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TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Understanding the Support Networks of First-Generation College Students:

Findings and Implications for Institutional Research

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About CCRC

CCRC studies community colleges because they provide critical access to postsecondary education and are uniquely positioned to promote equity and social mobility in the United States. Our mission is to conduct research that helps these institutions strengthen opportunities and improve outcomes for their students, particularly those from underserved populations.

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Fresno City College

FRESNO STATE

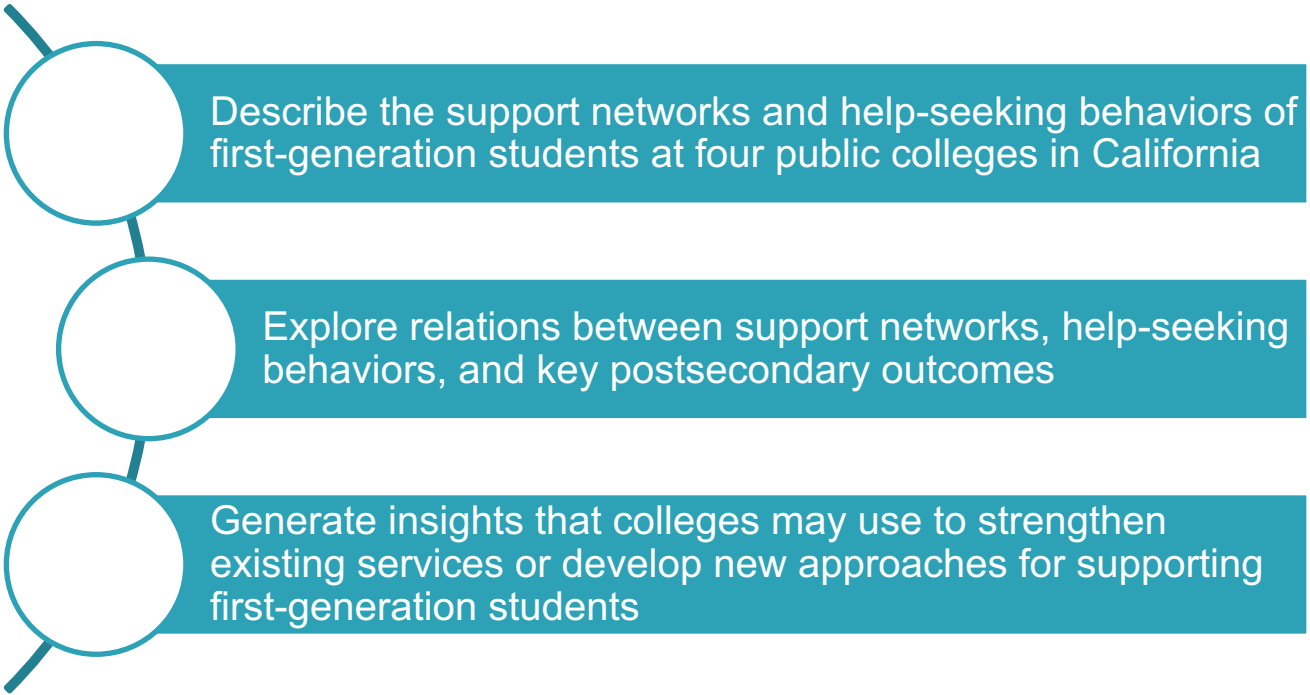
Cal State Fullerton

Session Overview

- Research Objective
- Survey and Interview Instruments
- Research Findings

Research Design

Objectives



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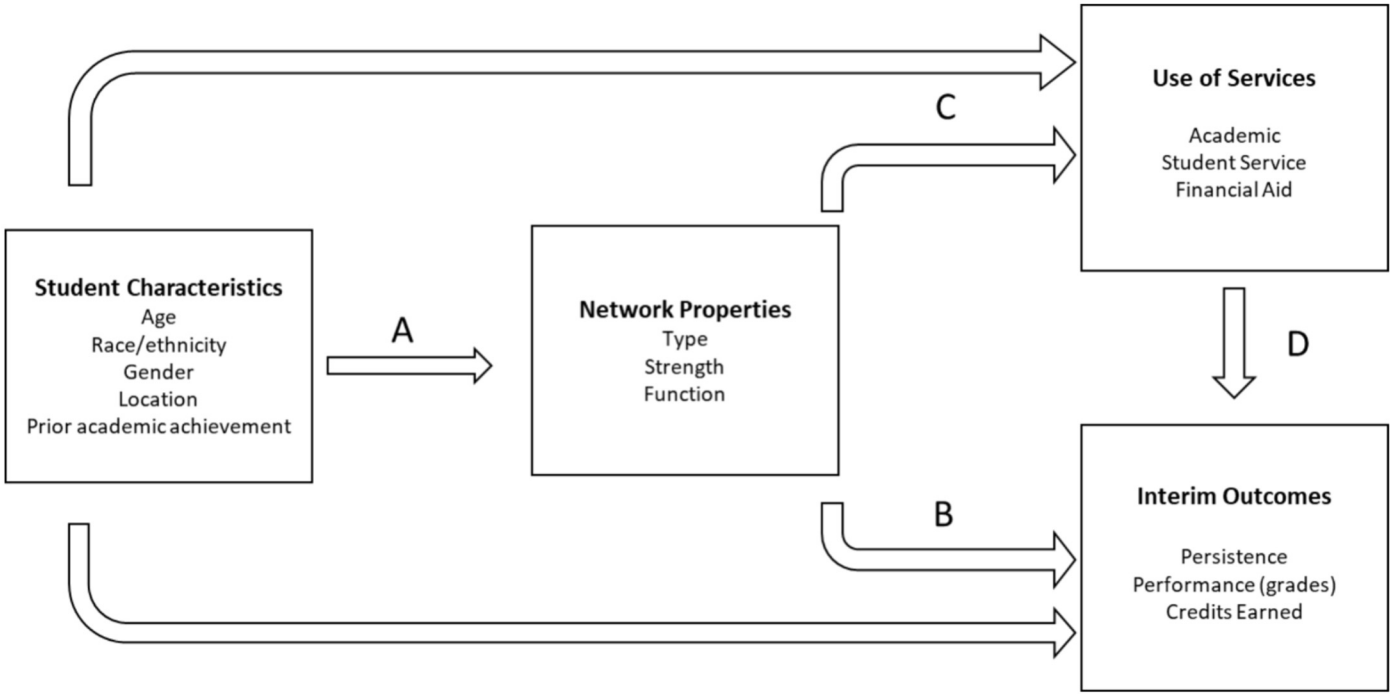
Conceptual Framework



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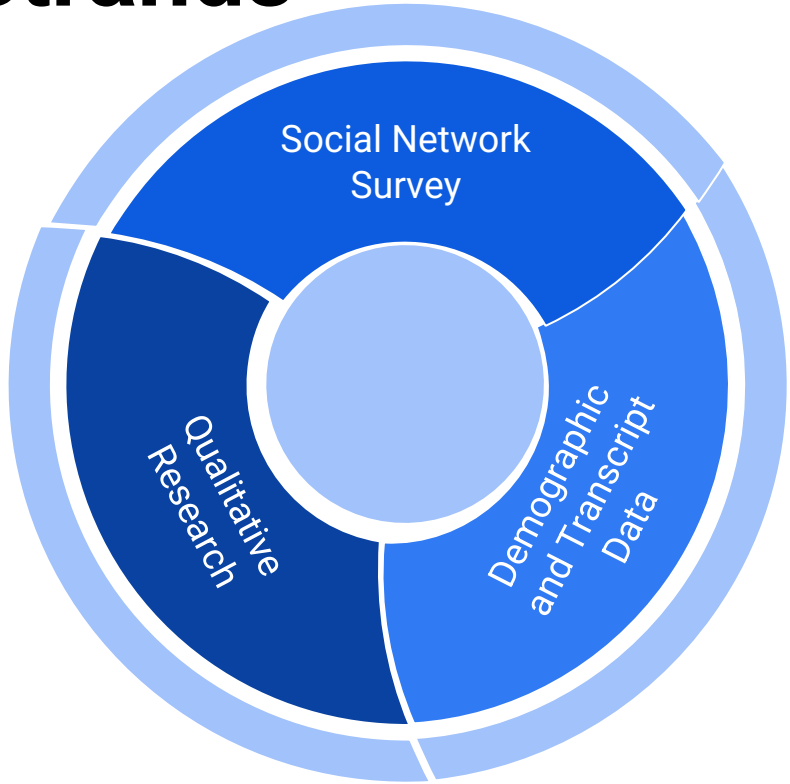
Research Strands



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Research Context

Data was collected in partnership with four Hispanic-Serving institutions in California, serving large numbers of first-generation college students: two community colleges and two four-year universities.

Fresno City College Quick Facts

- **Equity-minded, Anti-racism commitment** – Fostering an inclusive and just learning environment.
- First California Community College established in 1910
- Hispanic Serving Institution
- 23-24 Data Vista Unduplicated Headcount:
  - 33,239 unduplicated headcount
    - 46% First Generation; 12% Unknown/Unreported

Partnerships to Increase Capacity

- Student Equity Plan First Generation Disproportionate Impact:
  - Completion of Math/English within First Year
  - Persistence Fall to Spring
  - Completion
  - Transfer
- Yet … not enough IRPE resources to understand root causes
- Partnership with external research group took time and effort, but now will be able to use these findings as a part of our future equity work.

Discussion

- How do these objectives align with your perspective of partnering with an external research entity?

- What do you see as the benefits and drawbacks of research partnerships?

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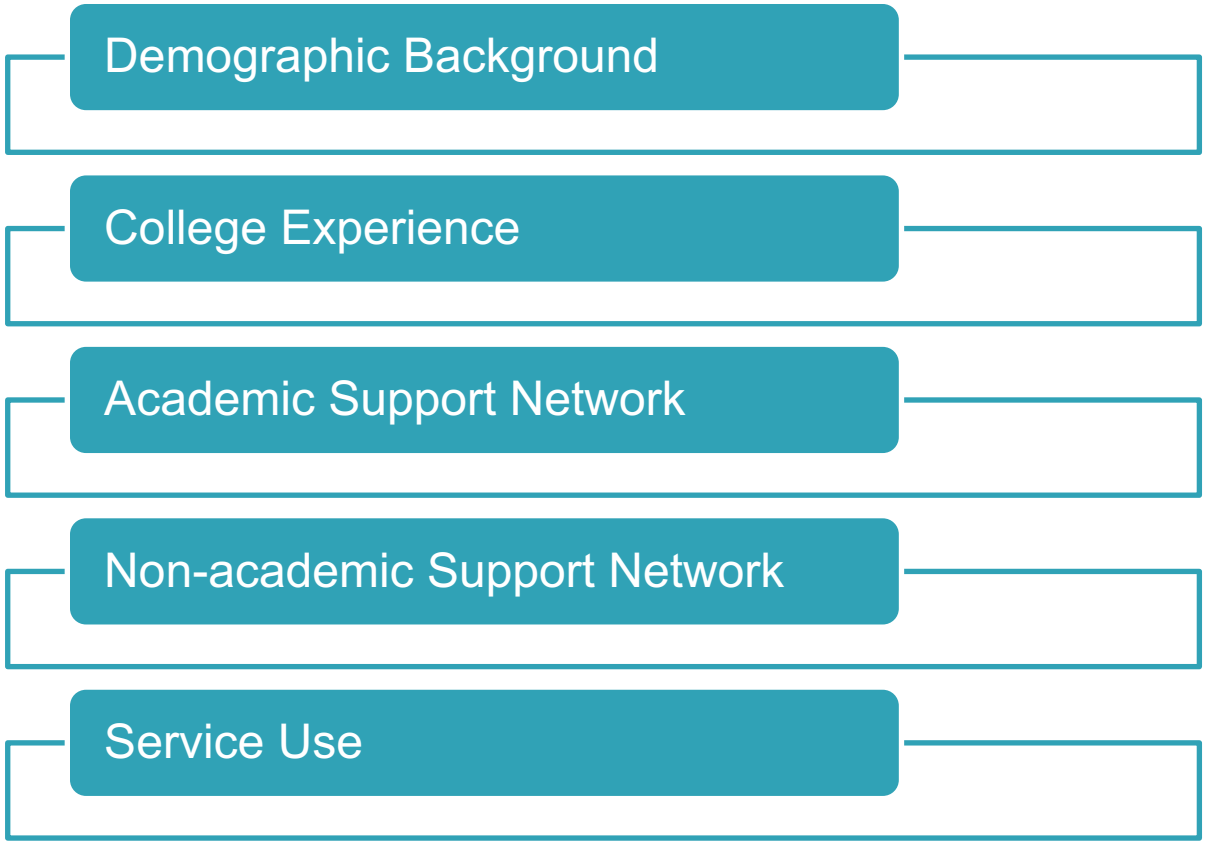
Instruments

Survey Constructs



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Defining First-Generation

What is the **highest level of education** completed by your parent or guardian with the most education (within or outside of the US)?

- ❑ Did not enter any form of higher education
- ❑ Attended but did not complete a two-year college
- ❑ Currently enrolled at a two-year college
- ❑ Earned a two-year college degree
- ❑ Attended but did not complete a four-year college
- ❑ Currently enrolled at a four-year college
- ❑ Earned a four-year college degree
- ❑ Earned a postgraduate degree (Master's, Professional Degree, Doctoral Degree).
- ❑ Unsure

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Defining First-Generation

- Was the college or university your parent or guardian attended in the United States or outside of the United States?

  - ❑ In the United States
  - ❑ Outside of the United States
  - ❑ Both in and outside of the United States
  - ❑ Unsure

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Defining First-Generation

Do you have any other family members (siblings, aunts, uncles, cousins, etc.) who currently attend or attended college?

- ❑ Yes
- ❑ No
- ❑ Unsure

Do any of these family members provide you with guidance or support as you navigate college?

- ❑ Yes
- ❑ No

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Survey Network Generator

Please think about and **list up to 7 people** you have turned to for **academic** help or support this year, including anyone you interacted with even if it was just one or two times or your interaction was brief.

If you do not know or cannot remember the name of someone you turned to for help or support, please identify them by their role or how you interacted with them for example "Academic Advisor, Financial Aid Person or Classmate."

Include only the first name, nickname or initials of the person(s) (e.g., "Mary or MJM") you list. We will NOT contact these people. It is important that you do not provide both their first and last names.

Person 1:

Person 2:

Person 3:

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Survey Network Generator

Please think about and **list up to 7 people** you have turned to for **non-academic** help or support this year, including anyone you interacted with even if it was just one or two times or your interaction was brief.

If you do not know or cannot remember the name of someone you turned to for help or support, please identify them by their role or how you interacted with them for example "Academic Advisor, Financial Aid Person or Classmate."

Include only the first name, nickname or initials of the person(s) (e.g., "Mary or MJM") you list. We will NOT contact these people. It is important that you do not provide both their first and last names.

Person 1:

Person 2:

Person 3:

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Interpreters

Q85. To the best of your knowledge, what is the **highest** level of education that **${q://QID60/ChoiceTextEntryValue/1}** has completed?

- ◯ Less than High School
- ◯ High school graduate
- ◯ Some college
- ◯ Associates degree
- ◯ Bachelor's degree
- ◯ Graduate or professional degree

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Interview Questions

Person 1	Can you tell me a little more about your relationship with **[survey response]**?
	Why did you choose to go to **[survey response]** for help?
	Can you describe your last conversation with **[survey response]**?

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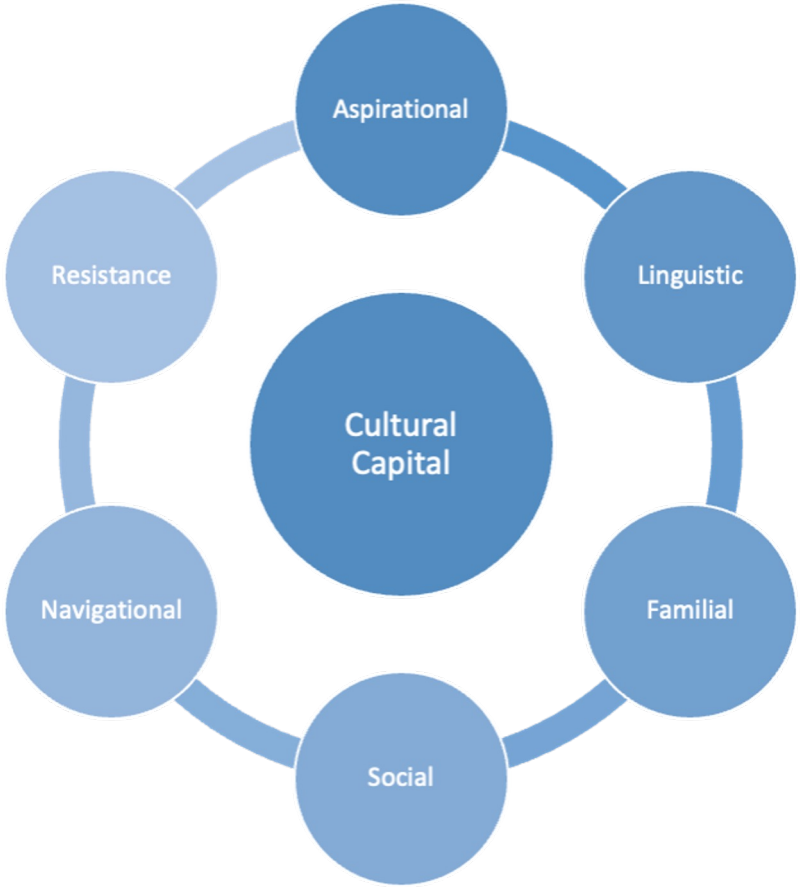
Researchers took an asset-oriented approach to understand students' relationships with institutional and non-institutional actors.



Source: Yosso (2005)

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What was one of the most important things **you did to be successful** in college this academic year?

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Discussion

- What instruments do you use to identify first-generation college students? Is it feasible to expand questions addressing parental education level to address familial connections more broadly?

- Has your college utilized social network methodologies in institutional research? Do you see a feasible formative application of this approach?

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Research Findings: Support Networks

70%

of respondents indicated that they had siblings and/or extended family members who either attend or have attended college.

60%

of respondents with siblings and/or extended family who either attend or have attended college indicated that these family members advise them on college-related issues.

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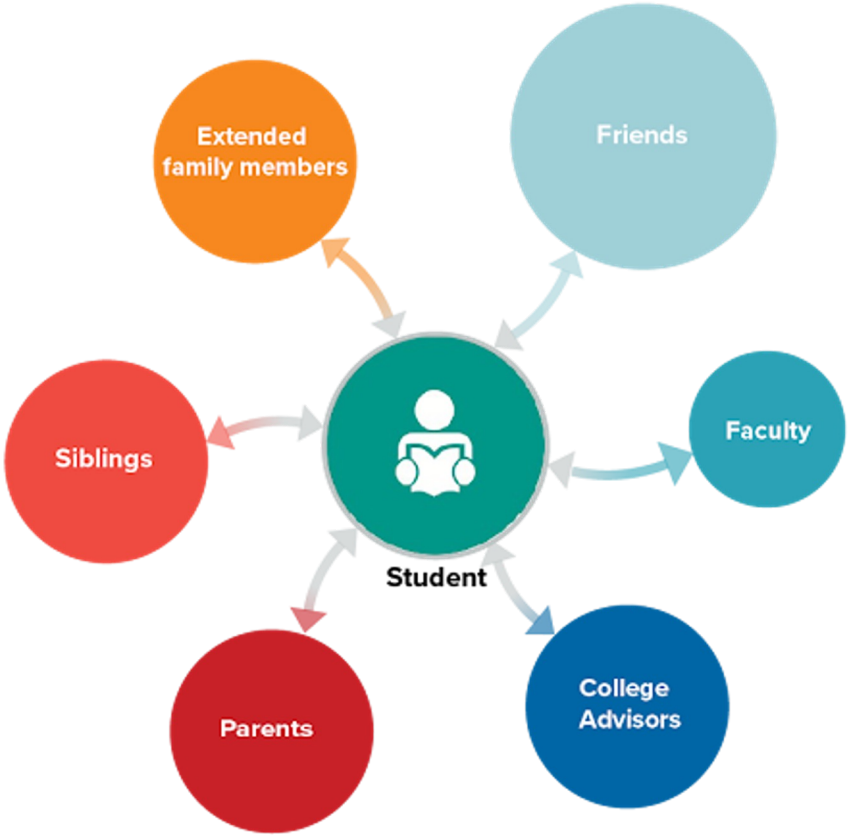
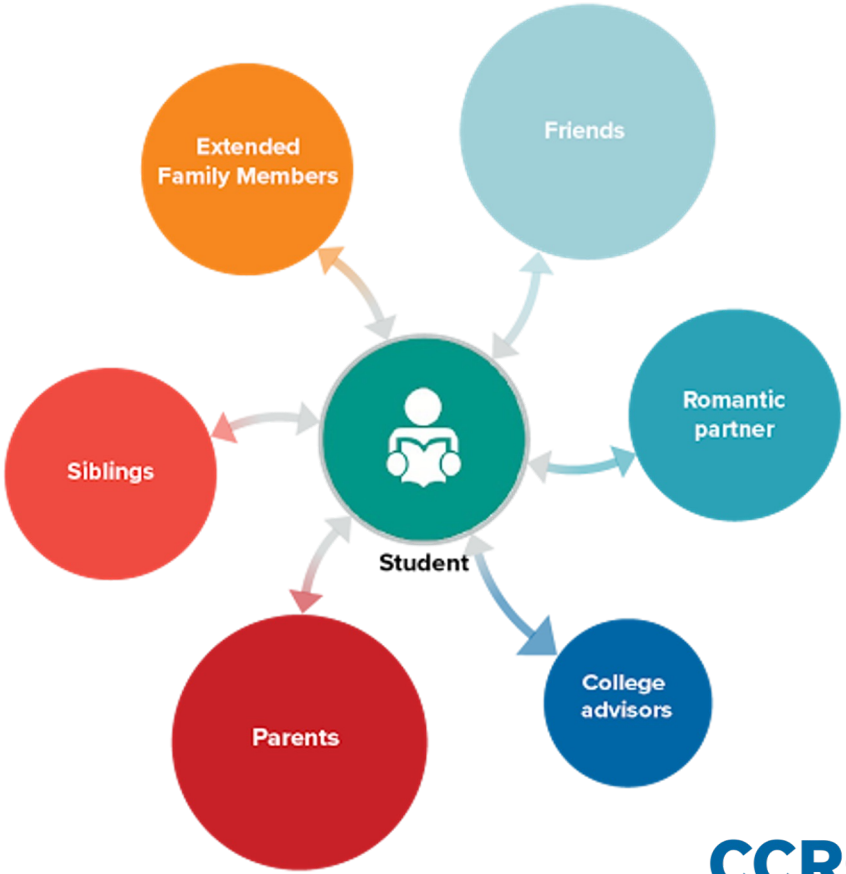
24.5%

Of respondents indicated that they were “not sure” or “did not” identify as a first-generation college student.

Academic Network



Non-academic Network



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Common Connections

Type of Connection	Academic Support	Non-Academic Support
Parent / Step-parent / Guardian	28.2%	48.9%
Sibling	31%	38.2%
Cousins	17.2%	18%
Friend from college	33%	28.6%
Friend from high school/childhood	38.6%	48%
Academic advisor at college	29%	12.2%
Faculty	21.1%	5.9%

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Relationships

Parents	Emotional and tangible support Not always in favor of college attendance
Siblings and extended family	Advice, academic skills, **brokerage** to services; can be a source of conflict
Peers	Networking and navigational help; academic **advice**, connections, help with things such as commuting
Advisors	Ongoing, targeted programs; campus info, career advice, referrals; not always available
Faculty	Academic support; college resources integrated into course structure.

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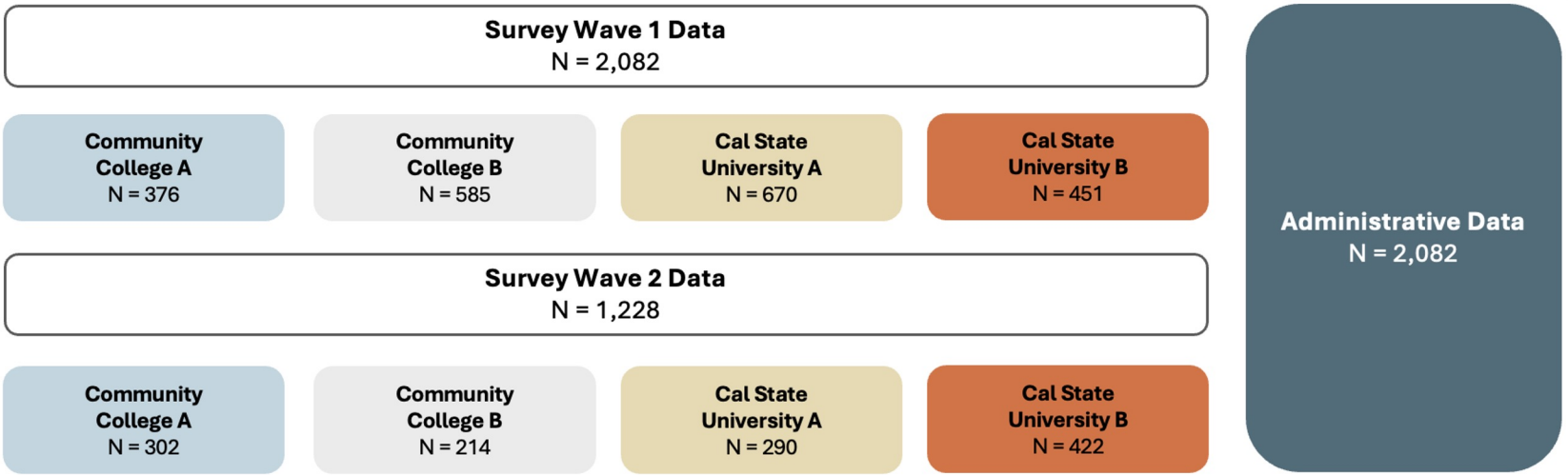
Network Properties and Student Outcomes

Data Structure



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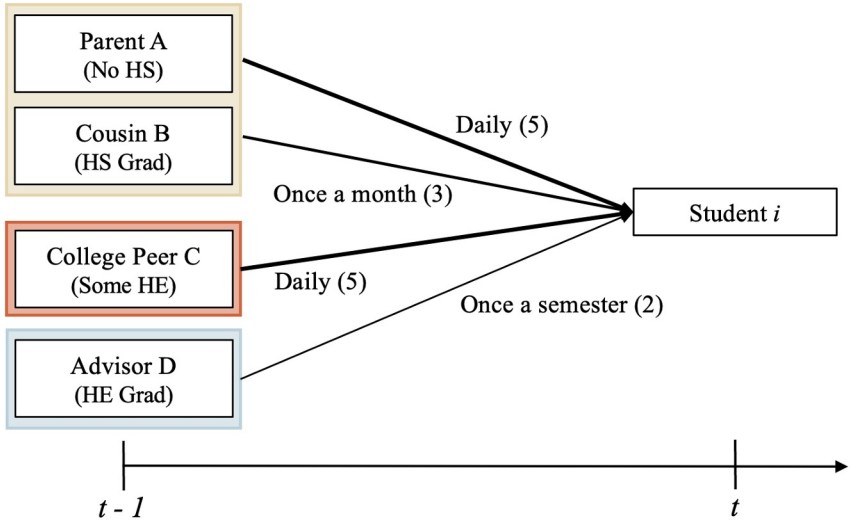
Modeling Network Exposure

Example of Network Interaction and Exposure



Estimation of Family Support Network Exposure

- Total Influence: Absolute Amount of Support

$$\begin{aligned} \textit{Sum of Weighted Family Exposure}_i &= 5 \cdot 1 \cdot 1 + 3 \cdot 1 \cdot 2 + 5 \cdot 0 \cdot 3 + 2 \cdot 0 \cdot 3 \\ &= 5 + 6 \\ &= 11 \end{aligned}$$

- Normative Influence: Average Level of Support

$$\begin{aligned} \textit{Weighted Family Exposure (normalized)}_i &= \frac{5 \cdot 1 \cdot 1 + 3 \cdot 1 \cdot 2 + 5 \cdot 0 \cdot 3 + 2 \cdot 0 \cdot 3}{5 \cdot 1 + 3 \cdot 2 + 5 \cdot 3 + 2 \cdot 3} \\ &= \frac{5 + 6}{32} \\ &= 0.343 \end{aligned}$$

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Network Impact on Student Outcomes

Impact of Academic Network Exposure on Average GPA

	Estimate (S.E.)	
Intercept	**0.697 (0.183)**	***
Network Characteristics *(Sum of Weighted Exposure)*		
Family Exposure	0.002 (0.001)	
College Peers Exposure	-0.001 (0.001)	
College Professionals Exposure	**0.005 (0.002)**	*
Individual Characteristics		
Gender	0.012 (0.047)	
Race Group (ref. Latinx)		
Asian	**0.157 (0.071)**	*
White	**0.318 (0.085)**	***
Others	-0.032 (0.093)	
Parental Education Level	-0.055 (0.033)	
Pell Eligibility	0.067 (0.057)	
High School GPA	**0.619 (0.044)**	***
Service Participation	0.014 (0.032)	
Advisor Interaction	0.011 (0.017)	
Instructor Interaction	-0.013 (0.015)	
Employment (ref. Not working)	**-0.113 (0.043)**	**
Study Time	**0.104 (0.021)**	***
R^2	0.1748	

p<.05, ** p<.01, *** p<.001.
Note: School fixed effects for the four institutions were included in the model estimation but are not displayed in the table.

Impact of Non-academic Network Exposure on Credit Earned

	Estimate (S.E.)	
Intercept	**5.982 (1.483)**	***
Network Characteristics *(Sum of Weighted Exposure)*		
Family Exposure	-0.002 (0.011)	
College Peers Exposure	**0.032 (0.014)**	*
College Professionals Exposure	0.010 (0.051)	
Individual Characteristics		
Gender	0.052 (0.384)	
Race Group (ref. Latinx)		
Asian	**0.315 (0.578)**	*
White	**0.196 (0.698)**	***
Others	-0.221 (0.761)	
Parental Education Level	-0.373 (0.274)	
Pell Eligibility	**1.313 (0.465)**	**
High School GPA	**2.767 (0.361)**	***
Service Participation	**0.580 (0.262)**	*
Advisor Interaction	**0.296 (0.144)**	*
Instructor Interaction	**0.253 (0.125)**	*
Employment (ref. Not working)	0.019 (0.355)	
Study Time	**0.475 (0.177)**	***
R^2	0.3327	

p<.05, ** p<.01, *** p<.001.
Note: School fixed effects for the four institutions were included in the model estimation but are not displayed in the table.

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Discussion

- What are some strategies for supporting first-generation students at your institutions?
- How do these strategies connect students to campus-based supports?
- How do these strategies leverage parental, sibling, or other familial connections?

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Thank you!

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