

Inherent Difficulties Accounting for Prenatal and Perinatal Risk Factors in Samples of Post-institutionalized Children

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Abstract

Research on international adoption has indicated that a majority of children present with a variety of special needs [1, 2]. Researchers often cite the institutional environment as the source of special needs in foreign adopted children [3, 4]. While the current article provides a general overview of developmental delays and deficits in post-institutionalized children, the overriding tenet is a call for better identification of pre- and perinatal risk factors in post-institutionalized children.

The Prenatal History "Wild Card": Inherent Difficulties Accounting for Prenatal and Perinatal Risk Factors in Samples of Post-institutionalized Children

Over the past decade and a half, an increasing body of literature pertaining to international adoption has emerged. In 2004 alone, the U.S. Department of State reported more than 20,000 children were adopted from foreign countries [2]. In the United States however, the number of international adoptions have more than doubled since 1992 [5]. While similarities exist between international and domestic adoptions, children adopted from foreign countries present a number of unique issues and challenges [6]. Many of these issues and challenges stem from the fact that internationally-adopted children are very likely to have experienced out-of-home or institutionalized care. Gunnar, Grotevant and Johnson's survey of internationally adopted children in Minnesota for example, indicated that prior to adoption 72% had experienced multiple transitions [7]. In addition Johnson suggests that roughly the same number of children adopted from foreign countries have a history of institutionalization [6].

There is now considerable evidence linking numerous poor developmental outcomes to children with a history of institutionalization [1; 8]. These findings are not surprising when considering the likelihood of exposure to the many conditions hazardous to physical, cognitive and socio-emotional development institutionalized children may face [2]. It is now well recognized, for example, that many foreign orphanages are understaffed, and institutionalized children will likely experience malnutrition, attachment problems and cognitive delays and deficits [1].

It may be obvious to even the casual observer that poor developmental outcomes are a direct result of early caretaker neglect and insufficient stimulation in the institutionalized setting. However, the general assumption that such outcomes are a direct result of the institutionalized environment is only part of the story. Although the relative contribution of nature and nurture to human development has been argued for centuries, a current review of the literature on post-institutionalized children is overwhelmingly focused on the post-natal (nurture) influences. While it is usually recognized that pre-and-perinatal influences contribute, the recognition is typically based on assumptions and speculation without the support of empirical data. The following sections will highlight what we know about the developmental outcomes for many post-institutionalized children. In contrast, we will then see that we know very little about the specific pre- and perinatal life history factors that may have contributed to these outcomes.

What We Know: Outcomes Cognitive Domain

While often dismissed for a lack of experimental rigor, deficits in the measured intelligence of institutionalized children have been reported since the 1930's [9]. Whether the measurement is an accurate reflection of intelligence or not is debatable but, a consistent pattern of data has emerged since that time. Children who are exposed to an institutionalized setting are at high risk for a number of cognitive deficits.

Sadly, some cognitive deficits have been reported for children as young as age two. Kaler & Freeman found dramatic differences between a representative set of Romanian orphans, and a matched sample of Romanian non-orphans (M = 35 months) [3]. Bayley scores indicated an average mental age of 9.5 months (SD = 7.5) for the orphaned group, in contrast to an average mental age of 25 months (SD = 2.8) for the non-institutionalized peers [3].

Several studies indicate some gains in cognitive function once

children are removed from the institution. For example, Rutter and colleagues found dramatic increases in developmental quotients on the Denver scales of Romanian adoptees two years after placement in an adoptive home in the United Kingdom [10]. Likewise, Johnson suggests that children average an increase of two developmental quotient points per month following removal from institutions [6]. However, when assessing post-institutionalized children for higher order cognitive functioning such as IQ and reading ability, low levels of intellect are typically reported [4, 11].

Physical Domain

While some post-institutionalized children may make cognitive gains once adopted, the majority of institutionalized children remain under-developed physically post-adoption as compared to their non-institutionalized peers [6]. This is not surprising considering the cascade of neurological events occurring during the first few years of life. The number of adverse events that may alter neural development occur in both the prenatal and postnatal environments. A foreign-born child's medical history may not be well documented, perhaps instilling a blind confidence in the child's physical well-being. Medical records may be vague or exaggerated for purposes of expediting a placement [12].

Recent reports indicate that children adopted from Russia and eastern Europe have a 20% rate of premature birth and 40% rate of small for gestational age [13]. Fetal growth restriction, low birth weight, and premature births have all been linked with maternal malnutrition and substance use [14]. While researchers are only beginning to discover the mechanisms behind these risk factors, children coming from institutional care are likely to have been exposed to them. As Johnson states, "Kids aren't in orphanages because they come from loving, intact families with a good standard of living and ready access to good health care and nutrition" (p.6) [6].

Socio-Emotional Domain

Following a history of maltreatment, conflict and isolation, it is no surprise that post-institutionalized children have difficulty controlling their emotions and relating to others. In addition to problems with emotional expression, research also suggests problems in the recognition and interpretation of emotions. In an examination of 5 year-old Russian orphans compared to a matched sample of Russian non-orphan counterparts, Sloutsky found that the institutionalized children were significantly less likely to correctly identify facial expressions of anger, fear, joy and love [15]. Interestingly, this finding is related to symptoms of the pervasive developmental disorder autism, for which many post-institutionalized children seem to mimic [16].

The critical lack of emotional bonding to a caregiver likely plays a major role in the inability of post-institutionalized children to form healthy social relationships. As first outlined by Bowlby a secure attachment provides the foundation for becoming an emotionally-healthy and well-adjusted adult [17]. Some data indicates that children adopted before 6 months of age tend to have better developmental outcomes [18]. Socio-emotional functioning, however, tends to be the most resilient against this trend [19]. For example, Reactive Attachment Disorder (RAD) of Infancy and Early Childhood, as described in the DSM 5, is characterized by "markedly disturbed and developmentally inappropriate social relatedness in most contexts." As summarized by Zeanah [1].

"Indiscriminate sociability is linked to lack of a discriminated

attachment figure in children in institutions, but it persists long after these children have developed attachment figures in the more favorable caregiver environment of the adoptive home." (pg.1).

Behavioral Domain

Disturbances in attachment are recognized and often defined by disturbances in behavior [20]. As previously noted, autistic-like behaviors are not uncommonly manifested by post-institutionalized children. In fact, such behavioral disturbances have been described as "institutional autism" by Federici [16]. Speech and language, attention and emotional regulation deficits, and self-stimulatory behaviors are among the hallmark features of this behavioral pattern. There is now an increasing body of literature reporting clinically significant levels of internalizing and externalizing behavior problems, insecure attachments, and sensory-regulation deficits with these children [21, 22]. The impact of the institutionalized environment on long term developmental sequelae however, is lesser known.

What We Don't Know: Predictors Pre- and Perinatal Factors

A majority of research on post-institutionalized children (including most of the studies cited here) is descriptive in nature. As a result of the dedication of these researchers, there is now considerable agreement about the characteristics of children who have been exposed to the institutional environment. There is more debate, and frankly less data available, about the specific mechanisms underlying the outcomes outlined above. For example, the paucity of neurobiological studies on post-institutionalized children is rare and generally neglected according to a review by Gunnar and Kertes [2].

There is now considerable evidence suggesting that post-institutionalized children will be challenged with special needs [1, 6, 21]. However, the contribution of prenatal and perinatal histories to detrimental developmental outcomes continues to be ignored in the recent literature. A study by Smyke and colleagues or example, supported the notion that institutionalization is the factor associated with deficits in physical growth, cognitive development, emotional expression and behavioral problems while prenatal and perinatal factors were not addressed [23]. Also, while acknowledging that "prenatal alcohol exposure and prenatal birth cannot be ruled out" Gunnar and Van Dulmen do not include them as factors in their model for describing behavior problems in post institutionalized internationally adopted children [24].

Prior studies indicate an exponential increase in poor developmental outcomes as the amount of time a child spends in an orphanage increase [18]. However, it may be more critical to have information about the child's biological mother, her pregnancy and any remarkable circumstances occurring during the birth. While extended time spent in an institutional setting may expose a child to more opportunities for maltreatment, pre- and perinatal predictors of dysfunction should also be identified.

The goal here is not to suggest that institutionalization has no effect on the developmental outcome of a child. However, it is negligent and insufficient to describe differences between institutionalized and non-institutionalized children without taking early developmental histories into account. In essence, there is a glaring need for the valid and efficient collection of accurate early life history data. Few would argue that there is a single developmental pathway for

a pervasive developmental disorder like autism. Currently, there is a lack of concerted effort to uncover potential differences amongst post-institutionalized children. Vigilance toward collecting valid pre-and perinatal data can only help us reliably predict specific developmental trajectories and improve therapeutic interventions for children and their families [25-38].

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