

The Impact of Environmental Injustice on Children's Well Being

Chair: Laura Patricia Kohn-Wood

Discussant: Bunyan Bryant

Presenters: Ginger L. Chew, Glenetta Hudson, Rachael Jankowski, Barbara Maddox, Michael S. Spencer, Carole Ann Beaman

In this symposium, research papers examined the association between environmental hazards and children's well being through the analysis of neighborhood-level environmental and health data (industrial plant locations and emissions, lead levels, asthma rates) as well as individual-level child health data. The discussant, Bunyan Bryant, defined and discussed environmental justice in the context of Head Start children and families and summarized the research findings in terms of policy directions, advocacy planning, and future recommendations.

- **Environmental Injustice, Children's Well-Being and Parenting Among Black Head Start Families**

Glenetta Hudson, Rachael Jankowski, Michael S. Spencer, Elaine Hockman, Barbara Maddox, Jessie Urban

To combat environmental injustices and their impact on children in the Detroit area, a partnership was formed between the University of Michigan Environmental Justice Initiative (EJI) and Detroit Head Start programs to address environmental hazards in Head Start communities. Two projects were carried out from this partnership. The first project utilized quantitative data to understand the prevalence and nature of adversity among Black preschool mothers and qualitative data to explore how parents use socio-cultural resources in parenting. Results showed that areas in Wayne County with Head Start students have a statistically significant greater density of environmental hazards (e.g., child asthma index, lead exposure, pollution density) and greater health risks compared to Wayne county zip codes without Head Start programs.

For study two, 14 African American Head Start mothers were asked open-ended questions about sources of strength they use for parenting. The results reveal several themes relating to how family, friends, parenting groups, church families, Head Start teachers, and mothers serve as sources of strength in facilitating resilient parenting. Using Photovoice, Head Start parents were asked to identify and discuss environmental problems that may affect their children's well-being. Each parent was given a camera and asked to capture "how environmental hazards affect your child's well-being." The photos centered on the physical environment, including abandoned buildings and vacant lots that had become illegal dumping grounds. From these pictures, parents and staff gained a better understanding of the environmental risks in the area and insight into appropriate community strategies to address these concerns.

- **The Impact of Environmental Injustice on Children's Well Being in Detroit Head Start**

Carole Ann Beaman

A case management model was implemented in Detroit Public Schools Head Start Program with recommendations and responsibilities designed to identify progress and/or barriers to implementation of best practices for the children and families affected by lead poisoning. The model is based on the case management model encompassing the education, medical and dental health, nutrition, mental health, and disability concerns of the child. Housing is a critical factor in addressing the needs of the lead poisoned family.

This service model is consistent with the Epstein Model of Parent Involvement. This model was particularly suited to Detroit Head Start families, particularly those with exposure to environmental hazards. The Epstein Model has six types of involvement: (a) parenting, (b) communication, (c) volunteering, (d) home-school connection, (e) decision making, and (f) community involvement. The Environmental Justice project can be visualized as a natural extension of parent experiences throughout the model, especially in developing policies and procedures to address the issues regarding this environmental toxin for the families and neighborhoods and to involve the community in effecting change.

- **Disparities in Indoor Allergen Exposure: Comparisons Between Urban and Suburban Environments**

Ginger L. Chew

Several studies have examined the prevalence of mice and cockroach allergens and their impact on children's health. In 2000, a U.S. study of 499 inner-city children with asthma found that 18% were allergic to mouse allergen and that those with exposure greater than the median level in kitchen dust had a 2.2 greater odds of mouse sensitization compared with those with a lower exposure level (Phipatanakul, Eggleston, Wright, & Wood, 2000). Mouse allergen has also been associated with mouse skin test sensitivity in suburban U.S. homes (Matsui et al, 2004). Even low levels of mouse allergen can pose a risk for developing allergic sensitization.

In a study of 339 asthmatic children in Baltimore, 35% of the urban dwellers were sensitized to cockroach allergen compared with 21% of the primarily suburban dwellers (Matsui, Wood, Rand et al., 2003). The difference in allergen levels between suburban and urban homes was investigated in a Boston study which found that homes in the high-poverty areas were more likely to have high cockroach allergen levels than homes in the low-poverty area (Kitch, Chew, Burge et al., 2000). In a national survey of 831 homes, more high-rise homes had high cockroach allergen than did single-family detached homes (Cohn, Arbes, Jaramillo, Reid, & Zeldin, 2006). In the same survey, homes in areas with populations greater than 1 million were more likely to have high levels of this allergen compared with homes in less densely populated areas (4.7% versus 1.5%).

While the home environment is an important source of exposure to indoor allergens, other sources (which can differ between urban and suburban locations) include schools and daycares. Of dust samples from New York City schools, 71% contained detectable cockroach allergen and 81% contained detectable mouse allergen (Chew, Correa, &

Perzanowski, 2005). In daycare centers (not homes) of North Carolina, average cockroach and mouse allergen levels were much lower than those in inner-city homes (Arbes, Sever, Mehta, Collette, Thomas, & Zeldin, 2005). Further investigation of daycares will reveal if there is a true difference between suburban and urban daycare centers similar to that observed in homes.

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