

Development and Validation of the Oklahoma School Readiness Reach-by-Risk Index (SRR²I)
Project Team: Naneida R. Lazarte-Alcalá, Ph.D. (PI), Celina Mendoza, Ph.D.
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Project Description

The purpose of this study is to: (1) identify gaps in the availability of quality early childhood programs across Oklahoma, (2) determine the effect of Child Care and Development Fund (CCDF) child care subsidies on school readiness, and (3) investigate changes in the profile of families who receive subsidies. This project is intended to inform policy decision-making and resource allocation and serve as a model for other states by comparing the prevalence of risk factors for school un-readiness to the reach of early childhood services at the county level. Further, this study will determine the extent to which children with multiple school readiness risk factors benefit from child care benefits and will contribute to determine whether CCDF subsidies are reaching those most in need.

Research Questions

1. How well does the availability of quality early childhood education and child care match the need for services based on geographic risk profiles? If a gap in services exists, where is this gap most prominent in relation to risk?
2. What is the demographic and risk factor profile of families accessing child care subsidy and how has this changed over time?

Sample

U.S. Census data for children ages birth to 5 with working parents and in low income families will be used as measures of demand for early childhood programs in each of Oklahoma’s 77 counties. For the supply side, program and service availability, and quality of several early childhood education and care programs will be used.

Methods

A selection of multivariate statistical methods will be applied, including time series analysis, and path analysis.

Question 1:

- Identify programs serving children ages 0-5
- Gather administrative data on child or family enrollments in each program by county
- Conduct gap analysis to estimate service gaps based on risk level for each county

Question 2:

- Develop a demographic profile of CCDF recipient families for 2012-2013 and compare to profiles over the last decade using trend analysis.
- Investigate effects of school readiness risk factors on CCDF subsidy use in terms of quality of providers and subsidy amount received using path analysis.

Progress Update

DHS published the Oklahoma School Readiness Reach-by-Risk Report 2015 in November 2015 in response to research question 1. Gaps in the availability of quality early childhood education programs and child care services were documented for each county for the 2013-2014 academic and fiscal year, and reach indexes were developed for overall (across 6 programs and services – one more than in the 2014 report), education (Head Start, Early Head Start, and Pre-K) and child care reach. Reach scores were compared to risk for poor school readiness as measured by the Oklahoma School Readiness Risk Index (SRR²I). The addition of Reach Out and Read to the pool of programs used to calculate the Reach Index in 2015 did not significantly change the county ranks or early childhood education programs and services reach groupings.

As in 2014, results showed 13 counties with high to moderately high risk levels had low overall

availability of early childhood programs (education, child care and one home visitation program combined). The highest overall and education reach remained among High Risk counties, with 42% and 53% in the High Reach group, respectively (overall reach was five percentage points lower than before) compared to 25% of counties statewide. The correlations in 2015 between scores on the SRRI and overall reach index ($r_s = .375$; $p = .001$) and education reach index ($r_s = .42$; $p < .001$) remained significant.

As in 2014, more than half of the state's 3- to 5- year olds were enrolled in Head Start (HS), with programs located in every county, and only 6% of children from infancy to age 2 were enrolled in Early Head Start (EHS), available in just over half the state's counties. The highest HS and EHS reach were among children living in High Risk and Low Risk counties, respectively.

The highest child care reach in 2015 was among High-Medium Risk counties, with 35% in the High Reach group, compared to 25% of counties statewide. In comparison, the highest child care reach in 2014 was among Medium-Low Risk counties, with only 32% in the High Reach Group. Child care reach classifications in 2015 were not significantly different from those in 2014, and as in 2014, comparing the six child care indicators to the risk classifications showed no significant relationship with child care reach, with reach being highly comparable across three of the four risk groups (High, High-Medium and Medium-Low).

New for 2015 was the analysis of changes in risk and reach classifications between 2014 and 2015, including risk rank percentile changes. Of the 26 counties that changed overall rank by 13 percentiles or more, half (13) increased in risk ranking from 2014. Two counties experienced extremely large increases of more than 40 percentiles. All risk groups experienced changes in rankings that also involved changes in risk group. Of the 14 counties with that moved up in risk grouping, seven are classified as High Risk in 2015. Three of those counties saw a simultaneous decrease in reach group.

Implications for policy/practice

Through rigorous and timely analyses of data, this project will contribute to a better understanding of the impact of CCDF benefits on school readiness, and will inform policy and resource allocation to more effectively distribute early childhood education resources statewide. For example, the lack of a significant correlation between county-level risk for poor school readiness and child care reach, points to the need to address quality child care in higher risk counties. The reach-by-risk analysis for all programs included in the Reach Index will continue to inform about the extent to which high quality early childhood programs and services are reaching families and children with the greatest need; and the guide policy and resource allocation decisions based on data-driven considerations. This project will also serve as a model for how technical and logistical efforts can be coordinated across a state in terms of data sharing and building effective partnerships to allow for more thorough research on early childhood questions.

Implications for research

This study will provide an empirically validated method of index construction to measure school readiness risk using socio-demographic factors known to predict a child's risk for starting school unprepared to learn. This method can be used as a model for other states to monitor school readiness risk at geographically disaggregated levels. This project will inform the field at large regarding how analysis of administrative data can lend insights into important questions of early childhood education and child care.

For more information:

This project builds on prior work summarized in the papers [Oklahoma School Readiness Risk Report 2013: Predictors in school readiness](#) and [Oklahoma School Readiness Reach-by-Risk Report 2014](#).

Contact:

Naneida R. Lazarte-Alcalá, Ph.D.
Project Director and PI
Planning Research and Evaluation
Oklahoma Department of Human Services
Phone: (405) 521-4175
Email: Naneida.LazarteAlcala@okdhs.org