

The science of “small things”: Psychological interventions to reduce racial achievement gaps in STEM

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The co-founder and CEO of Partpic, Jewel Burke



Atlanta-based visual recognition startup

Psychology works in small unexpected ways...

...often without us knowing it

**...it accumulates across people but
manifests in local contexts**

...to create a university culture





Stereotype Threat

The threat and stress of confirming stereotypes about one's group in evaluative situations, such as, test-taking, interviews, sales pitches, and performance evaluations.

Stereotype threat

African American and White American college students.

Test instructions:

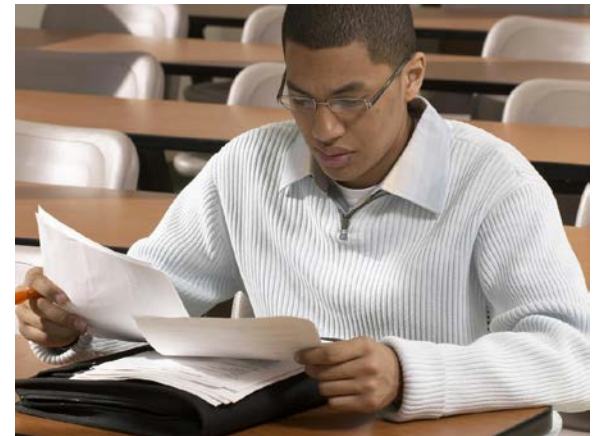
Standard test instructions

OR

Standard test instructions

+

“Please indicate your racial group”



Stereotype threat

Verbal Test Performance

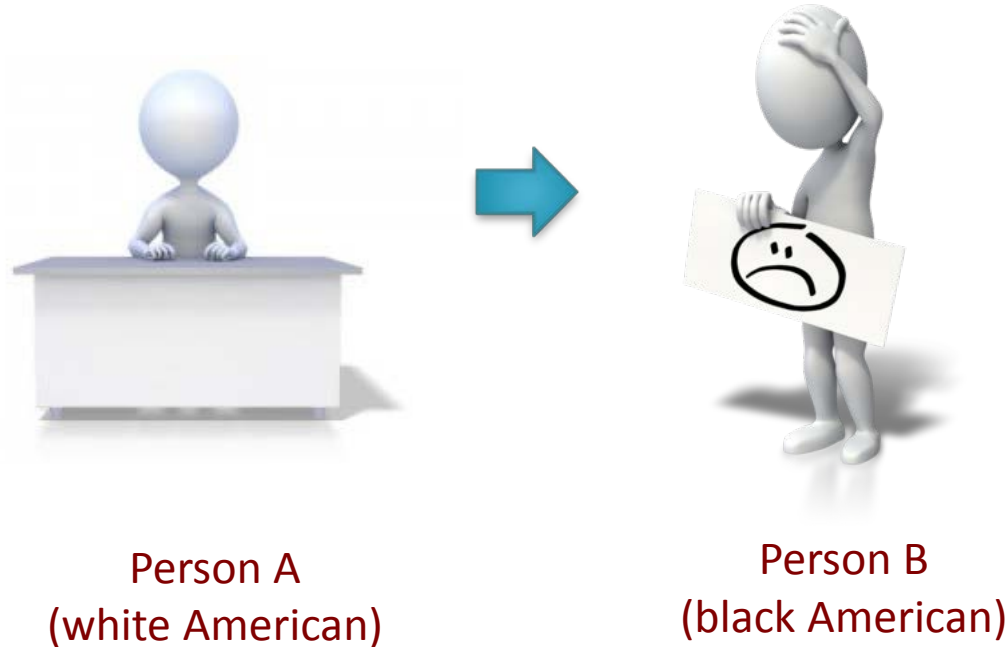


Small Changes in Psychology to Block Racial Bias

Because of racial bias
Black students have difficulty trusting
criticism



How do we block racial bias so that Black students can thrive?



“How can I (White American) offer criticism so this person who is different from me (Black American) will thrive?”

Critical of work

Critical of work +



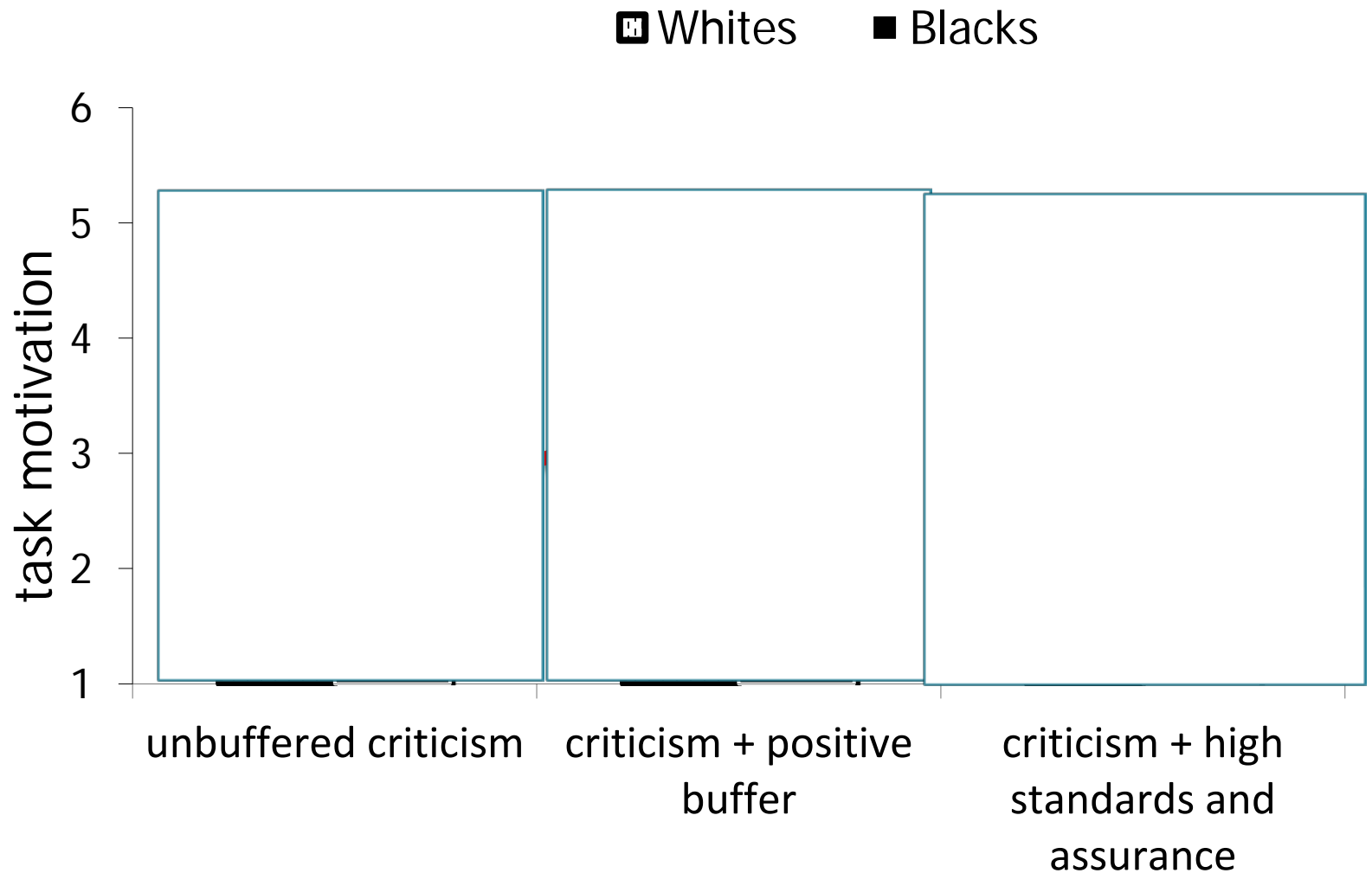
Critical of work +



+

I believe
in you.

How do we block racial bias so that Black professionals can thrive?



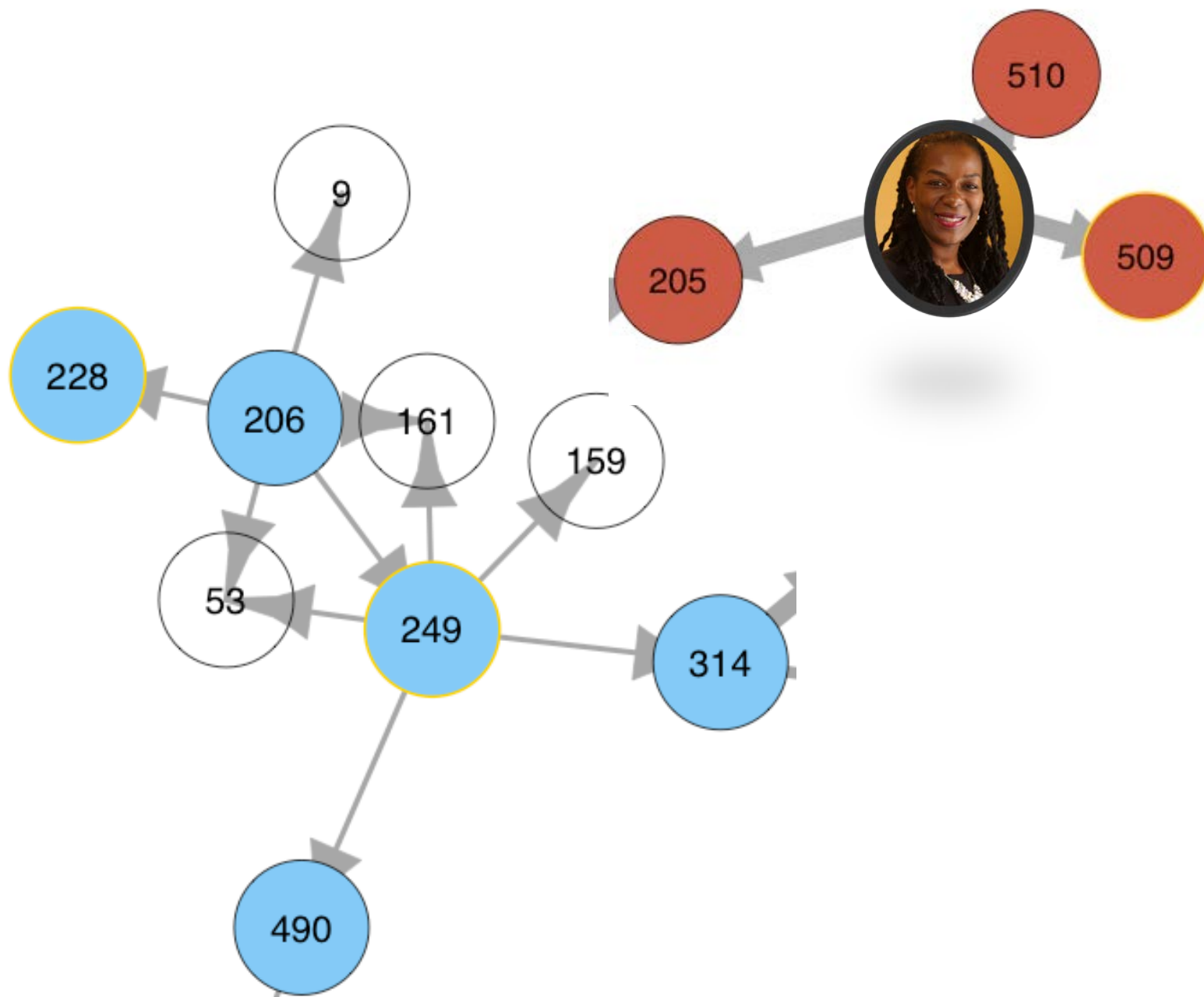
Using psychology to improve
engagement and retention



The majority of students who plan to graduate in science drop out.



A major contributing factor to leaving is feeling isolated.



Social networks



Greater life satisfaction



Greater career success



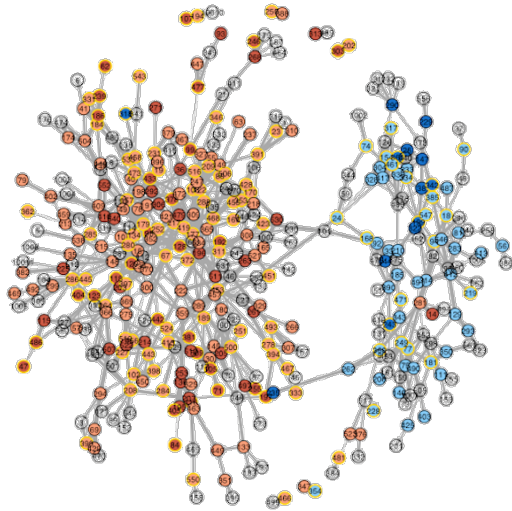
Better physical and mental health



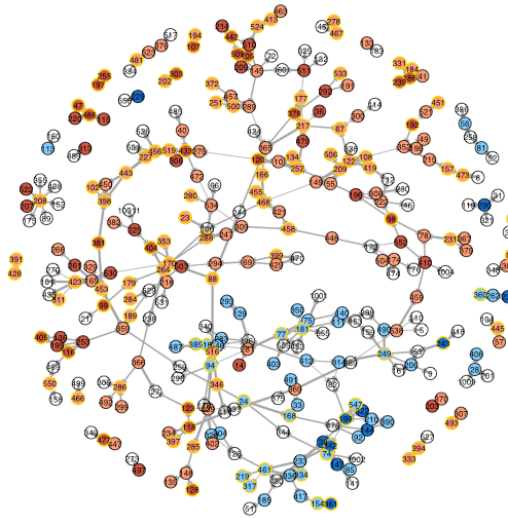
Better occupational pursuits

Social Networks In Biology for One Semester

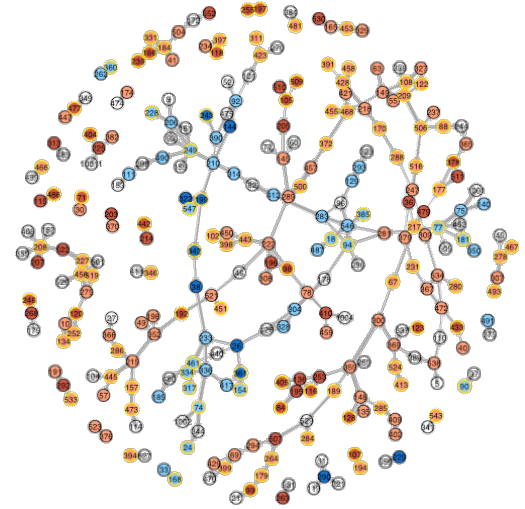
FRIENDSHIP



STUDY



SUPPORT

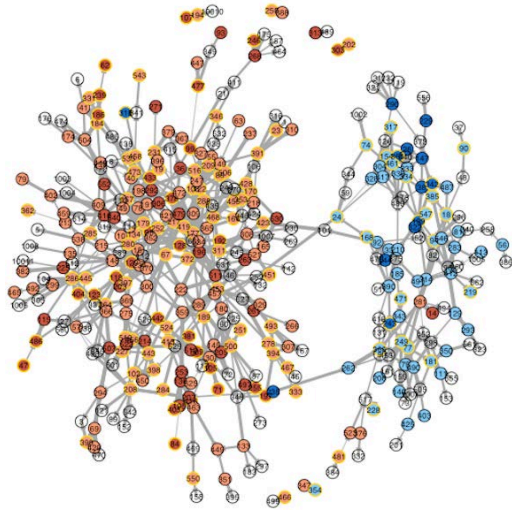


SEPTEMBER

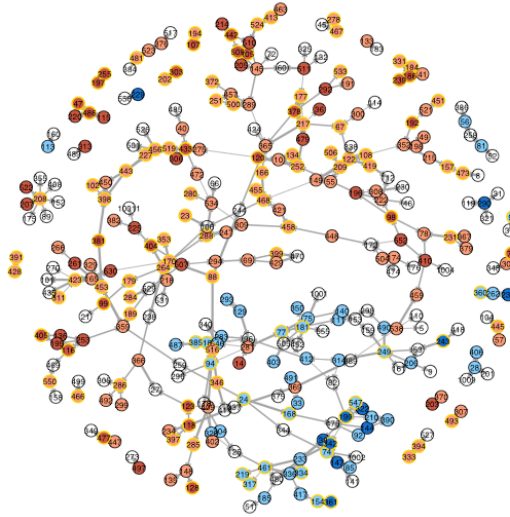
DECEMBER

Social Networks In Biology for One Semester

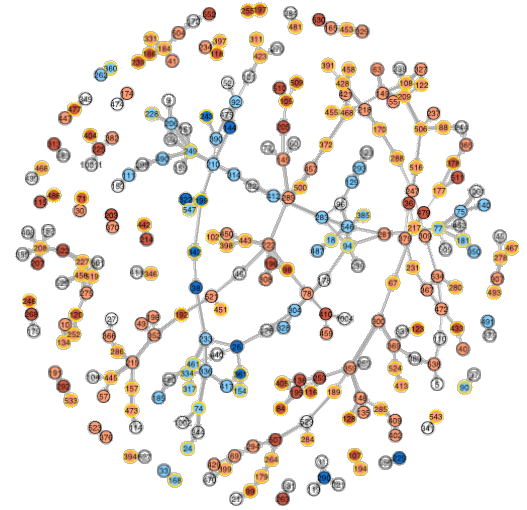
FRIENDSHIP



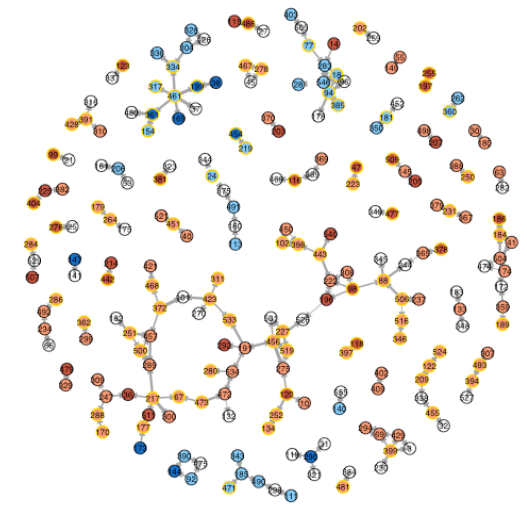
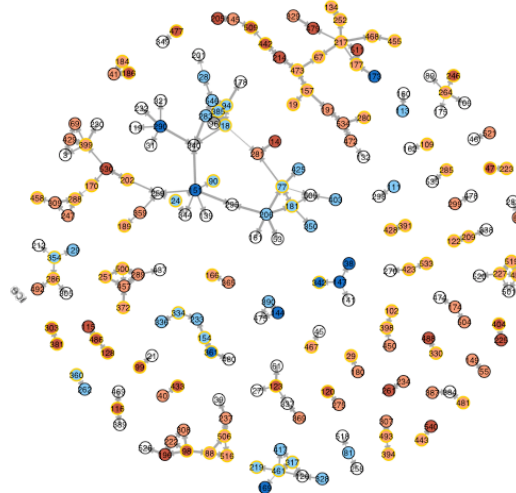
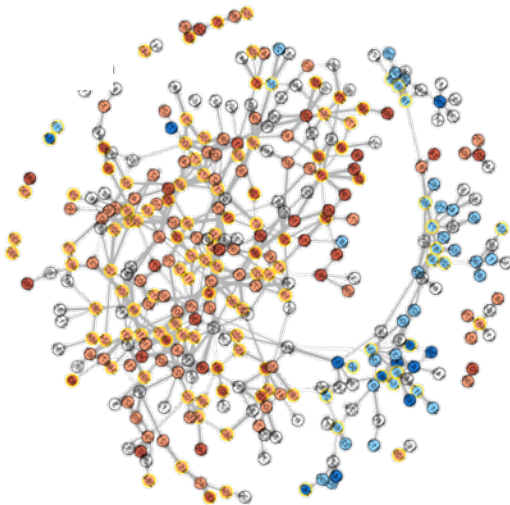
STUDY



SUPPORT



DECEMBER





Values affirmation

1

WHAT ARE YOUR PERSONAL VALUES?

Below is a list of characteristics and values, some of them may be important to you; some may be unimportant to you. Please rank them from 1 to 11 according to how important they are to you (“1” being the most important item, “11” being the one that is least important to you). Use each number only once.

- _____ Being Good at Art
- _____ Physical Attractiveness
- _____ Creativity
- _____ Independence
- _____ Membership in a Social Group (such as your community, racial group, or school club)
- _____ Music
- _____ Politics
- _____ Relationships with Friends or Family
- _____ Religious Values
- _____ Sense of Humor
- _____ Sports Ability

Values affirmation

2

Directions

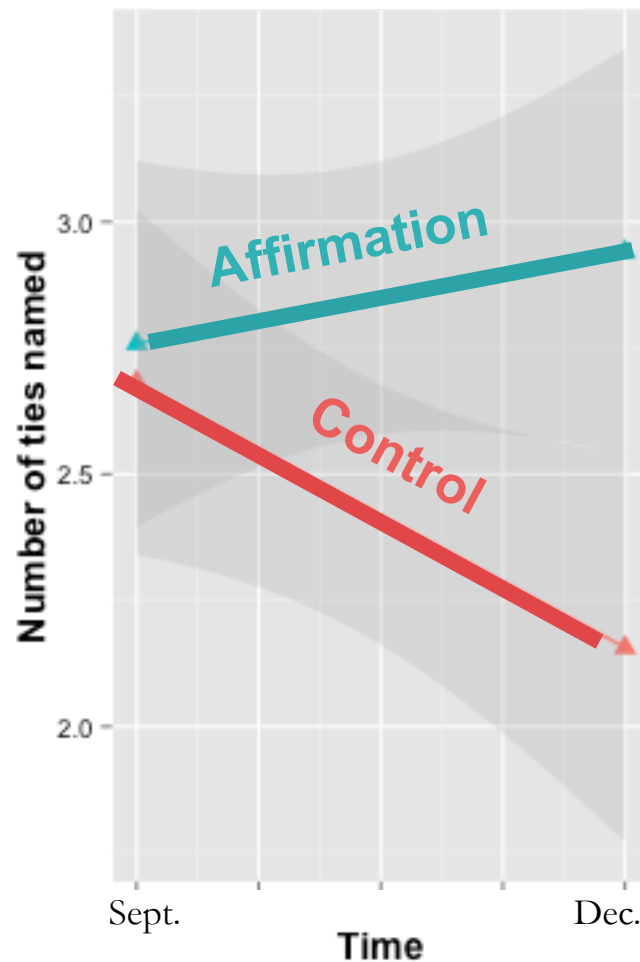
- 1) Look at the value you picked as most important to you (the value you ranked as #1 on the previous page).
- 2) Think about times when this value was or would be very important to you.
- 3) Describe why this value would be important to you.

Focus on your thoughts and feelings and don't worry about spelling, grammar, or how well written it is.

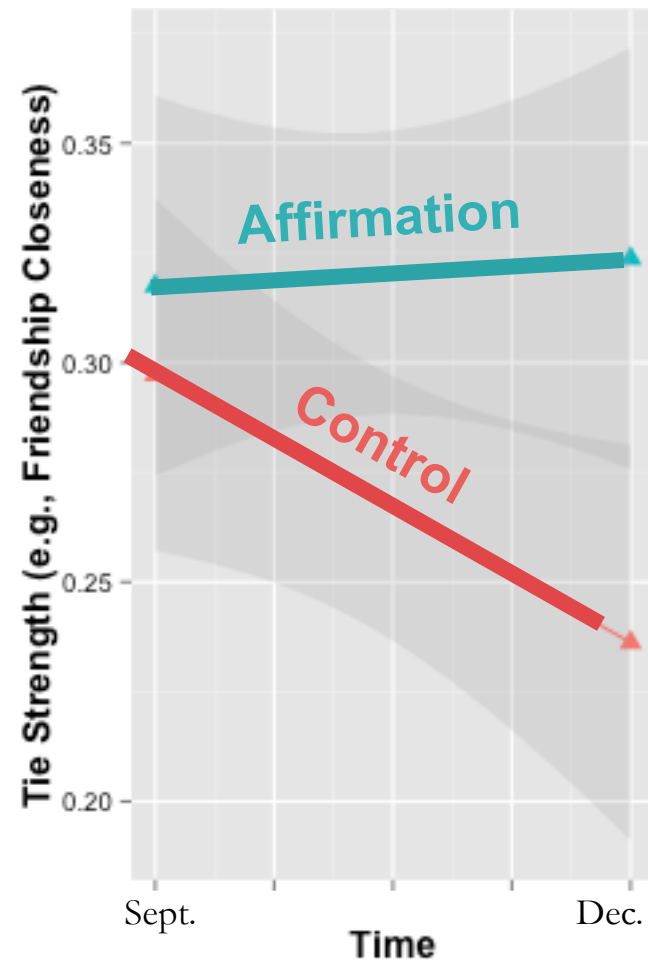
How can one get by without friendship or family? I know I
couldn't, I need that support, at times it can feel like the
only thing I have that's real. At other times I don't need it,
but love and comfort from relationships is something that is
always nice... When in need I fall back on my support, friends
and family, without that support I would never stop falling.

Friendship network over the course of one semester

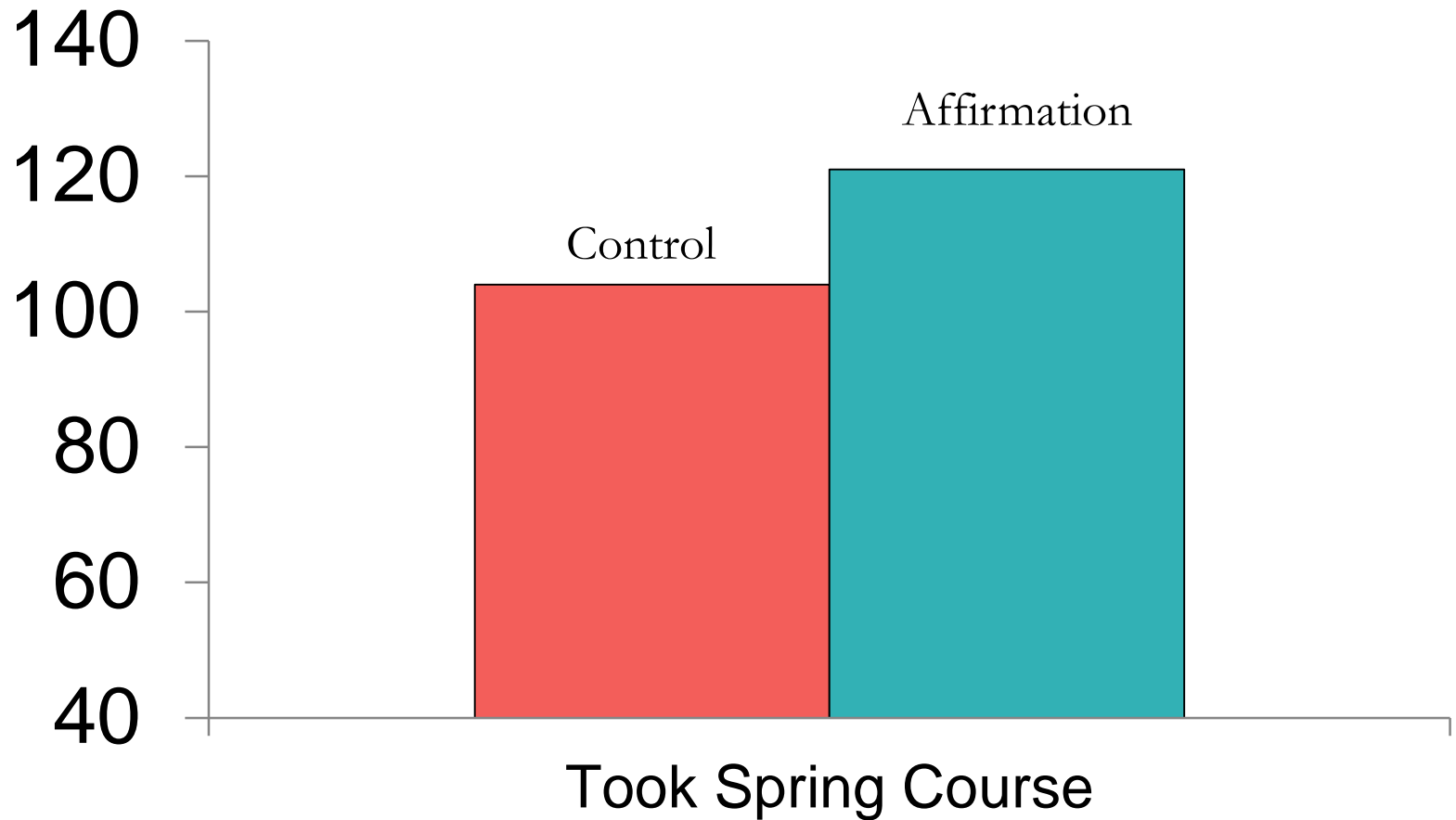
NUMBER OF FRIENDS



CLOSENESS WITH FRIENDS



Number of students who enrolled in Part II of course





Impact

Conclusion

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...often without us knowing it

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Thank you.