

## NEURAL CORRELATES OF CARE SETTING IN A SAMPLE OF CHINESE CHILDREN DOUBLE ORPHANED BY AIDS

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**D**r. Behen will present data from a set of studies focusing on the functional and structural neural correlates of differential care settings (orphanage, kinship care, community group homes) (NIH: 5R21HD087108-02) in children double orphaned by AIDS. The talk will highlight the behavioral and neural phenotypes associated with such early adversity and across care settings, and also predictors of such outcomes, especially focusing on timing and care setting parameters.

**Objective:** Studies investigating the effects of early social deprivation associated with institutional rearing reveal increased incidence of cognitive/behavioral problems and altered neural structure/function, raising concerns about the use of institutional settings (i.e., orphanages) in the care of orphaned children, and prompting study of alternative programs (i.e., foster care) for the care of such children. However, empirical scrutiny of neurodevelopmental outcomes across care settings (and timing/care setting parameters associated with outcomes) is critical before a global push to foster care is undertaken.

**Method:** We applied neurocognitive/behavioral assessments, and structural/functional MR imaging in 124 Chinese children double-orphaned by HIV/AIDS (mean age=14.7+SD=1.5 years), across three care settings (orphanage, community group home, kinship care), and two age groups (onset of adversity <3years, >8 years of age). Data analyses included between-group comparisons on cognitive/behavioral outcomes and structural/functional neural connectivities. Regression analyses were used to identify/determine relationships between duration in care and outcomes across settings, and whether relationships are moderated by age of onset of adversity.

**Results:** Analyses revealed increased incidence of cognitive/behavioral problems in children raised in orphanages and kinship care compared to those in community group homes. Further, orphanage rearing was associated with altered neural connectivities, especially involving frontal and temporal regions, compared to community group home. Outcomes were associated with duration in care (longer duration in orphanage was associated with poorer outcomes over time; care in group homes was associated with improved outcomes over time); findings were accenuated in children with onset of adversity before 3 years.

**Conclusions:** Community group care was associated with improved neurodevelopmental outcomes compared to orphanage care. Such outcomes appear to be strengthened over time in such settings, particularly in children with early onset of adversity. Such data may have important implications for policy for how growing numbers of children, worldwide, can be best cared for following early adversity.

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