# A Convergent Mixed Methods Study: Academic Mastery Among Latino Children in Migrant Farmworker Families

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## Introduction

- Annually, over 650,000 Latino youth migrate internally with their farmworker parents who travel in search of seasonal agricultural work.[1]
- Youth in Latino migrant farmworker families (LMFW) are considered some of the most academically vulnerable youth in the U.S.[2]
- Only 50% of youth in LMFW families graduate high school, and among those in school, many are often behind their grade level.[1,3]
- Educational disruptions resulting from their families' migratory life likely contribute to these academic vulnerabilities.[3]
- Purpose of this convergent mixed methods study was to identify factors that influence academic mastery among youth from LMFW families.

## Methods

### Participants
- Quantitative (*N* = 65)
  - *Youth Survey:* LMFW youth ages 8-18 (*M*age= 12.79, 53.8% male) enrolled in summer Migrant Education Program (MEP)
  - Most born in U.S. (63.6%), preferred to speak English (69.7%), and lived in two-parent households (69.7%).
- Qualitative (*n* = 24)
  - *Semi-structured interviews:* Subsample of LMFW youth ages 10-18 (*M*age=13.88, 66.7% male; most born in U.S. (79.2%), preferred to speak English (79.2%), and lived in two-parent households (66.7%).
  - *Focus group:* One mother focus group included 9 LMFW mothers (with children involved in larger study). Two focus groups, each included 9 MEP participants (total: 2 administrators, 1 curriculum coordinator, 1 school nurse, and 14 MEP teachers (pre-kindergarten through 12th grade).

### Procedures
- Quantitative
  - *Youth Survey:* After parental consent and youth assent forms were collected, LMFW youth were recruited through the MEP to participate in survey (60-90 mins) completed on iPad in English or Spanish. Compensation was $20.
- Qualitative
  - *Interviews:* Purposeful sampling used to recruit subsample of LMFW youth to participate in audio recorded semi-structured interviews (30-60 mins). Conducted in English or Spanish. Youth were compensated $15.
  - *Focus Groups:* Purposeful sampling used to recruit LMFW mothers and MEP staff and teachers to participate in focus groups (45 mins). Participants were compensated $20. One LMFW mother focus group conducted in Spanish. Two MEP staff and teacher focus groups conducted in English.

### Measures
- Quantitative
  - *Youth Survey* (Youth report): Mom School Involvement Scale (α=.83, 4 items), Perceived Family Support (α=.89), Perceived Rejection by Teachers (α=.93, 15 items), Teacher Attachment Scale (α=.96, 9 items), School Attachment (α=.81, 13 items), and Mastery Orientation Scale (α=.85, 6 items).
- Qualitative
  - *Interviews and Focus Group guides:* included open-ended and follow-up questions to encourage in depth elaboration (e.g., youth asked "How important do you feel education is for your future?" mothers asked "What problems, if any, does your child have at school? MEP providers asked "What are some characteristics of LMFW children that appear to help them be successful in school?").

## Data Analysis

- Quantitative
  - *Youth Survey:* After data screening was complete, descriptive statistics, correlations, and scale reliabilities were calculated with age, child sex, and place of birth used as control variables.
  - Multivariate linear regression models were used to examine predictors of school attachment and mastery orientation.
- Qualitative
  - *Interviews & Focus Groups:* De-identified (pseudonyms used for youth), transcribed verbatim, coding & analysis using thematic analysis and completed by two independent researchers.
- Integration of convergent mixed methods
  - Integration of mixed methods through comparing and contrasting of quantitative and qualitative data results.

## Results

**Bivariate correlations among variables and covariates (N = 65)**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Mom school involvement | 1 | | | | | | | | |
| 2. Perceived family support | .42** | 1 | | | | | | | |
| 3. Teacher rejection | -0.00 | 0.09 | 1 | | | | | | |
| 4. Teacher attachment | 0.22 | 0.17 | 0.14 | 1 | | | | | |
| 5. Mastery orientation | .34** | 0.13 | -.28 | 0.18 | 1 | | | | |
| 6. School attachment | .44** | .42** | -.27* | .43* | .61** | 1 | | | |
| 7. Child age | -0.23 | -0.13 | -0.10 | -.29 | -0.08 | -0.14 | 1 | | |
| 8. Child ex | -0.01 | -0.06 | -.26 | -0.20 | 0.10 | 0.03 | -0.19 | 1 | |
| 9. Child born in U.S. | 0.02 | 0.18 | 0.06 | -0.12 | 0.00 | -0.06 | -0.22 | -0.04 | 1 |
| Mean | 2.88 | 3.43 | 2.00 | 2.34 | 2.65 | 3.14 | 12.86 | 1.46 | 1.35 |
| Standard Deviation | (.83) | (.72) | (.57) | (1.02) | (.74) | (.53) | (3.03) | (.50) | (.48) |

Note: ** p < .01 level, *p < .05.

## Results Continued

Results from the main quantitative analysis are reported in Figures 1 & 2. In all figures solid lines show significant paths (*p* < .05), dashed lines show non-significant paths, and standardized coefficients and *p* values are reported.
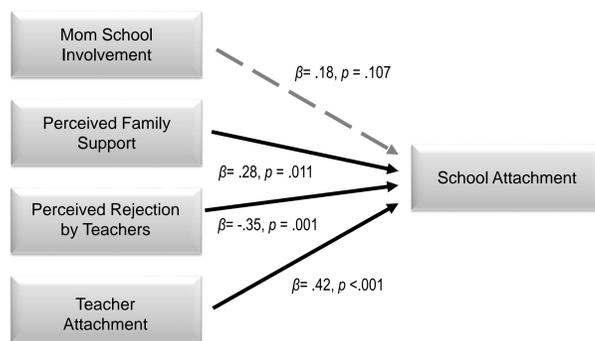


Figure 1: *Predictors of School Attachment*

Mom School Involvement — β= .18, p = .107
Perceived Family Support — β= .28, p = .011
Perceived Rejection by Teachers — β= -.35, p = .001
Teacher Attachment — β= .42, p <.001
→ School Attachment



Figure 2: *Predictors of Mastery Orientation*

Mom School Involvement — β= .11, p = .357
Perceived Rejection by Teachers — β= -.14, p = .211
School Attachment — β= .49, p <.001
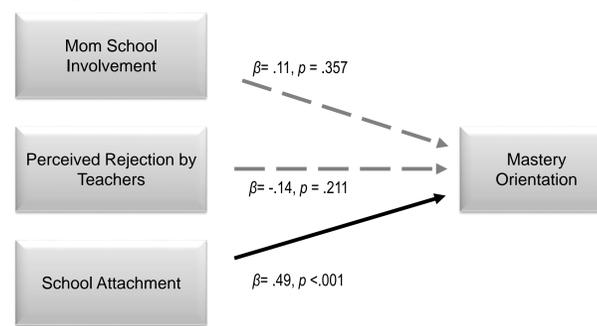→ Mastery Orientation

Table 2: *Qualitative Findings (6 Themes & 2 Subthemes identified)*

| Qualitative Themes | Representative Quotes: LMFW younger youth (10-14 years), LMFW older youth (15-18 years), LMFP Mothers, Migrant Education Program (MEP) Staff and Teachers (Providers) |
|---|---|
| 1. Educational Values | "[Education is] really important because I have seen many people [who] haven't succeeded. They don't have really good jobs, they don't have a lot of money, they're just in jobs they don't like because they haven't studied and sometimes they don't have enough money because they didn't go to school" (Christian, 13 yo)<br>"Without [education] I wouldn't be able to be anything. I wouldn't be able to go forward." (Dominic, 16 yo).<br>"We definitely, don't want to see our kids doing what we do. That's why we say [to them that] it's better that they study and get a good education so that they don't have to be out [in the fields] working like us" (Mother #3)<br>"[LMFW students] are eager to learn" (teacher4_FG#2) |
| 2. Academic Motivation & Aspirations | "I wanna be a doctor" (Daniela, 12 yo)<br>"[My parents encourage] me to keep running and playing basketball so that I can get a scholarship to pay for [college]" (Bianca, 16 yo)<br>"They have all the tools to be the most successful people--the hard work and respect." (Provider 9, PFG #2) |
| 3. Educational Challenges: (a) adult responsibilities | "I take care of my brothers… I worry about them a lot." (Christian, 13 yo)<br>"I wanted to work to help my mom pay rent" (Jorge, 17 yo)<br>"Kids take on parent roles…[older kids] have to grow up super quick." (Staff5, FG#2) |
| (b) Mobility | "You miss a lot of school and you're behind everybody. You don't know what they're teaching sometimes. It gets really hard" (Yareli, 11 yo).<br>"My son doesn't take his final exam. It affects his grades, especially in mathematics" (Mother #6)<br>"[youth] could be learning fractions in Texas and then they come here and maybe the school has already gone over fractions."(Staff7_FG#2) |
| 4. Maternal Communication about Education | "My mom always tells me to study because she said that it's gonna help me reach my career and my future goals" (Adriana, 11 yo)<br>"[My mother urges me] to finish high school because my brother didn't and it's always difficult for him to get a job because everyone asks for a diploma." (Jorge, 17 yo)<br>"We tell [our kids that] it's better that they study and get a good education so that they don't have to be out [here in the fields] working like us" (Mother #3) |
| 5. Parental School Involvement | "When my mom is done making food for us, we go to my room and she helps me study". (Armando, 12 yo)<br>"[MEP] is good because I focus more on [my children's] studies and I help them" (Mother #4)<br>"I don't think [the parents] take the time to ask 'Hey, did you do your homework?' … I think if education was emphasized as being important, the kids would see that too." (Provider #7 PFG#2) |
| 6. School Based Relationships: (a) Supportive | "I like that some teachers know your feelings." (Zariyah, 11 yo)<br>"[My teachers] are able to understand how much time we need or if you're not going as fast as the other kids or you're going too fast and they're able to speed up with me" (Esperanza, 16 yo).<br>"[Support is] understanding what it means to be a migrant, you know, not getting mad that a child is sleeping, realizing that maybe they were up at 4:30am when their parents were taking them to the babysitter so that they could go to [work] the fields"(Provider #7, FG #2) |
| (b) Strained or underdeveloped | "I just can't get along with [some teachers back home]. Some of them want respect but [they don't] give respect back" (Eduardo, 17yo)<br>"Because they're a very mobile population, a challenge I have is [that I] get to know the child and their needs, and then the program's over. It's so quick. The kids are aware. I think they [think], 'Okay, this is a short period of time and then I'm go[ne] and I'm gonna maybe be in this school for a little bit, and then I'm gonna be here and there.' So that is a big struggle" (3rd-5th grade teacher) |

## Discussion

- **This convergent mixed methods study sought to investigate the factors that influence academic mastery among youth from LMFW families.**
- **Both quantitative & qualitative findings supported the notion that mastery orientation is positively predicted by school attachment.**
  - Qualitative evidence revealed that aspects of mobility such as school interruptions due to travel and differing school curricula may negatively contribute to school attachment and, in turn, youth's academic mastery.
- **Both data sources confirmed that school attachment is positively predicted by teacher attachment and negatively predicted by perceived rejection by teacher.**
  - Again, qualitative findings provided greater depth related to how school-based relationships with teachers (either strong, underdeveloped, or strained) might impact school attachment among LMFW youth.
- **While both data sources found that maternal involvement predicted school attachment, qualitative results revealed differences between how teachers and parents perceive parental involvement.**
  - It may be interesting to explore this phenomena further to see if these differences impact LMFW youth's academic mastery and school attachment.
- **Qualitative analysis found emergent dimensions that were not found significant in this study's quantitative stage.**
  - Including mobility and its impact on LMFW youth's educational success.

## Limitations & Recommendations

- Quantitative:
  - *Youth Surveys* collected from youth only; however obtaining survey data from both mothers and fathers could enhance findings.
- Qualitative:
  - *Youth Interview* participants were predominantly male and mostly preferred to speak English. Future research should increase female participation. Also, given that findings revealed English fluency as a barrier to academic mastery, increasing participation among youth who mostly prefer to speak Spanish could provide valuable insights regarding this phenomena.
  - *Focus groups* with both mother and MEP providers were conducted, however no father focus groups and only one mother focus group were conducted. Future studies should increase the perspectives captured from both LMFW mothers and fathers.
- Convergent Mixed Methods:
  - As both data sources were collected at the same time this approach does not allow for researchers to use one data source to inform the collection of the second source. However, the strength of convergent mixed methods is that it allows for triangulation of data sources which strengthens findings and also helps to control for researcher bias.

## Acknowledgements