**Congruence of Parent and Teacher Educational Expectations and Youths' Academic Outcomes**

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## Background

Educational competence and achievement are determined by a number of influences and have crucial implications for young people's economic and personal outcomes throughout the life course. Our study seeks to highlight factors that support educational competence in a sample of high school students. Informed by ecological theory (Brofenbrenner 1979), we investigate how interactions in two proximal contexts (i.e., microsystems) of adolescents' lives — families and schools — influence educational success. Specifically, we have two primary research goals.

First, we assess the independent and conjoint influences of parent and teacher educational expectations on young people's academic achievement. Links between adults' expectations for children and adolescents' educational outcomes are strong and well documented in the literature for both teacher (Eccles et al. 1998; Jussim, Eccles, & Madon 1996) and parent expectations (see Yamamoto & Holloway 2010). In previous work with a low-income sample, we identified the conjoint influence of expectations from these two important socializing agents in young people's lives. We seek to extend this work by exploring these relationships with a large, nationally representative sample.

Second, we examine the possible pathways by which adult expectations exert their influence. Specifically, we investigate five sets of mediators: parents' educational involvement at home, the parent-youth relationship, the teacher-youth relationship, home-school connections, and youth's own educational expectations and competency beliefs. Prior work posits that adults' negative educational expectations may be communicated to students via compromised interactions, including less investment and declines in relationship quality and support (Yamamoto & Holloway 2010; Jussim, Eccles, & Madon 1996). Consistent with ecological theory's emphasis on possible mesosystemic influences, we allow for the possibility that teacher expectations might influence processes in the home environment and vice versa.

## Data and Methods

*Data Source*. Data come from the Educational Longitudinal Study (ELS), a nationally representative, longitudinal sample of 17,591 adolescents attending 752 schools. Student survey data were collected in 2002 (Wave 1) when students were 10th graders, two years later in 2004 when most adolescents were in 12th grade (Wave 2), and again in 2006 (Wave 3). In addition to student survey data, we also included data from math achievement tests (Wave 2), teacher surveys (Wave 1), and academic records (high school transcripts). Given our central focus on adult expectations for young people's educational attainment, we limited our sample to 11,108 adolescents from the original sophomore cohort who had data on parent expectations and at least one teacher's expectations with preference given to math teachers.

*Measures*. Table 1 provides descriptive statistics, including correlation estimates, for the primary constructs of interest. *Parents* and *teachers* reported the highest level of education they expected the focal student to complete on a seven-point continuum ranging from less than a high school degree to PhD, MD, or other advanced degree. We measured *academic outcomes* as cumulative grade point average, standardized math achievement test scores, highest math course taken in high school, and high school graduation status. We included four sets of mediators. *Parent mediators* included parental involvement at home and parent-youth relationship, both modeled as latent variables. A latent variable capturing teacher-youth relationship served as a

*teacher mediator*. *Home-school connections* included parental involvement in school and communication with school. Finally, *youth mediators* consisted of youths' own expectations, math self-competency, and academic effort and persistence.

*Analyses*. We conducted a path analysis in a structural equation modeling (SEM) framework to examine the magnitude and significance of association between the predictors (adult expectations), mediators (parent, teacher, home-school, and youth), and academic outcomes. We will also conduct multiple group analyses to explore the moderating effects of congruent-dissonant adult expectations on the relationships in the path analysis. In the multiple group analyses, we will constrain model paths in blocks and then use chi-square difference tests to determine whether the constrained models lead to a significant decline in model fit.

## Preliminary and Expected Findings

Preliminary results indicated that adult expectations exerted a significant influence on youths' academic outcomes through a number of mechanisms (see Table 2). Both parent and teacher expectations were associated with better academic outcomes, but teacher expectations were more than twice as influential for all outcomes. In terms of mediators, we found that adult expectations were related to home processes, school processes, and home-school connections. These home and school mediators, in turn, were related to youths' academic competence, effort, and expectations. Youths' academic beliefs were, in turn, linked to academic success. Although we observed significant evidence for mediated pathways, the direct relationships between adult expectations and youth academic outcomes remained.

Future analyses will examine whether the congruence between parent and teacher expectations influence the relationships under study. As a first step, we have created a four-category variable that captures whether parents and teachers expect the youth to graduate from college. In total, 18% of the sample had congruently low parent and teacher expectations, 53% had congruently high parent and teacher expectations, 5% had high teacher but low parent expectations, and 25% had high parent but low teacher expectations. Future regression analyses will examine the direct effects of congruent/dissonant adult expectations for students' academic outcomes, and multiple group analyses will determine whether the strength of modeled relationships varies across our four congruence/dissonance groups.

## Conclusion

Our preliminary findings suggest that parent and teacher expectations are powerful predictors of youths' academic outcomes, and these relations are mediated by processes within and connections between families and schools as well as youths' personal beliefs. Additional multiple group analyses will further explore how congruence/dissonance between adults' expectations impact these links. Findings will suggest multiple points of entry for academic intervention and prevention efforts that promote the educational success of all students.

### References

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Table 1. Correlations, Means, and Standard Deviations for Study Variables

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. P expectations | --- | | | | | | | | | | | | | |
| 2. T expectations | .47*** | --- | | | | | | | | | | | | |
| 3. P home involvement | .02* | -.00 | --- | | | | | | | | | | | |
| 4. P-Y relationship | .09*** | .01 | .17*** | --- | | | | | | | | | | |
| 5. P school involvement | .18*** | .19*** | .12*** | .20*** | --- | | | | | | | | | |
| 6. P communication with school | -.18*** | -.31*** | .03** | -.01 | -.02 | --- | | | | | | | | |
| 7. T-Y relationship | .10*** | .10*** | .11*** | .04*** | .07*** | -.06*** | --- | | | | | | | |
| 8. Y expectations | .51*** | .43*** | .07*** | .04*** | .15*** | -.14*** | .10*** | --- | | | | | | |
| 9. Y math self-competency | .23*** | .34*** | .03** | .03** | .06*** | -.16*** | .17*** | .23*** | --- | | | | | |
| 10. Y effort and persistence | .29*** | .29*** | .16*** | .07*** | .08*** | -.16*** | .23*** | .31*** | .52*** | --- | | | | |
| 11. Math achievement | .38*** | .62*** | -.08*** | -.03** | .13*** | -.19*** | .04*** | .37*** | .39*** | .21*** | --- | | | |
| 12. Math sequence | .41*** | .56*** | -.00 | -.01 | .16*** | -.20*** | .07*** | .39*** | .26*** | .24*** | .57*** | --- | | |
| 13. Cumulative GPA | .40*** | .63*** | -.01 | .03** | .16*** | -.64*** | .10*** | .38*** | .26*** | .31*** | .57*** | .50*** | --- | |
| 14. Educational attainment | .39*** | .57*** | .03** | .05*** | .15*** | -.26*** | .09*** | .38*** | .23*** | .25*** | .58*** | .49*** | .70*** | --- |
| *Mean* | 4.99 | 4.22 | 0.00 | 0.00 | 1.25 | 0.00 | 0.00 | 5.29 | 2.55 | 2.79 | 51.66 | 5.13 | 4.10 | 3.35 |
| *SD* | 1.40 | 1.44 | 0.66 | 0.48 | 1.36 | 0.35 | 0.74 | 1.37 | 0.85 | 0.73 | 9.96 | 1.12 | 1.47 | 0.75 |

*Note*. P signifies parent, T signifies teacher, Y signifies youth; $n = 11,108$ for W1 measures, $n$ ranges from 9,772 to 10,435 for W2 measures, $n = 10,154$ for W3 measure; *p < .05, **p < .01, ***p < .001.

Table 2. Pathways by which Adult Expectations Influence Adolescents' Academic Outcomes

| | B (*SE*) | *p*-value |
|---|---|---|
| **Adult Expectations -> Family Processes** | | |
| Teacher expectations -> Home educational involvement | -.089 (.02) | .000 |
| Parent expectations -> Home educational involvement | .077 (.02) | .000 |
| Teacher expectations -> Parent-youth relationship | -.055 (.01) | .000 |
| Parent expectations -> Parent-youth relationship | .153 (.01) | .000 |
| **Adult Expectations -> School Processes** | | |
| Teacher expectations -> Teacher-youth relationship | .109 (.02) | .000 |
| Parent expectations -> Teacher-youth relationship | .194 (.02) | .000 |
| **Adult Expectations -> Home-School Connections** | | |
| Teacher expectations -> School educational involvement | .057 (.01) | .000 |
| Parent expectations -> School educational involvement | .090 (.01) | .000 |
| Teacher expectations -> Communication with school | -.476 (.03) | .000 |
| Parent expectations -> Communication with school | -.080 (.02) | .000 |
| **Adult Expectations -> Youth Mediators** | | |
| Teacher expectations -> Youth expectations | .185 (.02) | .000 |
| Parent expectations -> Youth expectations | .360 (.01) | .000 |
| Teacher expectations -> Math self-competency | .175 (.03) | .000 |
| Parent expectations -> Math self-competency | .063 (.01) | .000 |
| Teacher expectations -> Effort and persistence | .150 (.03) | .000 |
| Parent expectations -> Effort and persistence | .134 (.02) | .000 |
| **Adult Expectations -> Academic Outcomes** | | |
| Teacher expectations -> Math achievement | .324 (.02) | .000 |
| Parent expectations -> Math achievement | .098 (.01) | .000 |
| Teacher expectations -> Math sequence | .271 (.02) | .000 |
| Parent expectations -> Math sequence | .098 (.01) | .000 |
| Teacher expectations -> Cumulative GPA | .162 (.04) | .000 |
| Parent expectations -> Cumulative GPA | .040 (.02) | .016 |
| Teacher expectations -> Educational attainment | .162 (.03) | .000 |
| Parent expectations -> Educational attainment | .064 (.02) | .000 |
| **Family Processes -> Academic Outcomes** | | |
| Home educational involvement -> Math achievement | -.104 (.02) | .000 |
| Parent-youth relationship -> Math achievement | -.007 (.01) | .621 |
| Home educational involvement -> Math sequence | -.022 (.02) | .211 |
| Parent-youth relationship -> Math sequence | -.039 (0.01) | .008 |
| Home educational involvement -> Cumulative GPA | -.051 (.02) | .001 |
| Parent-youth relationship -> Cumulative GPA | .001 (.01) | .935 |
| Home educational involvement -> Educational attainment | .014 (.02) | .428 |
| Parent-youth relationship -> Educational attainment | -.019 (.02) | .224 |
| **School Processes -> Academic Outcomes** | | |
| Teacher-youth relationship -> Math achievement | -.024 (.01) | .060 |
| Teacher-youth relationship -> Math sequence | -.003 (.02) | .833 |
| Teacher-youth relationship -> Cumulative GPA | .060 (.01) | .000 |
| Teacher-youth relationship -> Educational attainment | .073 (.01) | .000 |
| **Home-School Connections -> Academic Outcomes** | | |
| School educational involvement -> Math achievement | .012 (.01) | .375 |
| Communication with school -> Math achievement | -.063 (.03) | .031 |
| School educational involvement -> Math sequence | .082 (.02) | .000 |
| Communication with school -> Math sequence | -.147 (0.4) | .000 |
| School educational involvement -> Cumulative GPA | .248 (.03) | .000 |
| Communication with school -> Cumulative GPA | -.606 (.06) | .000 |
| School educational involvement -> Educational attainment | .166 (.03) | .000 |
| Communication with school -> Educational attainment | -.425 (.05) | .000 |

*Note.* The following pathways were not included due to space constraints: family processes -> youth mediators; school processes -> youth mediators; home-school connections -> youth mediators; youth mediators -> outcomes.