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Chinese and Latino Immigrant Parents' Views of How to Facilitate their Children's Math Development

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Purpose

- To document how **Latino** and **Chinese** 1st immigrant parents (prek, k, 1st graders) socialize their children's math development

Background

Race/Ethnicity

- One in four U.S. children lives in an immigrant family, approx. 2/3 of Asian or Latino origin (Fuligni, 1997; Hernandez & Napierala, 2012)

Math

- Latino 54% below grade level
- Asian 37% below grade level (NAEP, 2013)

Background cont.

Parents' Socialization Practices

- Chinese
 - Training (Chao, 2001)
 - Role of Effort (Stevenson, Chen, & Uttal, 1990)
 - Systematic Instruction (Huntsinger & Jose, 2009; Pomerantz et al., 2014)
- Latino
 - Motivational practices (Ceballo, Maurizi, Suarez, & Aretakis, 2014; Ramos, 2014)

This Study

- Mixed methods
- **Latino** and **Chinese** immigrant parents' socialization of young children's math development
 - Importance of math development
 - Frequency of children's engagement in math
 - Parents' views of their role in their children's math learning
 - Parents' views of how children learn

Participants

- **40 First Generation Chinese**
 - (mainly from China)
 - Mean Age 39.07 (3.95)
 - Years in US 9.47 (SD 5.25; range <1year-22 years)
 - 97% at least B.A.
- **37 First Generation Latinos**
 - (from Central/S. America)
 - Mean Age 33.79 (5.31)
 - Years in US 10.97 (SD 4.9; range 3.5-26 years)
 - 8% at least B.A.

Questionnaire

- What is math?
- How often does *[child's name]* do any math activities at home? (4 point scale)
- How often your child does certain activities (*Asked about 30 activities- - counting, puzzles, math tv, blocks, building toys*) (4 point scale)

Questionnaire cont.

- What does your child like best about (*specific math activities*)
- What do you like best about (*specific math activities*)
- What is the best way to help your child learn math?
- When you pick out a math toy/book/activity for your child, what kinds of things do you look for?

Questionnaire cont.

- How important is it that your child does math activities at home? (5 point scale)
- How important is it that you help your child with math? (5 point scale)
- How often does your child see you doing math? (4 point scale)
- How much do you enjoy math? (5 point scale)
- How good at math are you? (5 point scale)

Results

- Importance of children doing math at home
Mean Latino ratings 4.81, Chinese 4.15, $p = .072$
- Importance of parents assisting their children with math at home
Mean Latino ratings 4.90, Chinese 4.22, $p = .077$
- Frequency of seeing parents do math
Mean Latino ratings 3.16, Chinese 2.53, $p > .10$

Results cont.

- Parent enjoys math

Mean *Latino* ratings 4.27, *Chinese* 2.83, $p < .006$

- Parent is good at math

Mean *Latino* ratings 3.83, *Chinese* 3.21, $p > .10$

- Frequency of child engaging in math activities at home

Mean *Latino* ratings 2.23, *Chinese* 2.17, $p > .10$

Results cont.

Parents' Actively Teaching

- *Chinese*

– *We are just at home, we keep teaching her. We keep teaching her with the Chinese textbook. We teach her by ourselves.*

- *Latino*

– *Putting yourself next to him to work with... already it is with cubes, or blocks ...*

Results cont.

Using Daily Living Opportunities

- Chinese

- *I think the child is more interested in learning if it is related to his/her daily life*
- *integrate things in daily life*

- Latino

- *For example when I am cooking, I tell her, “bring me two tomatoes!” or “bring me an onion” ...*
- *(At laundromat) ... there are times she- count me the ‘coras’ (quarters), I tell her, of – eh I will put about three washes. And so I tell her how many ‘coras’ the machine takes and then she will separate them for me.*

Results cont.

Planning/Expectations

- Chinese

- *I bought a book. There are testing sheets in it with math questions that are not the formula of addition and subtraction but these questions like I said. He is usually able to do ... I usually require him to do four sheets. I feel like if he concentrates on it, he should be able to finish it within 20 minutes.*
- *In the morning, on the paper just showed, she probably does three to five pages. At the beginning, two pages in the morning, two pages in the afternoon. Then gradually adds her more pages. Three or four pages depend on the situation of that time.*

Results cont.

How Children Learn

- Chinese

- *Everyday you need to do math exercises constantly (practice)*
- *If you really want him to learn numbers, he needs to memorize (memorize)*
- *My first thinking is he will like it and it is interesting; otherwise it is meaningless (interest)*

Results cont.

- Latino

- *Doing activities like-, no?...Adding...in math, counting things...because it's the only option so he can learn.*
- *(Discussing a math tv program) She learns different things, the numbers, to subtract, to add, to divide*
- *Practices with the...with the numbers and that, and that she teaches herself*

Conclusions

- **Mixed Methods**
- ***Similarities* between Chinese and Latino:**
Both reported playing an active role in their children's math development through direct instruction, providing artifacts, and using daily living activities as teaching opportunities.

Conclusions cont.

- ***Differences* between Chinese and Latino:**
Chinese parents' approaches were more guided by a detailed systematic plan and set of expectations for their children's progress. They discussed the processes (practice, memorization, engaging child's interest) through which their children learned math

Latino parents stressed the importance of their children learning and discussed activities they did to foster learning but generally did not express a systematic approach to fostering such learning

Thank you ☺

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