

Multiple Child Care Arrangements and Children's Health

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Project Description.

This completed study examines relations between concurrent, multiple child care arrangements, or arrangement multiplicity, and young children's health. Specifically, within-child fixed effects models using a longitudinal, comprehensive dataset are used to relate changes in the number of children's child care arrangements to changes in children's communicable diseases and general health from birth through age 5. The mediating effect of peer exposure and the moderating effects of child gender and family income is tested. Increases in the number of arrangements were associated with a 15% increase in respiratory problems among children 3 to 54 months of age, and a 25% increase in otitis media among children 36 to 54 months. Associations were smaller among African American children compared to European American and other-race children. Findings suggest that the number of peers with which a child comes into contact at child care mediates the association between increases in number of arrangements and increases in reported respiratory problems.

Research questions.

- *Is the experience of multiple, concurrent child care settings related to increases in the incidence of communicable diseases and general health among children from birth through age 5?*
- *Is the relationship between arrangement multiplicity and child health mediated by the total number of children to which the child is exposed?*
- *Is the relationship between arrangement multiplicity and child health stronger among boys and children from low-income families than among girls and children from higher-income families?*

Sample. Data from the National Institute of Child Health and Human Development's Study of Early Child Care and Youth Development (NICHD SECCYD), a longitudinal, comprehensive dataset of 1,364 children followed from birth through age 15, will be used. This study will include children in the sample from 3 to 54 months of age and with

complete information on health outcomes and child care attendance for at least two of the 16 total time points. A total of 1,265 children are included in analyses.

Methods. Within-child fixed effects (FE) models are used to relate changes in the number of concurrent nonparental child care arrangements children regularly attend with changes in mothers' reports of children's communicable diseases and ratings general health. Time-varying covariates including child care quality, primary type of care, hours in care, parental employment characteristics, family income and structure, and parenting quality are controlled. The moderating effects of child gender and family income status are tested.

Results: 52% of children attended multiple child care arrangements at least once from 3 to 54 months. Increases in the number of arrangements were associated with a 15% increase in respiratory problems among children 3 to 54 months of age, and a 25% increase in otitis media among children 36 to 54 months. Associations were smaller among African American children compared to European American and other-race children. Findings suggest that the number of peers with which a child comes into contact at child care mediates the association between increases in number of arrangements and increases in reported respiratory problems.

Progress Update. The study was recently accepted for publication in *The Maternal and Child Health Journal*.

Implications for policy/practice

Previous research has identified a link between child care attendance and children's health, which may be partially explained by arrangement multiplicity. The limited research on arrangement multiplicity has examined children's behavioral outcomes or has been conducted abroad in very different child care policy contexts; the current study sheds light on the experience of one aspect of child care instability

commonly experienced in the U.S., arrangement multiplicity, and how the experience relates to children's health. This study finds that children attending multiple child care arrangements prior to kindergarten entry experience slightly more contemporaneous communicable diseases, relative to attending single nonparental arrangements, through exposure to more peers. The study helps to identify the pathways through which arrangement multiplicity may affect children's health to provide ways to encourage stability through subsidies and other child care policies.

Implications for research

The study uses rigorous statistical methods, namely within-child fixed effects models, to limit the potential selection bias into unstable child care, or

the pre-existing differences between children in stable and unstable care.

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