

Exploring Latino Parent Attitudes Toward Science and Involvement in their Children's Science Education

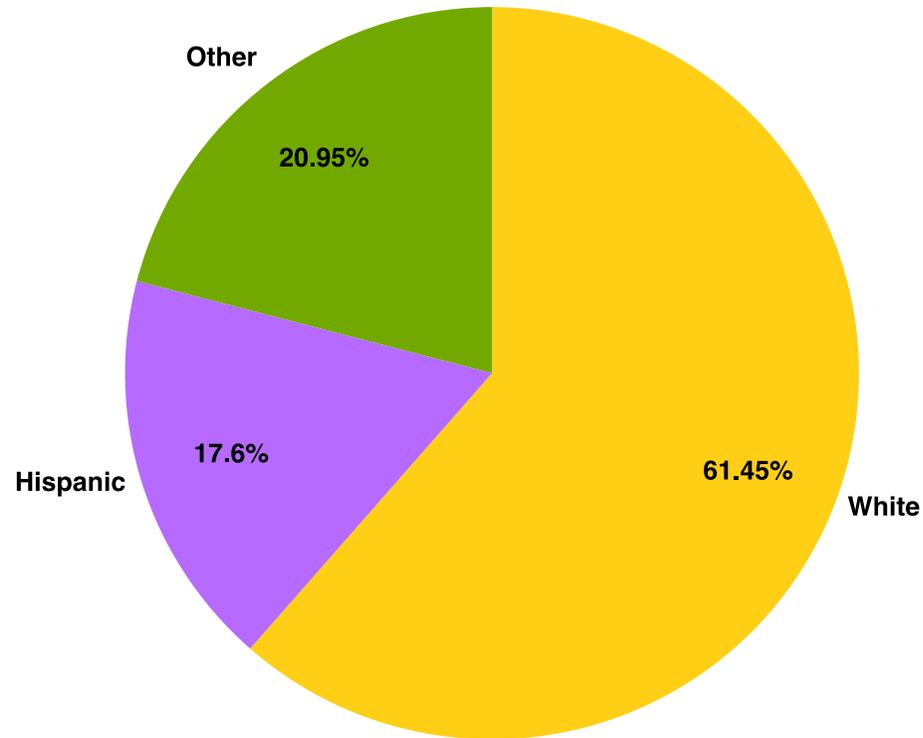
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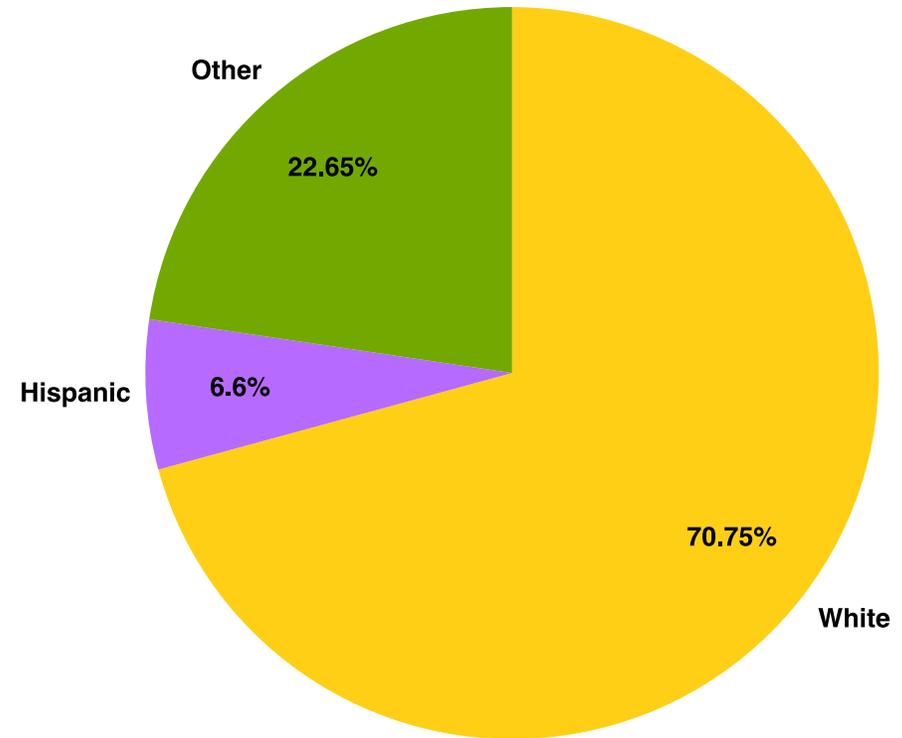
Hispanic/Latino population underrepresented in Science, Technology, Engineering, and Mathematics in 2015

U.S. Population by Race/Ethnicity



American Community Survey, 2015

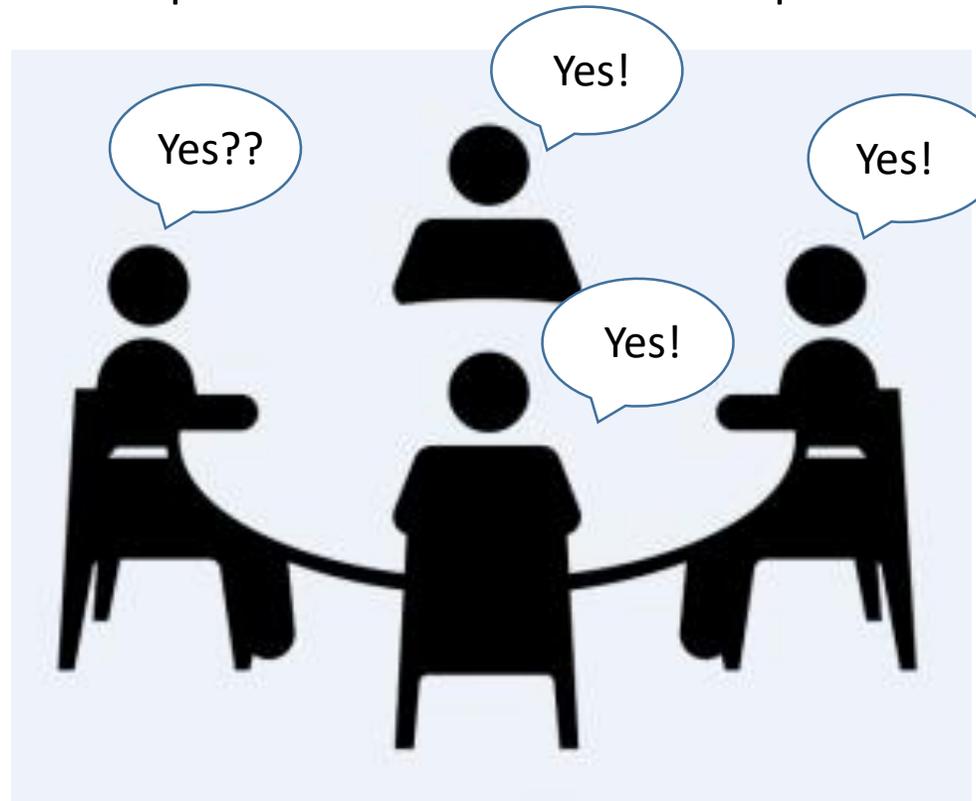
STEM Workforce by Race/Ethnicity



American Community Survey, 2015

Why is it important to have diversity in STEM Fields?

- Guards against groupthink and overconfidence
- Improves ability to solve problems and make predictions

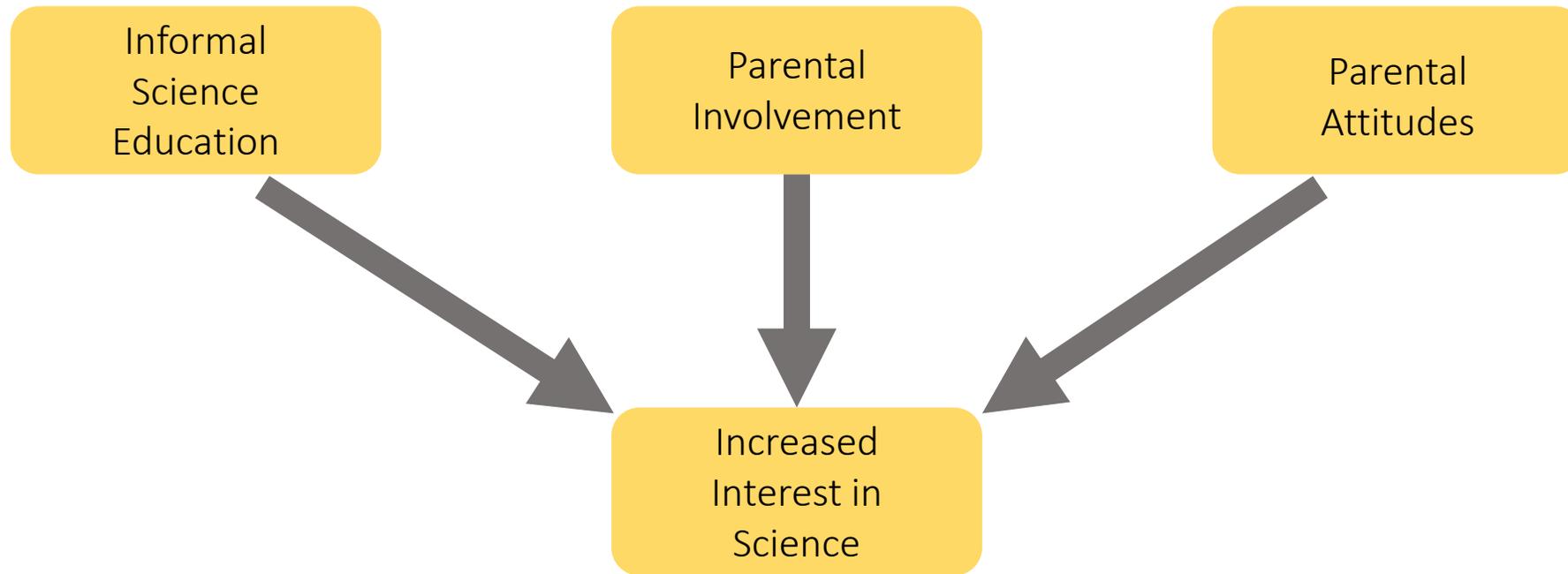


Children's Interest in Science- *Earlier the Better*

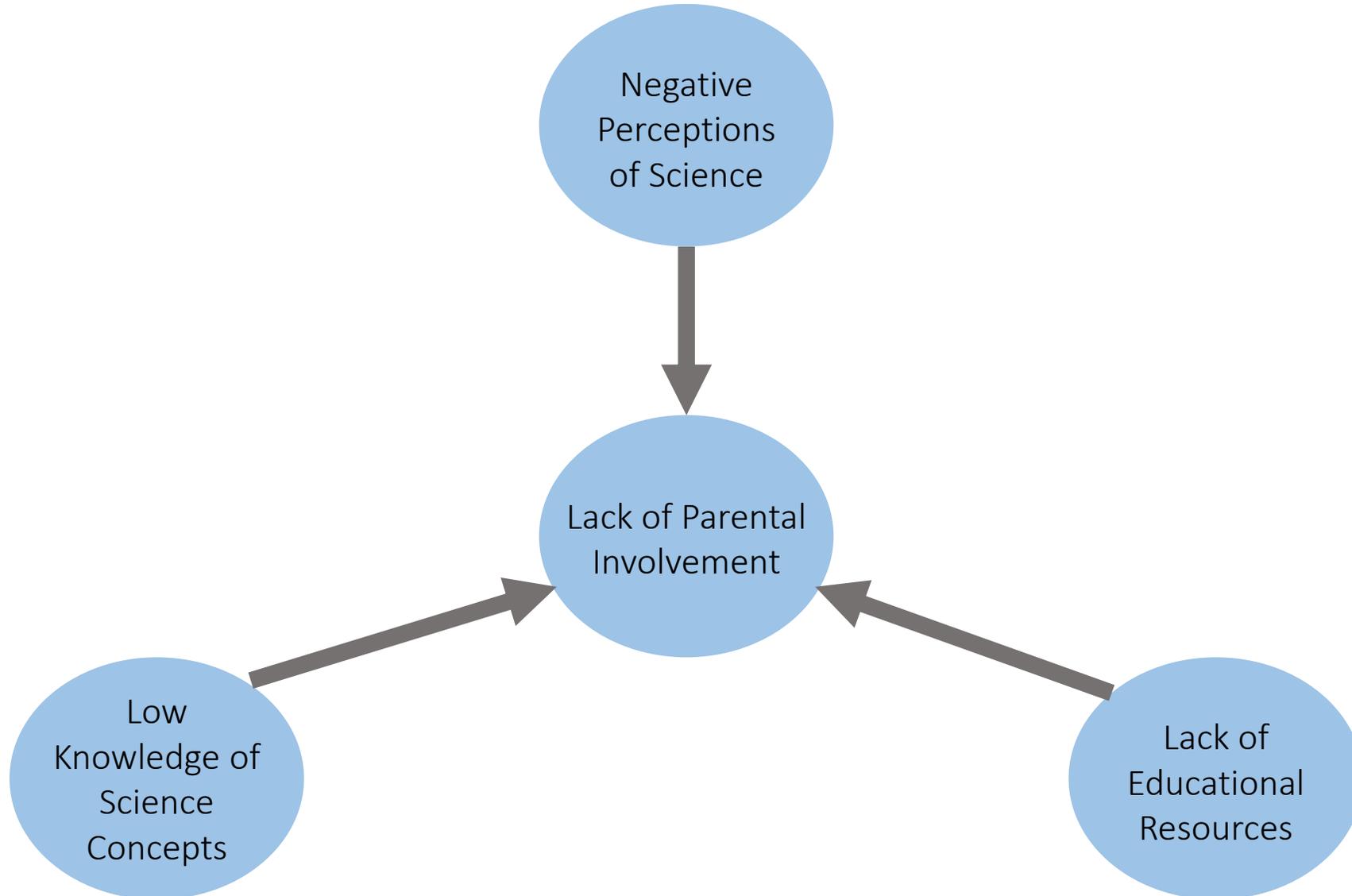
- More likely to pursue science in college
- Children spend most of their time with parents and family
- Home experiences affect interest in science



Positive Influences on Children's Interest in Science



Factors that Decrease Parental Involvement



Exploratory Questions

- How are Latino parental attitudes of science influenced after participating in a family science event?



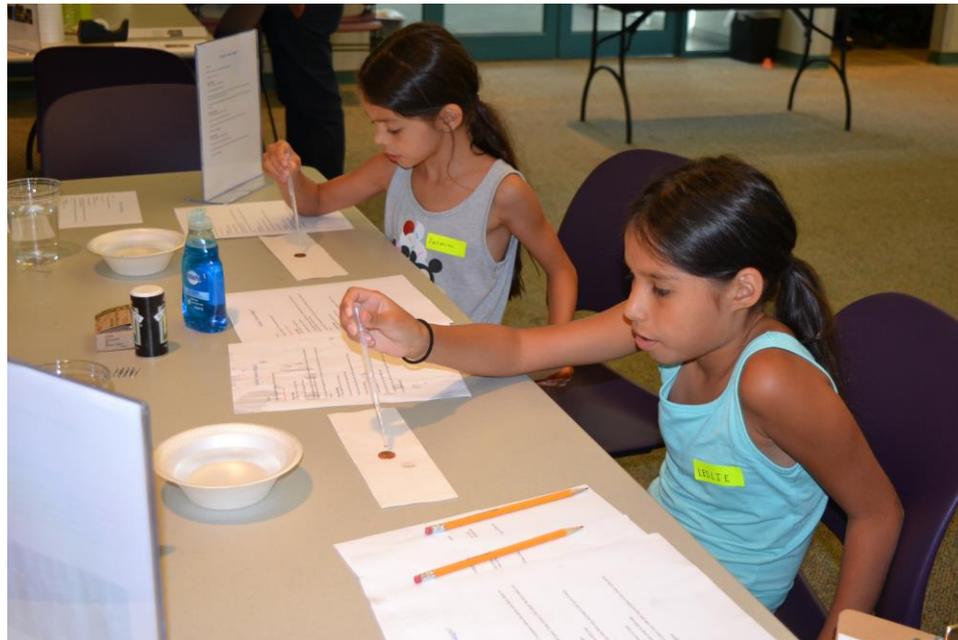
Exploratory Questions

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- What are Latino parents' perceptions regarding the value of family science events?



Exploratory Questions

- How are Latino parental attitudes of science influenced after participating in a family science event?
- What are Latino parents' perceptions regarding the value of family science events?
- How is Latino parental involvement influenced after a family science event?



Attitude Toward Science Survey

	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
1. Science is fun.	<input type="radio"/>				
2. I do not like science and it bothers me to have to study it.	<input type="radio"/>				
3. During science events, I usually am interested.	<input type="radio"/>				
4. I would like to learn more about science.	<input type="radio"/>				
5. If I knew I would never go to science events again, I would feel sad.	<input type="radio"/>				
6. Science is interesting to me and I enjoy it.	<input type="radio"/>				
7. Science makes me feel uncomfortable, restless, irritable, and impatient.	<input type="radio"/>				
8. For this question, fill in 'Undecided'.	<input type="radio"/>				
9. Science is fascinating and fun.	<input type="radio"/>				
10. The feeling that I have towards science is a good feeling.	<input type="radio"/>				
11. When I hear the word science, I have a feeling of dislike.	<input type="radio"/>				
12. Science is a topic which I enjoy studying.	<input type="radio"/>				
13. I feel at ease with science and I like it very much.	<input type="radio"/>				
14. I feel a definite positive reaction to science.	<input type="radio"/>				
15. Science is boring.	<input type="radio"/>				

Family Science Event Survey

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. This experience was valuable for my child.	<input type="radio"/>				
2. This experience was valuable for me.	<input type="radio"/>				
3. This experience made me less comfortable doing science.	<input type="radio"/>				
4. I believe that teaching hands-on science is beneficial to my child.	<input type="radio"/>				
5. I am interested in assisting my child's class or school with science.	<input type="radio"/>				
6. I am willing to volunteer with the family science initiative.	<input type="radio"/>				
7. This experience made me more comfortable doing science.	<input type="radio"/>				
8. I liked science when I was in elementary school.	<input type="radio"/>				

Parent Involvement Questionnaire

1. What ways are you involved with your child in science activities? Please explain.
2. What ways do you have conversations with your child about science? And how often? Please explain.
3. How comfortable are you doing science with your child? Please explain.
4. What sorts of things might help you feel more comfortable doing science as a parent/guardian? Please explain.
5. In what ways, if any, are you involved in the science being taught at your child's school? Please explain.
6. What is the biggest obstacle, if any, that prevents you from getting more involved in your child's science education? What might be able to help you overcome this obstacle? Please explain.

Family Science Activities

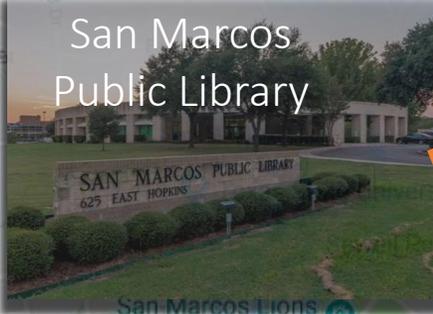
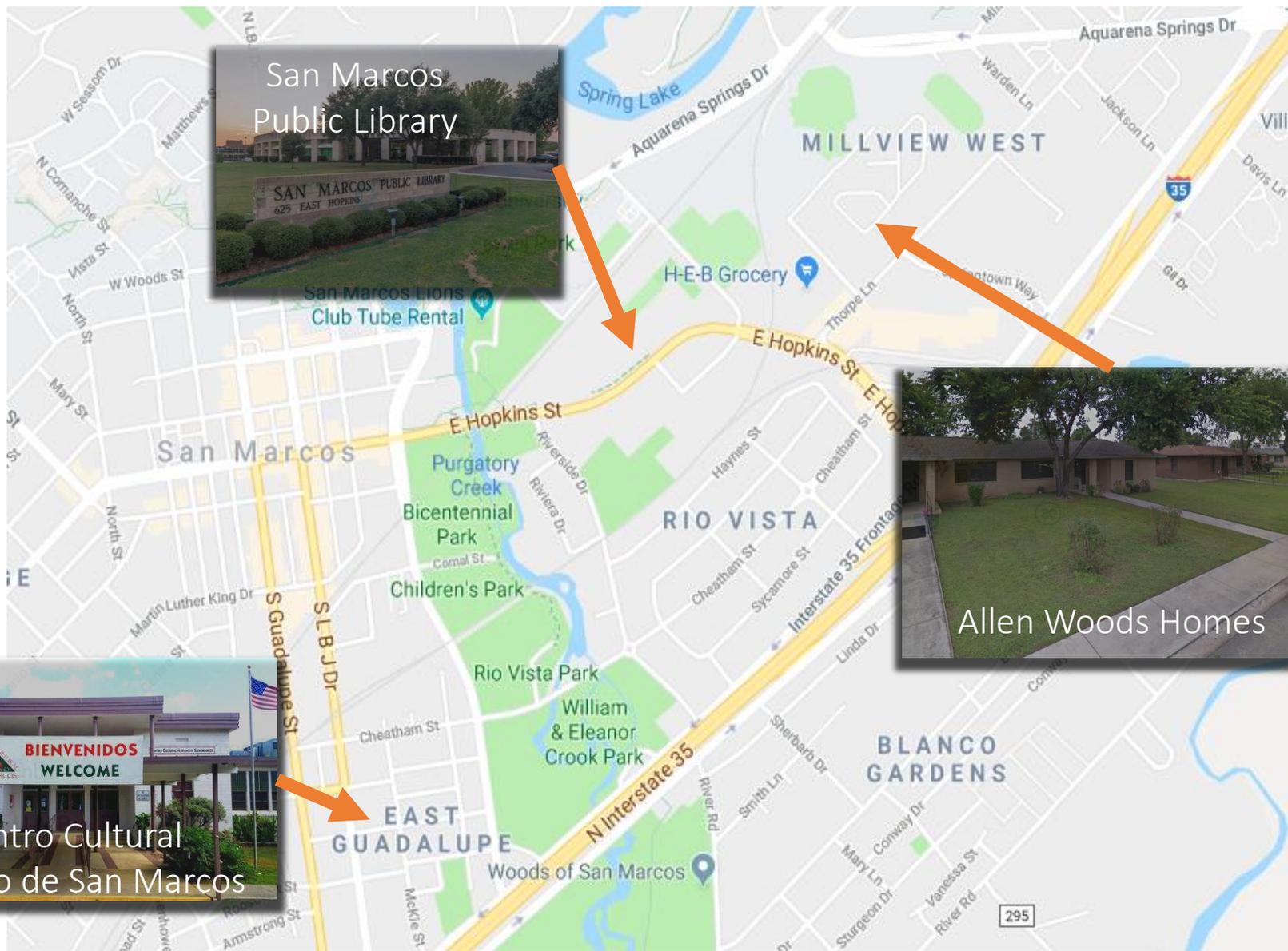


Balloon Rocket



Eclipse Viewers

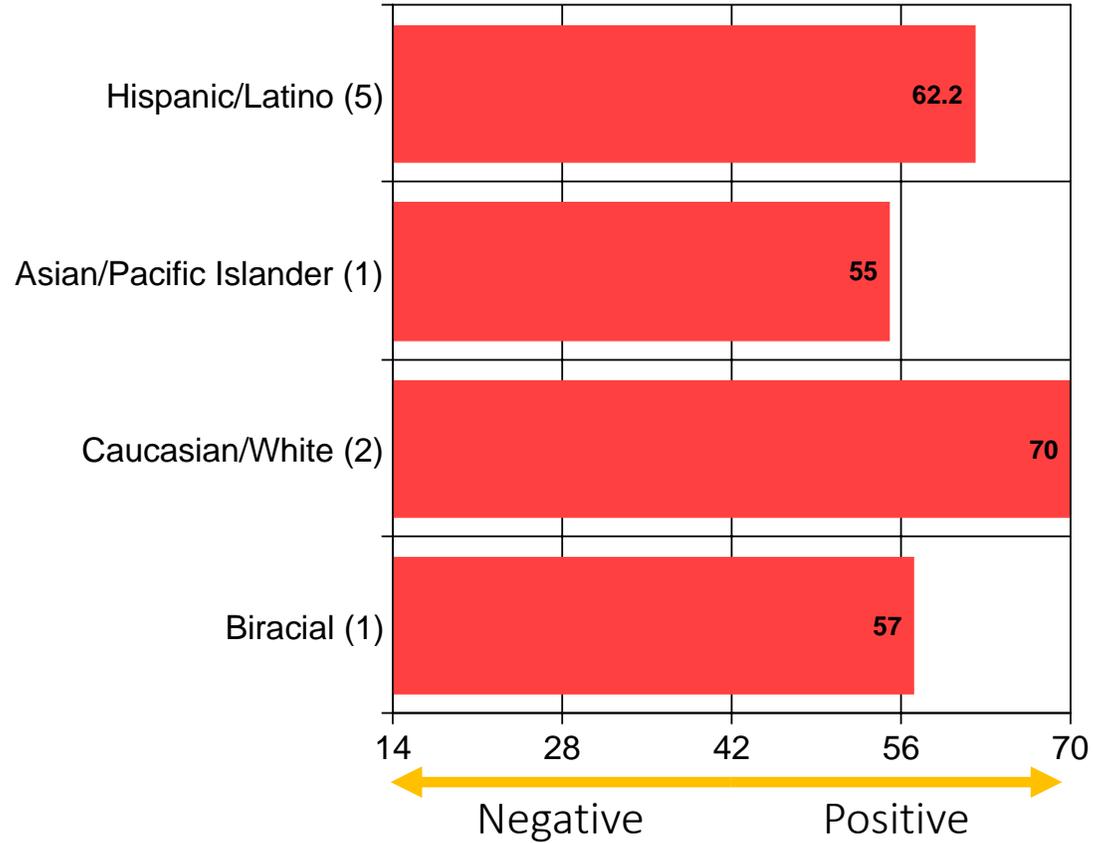
Study Sites



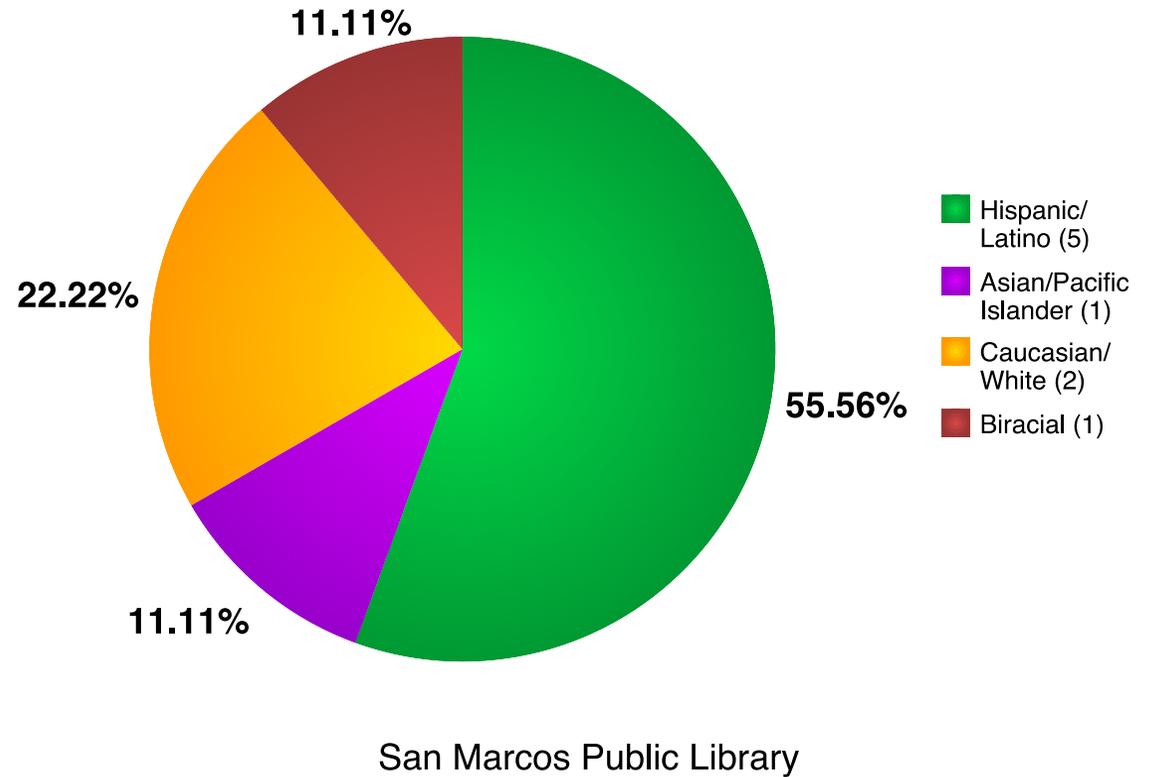


San Marcos Public Library

Attitude Toward Science by Race/Ethnicity (n=9)



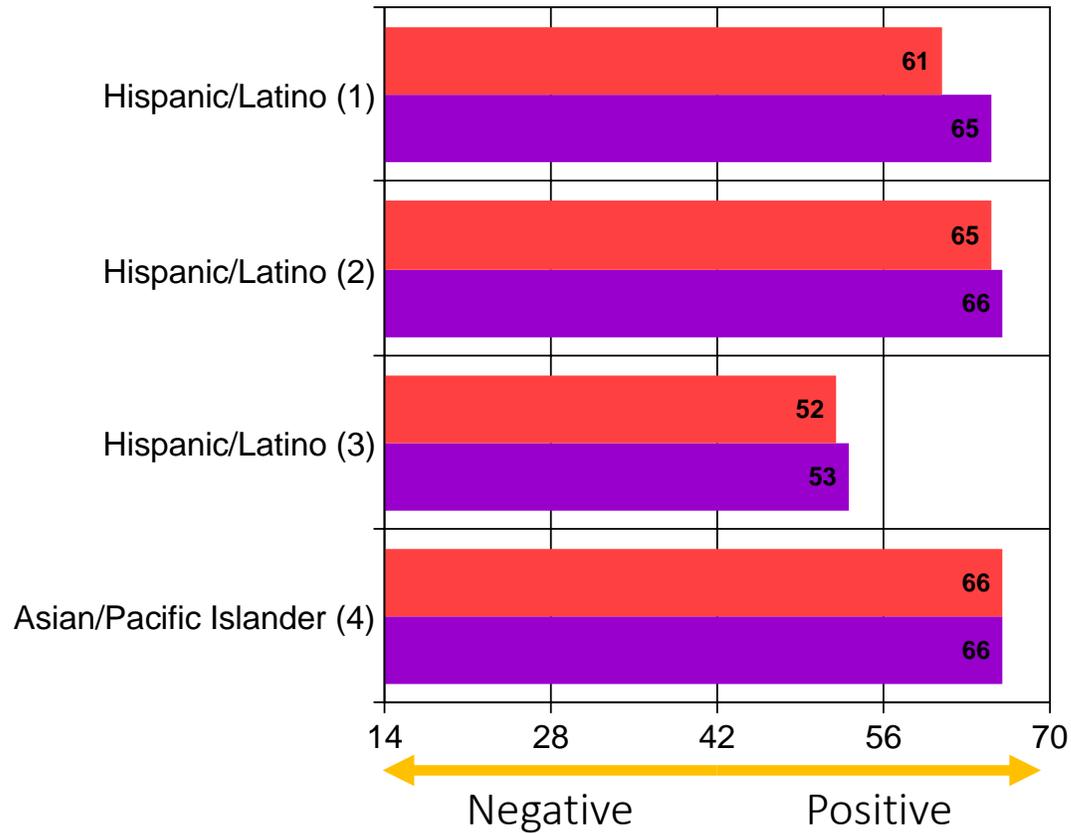
Library Program by Race/Ethnicity (n=9)



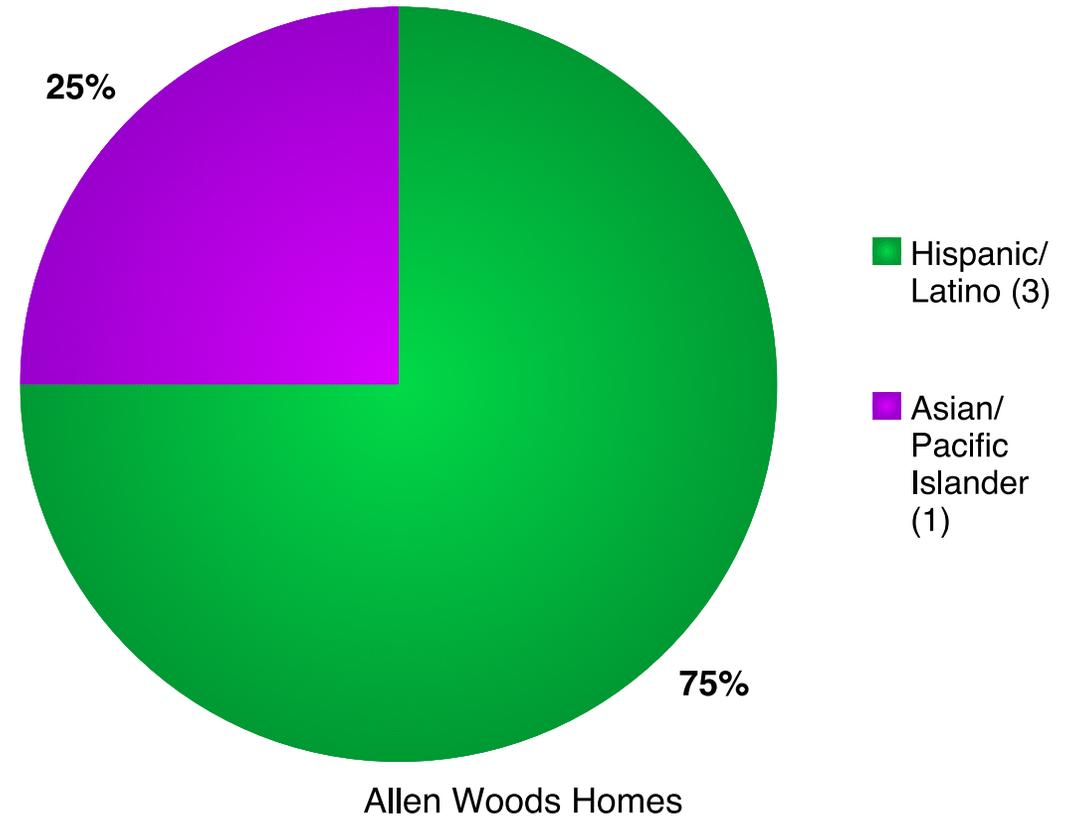


Allen Woods Homes

Attitude Toward Science by Race/Ethnicity (n=4)



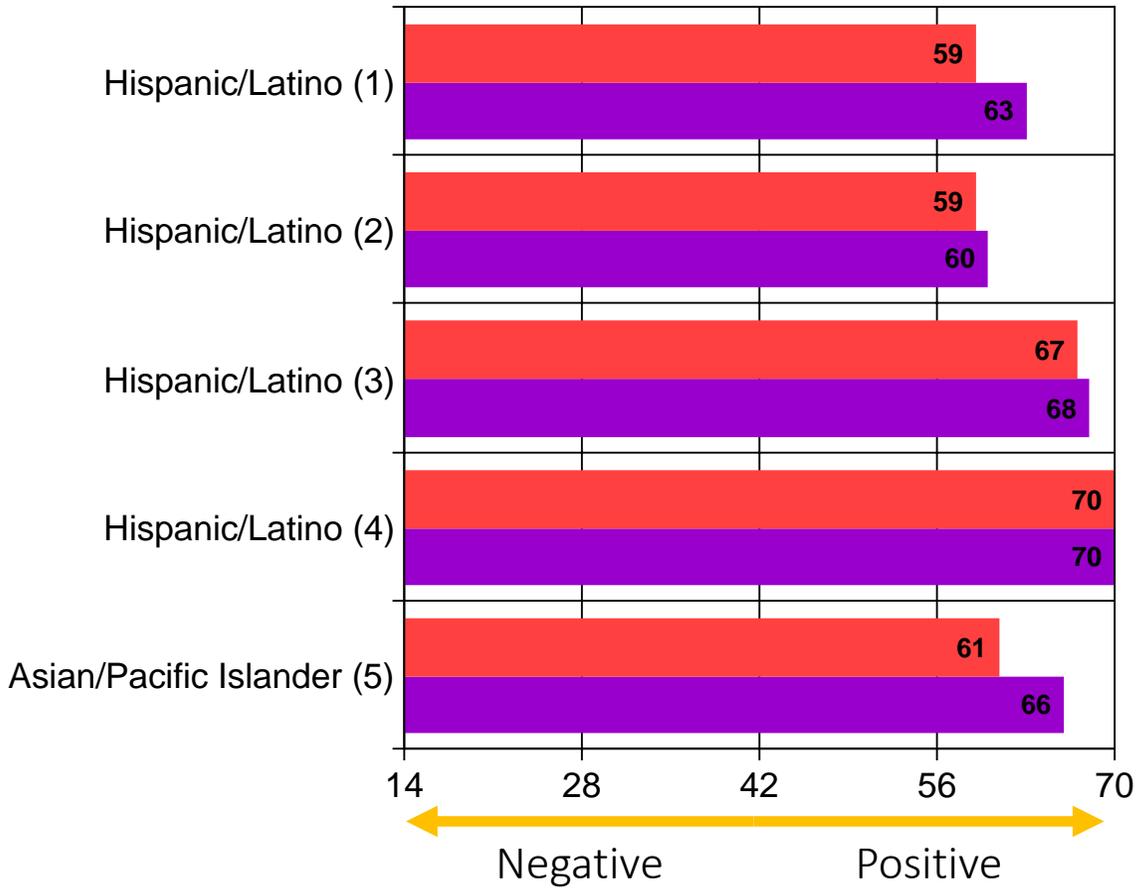
Allen Woods Program by Race/Ethnicity (n=4)



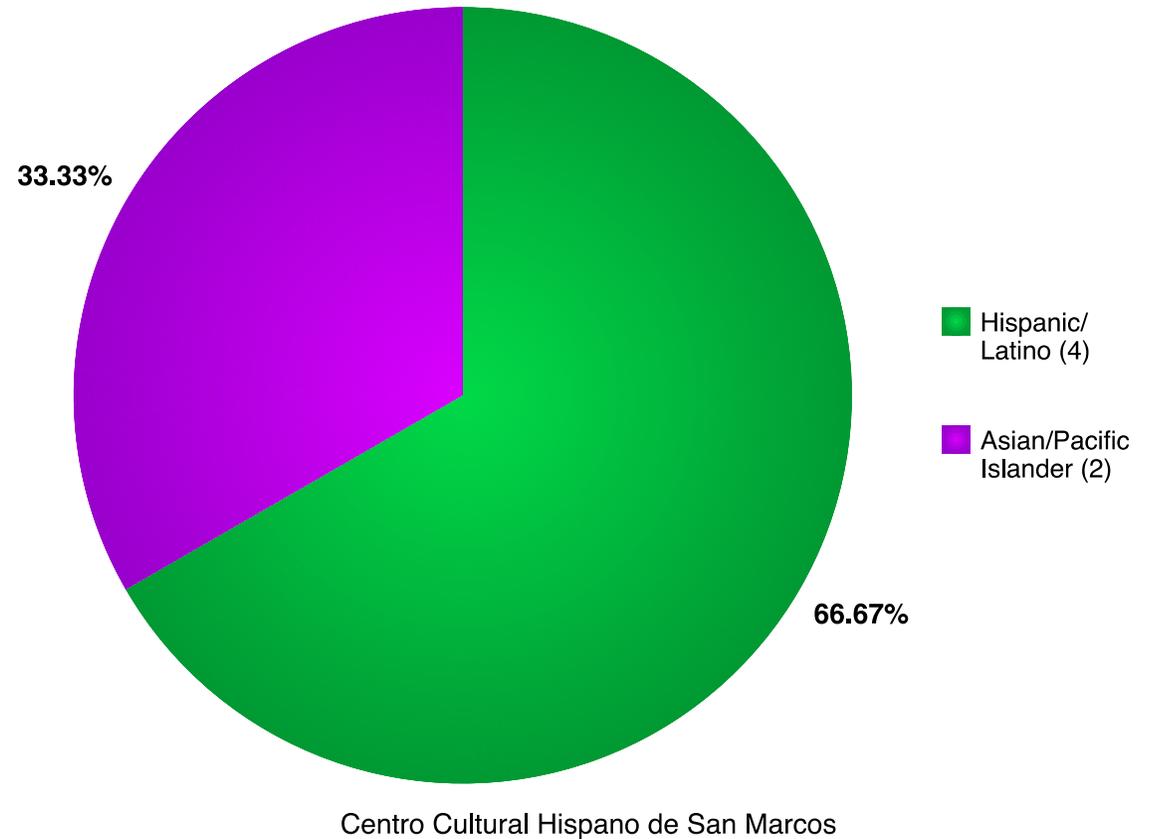


Centro Cultural Hispano de San Marcos

Attitude Toward Science by Race/Ethnicity (n=5)

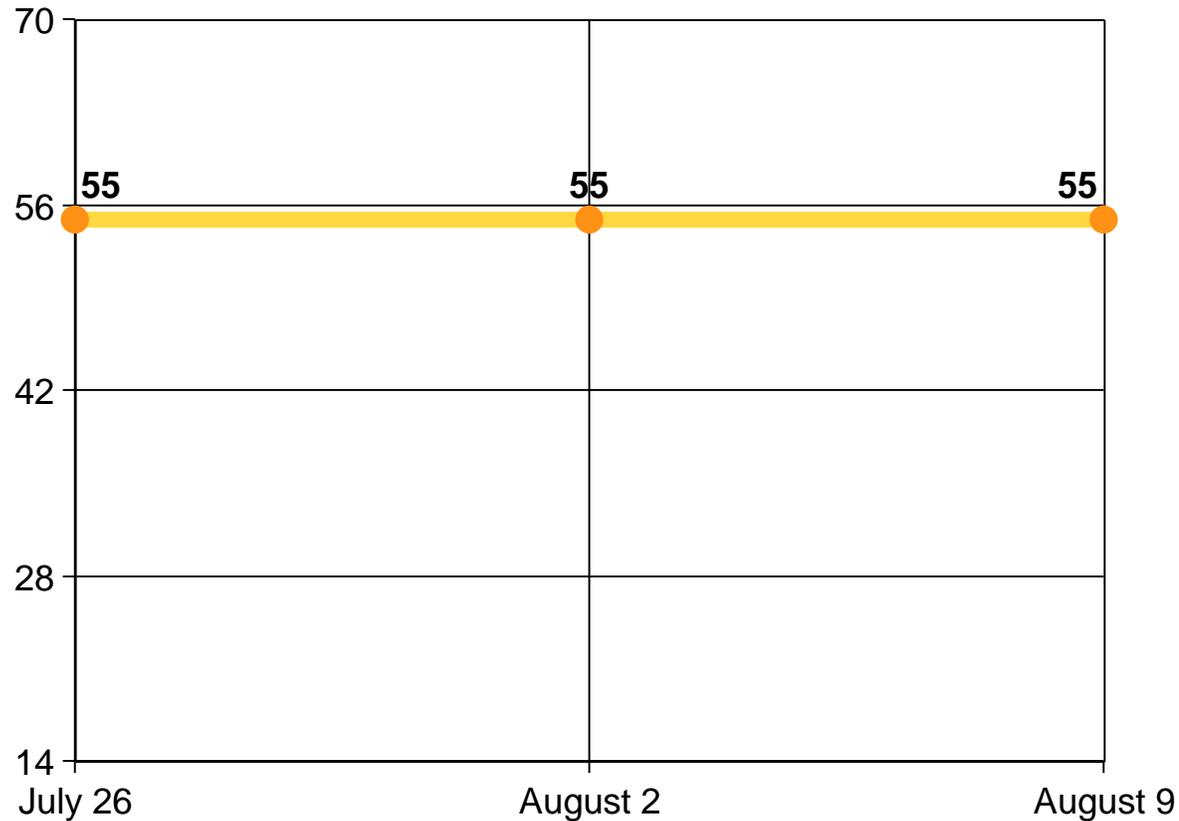


Centro Program by Race/Ethnicity (n=6)



Case Study Parent #1 - Javier

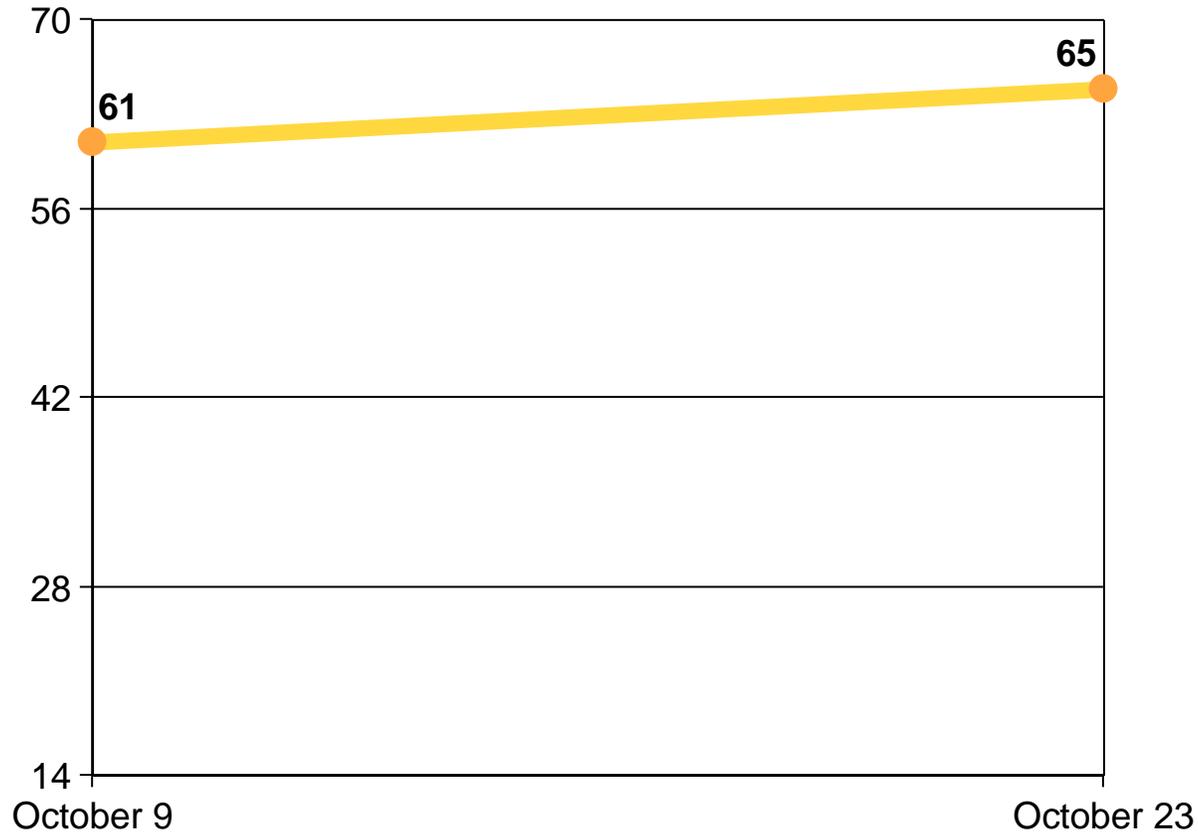
Attitude Toward Science - Javier (2017)



“...this program has helped me in my own understanding of science, that it doesn’t have to be complicated with lots [of] complicated equipment...”

Case Study Parent #2 - Jessica

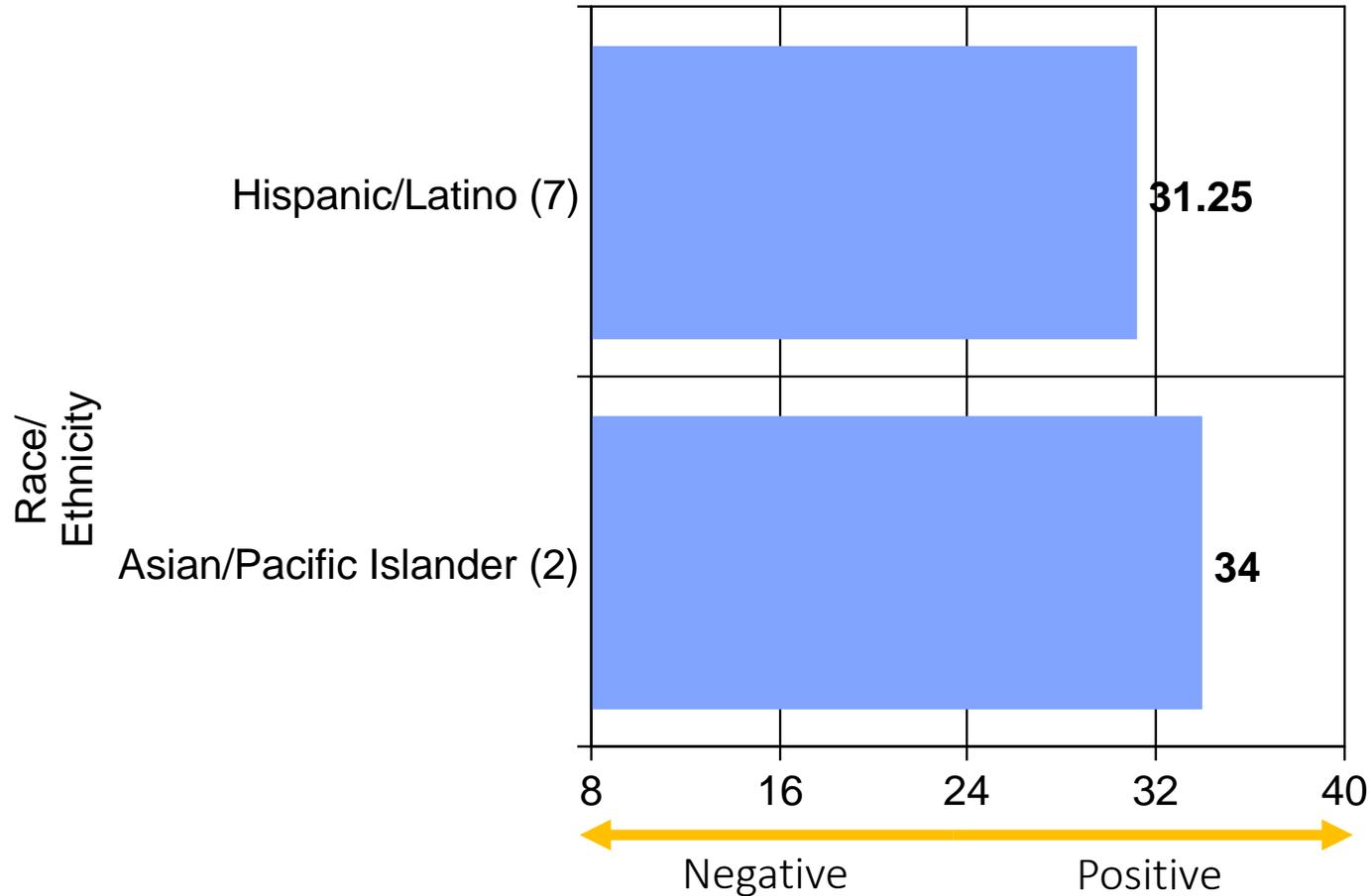
Attitude Toward Science - Jessica (2017)



“... simple projects are fun. We really enjoyed the activities we did with the solar beads.” -Jessica

Parent Perceptions of Family Science Event

Parent Perceptions of Family Science Event (n=9)



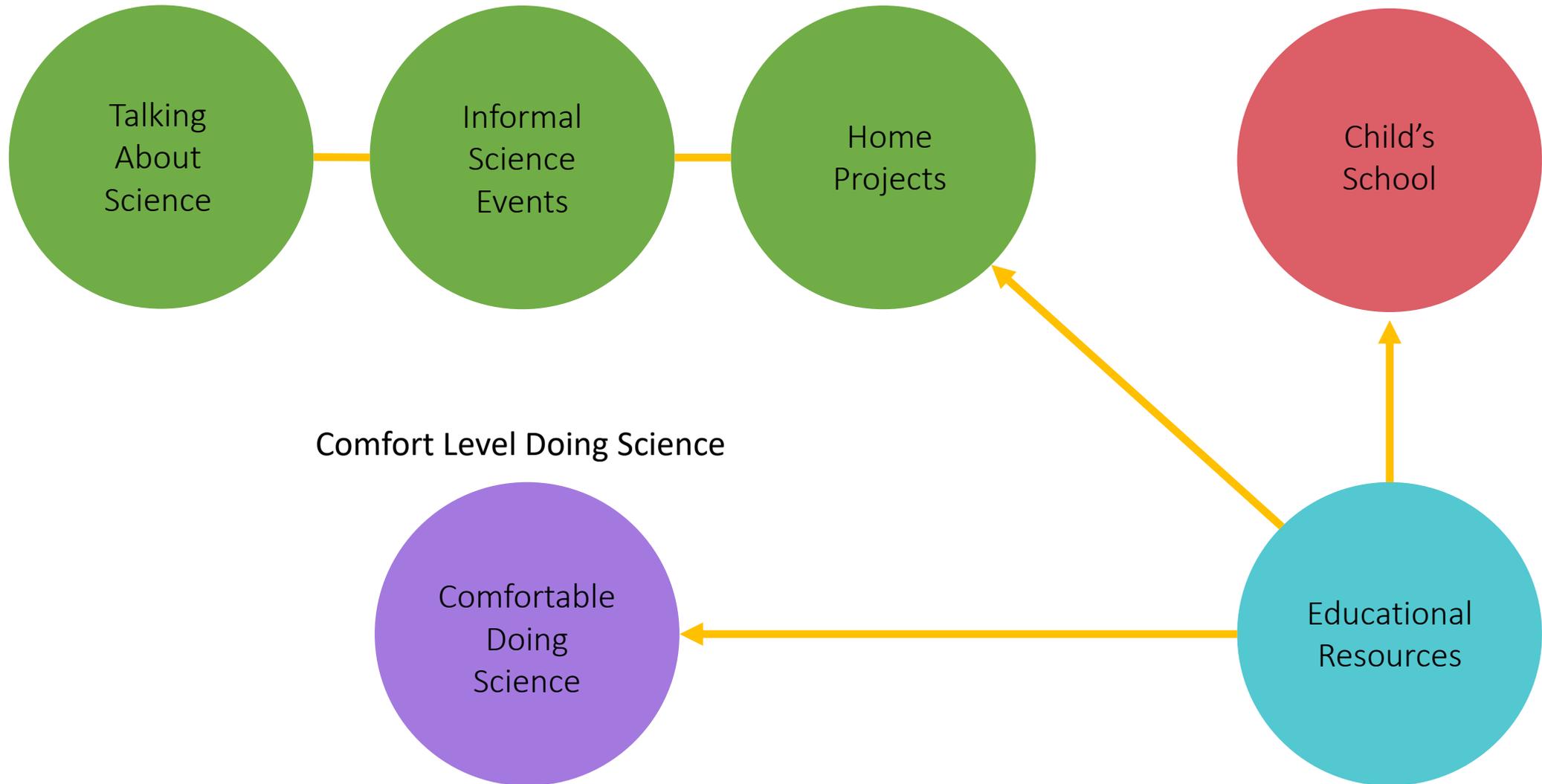
Allen Woods & Centro Cultural



Parental Involvement

Most Types of Involvement

Least Types of Involvement



Challenges to Study

- Gaining participation from parents that are not interested in science
- Encouraging parents to continually return



Summary

Increases in
Latino parents'
attitudes
towards
science

Positive
perceptions of
our family
science events

Latino parents
need access to
educational
resources

Acknowledgements

Dr. Julie F. Westerlund
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Rebecca Manzanares
(Centro Cultural Hispano de
San Marcos)
San Marcos Daily Record



Volunteers
Enrique Aguayo
Rodrigo Aguayo
Carlos Baca
Brandy Gaytan
Veronica Molina
Lindsay Ogan
Geovanny Orduna-Loya
Sydney Robinett
Robert Shine

Questions?

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