Developing Early Childhood Programs for American Indian Children and Their Families in Urban Settings: Research-Based Principles to Promote Long-term Effectiveness

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Abstract

Early childhood programs for economically disadvantaged children are compensatory interventions designed to help prevent school failure and social difficulties by promoting healthy child and family development. Nine principles of early childhood interventions that can be applied in urban American Indian settings were reviewed to highlight the research-based characteristics of programs that promote long-term effects on children's development that should be implemented. Effective programs can not only enhance American Indian children's scholastic development but also can reduce the need for later remedial education and social services. The effects of the Chicago Child-Parent Center, a large-scale early intervention program, were described to illustrate the importance of designing and implementing programs that have all the features of programs demonstrating long-term success for children and families.

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Urban American Indian children, like other minority groups, are disproportionately poor and suffer from socioeconomic distress. Although child poverty in the United States has decreased slightly in the last few years, in 2004 about 20% of all children in the United States were poor; for American Indian children the figure was even higher-over 32% (U.S. Census, 2004). Children who are poor during the early school years are more likely to have problems completing school and score lower on measures of health, cognitive development, school achievement, and emotional well-being than are children in higher-income families (Duncan & Brooks-Gunn, 1997). American Indian youth enter kindergarten with significantly lower reading, mathematics, and general knowledge achievement scores than other students (Demmert, 2004), and are at greater risk of school dropout (Burns & Patton, 2000; Cannella, 1997). As a result of these and other indicators of low attainment, many urban-based area educators and policymakers are seeking ways to best serve this unique population of children.

These indicators of poor child development become more acute when considering the on-going American Indian migration from rural reservations to large urban environments. Urban American Indian community centers were created in the late 1950's and early 1960's as a part of the federal relocation policies, with the goal of resettling American Indian people in urban areas, where they would be closer to schools and jobs and thus, more easily assimilated (Nagel, 1995). These policies were very effective. Today, nearly 60 percent of American Indians reside off-reservation, and as a result, the majority of American Indians have only limited access to the

educational, cultural, and financial services provided by tribal and federal agencies on reservations (Nagel, 1995; U.S. Census, 2004).

What is Early Childhood Intervention?

In the United States, early childhood intervention is a general descriptor for a wide variety of programs (Niles, Reynolds, & Nagasawa, 2006; Niles, 2004; Reynolds, 2002). Most often, it is defined as the provision of educational, social, and emotional, and health services, during any of the first nine years of life, to children who are at risk of poor outcomes because they face social-environmental disadvantages or have developmental disabilities (Reynolds, 2000). These interventions are compensatory; that is, they are designed to prevent problematic behavior such as academic underachievement, low motivation, or school failure in populations at risk (Reynolds, 2000). From the beginning, such interventions emphasized comprehensive services - center-based early education, multi-faceted family participation (i.e., parenting training, education and employment assistance), and physical health and nutrition services (Niles, et al., 2006; Niles, 2004; Reynolds, 2002).

For this paper, early childhood is defined from ages 3 to 9. The targets of early childhood intervention are minority children who are at risk of developmental problems primarily due to economic disadvantage. Among the programs discussed are well-known large-scale public programs such as Head Start, Follow Through, and the Chicago Child Parent Center Program (CPC), and small-scale model programs such as the High/Scope Perry Preschool and the Abecedarian Project.

Urban American Indian Children and Prevention Programs

For urban communities serving American Indian children, early childhood intervention programs should represent a method of primary prevention that supports the universal educational goal of getting children "cognitively ready to learn." These types programs provide intervention early in the lives of American Indian children usually prior to social, behavioral, or school problems occurring (Fayden, 1997). In contrast, most American Indian child welfare programs are tertiary prevention programs that are implemented to protect children who have already experienced considerable challenges such as school dropout or abuse or neglect. The tertiary approach is common in schools today, even though it is limited in its effectiveness.

For educators and policymakers alike, the primary prevention perspective is alluring because early childhood intervention programs of relatively high quality have been found to be cost-effective, improve children's social, psychological and cognitive readiness for school (Barnett, 1998; Haskins, 1989; McKey, Condelli, & Ganson, 1985; Schweinhart & Weikart, 1997; White, 1985). The programs are also associated with children's long-term school success including higher school achievement, lower incidence of grade repetition, special education placement, and juvenile delinquency, and greater likelihood of high school graduation (Reynolds, Temple, Ou, Robertson, Mersky, Topitzes, & Niles, Forthcoming; Reynolds, 2000; Schweinhart & Weikart, 1997).

Although not specifically implemented for American Indian children, some of the best confirmation for long-term effects of early childhood intervention programs with urban-based minority populations comes from the Chicago Child-Parent Center Program, Perry Preschool Program, the Abecedarian Project, and programs in the Consortium for Longitudinal Studies (Ramey & Ramey, 1998; Reynolds, 2000; Schweinhart & Weikart, 1997). These

programs are primarily two generational in scope (services targeting both the parent and child simultaneously).

Accordingly, in designing new programs and in modifying existing ones, early childhood educators and policymakers who work with American Indian children in urban areas should develop and implement interventions that have the elements of programs demonstrating long-term achievement for minority children and families. These programs will not only promote healthy development in American Indian children and their families but will likely reduce dependence on the overwhelmed (and expensive) social service system found in urban areas.

Nine Principles of Effective Programs

Using Reynolds (2000) as a foundation, the purpose of this paper is to describe nine critical principles of effective early childhood programs that can be used for urban American Indian children. They are highlighted in Figure 1. Educators, researchers, and program administrators agree that the most important goal of early childhood programs is helping participants develop social competence (Waters, E. & Sroufe; 1983; Zigler & Trickett, 1978). Social competence has been defined as everyday effectiveness in meeting family, school, and individual responsibilities and it can be separated into five distinct components. These include (a), school achievement (b), physical health (c) positive interactions with peers, (d) emotional competency, and (e) family interpersonal development (also see Pellegrini & Glickman, 1990; Zigler & Trickett, 1978).

The association between the nine principles of successful early childhood programs and social competence has been extensively validated in the early childhood empirical research

literature. Among these studies are Barnett (1998), Chafel (1992), Currie (2001), Frede (1998), Karoly, Greenwood, Everingham, Hoube, Kilburn, Rydell, Sanders, & Chiesa (1998), Niles, et. al, (2006), Ramey & Ramey (1998), Reynolds (2000, 2002), Reynolds & Temple (2006), Schweinhart & Weikart (1997), van IJzendoorn, (1998), White (1985), Zigler & Muenchow (1992), and Zigler & Styfco (1993). More important to urban American Indian children and the communities that serve them, these broad principles can be tailored for to meet their needs (Archibald, 1995; Barber, 1986; Demmert, 2004; Marks & Graham, 2004).

Although early entry into programs, especially if before problem behaviors are seen, is the most obvious characteristic of effective programs, more recently, duration of participation has been highlighted as an important predictor of positive program effect (see Comer, 1993; Danziger & Danziger, 1993; Dryfoos, 1990; Duncan & Brooks-Gunn, 1997; Hill & Sandfort, 1995; Sherman, 1994; McLoyd, 1998; Ramey & Ramey, 1998; Reynolds, 2000; Reynolds & Temple, 2006; Weissberg & Greenberg, 1998; Wilson, 1987; Zigler & Berman, 1983). Longer-lasting intervention (i.e. 3 or more years) enhances developmental continuity and is consistent with the ecological concept that experiences have the most impact if they occur "on a regular basis over extended periods of time" (Bronfenbrenner & Morris, 1998; Reynolds, 2000).

By providing comprehensive and longer lasting services to minority families (i.e. urban American Indian families) through early childhood programs, the physical health, nutritional, social-emotional, and educational needs of the children would be met in more consistent manner (Garces, Duncan, & Currie, 2002; Ramey & Ramey, 1998; Reynolds, 2000; Schweinhart & Weikart, 1997). As outlined in Niles (2006), programs for American Indian children that do not provide adequate health and family support services are less likely to be effective. In fact,

evidence strongly suggests that early childhood programs include broader family systems (i.e. parents and other family members) in significant ways are most likely to show long-term effects on children and families (Barnard, 2004; Reynolds, Mavrogenes, Bezruczko, & Hafemann, 1996; Reynolds, 2000; Seitz, 1990; Yoshikawa, 1995).

Principle 1: Design programs that Support the Culture of American Indian Children

Any early childhood program for urban American Indians would be incomplete without an emphasis on the unique American Indian culture. According to Weaver (2005), culture represents the values, beliefs, and world views shared to a greater or lesser extent by members of a certain ethnic group. The role of culture in identity development is critical since it is through culture that children are socialized and taught their place in a society. American Indian cultural values, beliefs and practices often contradict those of the dominant culture. According to LaFromboise and Low (1998) independence and self-discipline are two values taught to American Indian children at an early age. Often these characteristics of American Indian children are misconstrued by others who view these children as too independent, and their parents' uninvolved (LaFromboise & Low, 1998). Moreover, many theoretical perspectives found in early childhood programs are limited in their applicability for American Indian children. For example, Erikson's identity development model relies heavy on the assumption that the family unit is nuclear, made up of two heterosexual parents. "Parent" in American Indian culture can represent extended family members including grandparents, aunts, uncles and cousins, who all serve as role models for the developing child (LaFromboise & Low, 1998). The reality that American Indian children have extended family "parents" and role models may be viewed negatively by others who assume nuclear family dynamics.

The divide between American Indian cultural values, beliefs and traditions, and dominant cultural expectations can provide added stress to identity formation in American Indian children (Garrett, 1999; Sue & Sue, 1990). Unfortunately this divide remains unrecognized in large urban centers and institutions where "normal" child development is viewed through a dominant culture lens. Early intervention programs should acknowledge this divide and make attempts to incorporate aspects of American Indian culture into early childhood curricula.

Principle 2: Target Children and Families who are at Highest Risk of School Difficulties

Because of the isolation found on remote reservations, few eligible American Indian children have the opportunity to participate in formal preschool education programs. This results in preference in enrollment usually being given to children that are located in and around urban centers and who have the greatest level need. This is an important point as research has shown that the effects of program participation are usually larger for children at higher risk of poor outcomes relative to children at lower risk (Barnett, 1998; Reynolds, 2000, 2002).

Research suggests that American Indian youth in general are at higher risk for negative outcomes, such as school dropout and substance abuse (see Burns & Patton, 2000; Johnston, O'Malley, & Bachman, 2000; Kumpfer, 1992). In 2003, 20 percent of American Indian children between the ages of 12 and 17 had used alcohol in the past month and they were more likely than other children to have used marijuana in the past month (Burns & Patton, 2000; Demmert, 1996, 2004; Johnston, et al., 2000; Kumpfer, 1992). Other recent reports have shown American Indian youth, ages 12 to 17, have higher rates of cigarette use, binge drinking, and illicit drug use than those from other racial or ethnic groups (Burns & Patton, 2000; Huff, 1997; Johnston, et al., 2000; Kumpfer, 1992). Epidemiological studies of American Indian youth over the past three

decades have confirmed these rates of use (Mitchell, Beals, Novins, & Spicer, 2003; Spicer, Novins, Mitchell, & Beals, 2003).

In 2003, American Indian 4th- and 8th-grade students scored lower on the National Assessment of Educational Progress (NAEP) reading and mathematics assessments than other students (Demmert, 2004). More important is the consequence that this poor early achievement has on long-term academic success. Failure to complete high school remains a significant concern for tribal leaders and educators alike. Many factors, including poverty, tribal isolation, and health deficits, contribute to the low high school completion rates of American Indian students. A recent study conducted by the Harvard Civil Rights project (2004) found that only 51.1 percent of American Indian 9th graders complete 12th grade with a regular diploma (compared to 75 percent of whites, 53.2 percent Hispanics, and 50.2 percent Blacks). American Indians also scored lower, on average, than other students on the SAT and the ACT in 2004 (Civil Rights Project, 2004). Although the number of American Indian students enrolled at United States universities has increased significantly over the past two decades, student retention and completion rates remain low (Civil Rights Project, 2004). American Indian people in United States are seven times less likely to graduate from a university, as are members of the general population (Demmert, 2004; Civil Rights Project, 2004).

To ensure that the most-at-risk children (i.e. poor American Indian) are served, objective screening instruments may be used in selection (although most children meet some form of means test) (Powless, D. L., & Elliott, 1993). If used, the instruments should include items that not only recognize and endorse the cultural background of the children but also predict later

educational success. One of the first screening instruments that did this was Ramey and Smith's (1977) research-based screening index which included 13 factors that are associated with school underachievement and low levels of social competence. They included (among others) decreased recognition of cultural and community supports (parents), low parent education, low income, single parent family, use of public aid, limited social support, and adult family members working in low paying occupations. Children with the greatest number of risk factors were given preference in enrollment in the Abecedarian Project.

Principle 3: Begin Participation Early and Continue to Second or Third Grade

Both timing and duration of participation are associated with program effectiveness and performance gains (Lally, Mangione, & Honig, 1988). Because the preschool years are a time of rapid physical and cognitive growth, a stable learning environment offering stimulating language and social activities promotes a healthy foundation for the school entry and beyond (Howes, 1990). Most programs demonstrating long-term effects on child development provide more than one year of intervention services of a half-day or more. Programs range from five years starting at three months of age for the Abecedarian Project (Campbell & Ramey, 1994, 1995) to two years of half-day preschool beginning at age three for the High/Scope Perry Preschool Program (Schweinhart & Weikart, 1997). Children in both programs experienced higher educational attainment, less grade retention and received fewer special education services by age 15 than nonparticipating children. Relatively early program entry also promotes greater readiness for school than later entry, and teachers and program staff are more likely to be satisfied with the program implementation (Chafel, 1992; Reynolds, 2000).

Research has consistently supported the view that longer-lasting effects can be achieved by extending intervention into the later grades (e.g., Seitz, Rosenbaum, & Apfel, 1985; Fuerst & Fuerst, 1993; Madden, Slavin, Karweit, Dolan, & Wasik, 1993; Reynolds, 2000; Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002). Extended childhood intervention is important because it helps children make a smooth transition to kindergarten and the primary grades. Evidence supporting the transition to school as a critical period is found in Niles et. al. (2006), Reynolds (2000) as well as Reynolds & Temple (2006), who found that participation in the Chicago Child Parent Center Program yields more positive achievement because of longer duration of participation. As a consequence of these findings and others, it is recommended that extended childhood intervention (e.g. from preschool to third grade) is provided for all American Indian children in urban areas.

Principle 4: Provide Comprehensive Child-Development Services

In order to promote and sustain good school performance, effective programs should assist American Indian children and families in meeting their physical health, nutritional, social, psychological, emotional, and scholastic needs. Beginning with the Project Head Start Planning Committee in 1964, comprehensive services have been a key part of most early childhood programs. The provision of comprehensive services is a constant feature of successful early childhood programs (Zigler & Muenchow, 1992; Campbell & Ramey, 1994, 1995; Reynolds, 2000; Schweinhart & Weikart, 1997). Comprehensive services usually include:

1. Physical health/nutrition services including a physical exam and health screening consistent with the Head Start Performance Standards, free breakfast or lunch, and medical assistance for children with special problems;
2. Social Services to the family including referrals to social service agencies and employment programs;

3. Parent Program services in the school or at home to enrich the education and development of children and parents and;
4. Curriculum Program services to implement a child-centered approach to language and literacy development.

Although there is consensus about the importance of providing comprehensive services, there is less agreement about the relative importance of these services and the extent to which these services should be provided (Reynolds, 2000). Certainly, more comparative research is needed in this area, especially as related to American Indian children.

Principle 5: Active and Multi-Faceted Parent Involvement

Parent involvement is the foundation of many early childhood programs including the Child Parent Centers and Head Start (Barnard, 2004). Early childhood programs that involve parents in significant ways through home visitation or through parent education or center involvement show longer-term effects (Barnard, 2004; Campbell & Ramey, 1995; Yoshikawa, 1994). The following parent involvement activities are provided in many effective programs:

1. Volunteering in the classroom and going on field trips;
2. Attending workshops and school activities plus interacting with other parents in the parent rooms;
3. Providing for children's educational needs at home through reading to child, going to the library with child, and managing daily affairs;
4. Completing high school course requirements and enrolling in employment training programs or their equivalent and;
5. Receiving home visits from the school-community representative or social worker.

Consistent with these themes, it is recommended a variety of methods be used to increase participation of American Indian parents. First, require that parents or family members participate in the program for a minimum amount of time, such as two days per month. Second, parent

involvement should emphasize home visits from school staff, promote family activities that extend the classroom curriculum, volunteering in the classroom, going on field trips, participating in parent resource materials and activities, and receiving parenting education. Third, school-based outreach should accommodate family schedules (Reynolds, 2000).

Principle 6: A Culturally-based, Child-Centered, Structured Curriculum Approach

No specific curriculum model is associated with successful early childhood intervention over the long term (Graue, Clements, Reynolds, & Niles, 2004). The key is to implement an approach that is relatively structured, child-centered, and encourages developmentally appropriate practices and behaviors. Generally speaking, developmentally appropriate practices are those that emphasize (a) individualized choices, (b) culturally-based story-writing, story-telling, and drawing, (c) hearing stories and books, (d) cooperative activities, (e) reading and writing games, (f) dramatic play, and (g) teacher-child interactions to develop critical thinking skills. Regular field trips to museums and libraries also are important. Graue et. al, (2004) suggest the following research-based recommendations for teachers and parents in developing reading skills in young children:

1. Read to smaller groups;
2. Be sure all children are prepared for book readings;
3. Read with cultural expression and encourage child involvement;
4. Have children make predictions about coming events;
5. Incorporate books into extended units;
6. Have children experience the same books at home and in school and;
7. Reinforce to parents the value of talking about books.

Curriculum approaches that have a special focus on language and literacy development appear particularly effective. Many early childhood programs emphasize language development and pre-reading skills (Madden et al., 1993; Reynolds, 2000; Schweinhart & Weikart, 1997; Schweinhart, Weikart, and Lamer, 1986). In the cognitively-oriented Perry Preschool Program, for example, key experiences are emphasized in the following areas: creative representation, language and literacy, social relations and personal initiative, movement, music, classification, seriation, numbers, space, and time.

Principle 7: Small Class Sizes and Teacher/Child Ratios

Almost all programs demonstrating long-term success into high school had teacher/child ratios of 1 to 8 or lower (Campbell and Ramey, 1995; Frede, 1994; Schweinhart & Weikart, 1997). The benefits of low ratios for children most-at-risk may be particularly large (Reynolds, 2000). Small class sizes and teacher/child ratios encourage individualized learning experiences, increase contact between teachers and children as well as among children, facilitate better classroom organization, and improve satisfaction among teachers and staff. These characteristics are known to improve motivation, school commitment, curiosity, and later school achievement. In short, small class sizes increase the likelihood that Principle 5 would be fulfilled (Niles 2006; Reynolds, 2000). As a consequence, the National Association for the Education of Young Children recommends that preschool class sizes be no larger than 20 and that teacher/child ratios be no larger than 1 teacher per 10 children. In kindergarten and the primary grades, class sizes and teacher/child ratios would be expected to increase slightly.

Principle 8: Regular Staff Development and In-service Training for Certified Teachers

The qualifications of staff are directly related to the quality of early childhood programs (Chafel, 1992; Frede, 1994). Teachers with bachelor's degrees or certification in early childhood intervention are more likely to provide developmentally appropriate practices in the classroom than teachers will other training experiences. In the well-known Perry Preschool Program, for example, all teachers had master's degrees and the teachers in the CPC program have at least a bachelor's degree in education and certification in early childhood education.

The recognition of the importance of training in early childhood programs is not new. In 1993 the 47-member advisory committee to the U. S. Secretary of Health and Human Services recommended a staff support and improvement initiative for Head Start and other programs (Niles, 2006). These include (a) provide national leadership in developing and implementing staffing plans, (b) develop a new initiative to encourage 'qualified mentor teachers', (c) establish competency-based training for staff who work with families, (d) ensure sufficient staffing levels to serve children and families effectively, (e) continue to increase compensation for staff, and (f) strengthen the availability of training and career development opportunities at the local level such as a leadership fellows program. These recommendations remain today.

Principle 9: Systematic Evaluation and Monitoring

Good programs require a commitment to evaluation (Rossi, Lipsey, & Freeman, 2004). Effective social programs are those in which systematic evaluation is a high priority and this begins with the recognition that programs rarely are at their best in the first two years of implementation (Rossi, Lipsey, & Freeman, 2004). Over the years, designers and evaluators have

learned the hard lesson that programs are rarely ever implemented as well as they could be and only through systematic evaluation can programs be improved most efficiently. For example, the early evaluations of Head Start (Zigler and Styfco, 1993) and other programs (e.g., Comer, 1993) are good illustrations of the importance of the timing of evaluation for program improvement.

Program evaluation helps determine: (a) whether the program and all its services are being implemented as planned, (b) if the program is achieving its short- and long-term objectives, and (c) the best ways to improve the program. Since many of the most effective private companies (e.g., IBM, Motorola, Wal-Mart Stores) spend up to 10% of their budgets on research and development, early childhood programs should provide an adequate level of financial commitment to evaluation. Why should social programs spend proportionally less on research than industrial programs? Research spending in Head Start, the largest and most well-known early childhood program, has varied from 2.5% in 1974 to one-quarter of one percent in 2000 (Zigler & Muenchow, 1992: Reynolds, 2000). Greater and more stable levels of research funding are necessary for effective program development and improvement (Rossi, Lipsey, & Freeman, 2004). At a minimum, it is recommended that evaluation and research activities in early childhood programs that target American Indian children be funded at 3% of the yearly program budget. Evaluations of these programs should also consist of two types. Process evaluations to determine the extent to which program services are being delivered as planned and how they can be improved. Outcome evaluation activities will identify the extent to which the programs are meeting their short- and long-term goals.

An Example: The Chicago Child Parent Centers

The structure of the CPC program is shown in Figure 2. The CPC intervention, described fully in prior research (e.g., Niles, Reynolds and Nagasawa 2006; Reynolds 2000), is a comprehensive program that offers educational and family-support services to urban-based minority children between the ages of three and nine (preschool to second or third grade). Located in or close to elementary schools in the Chicago public school system, the CPC program is similar to Head Start in that it emphasizes the acquisition of basic skills in language arts and math through relatively structured but diverse learning experiences that include teacher-directed, whole-class instruction, small-group and individualized activities, frequent field trips, and play. Major elements of the intervention include: low child-to-staff ratios in preschool (17:2), kindergarten (25:2), and the primary grades (25:2); an intensive parent program that includes receiving parenting education, volunteering in the classroom, attending school events and field trips, furthering educational attainment, and receiving home visitation; and health and nutrition services, including screening and diagnostic services, speech therapy, meal services, and referrals by program nurses. Eligibility criteria for the intervention are: residence in a high-poverty (Title I) school area; demonstration of educational need as assessed by a screening interview and staff outreach; and parental agreement to participate. Rates of participation of eligible children were high because the program was located in areas not served by other preschools, and few families could afford private child care. The high level of community participation helps ensure that findings are representative of eligible children rather than sample selection.

Key Research Findings

An ongoing longitudinal study (see Reynolds et. al., forthcoming) of CPC children shows dramatic long-term effects. CPC preschool participants by age 24 had higher rates of school completion (71.4% vs. 63.7%, p = .01), higher rates of attendance in 4-year colleges (14.7% vs. 10%, p = .02), and more years of completed education (11.7 vs. 11.4 yrs, p = .001). They were more likely to have health insurance (70.2% vs. 61.5%, p = .005). They also had lower rates of felony arrests (16.5% vs. 21.1%; p = .02) and incarceration (20.6% vs. 25.6%; p = .03) as well as criminal convictions; lower rates of depressive symptoms (12.8% vs. 17.4%, p = .057); and lower rates of out-of-home placement (4.7% vs. 8.8%, p =.005). Participation in the school-age program and in the extended intervention also was linked to better health and well-being on some indicators. Some program effects were stronger for males, 2-year preschool participants, and children in centers rated high in child-initiated activities.

For parents of study participants, both preschool and extended intervention was associated with higher educational attainment. Preschool intervention also was associated with lower rates of parental disability and higher parental employment. Participation in a school-based intervention beginning in preschool was associated with a wide range of positive outcomes in adulthood for children and their parents. A benefit-cost analysis of the program indicates that for every $1 invested in the CPC program the return to society is $7 to $10 in reduced expenditures on remedial education and crime and in increased economic well-being (Reynolds & Temple, 2006). These findings suggest that participation in only preschool or in only kindergarten is not the optimal intervention strategy for many minority children. Participation in extended early childhood

intervention is most likely to promote longer-lasting effects. How do the longer-term effects of the program occur? Two explanations are clear. One is that program participation increases children's early cognitive development so that they are more likely to begin school ready to learn and this greater readiness begins the cumulative advantages needed for success during the school-age years (Reynolds, 2000). A second explanation for longer-term program effects is that comprehensive interventions encourage parent involvement in children's education (Reynolds, 2000). When parents are involved in the education process, they are more likely to provide the continuity needed (from the school to the home and vice versa) after the intervention ends (Barnard, 2004).

Unique Issues for Early Childhood Intervention with American Indian Children

For American Indian children and their families, there are many unresolved issues that have not been adequately discussed (Evans, McDonald & Nyce, 1999). Three issues seem particularly important. First, formal research on early childhood intervention programs has often ignored culturally conditioned values and practices of those who are the intended targets of such programs (Anderson & Watts, 1996; Apthorp, D'Amato, & Richardson, 2002). Many American Indian children and their community representatives have expressed concern about the lack of representation of their values and methods in both the process and the outcomes of research (Dahlberg, Moss, & Pence, 1999). Their concerns are essentially twofold: (1) mainstream, Euro-Western educational approaches often do not fit the learning styles, interests or needs of American Indian children; and (2) the predominantly Euro-Western value on what is determined to be "best practice" or evidenced based" perpetuates the colonial, assimilationist effects of education upon marginalized populations including American Indian children (Battiste, 1997; Dahlberg, et al.,

1999; Kirkness & Barnhardt, 1991; Kirkness, 1986;). These concerns have been elaborated by many Indigenous educators (Archibald, 1995; Armstrong, Kennedy & Oberle, 1990; Barber, 1986; Battiste, 1997; Dahlberg, et al., 1999; Kirkness & Barnhardt, 1991; Kirkness, 1986; Leavitt, 1995; Lockhart, 1982; Mackay & Myles, 1995).

The second issue is that American Indian children differ from each other across tribal and ancestral affiliations and across the cultural norms that affect their families and the types of environments in which they live (Kratochwill, McDonald, Levin, Young Bear, & Demaray, 2004: Marks & Graham, 2004). Thus, research must take into account the unique cultural characteristics of children and families and the goals and values of the local communities in which they live (Marks & Graham, 2004). This is not easily done in mainstream research (Bacon, Kidd, & Seaberg, 1982).

Finally, methodological challenges (such as small populations resulting in small sample sizes), issues in gaining tribal acceptance and permission to conduct research, and a lack of substantial financial support have combined to produce the current situation of limited research-based early childhood information about American Indian children (Dahlberg, et al., 1999; Demmert, 2004; Doebler & Mardis, 1981; McCarty, Wallace, Lynch, & Benally, 1991). Resolution of these issues seems fundamental to further progress in the early intervention and prevention field as related to American Indians (Haig-Brown, 1995).

Conclusions

Early childhood programs for at-risk children are comprehensive interventions designed to help prevent academic and social difficulties by promoting healthy child and family development. Nine principles of early childhood interventions were discussed to highlight the characteristics of programs that promote positive long-term social competence for minority children. Effective programs not only enhance children's social competence but also can reduce the need for later remedial education (i.e. special education or grade retention) and social services. The program design and selected outcomes of the Chicago Child-Parent Center, a large-scale early intervention Program, were described to illustrate the importance of designing and implementing programs for urban American Indian children that have all the features of programs demonstrating long-term success for minority children and families.

A central issue in implementing the nine essential principles of early childhood programs is the tradeoff between serving as many American Indian children as possible for one year at a basic level or serving more American Indian children for longer periods at a higher level of effectiveness (Archibald, 1995; Armstrong, et al., 1990; Barber, 1986; Battiste, 1997; Demmert, 2004; Marks & Graham, 2004). In the short- and long-term, the benefits of the latter approach have been demonstrated consistently over the past four decades. Although research should have an important role in determining the most effective program characteristics for long-term success, local communities, program administrators, and policymakers must take factors other than empirical evidence into account in their decision making. These factors include tribal values and culture, community needs, the levels of risk experienced by families, and resource constraints.

It may be advantageous, however, to investigate programs that vary in their fidelity to the above principles. For example, some programs could emphasize services in only in preschool and kindergarten while others emphasize services up to third grade. Program variations also could investigate different class sizes, alternative kinds of parent involvement (i.e. using more tribal-specific parenting practices), and curricula. The impact of these variations could then be compared with urban-based American Indian children and their rural reservation-based peers.

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