A multi-site randomized trial of school-based mentoring with Latino/as: Moderating effects of gender and age on outcomes

SMILE

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Importance of studying school-based mentoring

- **Fastest growing** context and type of mentoring, now constituting half of the total BBBS mentoring matches
- **Great potential:** Access to more youth with greater need, less demanding for mentors
- **Considerable challenges:** Duration and frequency constraints, supervision issues, and conflicts among stakeholders about what should go on during school-based mentoring meetings

SMILE Project

- The first large-scale, randomized study of school-based mentoring (SBM), and the only study of Latino/a youth mentoring of its kind.
- Conducted in collaboration with the Communities In Schools (CIS) program in San Antonio, funded by the W. T. Grant Foundation.
- ***Key questions*:** (1) Does mentoring add anything to what staff already provide youth through CIS? (2) What are key moderators of program effects?

General goals of the SMILE: School-based practices and mentor goals

- What are expectable benefits of SBM?
- What are the effects of 6 months of SBM?
- What roles do race, age and gender play?
- What might be the mechanisms of change?
- What is effective mentoring?
- What should mentors do with mentees in SBM?
- Does it matter why adults volunteer to mentor?
- Which mentors stay the course?

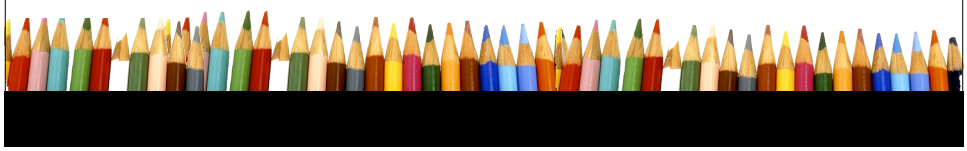
Today's presentation: Main effects, and differential effects by age and sex

- Examining only youth's self-report data, what are the effects of one year of mentoring?
- Do intent to treat effects differ from outcomes for only those who "actually" received their assigned service?
- Do sex and age moderate the effects of meeting with a mentor?

Study of Mentoring In the Learning Environment

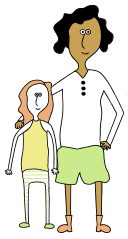
SMILE

- Over 420 Latino Youth
- 20 Public Schools
- On-Site Case Managers in *Communities in Schools* provide all youth counseling services
- Half randomly assigned to receive mentoring too
- Survey assessments: twice yearly over two years (data from youth, teachers, and parents)
- Weekly logs document mentoring activities

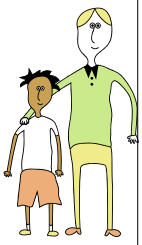


Recruiting youth, collecting data

Students who volunteered for or were referred to CIS for counseling, enrichment, and support services were randomly divided into two groups. The 1st group received mentoring and other CIS services while the 2nd group received only the other CIS services.



Surveys were given to students, parents, teachers, and mentors (pre,mid, post) to determine whether having a mentor made a significant difference in the lives of youth beyond changes resulting from the other services (counseling, tutoring, etc.)



Data Collection Periods

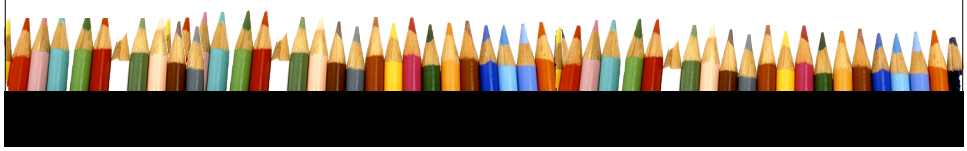
	Youth		Adults		
	Mentee	Control	Parents	Mentors	Teachers
Year 1: Fall	✓	✓	✓	✓	
Mid-Year	✓			✓	
Spring	✓	✓		✓	✓
Year 2: Fall	✓	✓	✓	✓	
Mid-Year	✓			✓	
Spring	✓	✓		✓	✓

Key outcome measures

1. Measure of Adolescent Connectedness (Karcher, 2003): Youth, parent, teacher versions
2. Self-Esteem Questionnaire (DuBois, 1999)
3. Social Skills Rating Scale (Gresham & Elliott, 1991) Youth, parent, teacher versions
4. Grades (Math and Reading) and Attendance
5. Mattering, Hope, and Social Support Scales and Connors Behavior Rating Scale
   Parent and teacher versions

Why measure connectedness?

- Connectedness is one of the 5 "C"s targeted by most youth development programs (Lerner, 2000).
- Connectedness is, I think, a phenomenon underlying many of the SEARCH Institute's developmental assets (of much interest to schools).
- Connectedness predicts both developmental competencies and risk-taking behavior.
- Connectedness can be characterized as youth-governed (unconventional, such as to peers) or adult-governed connections (such as to school and to teachers), with the former predicting risk-taking.



The conventionality dimension of connectedness

Conventional connectedness--to school, teachers, culturally different peers--predicts social competence, achievement, and involvement in extracurricular and volunteer organizations.

Youth high in unconventional connectedness (such as to friends and peers), and low in conventional connectedness are more likely to engage in delinquent acts and misbehavior.

Hemingway: Measure of Adolescent Connectedness (5.5 version; Karcher, 2003).

Connectedness to School focuses on the importance youth place on school and how active they are in being successful in school (α = pre .82/post .80).

Connectedness to Teachers assesses efforts to get along with teachers and concerns about earning teachers' respect and trust (α = .78/.80).

Connectedness to Peers assesses feelings about their peers and working with peers on projects and school-related tasks (α = .76/.83).

Connectedness to Culturally Different Peers asks about youths' desire to interact with and get to know peers from other cultural groups (α = .80/ .84).

Hemingway: Measure of Adolescent Connectedness (5.5 version; Karcher, 2003).

Two scales from this measure assessed present and future-oriented self-esteem:

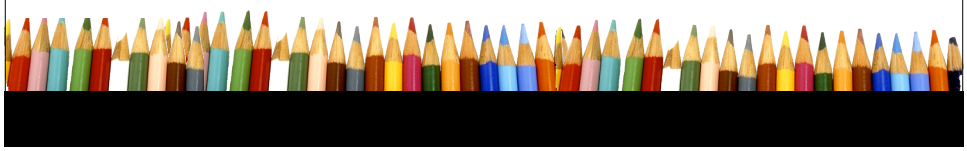
Self-in-the-Present assesses feelings about current relationships, continuity in behavior across contexts, and an awareness of skills and interests that make them liked by others (α = .76/.70).

Self-in-the-Future asks about the behaviors and qualities that they perceive will help them have a positive future (α = .79/.79).

Self-Esteem Questionnaire

(SEQ; DuBois, Felner, Brand, Phillips, & Lease, 1996).

The ***Global Self-Esteem*** scale consists of eight items that assess overall perceptions of self-worth (e.g., "I am happy with myself as a person")(α = .79/.80). In prior research, the scale has demonstrated good reliability and evidence of construct validity (DuBois et al. 1996; Karcher & Lee, 2002).



Social Skills Rating System (Gresham & Elliott, 1987)

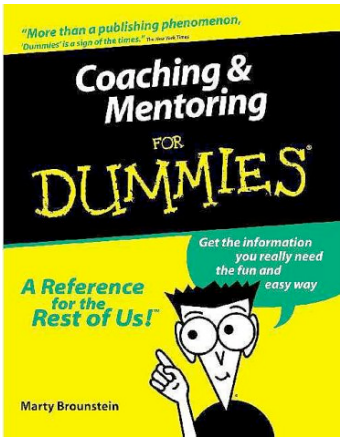
This survey assesses social skills that affect teacher-student relationships, peer acceptance, and academic performance. It is designed to identify children who have problems with behavior and interpersonal skills, to detect problem behaviors for treatment, and to assist in planning intervention. Separate scales assess ***Cooperation*** (α = .78), ***Empathy*** (α = .76), ***Assertion*** (α = .57), and ***Self-Control*** (α = .82).

Communities in Schools (CIS)

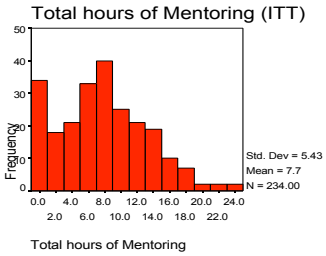
- CIS is a nationwide non-profit organization that works with approx. 40 schools in San Antonio.
- We chose 20 of these schools to participate in the SMILE study: 7 elementary, 6 middle, and 7 high schools.
- Students are referred to CIS by parents and teachers, and some students refer themselves.
- CIS places a Case Manager (CM) at each school to provide counseling and supportive services to youth and their families. Case managers also supervise volunteers.
- Mentees and non-mentees received a standard set of services (mean = 29 hours) that were 34% guidance related, 31% enrichment activities, 28% educationally oriented support, and 10% tutoring (during year 1).

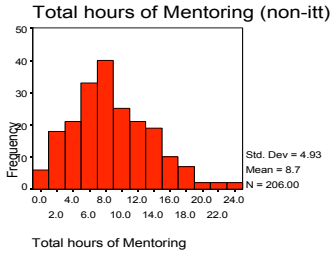
CIS/SMILE Mentor Guidelines

- Meet in the CIS office at mentee's school or an approved space
- Play games, do homework, or talk about school, friends
- Do not leave school property or meet outside of school
- Do not give gifts or money
- Meet weekly for 1 hour
- One Year commitment



What actually happened to those assigned to receive mentoring?





- **Mentor quit**: Before meeting youth (4.3%); After meeting youth (20.7%).
- **Mentee**: Quit after meeting (4.7%); Met with their mentor (88.5%); Mentored all year (70%).

Sample: Mentors

- Mentors were 54% Latino, 35% Caucasian, 5% African American, and 6% “Other”
- 70% were college students, 13% were military personnel, 15% full-time employed adults, and 2% “Other”
- 43% spoke Spanish
- 78% were female
- 71% mentored all year

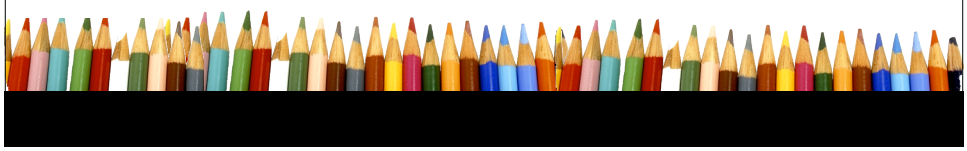
Sample: Youth

525 youth between the ages of 10 and 18; most from families earning less than $20,000 a year.

There were more males in Elem./MS (n = 108) than in HS (n = 63) (χ^2 = 8.66, p = .004), but balanced numbers of females in Elem./MS (n = 170) and HS (n = 175).

There was not a significant difference in the gender distribution of participants across treatment and control conditions (χ^2 = 2.36, p = .14).

Youth in the treatment and control conditions did not differ in age (F =.60, p = .43).



Mentee/Non-mentee Differences

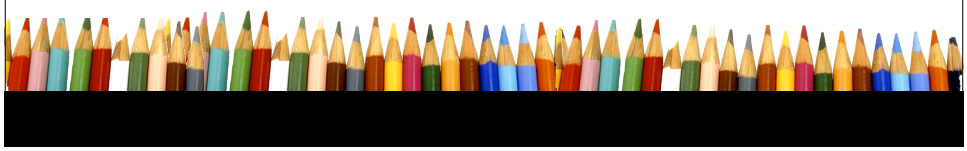
Differences at end of year on number of mentoring hours (t = 20.47, p < .001), service hours (t = 2.07, p < .005), supportive guidance hours (t = 1.67, p < .001) with mentees receiving more.

The mentees and non-mentees did not differ on family income or the number of individuals in the home, but non-mentees were more likely to have Spanish as the primary language spoken in the home (F = 7.65, p < .01) and were higher in parent-reported impulsivity and restlessness (F = 1.78, p < .06).

The only significant MANOVA omnibus test (F = 3.34, p = .04) was for the hope/mattering pre-test scales.

Missing Data

Less than 6% of data for all variables were missing on post-test surveys. Because the data were not missing completely at random (Little's MCAR $\chi^2 = 45.39$, $p < .001$) and dependent only on sex and age (the data were missing at random), missing values were imputed using the EM estimation method (i.e., rather than being deleted).



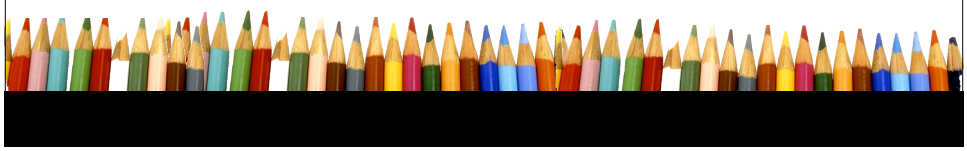
Effect Size (measure of association: % of variance explained)

Effect size calculations were based on partial eta-squared (η^2), where partial η^2 is the proportion of the difference between the two groups that is explained by the factor (or interaction). By comparison with Cohen's *d* classification of a small effect size as less than .20, moderate effect when between .40-.50, and .80 for a large effect; for partial η^2, .01 is a small effect, .06 is moderate, and .14 is large.

Two Samples; Two Tests

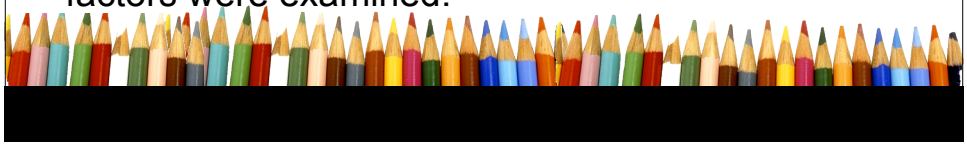
We conducted intent-to-treat analyses first which included all youth. We then conducted analyses of only those youth who actually received mentoring or the other services in the conditions to which they were assigned.

For each of these samples, we first examined main effects of having a mentor; then examined the role of sex and age as moderators of mentoring's effect.



Analyses of Covariance

- Using Multivariate Analysis of Covariance (MANCOVA) we conducted five overall tests of outcomes from SBM to determine whether the youth in the mentoring condition demonstrated greater positive changes than those in the control condition.
- All analyses included pre-test scores, language in the home, and initial behavior ratings as covariates.All main effect tests included age (high school or not) and sex as covariates. The tests of 2- and 3-way interactions included sex and age as factors were examined.



Main Effect Analyses

- The main effect analyses for changes in connectedness revealed an main effect of mentoring on **connectedness to peers**.

Connectedness Omnibus, Intent to Treat: $F = 2.21$; $df = 4,454$; $p = .07$; partial $\eta 2 = .02$; and for Treatment Received $F = 2.43$*; df $= 4,422$; $p = .05$; partial $\eta 2 = .02$.

- There were main effects on **self-esteem** too.

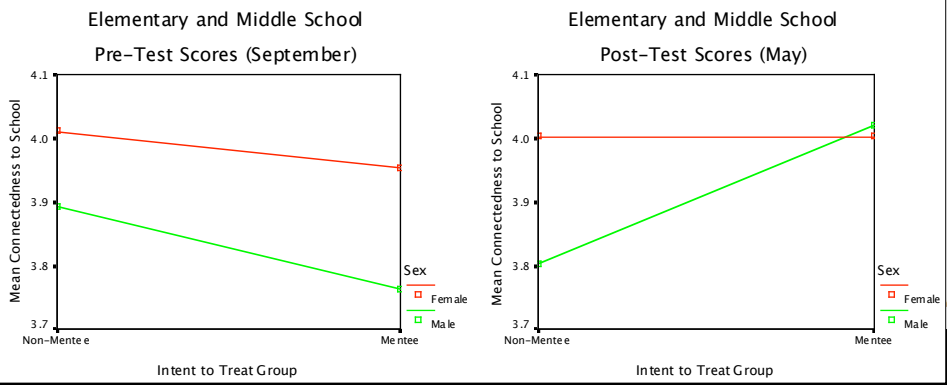
ITT: $F = 4.94$; df $= 3,454$; $p < .005$; partial $\eta 2 = .03$.
ACTUAL: $F = 5.04$; df $= 3,422$; $p < .005$; partial $\eta 2 = .04$.

- None for Grades, Social Skills, Hope, or Mattering

Tests of 3-Way interactions revealed positive changes after mentoring in *Connectedness to School* for younger male mentees:

3-way interaction (post): $F = 4.81$, $p = .03$

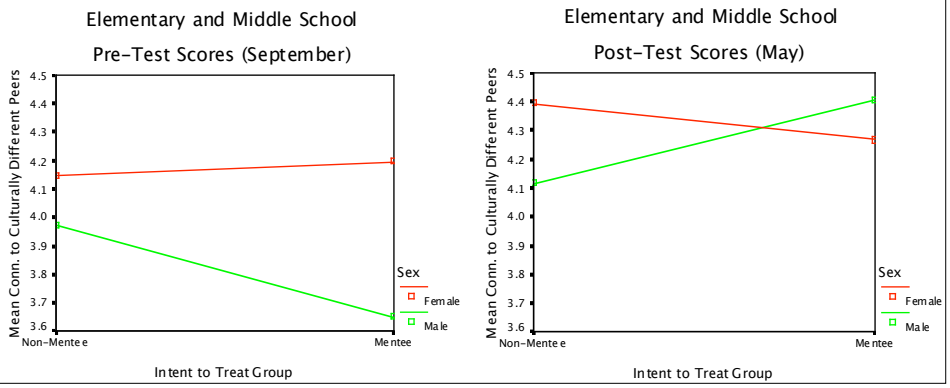
Simple effect (post): $F = 3.44$, $p = .06$



Positive changes in *Connectedness To Culturally Different Peers* for younger male mentees:

3-way interaction (post): $F = 5.45$, $p = .02$

Simple effect (post): $F = 4.55$, $p = .03$



INITIAL SMILE FINDINGS

- Main effects: Improved self-esteem and connectedness to peers (all mentees)
- Moderators: Sex and age moderated outcomes improved connectedness to school and culturally different peers, cooperation and empathy (improvements among young, male mentees only).
- Intent-to-treat analyses suppressed effects.
- Program fidelity (short matches, attrition) was a significant problem.
- Effect sizes were small (partial η^2=.01 or small)

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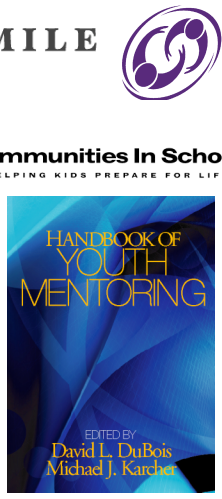

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