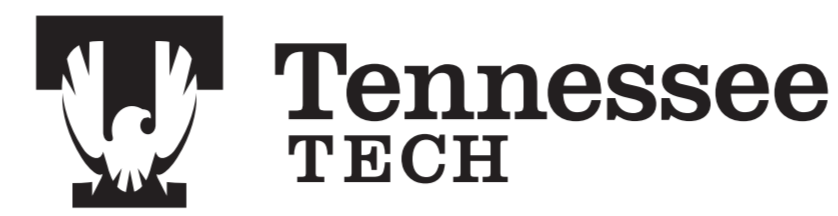


Predicting Difficulty Making and Keeping Friends for Children with Special Health Care Needs

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Introduction

Research Problem

Children with Special Health Care Needs (CSHCN) "...those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally" (Arango et al., 1998, p. 138). Houtrow, Okumura, Hilton, and Rehm (2011) projected that in 2005-2006 the United States CSHCN population was 13.9%, which equaled eight million children. Socially, CSHCN are significantly at risk for being bullied, victimized, and ostracized (Twyman et al., 2010). These considerations could contribute to the CSHCN difficulty in making and keeping friends.

Purpose

The purpose of this study was to investigate for CSHCN if there was a relationship between difficulty making and keeping friends and the independent variables:

- ability to do things other children their age do
- learning
- ability to communicate
- feeling anxious or depressed
- exhibiting behavior problems
- attention deficit hyperactivity disorder
- depression
- anxiety
- diagnosed behavioral problems
- autism spectrum disorders
- intellectual disability
- developmental delays
- school attendance
- participation in organized activities

Methods

Sample 40,242 children ages birth to 17 years old

Design Descriptive correlational study

Data Source

2009/10 National Survey of Children with Special Health Care Needs. The survey's purpose was to discover state level numbers of CSHCN, define their health and functionality, determine necessary services, and address challenges for getting care (van Dyck, et al., 2002).

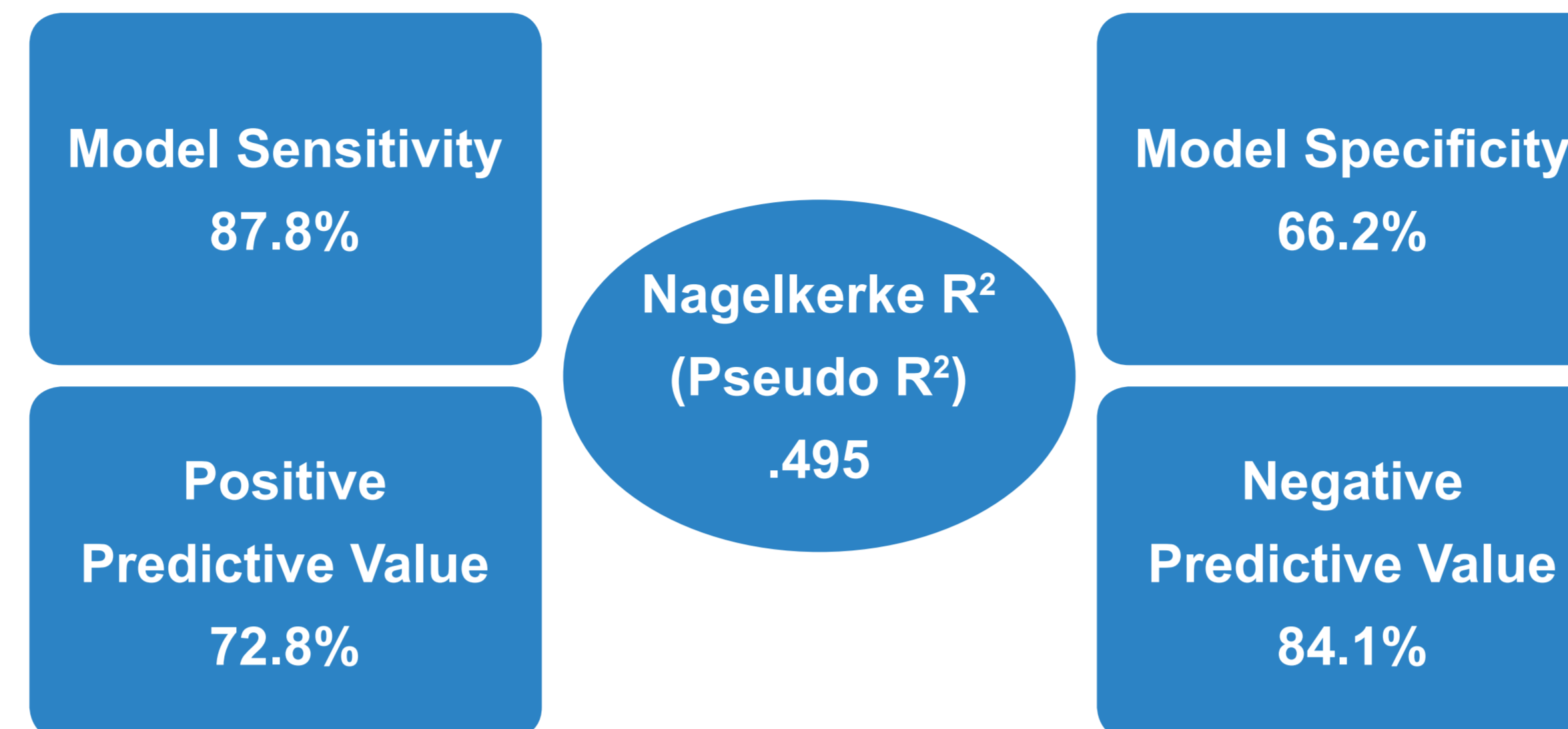
Data Collection

Researchers used cross sectional telephone surveys with a parent or legal guardian and screened 190,000 children for special healthcare needs. A complex sample design was stratified by state to include 750 CSHCN from each state and Washington, DC.

Data Analysis

- Tolerance and Variance Inflation Factor (VIF) showed multicollinearity was not a problem among the predictor variables.
- Multilevel logistic regression with clustering, stratification, and weighting variables was applied.

Model Summary Statistics



Results

Classification Table

	Observed		Predicted		Percent Correct
	No Difficulty	Some Difficulty	Making and Keeping Friends	No Difficulty	
No Difficulty	5369667.36	743475.667			87.8%
Some Difficulty	1017169.86	1989192.98			66.2%
Overall Percent	70.0%	30.0%			80.7%

Regression Coefficients

	B	S.E.	Wald	df	Sig	Exp(B)
Ability to Do Things	.224	.073	9.502	1	.002	1.251
Learning	.669	.079	71.873	1	.000	1.952
Communicating	.730	.067	117.409	1	.000	2.074
Anxiety/Dep.	.850	.071	142.501	1	.000	2.339
Behavior Prob.	1.055	.064	268.807	1	.000	2.871
ADD/ADHD Dx	.222	.068	10.542	1	.001	1.249
Depression Dx	.353	.082	18.667	1	.000	1.423
Anxiety Dx	.198	.075	6.926	1	.009	1.219
Behavioral Dx	.443	.080	30.337	1	.000	1.558
Autism Spec. Dx	1.117	.104	114.491	1	.000	3.055
Intellectual Disability Dx	.055	.120	.210	1	.647	1.057
Dev. Delay Dx	.183	.077	5.692	1	.017	1.201
School Attend.	.063	.080	.627	1	.428	1.065
Activities	.589	.069	72.578	1	.000	1.802
Constant	-3.361	.202	167.491	1	.000	.035

Results Continued

Regression results indicated the overall model of fourteen predictors significantly predicted group membership ($\chi^2(14) = 15647.980$ at $p < .001$).

The results showed that CSHCN with any of the independent variables, excluding intellectual disability and regular school attendance, exhibited difficulty in making and keeping friends. The four variables with the highest odds ratio are explained.

- The odds of having difficulty making and keeping friends are 2.07 times higher for CSHCN with communication difficulties than for those without communication difficulties.
- The odds of having difficulty making and keeping friends are 2.34 times higher for CSHCN who feel anxious or depressed than for those who did not feel anxious or depressed.
- The odds of having difficulty making and keeping friends are 2.87 times higher for CSHCN with behavior problems than for those without behavior problems.
- The odds of having difficulty making and keeping friends are 3.05 times higher for CSHCN with an autism spectrum diagnosis than those without an autism spectrum diagnosis.

The predictor variable odds ratios explain that CSHCN may demonstrate one to three times the difficulty making and keeping friends when compared to children without the challenges of special health care needs.

Conclusion

- Children with special health care needs are a vulnerable population who face challenges in life. Twelve independent variables were correlated and found to be predictors of the dependent variable.
- A future implication for research is to investigate, both qualitatively and quantitatively, the impact of each variable on CSHCN.
- An implication for practitioners is awareness that the predictor variables offer opportunities for interventions to assist CSHCN with the challenge of making and keeping friends.

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Acknowledgements

2009/10 National Survey of Children with Special Health Care Needs. Maternal and Child Health Bureau in collaboration with the National Center for Health Statistics. 2009/10 NS-CSHCN (SPSS) Indicator Data Set prepared by the Data Resource Center for Child and Adolescent Health, Child and Adolescent Health Measurement Initiative. www.childhealthdata.org.

