

Schools' Mental Health Services and Young Children's Emotions, Behavior, and Learning

full paper available at

<http://www.columbia.edu/~rr2165/research.html>

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Introduction

- First nationally representative study of provision, financing, and effects of elementary school counseling services in U.S.
- researchers estimate that 80 percent of children needing mental health services fail to receive these services (Kataoka et al., 2002)
- Schools may be convenient locations to effectively reach young children in need of mental health interventions (Atkins et al., 2003; Weist et al., 2003)
- “there are very large portions of the country where school-based mental health and empirically supported treatments are completely absent” (Evans & Weist, 2004).

Introduction

- > 40,000 elementary school counselors employed in U.S.
- Certification requirements vary only slightly across states, with most states requiring counselors to possess a graduate degree in counseling or school psychology
- Elementary counselors spend majority of time meeting w/ children 1-on-1 or in groups
- Most states do not subsidize or require a minimum elementary counselor per student ratio
- > 30% of all public school districts offering elementary schools did not employ **any** elementary-level counselors
- Counseling services may decrease in the near future due to budget cuts and increased concern with school accountability & student test score
- ASCA's 2003 national model for counselors

Related Literature:

Rates of childhood mental health problems/services

- **MECA survey** in four cities
 - At least one in five young children “have mental disorders with at least mild functional impairment” (U.S. Dept. of Health & Human Services, 1999),
 - Children & adolescents who lacked private health insurance were just as likely to receive mental health services as those with private insurance, often because the uninsured used services in non-clinical settings such as schools and welfare agencies (Glied et al., 1998).
 - inconsistent responses given by adolescent children and their parents (Leaf et al., 1996)
- Sturm, Ringel and Andreyeva (2003) use a multi-state data set, the Urban Institute’s **National Survey of America’s Families (NSAF)**, to compare mental health need with service use of 6-17 year olds
 - large amount of between-state variation in rates of children’s need for services, service-use, and unmet need

Related Literature : Impact of School-based Mental Health Services on Student Outcomes

- Zins, Weissberg, Wang, & Walberg (2004) summarize research on specific emotional learning programs
- Small-scale mental health interventions
 - Validity issues with several small-scale randomized studies
- 2 prior studies examining elementary counselor per student ratios
 - Carrell & Carrell's (2006) study of inter-semester variation in elementary counselors per pupil in a FL county
 - Regression discontinuity study (Reback, *Education Finance & Policy*, Spring '10) exploiting Alabama's counselor subsidies

Overview: Two-part study using 2 data sets

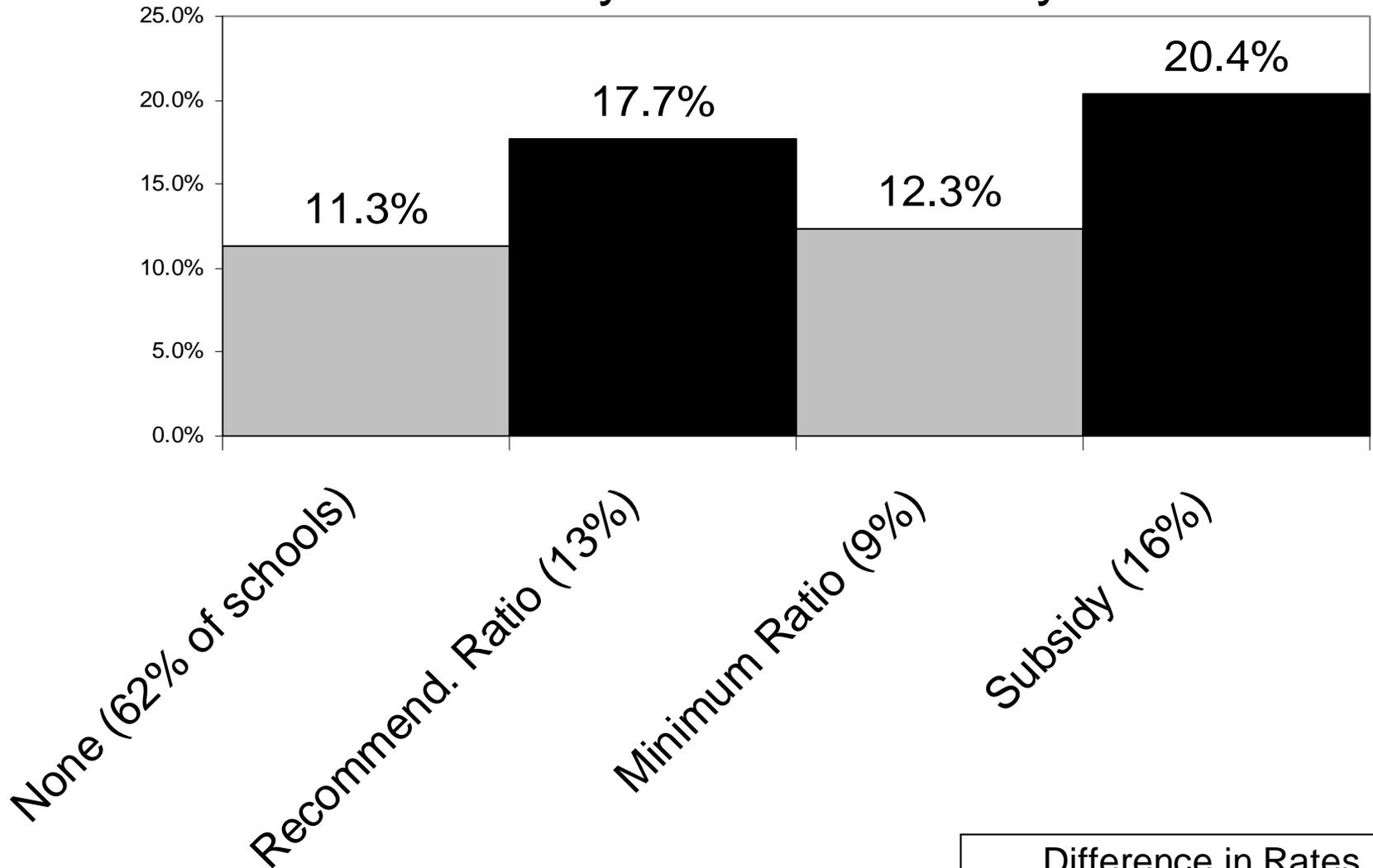
1. “Early Childhood Longitudinal Survey” (ECLS)

- nationally representative sample of 3rd graders
- describe teacher survey responses concerning whether specific students met with a professional counselor at the school

2. “Schools and Staffing Survey”

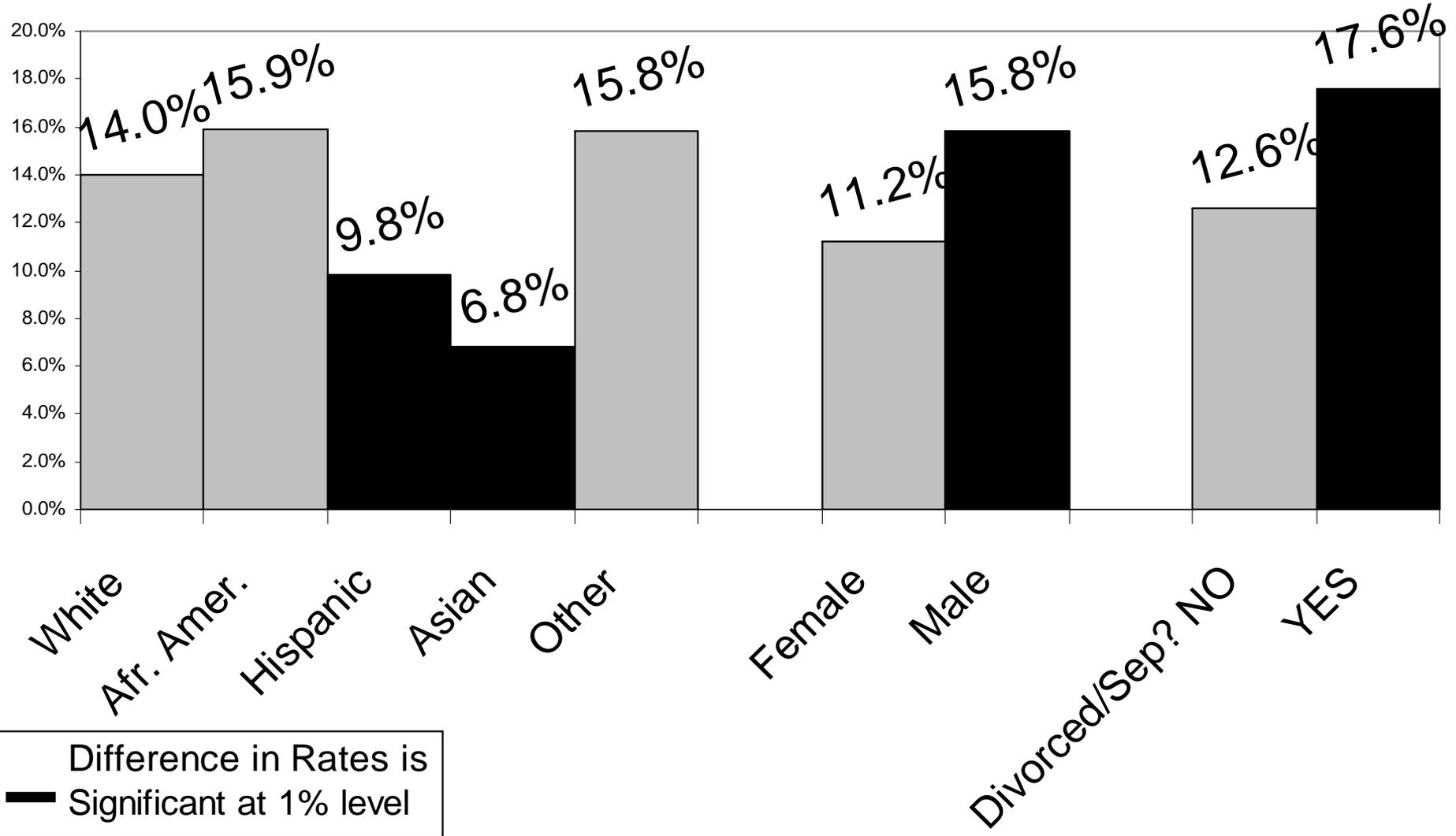
- Multiple waves of teacher surveys representative at both national & state levels
- examine how changes in states’ counseling policies over time affect teacher survey responses concerning student behavior

3rd grade Counseling Rates by States' Elementary Counselor Policy



— Difference in Rates is Significant at 1% level

Estimated fraction of third graders attending U.S. public schools who received school-site counseling services by student characteristics, 2001-02 school year



Cross-state Policy Evidence from ECLS-K

- First-stage: predict school-level % of students receiving counseling using
 - state counseling policy indicators (3 variables: subsidize, mandate, recommend)
 - controls for Census region, urbanicity, % school revenues from state sources, district spending per pupil, school demographics, mean fall K test scores, detailed mean student household variables
- Second-stage: same control variables and examine how predicted % receiving counseling affects various mean student outcomes

Evidence from the ECLS-K: How variation in predicted counseling availability due to inter-state policy variation is related to student outcomes

Dependent Variable (School-level Mean)	Change (in std. dev.) associated with a 5 % point increase in students receiving counseling	T-stat.	N
Mean math test score	.11	2.09	860
Mean reading test score	.07	2.06	860
% of students with Individualized Education Plans	.00	-0.04	790
Mean SRS/Academic Engagement scores based on students' interview responses (1=worst, 4=best)			
Index of <u>Externalized</u> problem behaviors	.12	2.09	860
Index of <u>Internalized</u> problem behaviors	.13	2.19	860
Student's interest/confidence in math	.05	1.00	860
Student's interest/confidence in reading	.00	0.01	860

Difference-in-differences based on State Policy Changes

- 11 states adopted significant elem. counselor policies between 1988 and 2003
- Use elem. school teacher survey responses from the Schools and Staffing Survey administered in 87-88, 89-90, 93-94, 99-00, and 02-03 school-years
- Control for grade composition, operating revenues per student, teacher-student ratio, % free lunch students, %black or Hispanic ethnicity
- Control for teacher characteristics
- Control for year effects and state fixed effects

Triple Difference Models which control for state-by-year, state-by-instructional-level, and instructional-level-by-year fixed effects

- Models include both elementary schools and high schools, using changes at high schools to capture any unobserved factors coinciding with timing of policy adoption
- Elementary counselor policy reforms are one of the few cases of wide-scale school policy changes affecting only one instructional level (10 out of the 11 cases)
- Additional models control for potential long-run effects of elementary reforms on high school outcomes

No Evidence of Upward Bias Due to Coincidental Changes

- Other elementary-level resources do not increase after adoption of elementary counseling programs
- Controlling for state fixed effects and year effects, adoption of elementary-level counseling program associated with
 - an \$84 *decrease* in district-level operating revenues per pupil for the average elementary school teacher
 - an *increase* of more than 0.5 pupils per teacher at elementary schools
 - not associated with any increase in pupil–teacher ratios in high schools.

**Counselor Availability and Teachers' Responses to:
"Necessary materials such as textbooks, supplies, and
copy machines are available as needed by staff."**

	(1) Difference-in- differences	(2) Triple Differences	(3) Triple Differences Controlling for Long-term HS Effects
Strongly <u>Disagree</u>	.013 (.010)	.018 (.011)	.019 (.012)
Strongly <u>Agree</u>	-.001 (0.020)	-.002 (0.030)	-.014 (0.039)

Counseling for Elementary School Students Eases their Teachers' State of Mind

	Difference-in-differences
Is the following <u>at least a minor problem</u> at the school?	
Student misbehavior interferes w/ teaching (% Yes= 60.7%)	-.031*
Physical Conflicts among Students (64.3%)	-.040**
Students Cutting Class (21.3%)	-.039*
Robbery or Theft (63.4%)	-.056**
Vandalism (63.9%)	-.049**
Student Absenteeism (80.7%)	-.028*
Student Tardiness (76.1%)	-.003
Teacher Absenteeism (43.6%)	-.024*

Counseling for Elementary School Students Eases their Teachers' State of Mind

	Difference-in-differences	Triple Differences
Is the following <u>at least a minor problem</u> at the school?		
Student misbehavior interferes w/ teaching (% Yes= 60.7%)	-.031*	-.035**
Physical Conflicts among Students (64.3%)	-.040**	-.037**
Students Cutting Class (21.3%)	-.039*	-.075**
Robbery or Theft (63.4%)	-.056**	-.059***
Vandalism of School Property (63.9%)	-.049**	-.077***
Student Absenteeism (80.7%)	-.028*	-.035**
Student Tardiness (76.1%)	-.003	-.005
Teacher Absenteeism (43.6%)	-.024*	-.051**

Counseling for Elementary School Students Eases their Teachers' State of Mind

	Difference-in-differences	Triple Differences	Triple Differences Controlling for Long-term HS Effects
Is the following <u>at least a minor problem</u> at the school?			
Student misbehavior interferes w/ teaching (% Yes= 60.7%)	-.031*	-.035**	-.050***
Physical Conflicts among Students (64.3%)	-.040**	-.037**	-.050***
Students Cutting Class (21.3%)	-.039*	-.075**	-.069***
Robbery or Theft (63.4%)	-.056**	-.059***	-.032**
Vandalism (63.9%)	-.049**	-.077***	-.070**
Student Absenteeism (80.7%)	-.028*	-.035**	-.024*
Student Tardiness (76.1%)	-.003	-.005	.004
Teacher Absenteeism (43.6%)	-.024*	-.051**	-.034**

Summary of Results

- Elementary counseling policies improve student behavior and cause teachers to feel better about their instructional capacities, which could plausibly lead to large improvements in student learning
- Elem. counselors *might* be much more cost effective than more popular educational policy reforms
 - ~\$46 per student increase *might cause* a .11 SD increase in mean math test scores and .07 SD increase in mean reading scores
- Schools in states with formal elementary counseling policies are doing *something* better for their elementary students:
 - (1) better than similar schools in other states
 - (2) better than they were previously doing before the policies were adopted, and
 - (3) better elementary-level improvements than secondary-level improvements

Next Steps

- Other outcomes
 - crime rates
 - high school completion rates
- Teacher “With-it-ness”: relationship between teachers’ perceptions of their students’ mental health/behavior and students’ self-reported issues

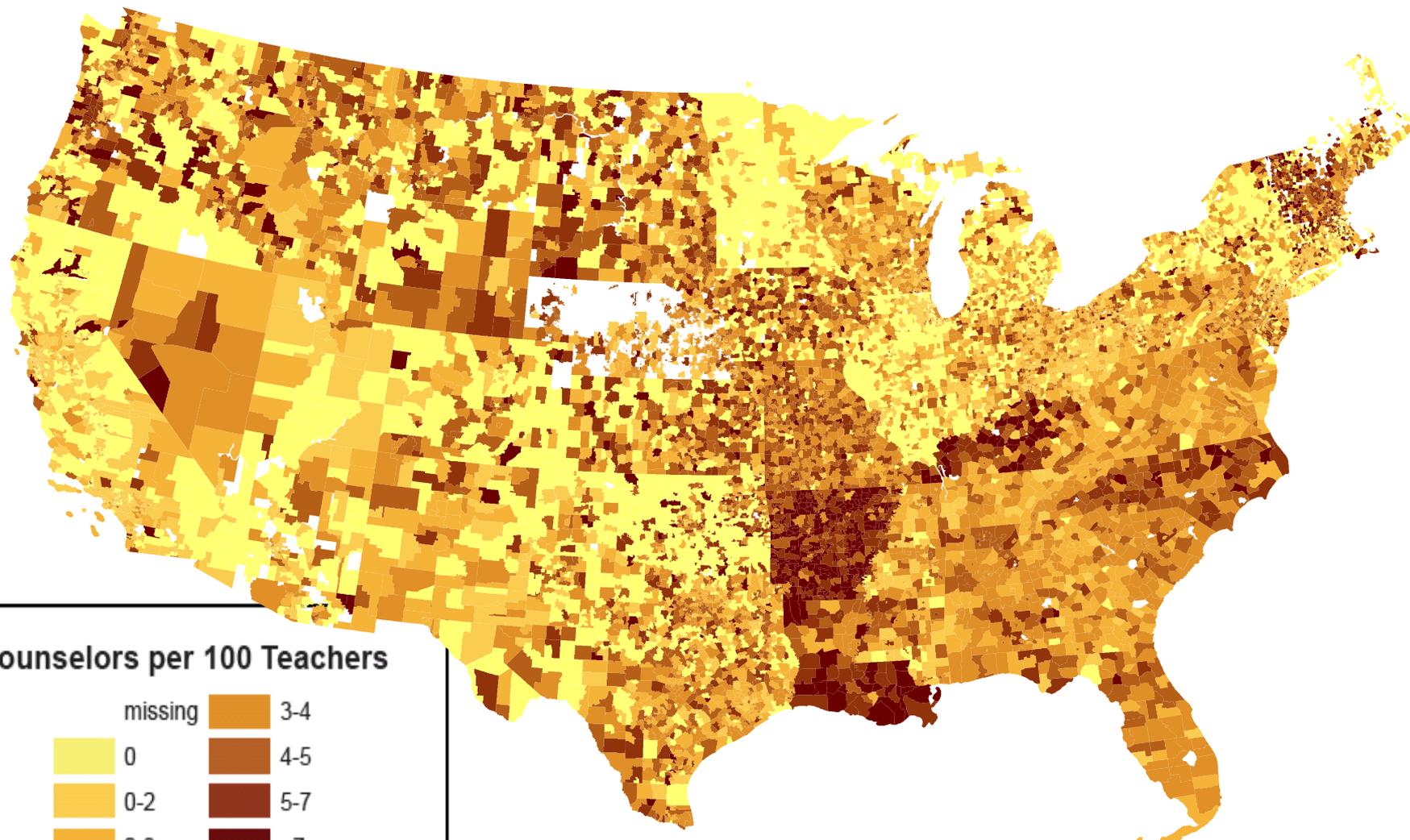
EXTRA

States that subsidized public elementary school counselors during 2001-02 school year

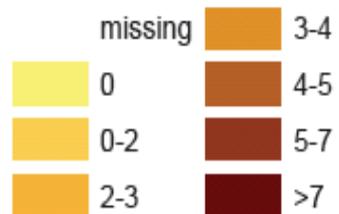
State	Description of Subsidy	Initial Year
Alabama	State fully funded counselors are based on the prior year enrollment in the elementary school (average daily membership from the first 40 days of the prior school year)	1989
Delaware	School districts earned a counselor for each full 150 units of pupils.	pre-1987
Georgia	School districts received \$78.40 per elementary school student to hire counselors for grade K-5. Districts were required to employ at least one counselor for every 462 FTE K-5 th grade students.	2000
Nevada	\$50,000 per school district "to support special counseling services for elementary school pupils at risk of failure."	1995
Texas	\$7.5 million in grant money to fund elementary school counselor salaries was divided among 64 districts. Districts submitted a competitive application for the counselor grant, and approximately 300 districts applied. Districts receiving the grants had to have a student-counselor ratio no greater than 500 to 1 (including fractional appointments).	1991

States that adopted (unfunded) elementary-level counselor mandates in 1987 or later

State	Description of Mandate	Initial Year
Idaho	Elementary schools were required to employ at least one FTE counselor (or psychologist or nurse) for every 450 students in order to be certified by Northwest Association of Accredited Schools, the main type of school certification in Idaho.	1997
Louisiana	School districts were required to employ at least one counselor for every 400 elementary students.	1991
Missouri	Schools were required to employ at least one counselor for every 500 elementary students.	1990
Montana	Elementary schools were required to employ at least one counselor for every 400 students.	1990
Nebraska	Elementary schools were required to employ at least one counselor if the schools enrolled at least 300 students.	1996
Oklahoma	Districts were required to have one counselor for every 400 students (all grades). All districts must employ a least 0.5 FTE counselor and all schools must offer some counseling services.	1991



Counselors per 100 Teachers



(Ranges above do not include lower boundaries)

Extension to Additional Outcomes

- F.B.I.'s Uniform Crime Reporting Program: monthly data from 1980 on concerning arrests by gender, age group, category. Reported at locality level.
- Can find dif-in-dif and triple differences estimates

Counseling for Elementary School Students Eases their Teachers' State of Mind

Is the following <u>a moderate or severe problem</u> at the school?	Difference-in-differences	Triple Differences	Triple Differences Controlling for Long-term HS Effects
Student misbehavior interferes w/ teaching (% Yes= 35.8%)	-.031*	-.019	-.031*
Physical Conflicts among Students (26.6%)	-.063**	-.041**	-.051***
Students Cutting Class (3.9%)	-.013*	-.023	-.019
Robbery or Theft (11.8%)	-.040***	-.020*	-.026
Vandalism (13.2%)	-.010	-.004	-.013
Student Absenteeism (34.1%)	-.014	-.004	.009
Student Tardiness (30.0%)	-.019	-.018	-.038
Teacher Absenteeism (9.8%)	-.032*	-.019	-.016
Student Drug Abuse (19.2%)	-.055**	-.085***	-.073***