}
HOME Physical Environment	5.80 ^{abc}	6.67 ^a	6.64 ^b	6.79 ^c	5.56 ^{**}
HOME Variety in Experience	5.07 ^{abc}	6.47 ^a	6.50 ^b	6.32 ^c	5.70 ^{**}
FACES Cohesion	37.00 ^a	40.07	41.40	43.04 ^a	4.06 ^{**}
Subsample <i>n</i>	n = 30	n = 15	n = 22	n = 28	
Age 7					
Ecocultural Ratings					
Socioeconomic Status	43.56 ^{ab}	48.89 ^c	51.65 ^a	54.55 ^{bc}	7.95 ^{***}
Accommodation Ratings					
External Accommodation	-.51 ^{ab}	.49 ^{ac}	-.30 ^{cd}	.36 ^{cd}	4.92 ^{**}
HOME & FACES					
HOME Learning Stimulation	8.46 ^a	9.29	9.23	9.92 ^a	4.40 ^{**}
HOME Language Stimulation	5.46 ^{ab}	6.50	6.61 ^a	6.75 ^b	4.77 ^{**}
HOME Physical Environment	3.83 ^a	4.50	4.33	4.63 ^a	3.28 [*]
HOME Variety in Experience	6.58 ^a	7.36	7.67 ^a	7.13	3.26 [*]
FACES Cohesion	38.94 ^a	40.36	43.81 ^a	41.76	3.47 [*]
Subsample <i>n</i>	n = 24	n = 14	n = 19	n = 25	
Age 11					
Ecocultural Ratings					
Socioeconomic Status	43.04 ^{abc}	50.71 ^{cd}	52.40 ^b	56.39 ^{cd}	10.96 ^{***}
Connectedness	42.85 ^{abc}	52.77 ^a	52.40 ^b	53.67 ^c	7.92 ^{***}
Child Status					
Behavior Hassle	5.77 ^{ab}	5.00	3.82 ^a	3.64 ^b	5.12 ^{**}
Subsample <i>n</i>					

Note. Means followed by the same superscript differ significantly in pairwise posthoc tests.

*** $p < .001$, ** $p < .01$, * $p < .05$.

decisions. Some mothers at this point in their child's life moved back into careers, or their jobs improved and/or additional caretakers (kin, or hired help) were available to help out. Some parents divorced or remarried, after staying together in a difficult relationship when the child was younger. Such changes often led to a subsequent increase in satisfaction, stability, and sustainability of their routines after an initial rocky transition between ages 7 and 11. In several cases, child placement outside the home for all or part of the week, dramatically improved sustainability of family routines. One child, for example, moved from living with a full time working

mother, to living with her father and homemaker stepmother. Another family moved out of a large urban area to a rural community with strong kin and community help and support from their church.

DISCUSSION

Family achievement of a sustainable routine is a useful family outcome, complementary to the use of other measures, and is meaningful to parents. It can be reliably rated and provides a holistic assessment of how parents weave together the routines and activities of daily life. We found a range of patterns, ranging from quite troubled and struggling, to coherent, balanced and meaningful. Sustainability scores are related to family composition (it is lower for single parents), SES and family income (higher for higher SES and income). Resources are not a proxy for achieving a sustainable daily routine, however, since there is considerable variation in income and SES within sustainability groups. Higher levels of family sustainability are associated with high social and interpersonal connectedness and lower Family Workloads, but the relationships are not linear; how families integrate and balance work and use connections, is important for sustainability, not simply the amount of either. The FES, HOME, and FACES showed quite low to moderate associations. Sustainability is fairly stable for most families, dips around age 7, but shows a surprising increase when children are 13. Increases in sustainability as children get older, are associated with higher SES, more family connectedness, and less child hassle. These are the same features, which distinguished family sustainability within age periods.

The traditional measures of family adjustment include useful items, but the valence of each item is predetermined and not considered in relationship to the whole family system. What might be a "good" score for one family on an item may not be relevant, or in fact may be negative for another, depending on the holistic appraisal that is part of understanding and assessing sustainability. Sustainability starts not with items that have predetermined valence, but with a holistic appraisal of the family's goals, the context of their daily routine, and the varied features that seem to sustain a routine (resource fit, balancing conflicts, meaning with respect to goals, and stability/predictability).

We do not have a comparison sample of families who do not have children with disabilities, and so are not able to differentiate qualities of sustainability unique to families with children with disabilities. However, the EFI and questionnaire has been used in a number of other populations. These include South Asian immigrant, Navajo, and Japanese families

with children with disabilities (Begay, Roberts, Weisner, & Matheson, 1999; Raghavan, Weisner, & Patel, 1999; Sakagami, Kanenaga, Nihira, Sakurai, & Suzuki, 1996) and families with typically developing but at-risk children (Reese, Goldenberg, & Loucky, 1995; Weisner, et al., 1999). A recent study linked home cultural ecology to infant reactivity to pain responses among North Italian families (Axia & Weisner, 2002). In each case, both common and unique features of family goals and daily routines were found. This is what our theory and methods would expect: a common set of universal family adaptive concerns, with significant variations due to culture and (in the case of families with children with disabilities) child developmental variations. Thus ecocultural theory and sustainability of family routines opens the topic of ethnic and cultural variations in family life, to empirical study with or without a child with disabilities. Ethnic groups are not well served by homogeneous group trait or social address labels. Our approach provides a way to assess which practices and meanings do or do not vary across cultural groups at the family level.

The EFI model of understanding family activities and routines can also be used in experimental research for topics with applied and policy implications. For example, a version of the EFI for working poor families and children has been developed as part of a prospective, longitudinal experimental intervention, New Hope (Weisner, Gibson, Lowe, & Romich, 2002). Over 1300 adults in two zip codes in Milwaukee, Wisconsin were recruited for a study of the impact of supports for working poor families. Half were randomly selected for eligibility for supports. The supports included wage supplements, child care vouchers, health care subsidies, and a community service job if needed. The other half were in the control group. A survey, child assessments, teacher reports, and administrative records were also used in the mixed method design (Bos, Huston, Granger, Duncan, Brock, & McLoyd, 1999; Huston, Duncan, Granger, Bos, McLoyd, 2001; Huston, Miller, Richburg-Hayes, Duncan, et al, 2003). The EFI focused on how families organized their daily routine in the face of low incomes, jobs which often were episodic and poorly paid with few or no benefits, and other stresses in their lives. The EFI also focused on parenting and children's lives, since a central focus of the overall study was on the impacts of the intervention and of concurrent welfare reforms on children's development. How parents learned about and used the New Hope program depended in part on their family sustainability and their prior beliefs and expectations regarding support programs (Gibson & Weisner, 1992); similarly, how parents used the child care vouchers also depended on their beliefs and values about appropriate care, and how such formal care fit into their daily routines (Lowe & Weisner, 1993).

An interview version of the EFI, focused on pre-literacy skills of parents and children, has been developed for parents of preschool children in Head Start (in collaboration with JoAnn Farver, (PI), USC, and Chris Lonigan, Florida State). The study is also an experiment, and assesses an intervention in Head Start and in homes, designed to increase children's pre-literacy skills. There are three arms of the intervention: some families are in a control group where they receive typical Head Start programs; some families are in Head Start centers receiving the intervention, and in which the families also receive an additional in-home intervention with parents; a third group of families are in the Head Start centers receiving the intervention but do not in addition receive the home intervention. The pre-literacy EFI interviews with parents focus on parent and child experiences with pre-literacy activities, beliefs about learning and preschool, and home learning contexts of families in all three arms of the intervention. The EFI taps the beliefs, values, goals, and practices found in family activities that might show how the intervention had its impacts, if indeed there are impacts (the study is still underway in 2004). A focus on sustainability of the family daily routine is relevant, then, not only to families with children with MR/DD, but to a variety of populations and policy concerns.

Sustainability is certainly illuminating with respect to current policies in place for children with disabilities and their families. With the reauthorization of the Individuals with Disabilities Education Act (IDEA) (PL 105-17). Congress has maintained its commitment to considering families, as well as children, as beneficiaries of early intervention services. The IFSP, or Individualized Family Service Plan, may include family, as well as child, outcomes. The question has been, what are appropriate family outcomes that are within the purview of early interventionists, and that are congruent with family goals and values? Bailey and colleagues (1998) have suggested that a reasonable family outcome of early intervention is an enhanced quality of life. A sustainable daily routine is likely to be associated with quality of life. An intervention intended to assist families and children should lead to increased sustainability. At the very least, it should not lead to a decrease in sustainability.

The reauthorization of IDEA also includes a mandate, beginning at age 14, for planning the transition between secondary school and adult life for youth with disabilities. "Adult life" is defined as broader than vocational outcomes; it encompasses living arrangements and social relationships. This transition is a significant one for families as well, requiring a renegotiation of parental roles and adjustments to the daily routine. One way to understand the impact of this transition on families is to examine sustainability of the family's routine before, during, and after the transition.

The sustainability of the youth's daily routine after the transition also can be used to indicate the success of the transition planning.

Talking with families about sustaining a routine opens up the subject of family activities and what makes them happen—what it takes to keep the desired ones going and what it would take to change the troubling ones. Such conversations foreground how interdependent daily routines and activities are: pull on one to demand more time for something else—and unanticipated changes happen elsewhere. Such conversations help us as researchers to “get inside” the family routine of life. Many desirable interventions founder on just this point: the interventions can't easily get inside the daily routine and become an accommodated part of everyday practices; they don't fit the cultural models and concerns of parents; they unexpectedly disrupt the fit with resources, the balance among conflicting demands, the goals of the family, or the predictability of life (Bernheimer & Keogh, 1995; Coots, 1998; Gallimore, et al., 1999). Effective ways to assess sustainability of routines help open this difficult area to practitioner understanding and shared discussion with parents.

Family sustainability also opens a window onto this important, powerful sociocultural context shaping learning and development in children. After all, sustainability is the crystallized outcome of previous and concurrent accommodations, which are, in turn, evidence of family social-ecological learning in context. All changes are not adaptations, since not all changes are the result of learning in response to the environment. But accommodations are a form of learning in response to others and the local ecology. Ethnographic research, including research using the EFL, is essential to reveal how families learn to accommodate in order to sustain their routine.

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