Issues in Early Intervention:
The Impact of Cultural Diversity on Service Delivery in Natural Environments

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How does one determine what constitutes the natural environment as a context for early intervention service delivery for students living in culturally diverse families and communities? This question was posed by an Early Childhood Special Education (ECSE) teacher in a large culturally and socio-economically diverse urban school district. The question is central to the gap between research and practice in early intervention.

In the United States, federal legislation provides the framework and guidelines under which all children between birth and age 22 with disabilities are provided equal access to educational opportunities in public schools. This legislation is known as the Individuals with Disabilities Education Act (IDEA). Part C of IDEA addresses the unique needs of children between birth and age 3 and their families. Part C is unique because it not only provides for individualized supports and services for the child, but it recognizes the importance of the family as the primary context in which to promote optimal child development.

When Congress revised and amended Part C of IDEA in 1997 (P.L. 105-17), it mandated that service delivery to young children between birth and age 3 be carried out in natural environments (Walsh, Rous, & Lutzer, 2000). The IDEA regulations define natural environments as "settings that are natural or normal for the child's age peers who have no disabilities" (34 CFR Part 303.18).

This statement is qualified by the stipulation that "to the maximum extent appropriate, early intervention services are provided in natural environments" (34 CFR Part 303.167(c)). This stipulation and definition of natural environments has led to continued discussion about what consti-

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tutes natural environments with respect to the diversity that characterizes the families and young children who are eligible to receive early intervention services.

Family-centered philosophy and practice has been a central component of early intervention for infants and toddlers that is related to natural environment service provision. Family-centered practices have been widely accepted in the provision of early intervention services since the 1960s (Bruder, 2000). Research indicates that families are essential to the success of early intervention services (Baily et al., 1998; Guralnick, 1998; Roberts, Innocente, & Goetze, 1999).

However, the family is strongly influenced by culture as it pervades all aspects of the family structure and it influences how a family defines itself. Therefore, understanding cultural influences in relation to the family system increases the likelihood that interventions will be appropriate (Wayman & Lynch, 1991). This article will explore the literature related to natural environments, family-centered practices, and the influence of cultural diversity as it relates to service provision in early intervention in an attempt to link the research to practices that promote appropriate and effective early intervention services.

Theoretical Foundations

The concepts of natural environments, family-centered philosophy, and the consideration of cultural diversity are based on the culmination of developmental and ecological theories of child development prominent in the field of early childhood education. The fields of Early Intervention (EI) and Early Childhood Special Education (ECSE) are strongly influenced both in philosophy and in practice by the constructivist theories of Vygotsky (1997) and the social ecological models of Broffenbrenner (1992).

The influence that relationships and

interactions with caregivers, friends, family, and the community have on child development is explained by Vygotsky's (1997) social constructivist theory. Central to this theory are the transactions that occur between the child and others in their environment. Vygotsky proposes that children's learning leads their development. Learning occurs on a continuum between a child's ability to independently and fluently solve a problem and their ability to solve a problem with maximum assistance from adults or with more capable peers. This latter end of the continuum illustrates the importance of transactions with others in learning which leads to increasingly sophisticated development across domains.

The social ecological theory advocated by Broffenbrenner (1992) explains the processes that influence child development and learning. Broffenbrenner appears to agree that learning leads development and that learning is related to transactions with both the environmental contexts that a child experiences and individuals with a variety of characteristics and influences of their own. The social ecological theory takes Vygotsky's theory one step further in recognizing the importance of the ecological systems or environments in which individuals are embedded and how these variables impact the transactions of individuals within a given context or environment.

Defining Natural Environments

The philosophy of natural environments is consistent with the constructivist and social ecological models proposed by Vygotsky (1997) and Broffenbrenner (1992) in that the emphasis is placed on transactions among children, caregivers, and more capable peers within a social context. This underlying philosophy appears to be generally agreed upon in the literature (Bricker, 2001; Dunst, Bruder, Trivette, Raab, & McClean, 2001; McWilliam, 2000; Tisot & Thurman, 2002; Walsh,

Rous, & Lutzer, 2000; Wayman & Lynch, 1991).

The controversy in the literature regarding a definition of natural environments is related to attempts to define what the natural environment is. In Part C of IDEA, Congress provided a definition of natural environment that focuses on the setting in which services would be provided. However, leaders in the EI and ECSE fields have indicated that opportunities to engage in a variety of more naturally occurring learning experiences is of greater importance (Bricker, 2001; Dunst & Bruder, 1999; Dunst et al., 2001).

In her review of the literature, Bricker (2001) found that three general themes emerged with regard to definitions of natural environments. One was that as a construct, natural environments may include a wide range of physical settings. The second was that no definition establishes natural environments in terms of both settings and the activities that occur in settings. This ambiguous aspect of natural environments leads to confusion in terms of how to provide services consistent with the philosophy of natural environments.

The third theme that emerged from the literature was that natural environments clearly do not include segregated or specialized settings for children with disabilities or laboratory settings. Bricker (2001) emphasizes that the construct of natural environments should distinguish between locations and activities. She concludes that ensuring that children are engaged in a functional and meaningful learning activity is more important than the where that activity occurs.

This conclusion appears to be supported by Dunst and colleagues (2001) and their research on natural learning opportunities. Dunst and Bruder (1999) propose a definition for natural learning environments that incorporates the idea that daily experiences, places, and activities are the source of learning opportunities.

This approach to defining natural environments appears to emphasize the importance of the activities over the setting. A more comprehensive definition of natural environments may include the daily routines, activities, and locations that are relevant to each individual family (Bricker, 2001; Dunst, Bruder, Trivette, Raab, & McClean, 2001; McWilliam, 2000; Tisot & Thurman, 2002; Walsh, Rous, & Lutzer, 2000; Wayman & Lynch, 1991). The services and the supports provided in this context should be relevant to the family's needs and developmentally appropriate.

Family-Centered Philosophy and Practice

Service delivery models for infants and toddlers have been focused on family-centered practices for more than a decade (Bruder, 2000; Stayton & Bruder, 1999). Family-centered practices are based on family systems theory adapted from the disciplines of psychology and social work (Wayman & Lynch, 1991).

The philosophy of promoting child development in the context of the family is rooted in an ecological model of learning and development with the child at the center of a family system whose characteristics are influenced by other systems such as community, culture, socio-economic status, ethnicity, etc. (Brofenbrenner, 1992). In addition to this theoretical underpinning, the belief that the family of caregivers is a constant over the child's lifetime and the belief that caregivers spend the most time with the child have been the primary rationale for early interventionists.

The impact of various characteristics of the family has been demonstrated in the research literature. Bruder (2000) reviewed the literature on family-centered early intervention and found that research focused on parent characteristics demonstrates the impact of socio-economic status, parent education, and home environment on both child development and service delivery patterns. Other family factors related to child development and early intervention include the parents' ability to follow intervention recommendations, parent-child interaction patterns, and quality of life including both formal and informal sources of family support (Bruder, 2000).

A significant amount of research has been done on family quality of life. This line of research is related to the overall functioning of the child and the family within larger ecological systems including extended family and siblings, neighborhood, school and other local community-based institutions as well as the larger institutions in society including cultural mediators, researchers, policy-makers, and social systems (Turnbull, Blue-Banning, Turbiville, & Park, 1999). It is this line of research that suggests family-centered philosophy and practice necessitate consideration of the diversity of families in determining the most appropriate and effective model of service delivery for early intervention.

Family and Cultural Diversity in Early Intervention

According to Wayman and Lynch (1991), the components of the family system are strongly influenced by culture as it affects all aspects of the family structure and it influences how a family defines itself. This is evident by the influence of culture on (a) family functions, (b) the family life cycle, and (c) events that are viewed as stressors.

The implication of this framework for early interventionists is that understanding cultural influences in relation to the family system increases the likelihood that interventions will be appropriate. Hanson and Lynch (1990) outline several topics relevant to early intervention on which perspectives may vary greatly across cultures. The topics include (a) views of children and child rearing, (b) views of disability and its causation, (c) views of change and intervention, (d) views of medicine and healing, (e) views of family and family roles, and (f) language and communication style. Furthermore they define the ability of early interventionists to provide services in a manner that reflects the background of the family as cultural competence (Hanson & Lynch, 1990).

Cultural Considerations

According to Hanson (1997), there are several factors about the nature of early intervention that must be considered in working with culturally diverse families. These factors include (a) attitudes regarding intervention, (b) methods used and location of services, (c) the qualifications of the service provider, and (d) styles of interaction and communication in the provision of services. In searching for empirical literature addressing the influence of cultural diversity on decision-making regarding the provision of services in the natural environment it quickly becomes clear that there is a strong conceptual framework for addressing the issue, but very little empirical research has been conducted.

There are a wide variety of ethnographic studies examining variables related to individual cultural groups, but no systematic study of the various models for assessing families and the effect that such assessment and program planning based upon that assessment has on outcomes for the youngest children considered at-risk or manifesting identified disabilities.

Implications for Practice

In her article examining the relationship of family-centered early intervention and natural interventions, Bruder (2000) discusses the phenomenon of the total and unquestioning acceptance of family-centered practices by both the EI and ECSE fields despite her observations that these practices are not being systematically implemented. Many service providers do not consider the needs of a family with regard to how needs are defined by the influences on that family system when determining service delivery.

Bruder (2000) suggests several reasons for this apparent "cognitive dissonance" in the field. The first is the research-to-practice gap. While there does appear to be a considerable amount of empirical research on the how parent and family characteristics impact child development and service delivery, there does not seem to be empirical literature on the cultural competence or natural environment approaches to early intervention published in peer reviewed journals.

Many of the projects such as the Early Childhood Research Institute on Culturally and Linguistically Appropriate Services (CLAS) conducted at the University of Illinois at Urbana-Champaign and Project Culturally Responsive and Family Focused Training (CRAFT) based at California State University, Northridge have provided excellent training and curriculum materials for providers, but have generated little research evaluating the effect of family-centered and culturally competent practices.

Conclusions

A definition of natural environments that includes the philosophy of family-centered practices and a consideration of family variables such as cultural diversity should be developed and empirically validated to promote ongoing improvement in service provision in EI and ECSE. The definition of natural environments proposed by Part C of IDEA is insufficient due to its emphasis on setting.

This definition is considered synonymous with the idea of full inclusion to the dismay of some who believe that that this model of service delivery does not have a sufficient impact on transactions between the child, caregivers, or more competent peers to impact child development and learning (Bricker, 2001; Tisot & Thurman, 2002).

A reading of the literature implies that natural environments as a model of service delivery is individually defined. Each individual lives and functions in an environment or context that is rarely exactly the same as another. Thus, variables such as culture, ethnicity, and the diversity of attitudes and beliefs are defining characteristics of the natural environment and should be considered in providing services to young children and their families.

This review of the literature generates a number of questions for future empirical research. The controversy over the definition of natural environments appears to be related to whether family-centered philosophy and practice can and should be implemented by early interventionists. One can see from an administrative standpoint how such an approach may be time consuming and difficult to manage. In addition, it may be difficult to justify as the practice has not been empirically validated.

A greater implication for institutes of higher education and other agencies who prepare EI and ECSE teachers and administrators is how to prepare students to understand the constructs of natural environments and family-centered practices and how familial and cultural diversity should be considered in determining and implementing service delivery models in early intervention. Furthermore, the models and definitions discussed in this paper should be empirically validated to provide a more research-based foundation for teacher preparation and practice.

Bruder (2000) suggests that there are several problems with the research methodology that has been used in the field of early intervention. Researchers have not adequately operationally defined the independent variables in their studies that were responsible for the changes in the dependent variables. This makes specific approaches difficult to replicate in order to validate their effectiveness.

Another problem is the dissemination of research findings. Research that is published in peer-reviewed journals and publications is largely conceptual or a review of the literature from other fields such as social work or counseling or it is a review of studies published in books or reports. Original empirical research should be published in peer review journals rather than distributed through reports that are not rigorously reviewed and difficult for practitioners to gain access to.

The EI and ECSE literature has proposed models for determining and delivering early intervention services to culturally diverse children and families. However, the models remain to be empirically validated.

In addition to this barrier to the implementation of family-centered practices in natural environments, the legislation that provides the framework for the provision of services (Part C) is complex and requires a great amount of sophistication.

Many practitioners do not have adequate training in the theoretical foundation of early intervention or of the research (such as it is) that guides practice (Bruder, 2000). The research underlying appropriate practices for serving diverse families needs additional study and validation to better inform practice and institutions that prepare teachers and administrators need to better prepare students by discussing the issues defined in this paper and promoting and disseminating empirical research.

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