



NEBRASKA CENTER FOR RESEARCH ON
CHILDREN, YOUTH, FAMILIES & SCHOOLS

Kindergarten Children's Development in Rural and Non-Rural Settings

Susan M. Sheridan, Michael J. Coutts,
Shannon R. Holmes, Amanda L. Witte, and
Sonya A. Bhatia



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Behavioral Challenges

- Childhood behavior problems often occur across multiple settings (e.g., home, educational setting; Achenbach, McConaughy, & Howell, 1987).
- Left unaddressed, young children with problem behaviors are vulnerable to negative outcomes later in life.
- Early intervention is necessary to reduce externalizing behaviors and build adaptive skills (Denham, 2006; Grusec & Davidov, 2010).

Transition to Kindergarten

- Children often experience academic, social, and cultural discontinuities when transitioning into kindergarten (Christenson, 1999).
- More than any other school readiness skill, young children's behavioral problems are rated as most concerning to Kindergarten teachers (Rimm-Kaufman & Pianta, 2000).
- The environmental context and the relationships between them are important when examining children's transitions to Kindergarten.

Environmental Context

- Ecological theory (Bronfenbrenner, 1979) emphasizes the importance of person-environment fit
- Optimal development occurs when:
 - Environments are conducive to social, behavioral, and academic success
 - Coordination exists between the key environments (home-school partnerships)
- Early academic and behavior problems are influenced by:
 - Community setting
 - Socio-demographic factors

Community Factors

- Rural and non-rural communities differ in ways that may impact children's development (Evans, 2006):
 - Resource accessibility
 - Economic characteristics
 - Collective human, social, and cultural capital

Socio-Demographic Factors

- Certain socio-demographic factors place children at risk for academic and behavioral challenges.
- Exposure to multiple risk factors impacts children more than individual risk factors (Evans, Whipple, & Li, 2013).
- Socio-demographic risk factors include:
 - Fewer than two adults in the home
 - Maternal education less than high school degree
 - Free and reduced lunch eligibility
 - Language differences between home and school

Cumulative Risk

- Cumulative risk is defined as the total number of risk factors experienced by a child.
- Early exposure to risk factors predicts children's behavior problems (Appleyard, Egeland, van Dulmen, & Sroufe, 2005).
 - Children who experience more risk factors have poorer behavior (Sheridan et al., 2012).

Current Study Purpose

- The purpose of this study is to examine:
 - The effect of community setting on parent and teacher reports of student behavior
 - The differential effect of cumulative risk on children's behaviors across rural and non-rural communities

Participants

- Participants were drawn from two randomized controlled trials
- 111 kindergarten students *identified as having disruptive behaviors* and their parents
- 53 teachers
- 40 schools
 - 10 mid-size city schools
 - 30 rural schools

Student Demographics

		Rural (n=61)	Non-Rural (n=50)
Mean (SD) Age		5.55 (.55)	5.23 (.48)
Gender (Male)		84%	100%
Disability Status		28%	54%
Ethnicity	White, non-Hispanic	85%	77%
	African American	3%	4%
	Hispanic/Latino	5%	6%
	Other	7%	13%
Risk Factors	0	18%	50%
	1	3%	36%
	2	36%	12%
	3 or more	43%	2%

Parent Demographics

		Rural (n=61)	Non-Rural (n=50)
Mean (SD) Age		32.4 (5.3)	32.6 (6.5)
Free/Reduced Lunch (Eligible)		68%	36%
Gender	Male	10%	11%
	Female	90%	89%
Education	Less than HS diploma	10%	9%
	HS diploma or GED	10%	11%
	Some college	44%	25%
	College degree	32%	38%
	Graduate coursework/Degree	4%	17%

Teacher Demographics

		Rural (n=30)	Non-Rural (n=23)
Gender (female)		96%	100%
Ethnicity (white)		100%	96%
Education	College degree	21%	43%
	Some graduate coursework	50%	48%
	Graduate degree	29%	9%
Mean (SD)	Years of Experience	14.1 (13.8)	7.6 (8.9)
Certification	General education	89%	78%
	General & Special education	11%	22%

Measures

- Student Behavior
 - Parent and teacher report on broadband scales of *Behavior Assessment System for Children* (BASC)
- Cumulative Risk
 - Parent report of socio-demographic risk factors
- Community Setting
 - Rural communities across three Midwestern states (Nebraska, Iowa, Kansas)
 - Moderately sized city in Nebraska (Non-rural)

Analyses

- A multilevel model of students and their parents nested within teachers was conducted to examine:
 - The effect of community setting on parent and teacher reports of student behavior (main effects)
 - The differential effect of cumulative risk by community setting on parent and teacher reports of student behavior (interaction effects)

Results: Main Effects

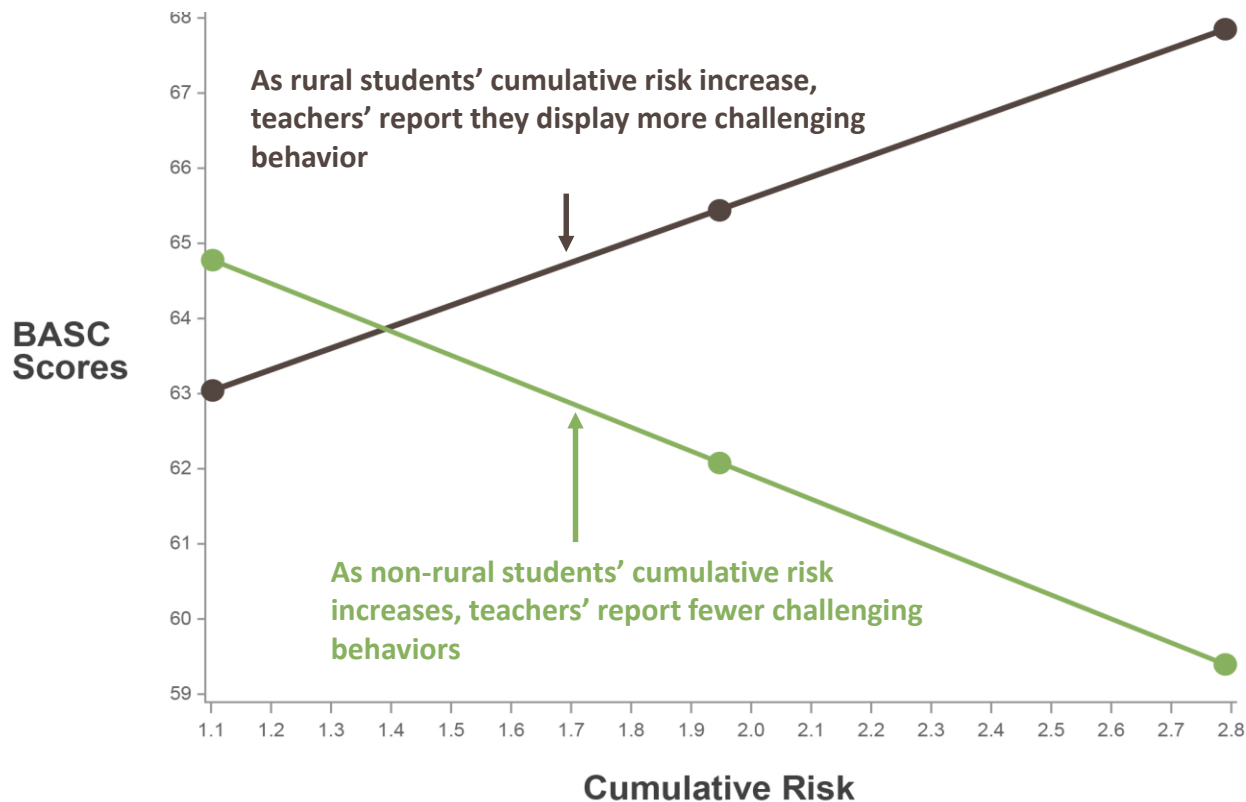
- Marginal differences between rural and non-rural kindergarten students noted on:
 - Teacher reports of the *behavioral symptoms index*, with rural students reported as having more challenging behaviors than non-rural students ($p = .07$)
 - Parent reports of *internalizing problems*, with children in rural communities reported as having fewer internalizing difficulties than non-rural students ($p = .07$)

Results: Interaction Effects

Geographic setting (rural vs non-rural) matters -- significantly -- when determining whether the degree of risk will be a factor in influencing children's behavioral functioning.

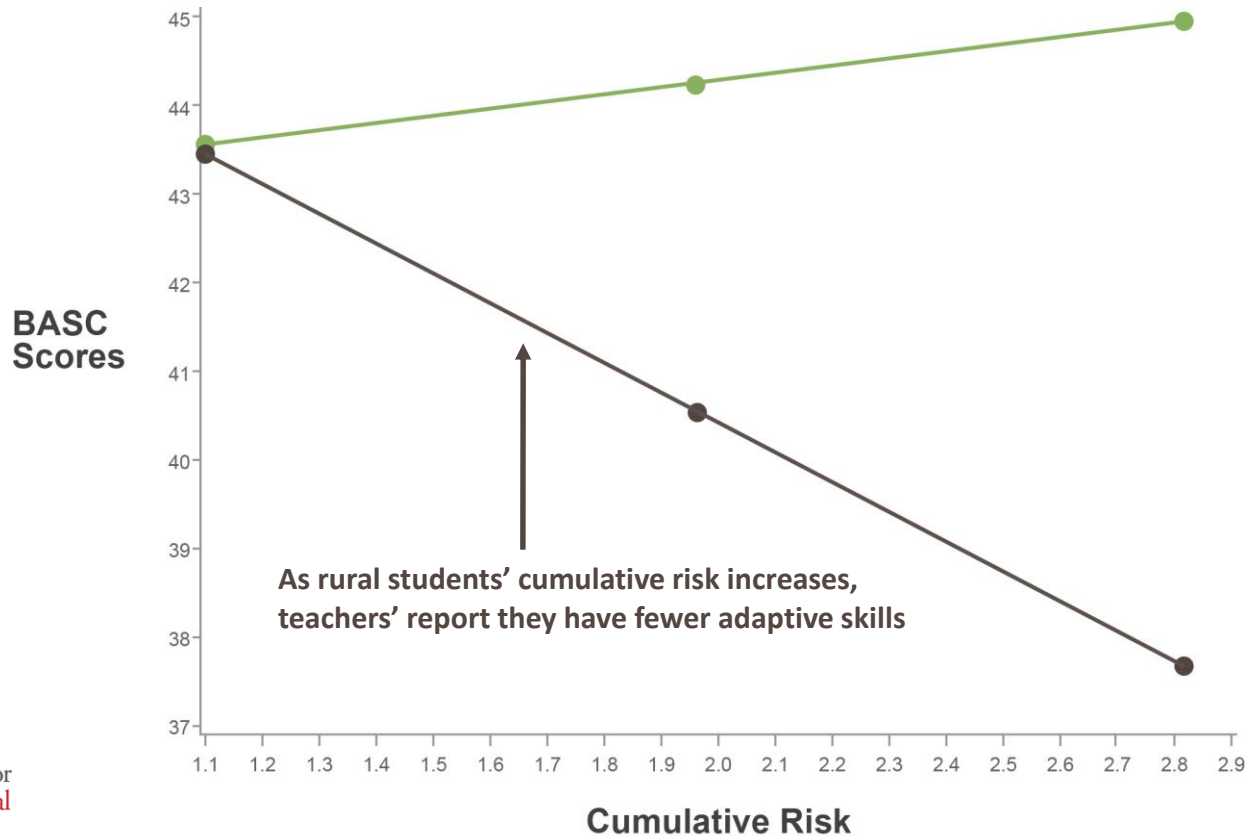
Results: Interaction Effects

- Effect of cumulative risk on teacher reports of students' **behavioral symptoms** varies as a function of their community setting ($p = .02$)



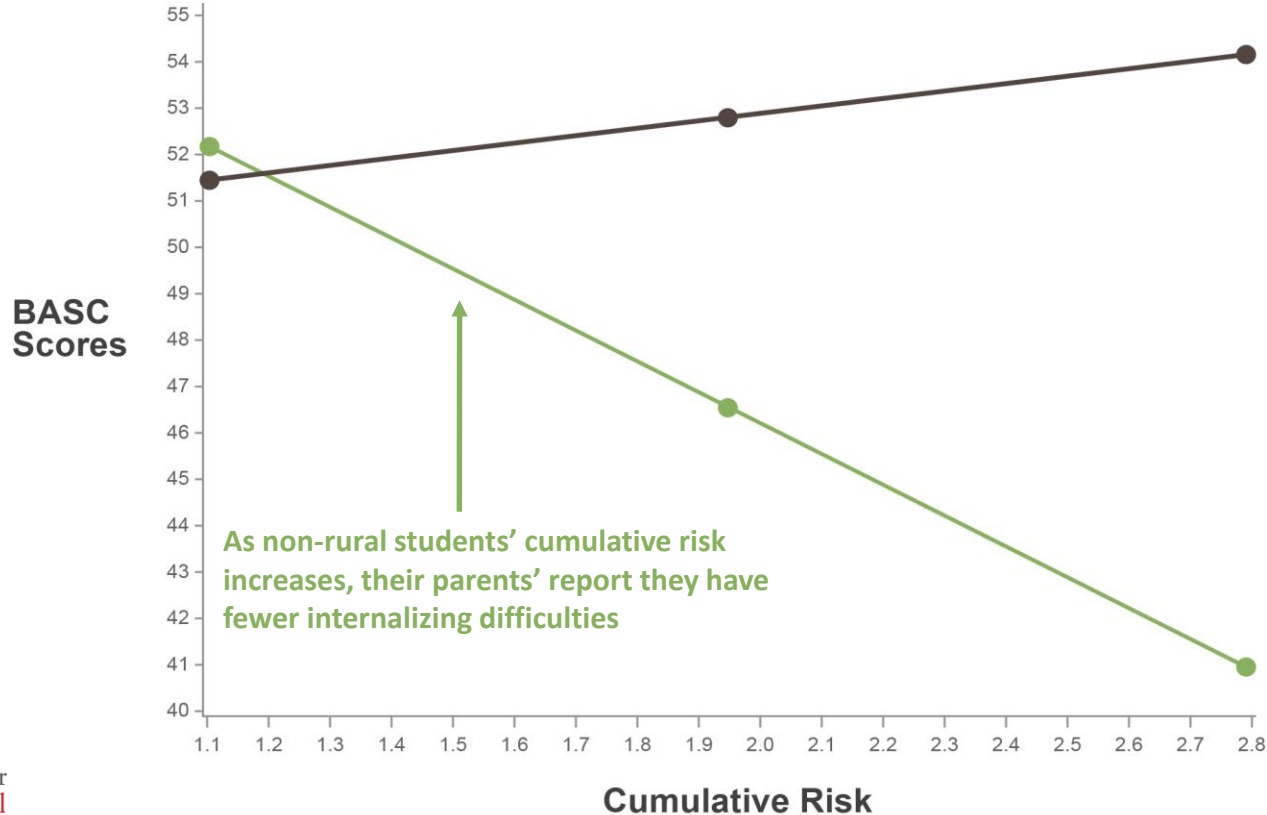
Results: Interaction Effects

- Effect of cumulative risk on teacher reports of students' **adaptive skills** varies as a function of their community setting ($p = .05$)



Results: Interaction Effects

- Effect of cumulative risk on parent reports of children's **internalizing problems** varies as a function of their community setting ($p = .02$)



Discussion

- General findings:
 - The presence and type of problem behaviors exhibited by kindergarten students differs based on community setting.
 - Consistent with nationally-representative study of rural vs. non-rural children using ECLS-B data (Sheridan et al., 2014)
 - Increasing levels of risk functions differently in rural and non-rural settings.
 - Access to services in urban/suburban settings may offset challenges associated with risk

Implications for Policy & Practice

- Preschool interventions focusing on decreasing problem behaviors and increasing adaptive behaviors are needed.
- To be maximally effective, interventions that address behavioral concerns for children at risk may need to be *context-sensitive*, or tailored to the community context within which children live.

Implications for Policy & Practice

- Access to methods to augment the skills and competencies of rural parents and teachers are necessary, especially for children exposed to multiple risk factors.
- Strategies that develop *context-sensitive*, cross-system partnerships are effective at building community support for young children's development.
 - Kunz et al. (Loft Room) explores preliminary effects of CBC as a partnership intervention for addressing challenging behaviors in rural communities.

Limitations

- The overall sample size of rural and non-rural settings is small.
- The rural sample used in this study is not representative of all rural areas.
- We cannot determine causation.

Contact Information

Susan M. Sheridan, ssheridan2@unl.edu

**Nebraska Center for Research on Children, Youth,
Families and Schools**

Website: <http://cyfs.unl.edu>

**National Center for Research on Rural Education
(R²Ed)**

Website: <http://r2ed.unl.edu>

Facilitated Discussion

- How can information from this study inform or advance early childhood practice?
- How can information from this study inform or advance early childhood public policy?
- What additional research is needed to inform or advance early childhood practice and/or policy?



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Thank you!



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