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# Using a Mobile App to Report Microaggressions: Longitudinal Relations with College Student Outcomes

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# Background

- Microaggressions are subtle verbal and nonverbal slights and insults based on a social identity (Sue, 2010).
- Previous research has found that experiencing microaggressions is associated with higher depressive symptoms (Ong, Burrow, Fuller-Rowell, Ja, & Sue, 2013), traumatic stress symptoms (Torres & Taknint, 2015), and anxiety (Blume, Lovato, Thyken, & Denny, 2012).
- The current study is innovative for several reasons:
  - First, it employs a unique method of data collection, a mobile app, for participants to report microaggressions as they happen.
  - Second, the study is longitudinal and explores the effects of microaggressions over time.
  - Third, while most studies of microaggressions focus on single racial groups, our sample is racially diverse.

# Participants

- 211 UCSC undergraduate and graduate students (70% women)
- 31% Android users, 68% iPhone users
- 18% lesbian, gay, or bisexual
- 26.5% Asian/Asian American, 5.2% Black/African American, 30.3% Hispanic/Latino, 26.1% White/European American, 8.1% Multiracial
- 57% first generation college students

# Measures

- BAPC (.72)
- Basic Needs Satisfaction - Competence (.79)
- Basic Needs Satisfaction - Belonging (.82)
- College Satisfaction (.80)
- Racial-Ethnic Microaggressions Scale (.93)
- Self-reported GPA
- CES-D (.74)
- Oxford Happiness Scale (.82)
- Rosenberg Self-Esteem Scale (.90)
- Perceived Stress Scale (.87)
- Coping Self-Efficacy
  - In the situation (.78)
  - Problem focused (.90)
  - Social support (.71)
  - Emotion focused (.91)

AT&T

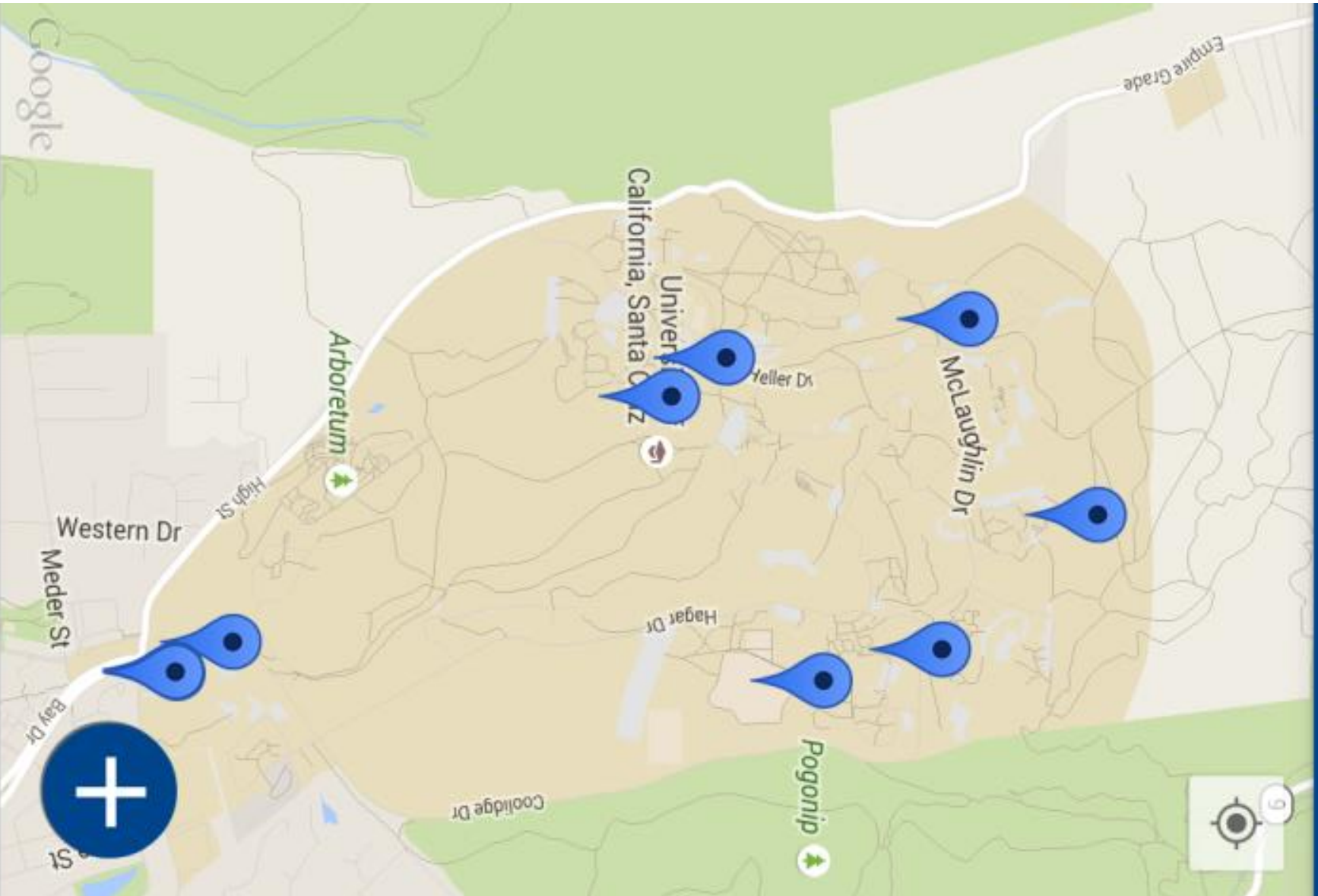


55%

9:44 AM



MicroReport



## Submit a Report

Describe what happened

Use current location 

Select a building

Class name or other location

Was it related to your...?

- race  culture  gender
- sexual orientation
- something else

How much did it bother you?

Not at all  Very much

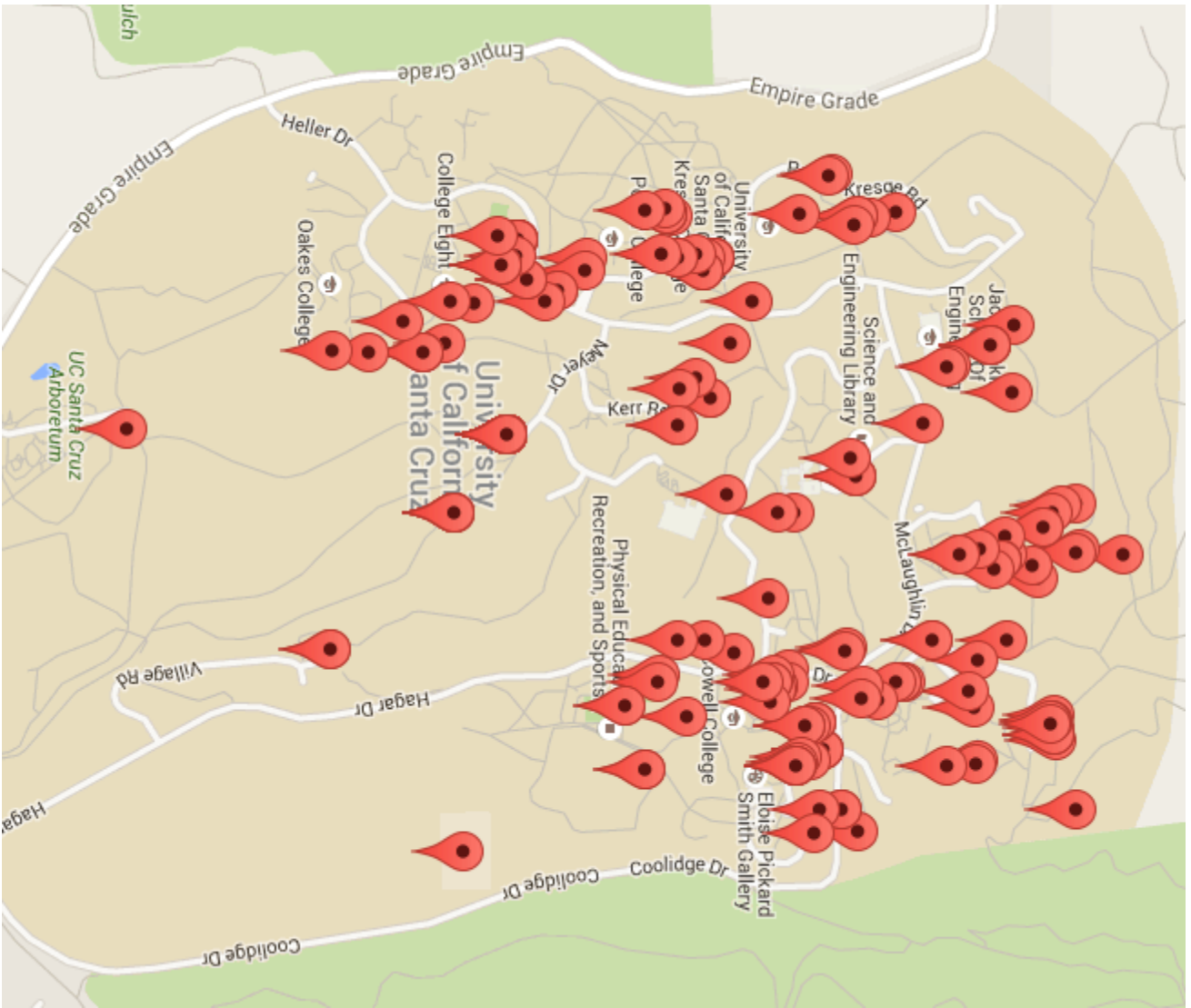
Cancel

Submit



# Procedure

- Use the app for one academic year
- 4 surveys
  - Perceptions of campus
  - Academic outcomes
  - Psychological well-being
  - Identity beliefs
- 2 workshops each quarter
  - Basics
  - Responding to microaggressions



## Reports as of Survey 3



# Results

## Reports

- 74% made a report
- 0-24 per person
- Mean # of reports: 1.73 (SD = 3.23)
- Mean bothered rating: 55.52 (SD = 28.41)
- Not correlated with survey measure of racial microaggressions

## Examples

- "West remote is shady as f\*\*\*, that's why I park under a lamp post because Oakes is right there" guy told his friend walking from West remote
- You know Asians, they all look alike.
- A guy said I play well for a girl
- A kid next to me called me a border hopper because I am brown.
- Housemate proclaiming that she "just knows" that one of her friends is gay because of feminine qualities he exhibits
- Man calls his friend faggot as a "funny" insult
- Guy said "That's so f\*\*\*\*ing retarded."
- A group of black students get flipped off by a fire fighter as they stood at a bus stop
- "The Target in Capitola is nice because lots of white people shop there."

# Descriptives

Variable	Mean	Std. Deviation
Racial Ethnic		
Microaggressions_S3	2.1459	.74824
LGBM_S3	2.4205	1.19388
CSE_in_S3	5.7781	1.80579
CSE_problem_S3	6.5305	2.02031
CSE_social_S3	6.6848	2.22539
CSE_emotion_S3	5.8351	2.44256
CESD_Total_S3	41.8042	9.06881
Oxford_Happiness_S3	33.3545	7.13370
RSE_Total_S3	2.9314	.61498
PSS_Total_S3	2.4832	.55482
BasicNeeds_Autonomy_S3	4.8245	.97424
BasicNeeds_Competence_S3	4.8675	1.13489
BasicNeeds_Relatedness_S3	5.2712	.91836
College_Satisfaction_S3	3.7511	.55828
How old are you?	19.82	2.21
Immigration age	8.84	5.05

Variable	Mean	Std. Deviation
Social Class	2.23	1.136
PSS_Total	2.4964	.56743
RSE_Total	2.9520	.61772
Oxford_Happiness	33.2319	7.10834
CESD_Total	41.7524	8.85047
SRE_short2	14.3232	6.52185
SRE_short	6.3654	6.41414
CSE_in	5.7089	1.76525
CSE_problem	6.4944	1.98673
CSE_social	6.8892	2.16181
CSE_emotion	5.6408	2.45984
Racial Ethnic Microaggressions	2.2433	.62912
College_Satisfaction	3.8211	.52222
BasicNeeds_Autonomy	4.8511	.99510
BasicNeeds_Competence	4.9344	1.07478
BasicNeeds_Relatedness	5.4248	.94799
Bothered_mean	58.4925	25.37913
Number of App Reports	3.17	3.826

# Longitudinal relations

## College Satisfaction ( $R^2 = .43$ )

	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	.469	.488	.338
College_Satisfaction	.702	.065	.000
Days Between Surveys	.001	.002	.546
White	.149	.105	.160
Asian	.100	.102	.330
Latino	.132	.100	.191
Social Class	.025	.033	.446
Gender	-.073	.073	.320
Racial Ethnic Microaggressions	.103	.056	.066
Number of App Reports	-.006	.010	.552

## Belonging ( $R^2 = .52$ )

	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	1.671	.727	.023
BasicNeeds_Relatedness	.648	.054	.000
Days Between Surveys	.001	.004	.797
White	-.106	.162	.514
Asian	-.158	.157	.315
Latino	-.226	.153	.142
Social Class	.096	.051	.060
Gender	-.351	.112	.002
Racial Ethnic Microaggressions	-.022	.086	.799
Number of App Reports	.000	.015	.989

## Competence ( $R^2 = .44$ )

	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	1.918	.941	.043
BasicNeeds_Competence	.664	.063	.000
Days Between Surveys	.002	.005	.722
White	-.174	.217	.425
Asian	-.015	.211	.942
Latino	-.123	.205	.550
Social Class	.048	.068	.477
Gender	-.409	.151	.007
Racial Ethnic Microaggressions	-.230	.112	.041
Number of App Reports	-.002	.021	.906

## Perceived Stress ( $R^2 = .38$ )

	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	.417	.489	.395
PSS_Total	.546	.062	.000
Days Between Surveys	.003	.002	.305
White	.162	.111	.148
Asian	.054	.108	.616
Latino	.037	.105	.722
Social Class	-.039	.035	.267
Gender	-.005	.077	.944
Racial Ethnic Microaggressions	.131	.058	.027
Number of App Reports	.005	.011	.637

## Coping Self-Efficacy – In the Situation ( $R^2 = .36$ )

	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	1.108	1.508	.463
CSE_in	.525	.066	.000
Days Between Surveys	.001	.008	.882
White	-.458	.365	.212
Asian	.107	.358	.766
Latino	-.096	.345	.781
Social Class	.365	.113	.002
Gender	.111	.253	.662
Racial Ethnic Microaggressions	.299	.186	.110
Number of App Reports	.047	.035	.183

## Coping Self-Efficacy – Problem Focused ( $R^2 = .42$ )

	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	.856	1.642	.603
CSE_problem	.597	.060	.000
Days Between Surveys	.004	.009	.630
White	-.728	.390	.063
Asian	.116	.378	.759
Latino	-.505	.367	.171
Social Class	.325	.122	.008
Gender	-.018	.269	.947
Racial Ethnic Microaggressions	.285	.199	.154
Number of App Reports	.031	.037	.399

## Coping Self-Efficacy – Seeking Social Support ( $R^2 = .32$ )

	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	3.749	1.927	.053
CSE_social	.502	.068	.000
Days Between Surveys	.004	.010	.726
White	-.990	.465	.035
Asian	.143	.452	.752
Latino	-1.537	.440	.001
Social Class	-.014	.145	.924
Gender	-.493	.320	.125
Racial Ethnic Microaggressions	-.170	.238	.476
Number of App Reports	.060	.044	.181

## Coping Self-Efficacy – Emotion Focused ( $R^2 = .35$ )

	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	-.378	2.078	.856
CSE_emotion	.561	.062	.000
Days Between Surveys	.015	.011	.178
White	-.565	.498	.258
Asian	.323	.483	.504
Latino	-.212	.470	.652
Social Class	.157	.155	.312
Gender	-.218	.344	.528
Racial Ethnic Microaggressions	.147	.255	.564
Number of App Reports	.043	.047	.368

## Depressive Symptoms ( $R^2 = .39$ )

	Unstandardized Coefficients		
	B	Std. Error	Sig.
(Constant)	3.116	7.728	.687
CESD_Total	.484	.067	.000
Days Between Surveys	.042	.039	.289
White	1.398	1.802	.439
Asian	-.775	1.745	.658
Latino	2.952	1.698	.084
Social Class	.873	.562	.122
Gender	2.727	1.240	.029
Racial Ethnic Microaggressions	3.378	.994	.001
Number of App Reports	.059	.171	.731

## Happiness ( $R^2 = .54$ )

	Unstandardized Coefficients		
	B	Std. Error	Sig.
(Constant)	10.911	5.432	.046
Oxford_Happiness	.711	.055	.000
Days Between Surveys	-.007	.027	.781
White	-.618	1.225	.615
Asian	.119	1.188	.920
Latino	.520	1.158	.654
Social Class	.577	.382	.133
Gender	-.574	.846	.498
Racial Ethnic Microaggressions	-.400	.655	.543
Number of App Reports	-.106	.116	.366

## Self-Esteem ( $R^2 = .63$ )

	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	1.063	.410	.010
RSE_Total	.741	.048	.000
Days Between Surveys	.001	.002	.651
White	-.261	.094	.006
Asian	-.113	.091	.217
Latino	-.200	.089	.026
Social Class	.044	.029	.134
Gender	-.026	.065	.694
Racial Ethnic Microaggressions	-.179	.049	.000
Number of App Reports	-.004	.009	.691



# Results Summary

- Belonging (ns)
- Self-esteem ( $p < .001$ )
- Feelings of competence ( $p = .041$ )
- Happiness (ns)
- Depressive symptoms ( $p = .001$ )
- Stress ( $p = .027$ )
- Coping
  - In the situation (ns)
  - Problem focused (ns)
  - Social support (ns)
  - Emotion focused (ns)

# Conclusions

- Microaggressions may occur less frequently than expected
- Nevertheless, they are associated with long-term mental health effects
- Future work will explore the reports in-depth and moderators of different effects

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- Our participants
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- Office of Diversity, Equity, and Inclusion

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