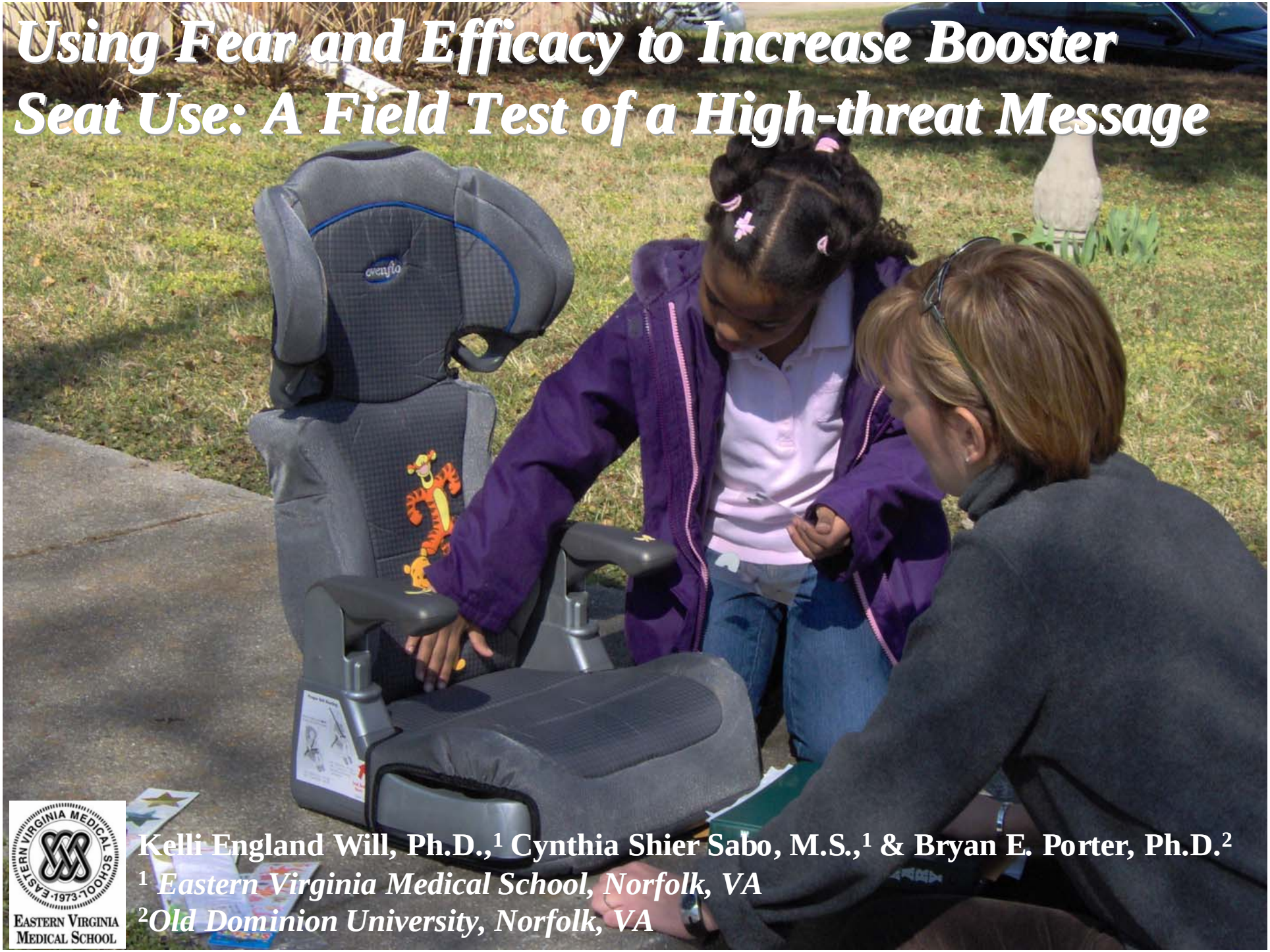
Using Fear and Efficacy to Increase Booster Seat Use: A Field Test of a High-threat Message



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Child Passengers Travel At Risk

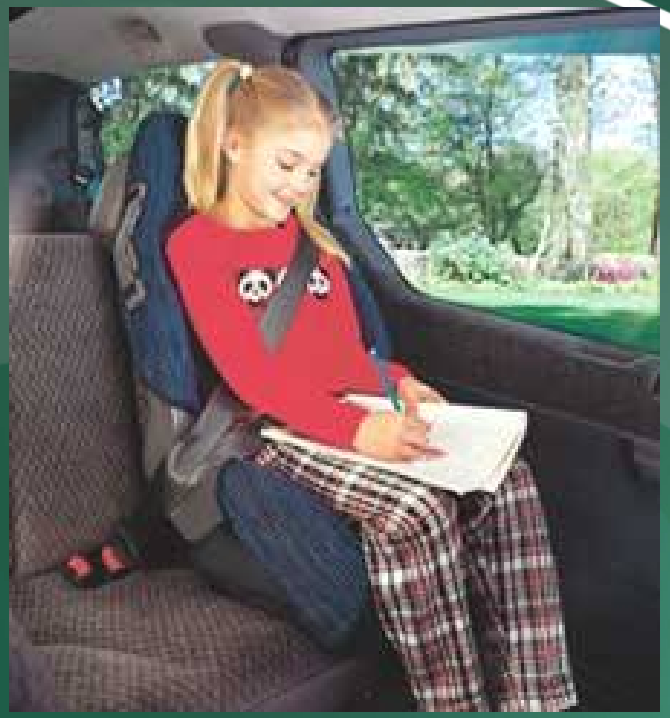
- Motor vehicle crashes are the leading cause of death for children (CDC, 2007)

- Only 20-25% of booster-sized children ride in booster seats (CDC, 2005; Durbin, Kallan, & Winston, 2001, Partners for Child Passenger Safety, 2005)
  - Booster size is approximately: 40-80 lbs., under 4/9" tall, 4-8 years old
  - Booster seats reduce crash injury risk by 59% versus just a safety belt for 4 to 7-year-olds (Durbin, Elliott, & Winston, 2003)

- 30% of children are permitted to ride in the front seats of vehicles, increasing their mortality risk by 46% (Braver et al., 1998; Ferguson et al., 2000)

Boosters are a Tough Sell

- Caregivers of booster-age children are a particularly difficult audience to reach



  - Reduced perception of risk (Sandman, 1991; Slovic, 1991; Will & Geller, 2004; Will, 2005)
    - Motor vehicle travel
    - Experienced parents
    - "Safe enough" in a belt
  - Audience is unengaged
    - Traditional messages often fail to motivate

Our Research Employs High-Threat Messages

- Research in other health areas supports the use of fear appeals that are *properly* designed and targeted appropriately
  (Witte, 1998; Witte & Allen, 2000)

  – Improperly designed
  = tune out the message

TWO KEY ELEMENTS:

- Messages must have a **high threat** component ***and*** promote **high efficacy** for protecting oneself from the hazard (i.e., provide an action plan) (Leventhal & Cameron, 1994; Witte, 1998; Witte & Allen, 2000)

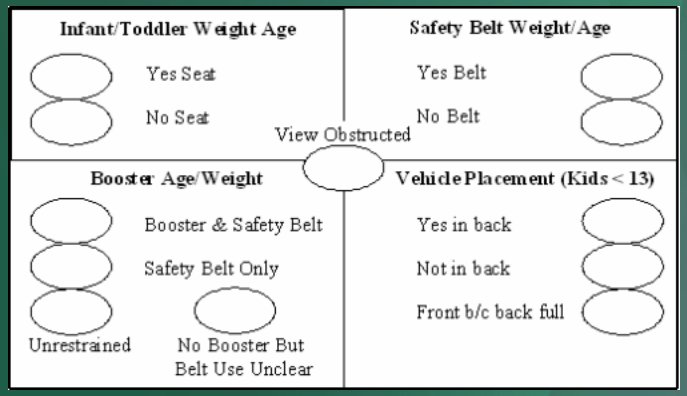
Study Overview

- Developed 6-minute threat-appeal video; worked with professional video production company
  - Evoked a high sense of vulnerability and bolstered efficacy

- Evaluated via an interrupted time series design with similar controls for comparison using both survey and behavioral observation data
  - Partnered with two large preschool/after-school care programs, using two similar control sites for comparison **(N = 226)**

Methods/Materials

- Caregivers participated during pick-up times at daycare sites
- Surveys
  - Knowledge, Attitude, & Practice Survey
  - Risk Behavior Diagnosis Scale (Witte, Cameron, McKeon, & Berkowitz, 1996)
- Parking Lot Observations
  - Weekly morning observations
  - Clicker Board
  - Inter-rater and Cohen's Kappa reliability coefficients were excellent (>.90 & >.75)



Video Presentation

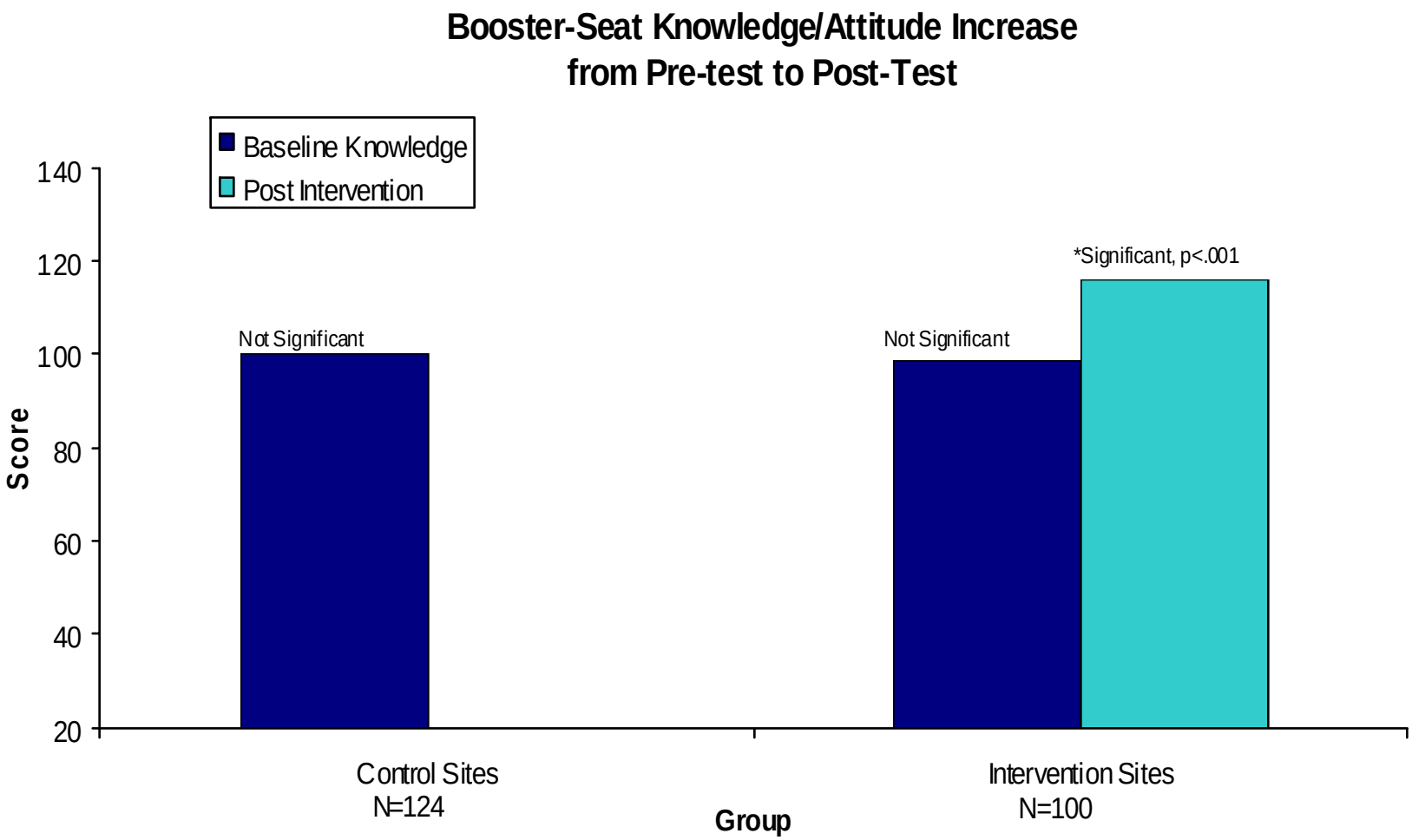
Demographics

Demographics for Participants by Group

Descriptor	Intervention (*n* = 100)	Control (*n* = 126)	Total Sample (*n* = 226)
Ethnicity			
African American	27.3%	31.1%	58.5%
Asian/Pac. Island	.9%	1.3%	2.2%
Caucasian	10.6%	18.9%	30.0%
Hispanic	2.7%	1.3%	4.0%
Native American	.4%	.4%	.9%
Other	2.2%	2.2%	4.4%
Education Level			
Some High School	.9%	.9%	1.7%
High School/GED	11.1%	8.7%	20.0%
Some College	13.3%	21.8%	35.4%
2-Year Degree	5.3%	4.8%	10.2%
Bachelor's Degree	9.7%	11.4%	21.2%
Graduate Degree	4.0%	7.4%	11.5%
SES Level			
$0-$15,999	8.9%	10.0%	19.0%
$16,000-$24,999	13.7%	8.3%	23.0%
$25,000-$49,999	12.0%	9.6%	21.2%
$50,000-$99,999	7.1%	18.8%	27.1%
$100,000 +	2.2%	7.4%	9.7%

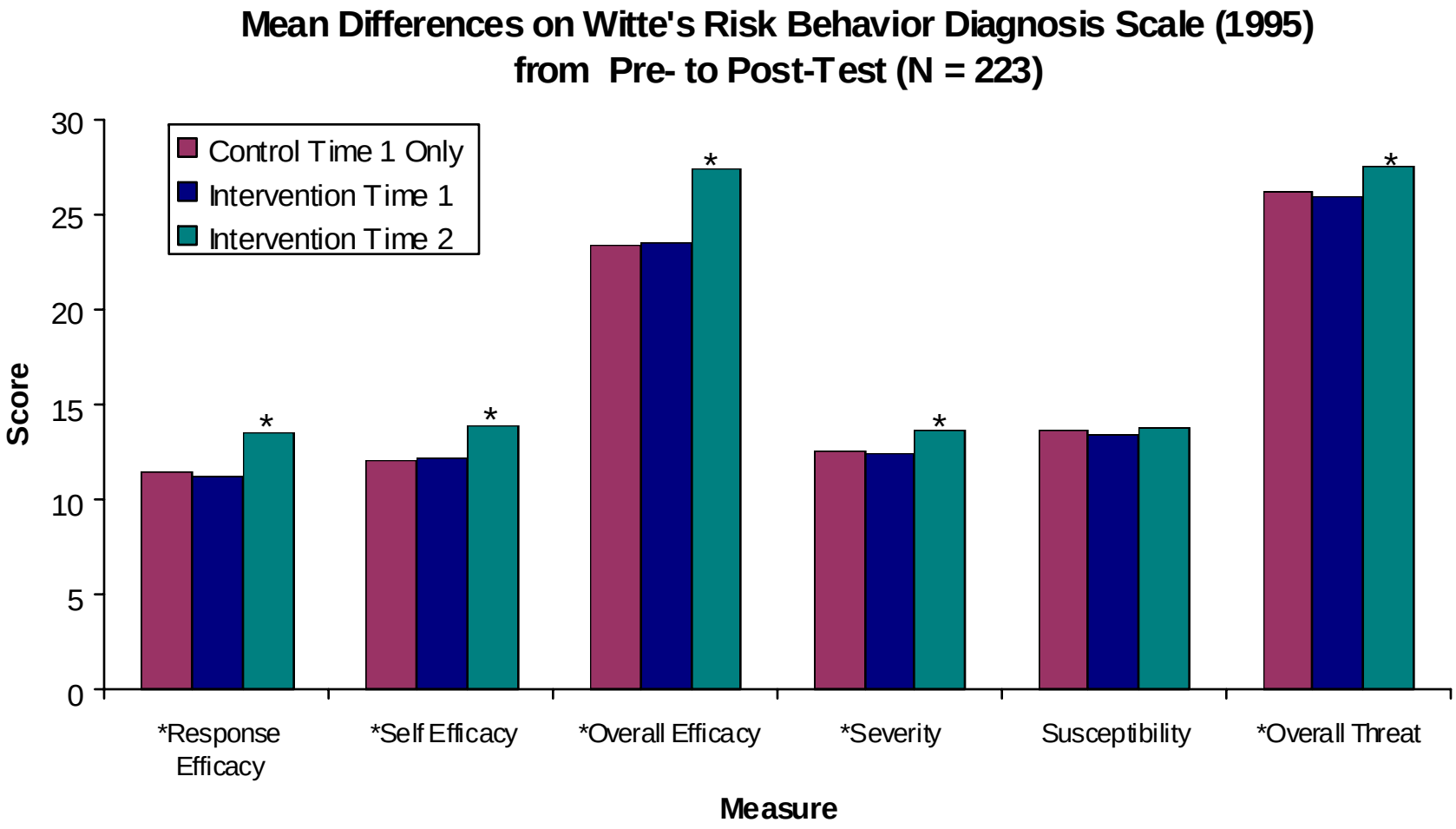
- 80% Female; 93% Parents or Step-parents

Significant Knowledge/Attitude Increase



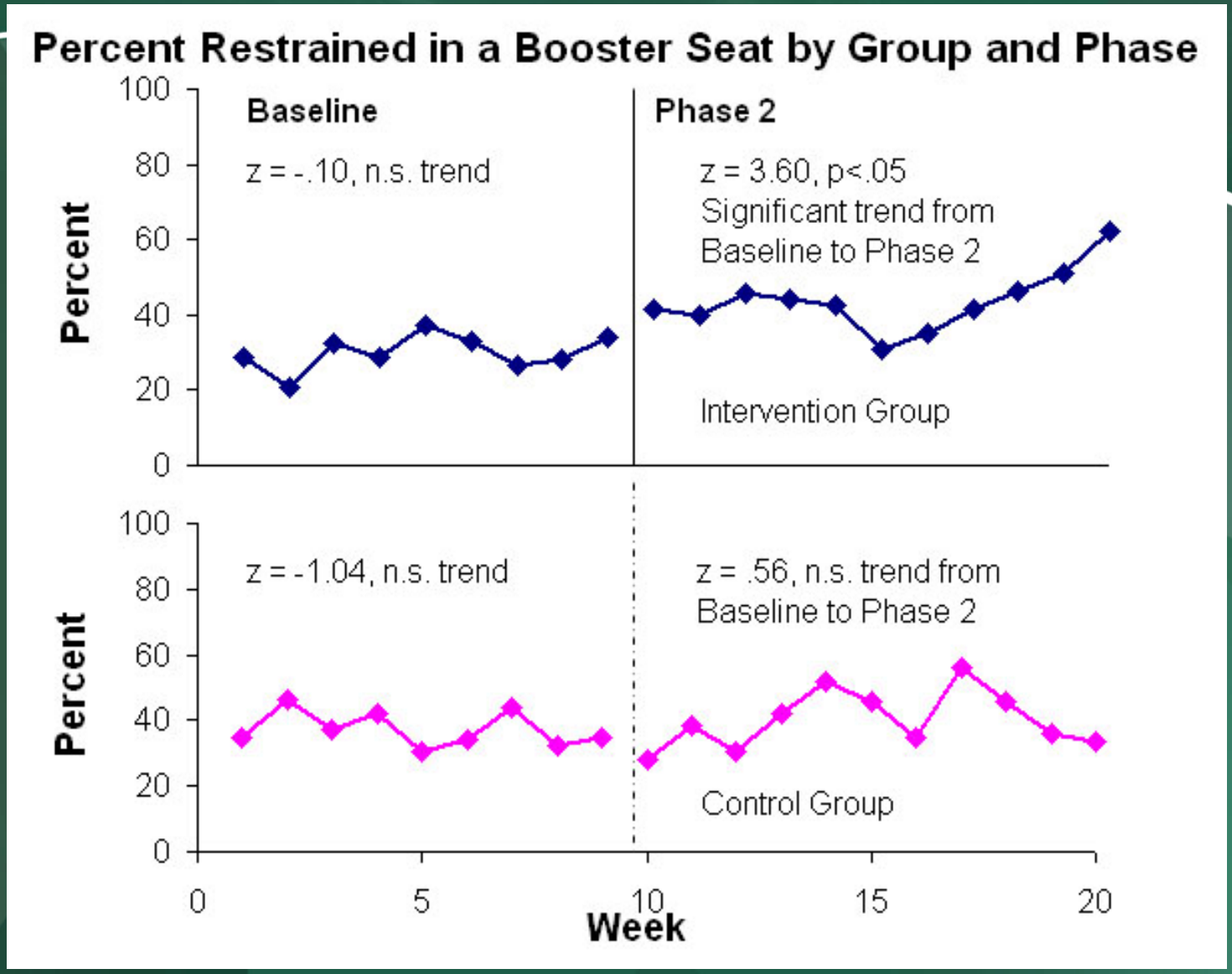
* t(99) = 12.25, p<.001, alpha was lowered to .017 according to Bonferroni's correction method

Significant Fear & Efficacy Increase



* $t(99) = 4.64$, $p<.001$ for overall fear; $t(99) = 8.08$, $p<.001$ for overall efficacy; alpha was lowered to .017 according to Bonferroni's correction method

Significant Increase in Booster Seat Use



•No change in back seat use, possibly due to ceiling effects.

Limitations & Future Research

- Study was limited in scope and length
- Dissemination Research
  - Well-child and other medical visits
- Additional Evaluation Research
  - Elementary school settings
    - Larger sample of target age
    - Longer follow-up

Thank you!

Questions?