

Swipe Right or Left

Impact of Interactive Functions on Dating Apps

Team 8

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Contents

01

Project Background

02

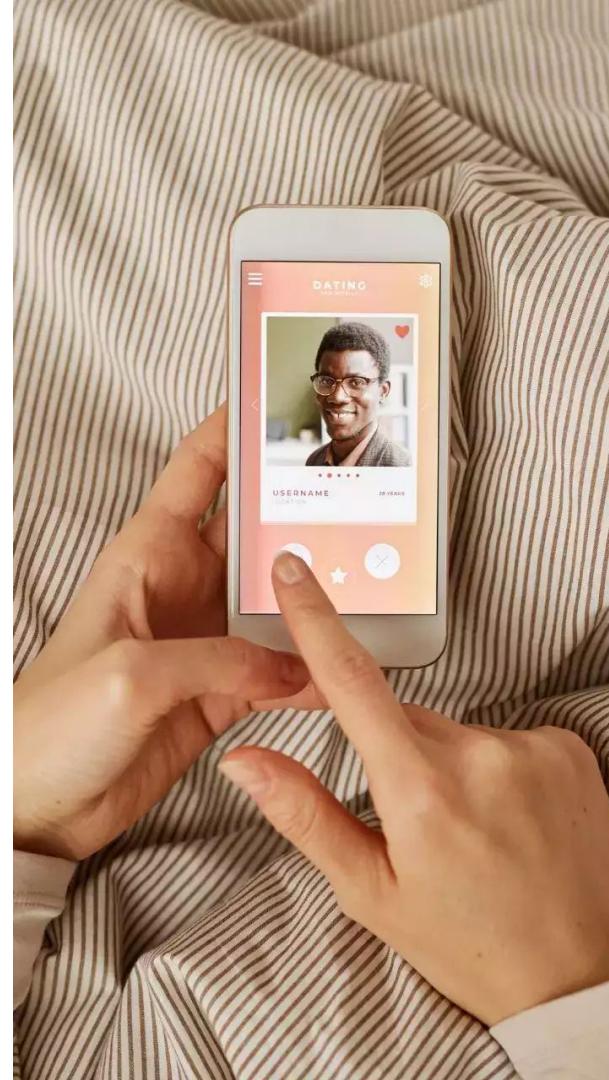
Experiment Design

03

Statistical Analysis

04

Finding & Challenge



Did you Know?

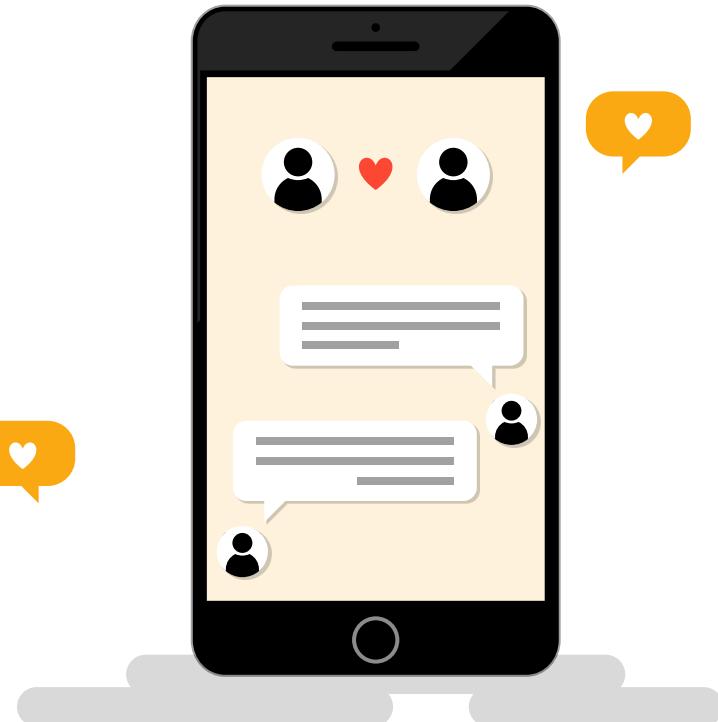


“Nearly 30% of U.S. adults have used a dating app, with younger users (18-34) being the most active”

—Pew Research Center (2020)

Research Question

Does adding multiple-choice questions to a profile enhance swipe rates on a dating app?



Experiment Design

Step 1

Survey Part 1 - Background

Provide age, gender, sexual orientation, and prior experience with dating apps.

Step 2

Randomly assigned

Randomly assigned at the user level into treatment or control groups

Step 3

Survey Part 2- profile

shown 10 simulated dating app profile pages, featuring of the gender they are interested in

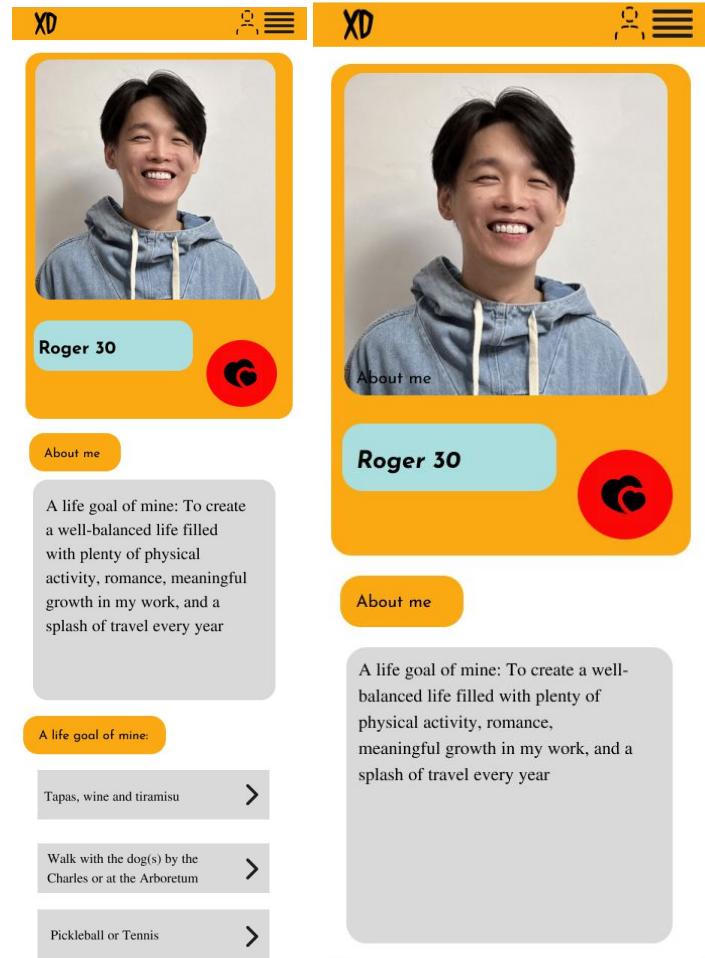
Measure swipe rates as the primary outcome & analysis more data



Survey Design

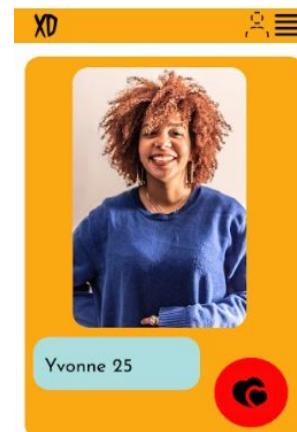
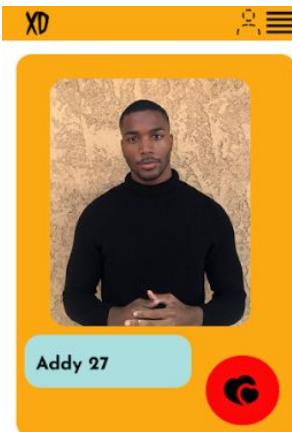
Anonymous questionnaire

- **Treatment Group:**
the "About Me" section included an interactive multiple-choice question.
- **Control Group:**
with the "About Me" section containing only a self-introduction.



Profile Design

The profiles included individuals with diverse ethnic backgrounds and physical features to minimize bias.



Survey Process



Survey Introduction

This survey would only takes you about 5 minutes.

The results of this survey will be used solely for research purposes in the BA 830 course. Your responses will **remain anonymous and will not be shared publicly.**



This part collects basic information.

What's your gender?

Male

Female

Other

XD

Victoria 22

About me

Typical Sunday: Extra sleep/ Nintendo switch/ a good walk/ coffee shops

which do we have in common

I'd rather watch movies than binge TV shows >

I love outdoor activities like camping or skiing >

I enjoy music, especially live concerts or festivals. >

Like or Dislike?

Like

Dislike

Distribution Design

Lonely at Midnight? Take This Fun Dating App Survey!  

Inbox x

Ming-Hua Tsai <jastsai@bu.edu> Tue, Feb 25, 10:42 PM (9 days ago)   

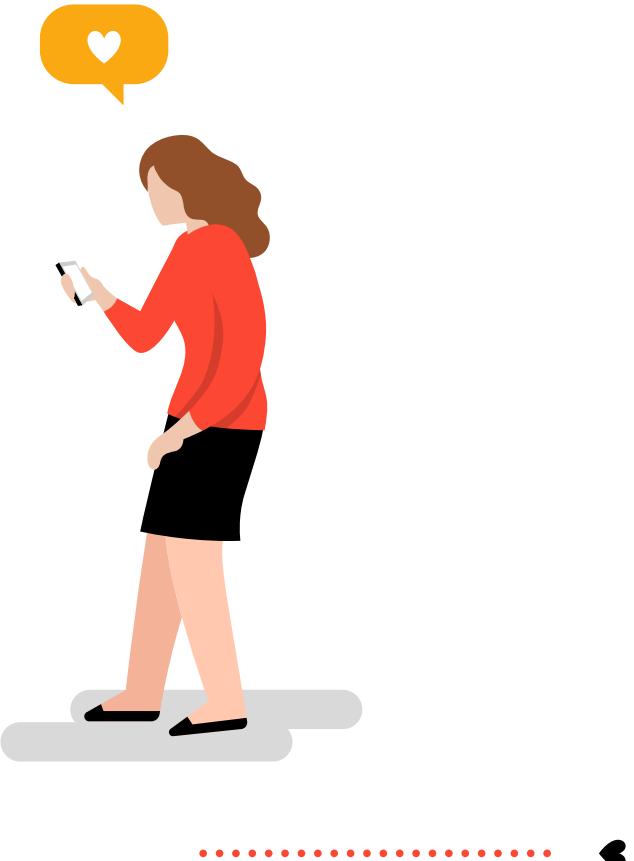
Dear MSBAer's,

I know everyone is getting a lot of survey emails lately, but trust me, this one's actually fun! We sincerely invite you to check out this fun dating app survey and give it a try. Thank you, and have a great night!

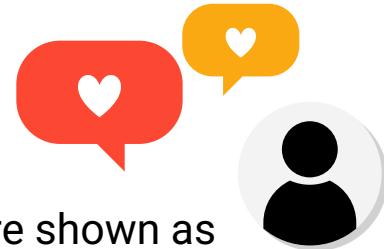
Link to the survey: https://bostonu.qualtrics.com/jfe/form/SV_3yfusZykmyMprSu

Best regards,
Jasmine, Shawn, Rick, Jerry

- Designed and distributed the questionnaire via Boston University's Qualtrics system to MSBA students.
- Recruited additional respondents aged 21-35 through social media platforms.



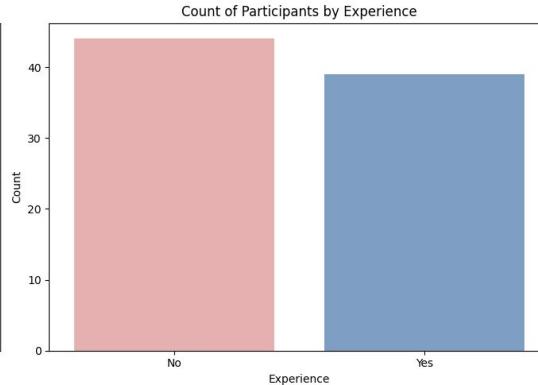
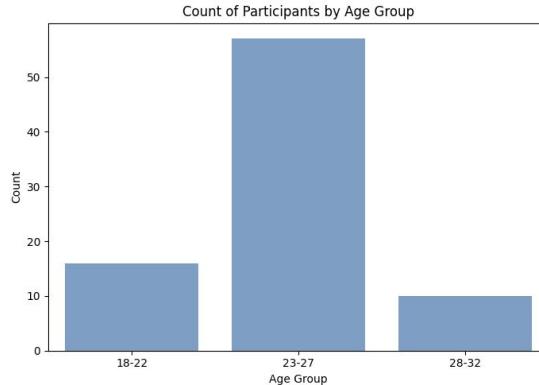
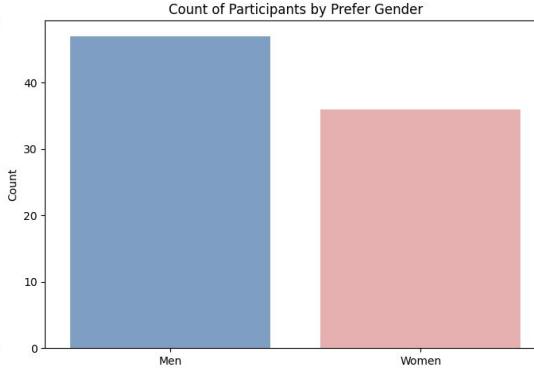
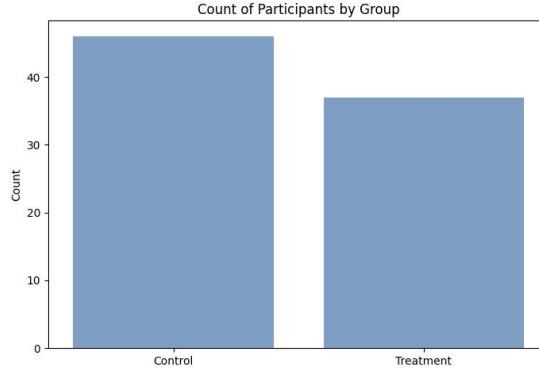
Data Overview



There are 83 samples in our dataset, and the variable descriptions are shown as below:

Variable Name	Descriptions
time_spent	Time spent answering the survey (in seconds).
interest_in	The participant's preferred gender: 0 = Male, 1 = Female
age_group	Age groups: 0 = 18-22, 1 = 23-27, 2 = 28-32.
experience	Dating app experience: 0 = No, 1 = Yes.
treatment	Profile including interactive self-Introduction: 0=No, 1=Yes
swipe_rate	The swipe rate.

EDA - Participant Counts



- More participants prefer men over women.
- Most participants are aged 23-27.
- Slightly over half have never used a dating app.



Analysis - Overview

ATE	Std	Cohens'D	Statistical Power	Size needed to reach power of 0.8
0.02	0.21	0.09	0.07	1790

- The Cohen's D is 0.09, while interactive self-introduction may have some impact on swipe rate, the effect is small.
- The statistical power is 0.07, indicating a limited ability to detect the effect of adding an interactive self-introduction on the swipe rate.
- If we want to reach a power of 0.8, we need 1790 samples.

Analysis - Balance Check

	interest_in (1)	age_group (2)	experience (3)
Intercept	0.478 *** (0.075)	0.935 *** (0.085)	0.500 *** (0.075)
treatment[T.B]	-0.100 (0.110)	-0.016 (0.123)	-0.068 (0.111)
Observations	83	83	83
R ²	0.010	0.000	0.005
Adjusted R ²	-0.002	-0.012	-0.008
Residual Std. Error	0.499 (df=81)	0.562 (df=81)	0.504 (df=81)
F Statistic	0.826 (df=1; 81)	0.017 (df=1; 81)	0.369 (df=1; 81)
Note:	* p<0.1; ** p<0.05; *** p<0.01		

- We conduct balance check to ensure our treatment and control group showed no significant differences across several covariate.
- The OLS results indicate that none of our covariates show a significant difference between the control and treatment groups.

Analysis - T-Test

	T	dof	alternative	p-val	CI95%	cohen-d	BF10	power
T-test	0.425638	80.373318	two-sided	0.671509	[-0.07, 0.11]	0.092648	0.249	0.069913

- p-value > 0.05
 - Cohen's d indicates a minimal effect size
 - The 95% confidence interval includes 0
- • No statistically significant difference



Analysis - Regression

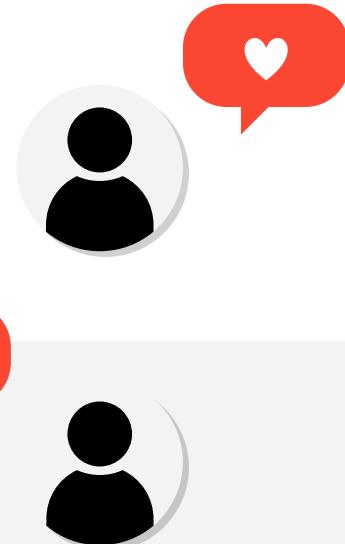
	Dependent variable: swipe_rate			
	(1)	(2)	(3)	(4)
Intercept	0.315 *** (0.034)	0.240 *** (0.034)	0.190 *** (0.046)	0.170 *** (0.045)
age_group			0.057 * (0.035)	0.028 (0.038)
experience				0.080 (0.049)
interest_in		0.157 *** (0.047)	0.150 *** (0.048)	0.166 *** (0.047)
treatment[T.B]	0.020 (0.047)	0.036 (0.044)	0.036 (0.044)	0.042 (0.044)
Observations	83	83	83	83
R ²	0.002	0.135	0.157	0.186
Adjusted R ²	-0.010	0.114	0.125	0.144
Residual Std. Error	0.215 (df=81)	0.201 (df=80)	0.200 (df=79)	0.198 (df=78)
F Statistic	0.181 (df=1; 81)	5.608 *** (df=2; 80)	5.239 *** (df=3; 79)	5.774 *** (df=4; 78)

- Interest_in has a significant and positive impact.
- No significant difference between the treatment and control groups.
- More variables lead to higher model explanatory power.

Analysis - CATE

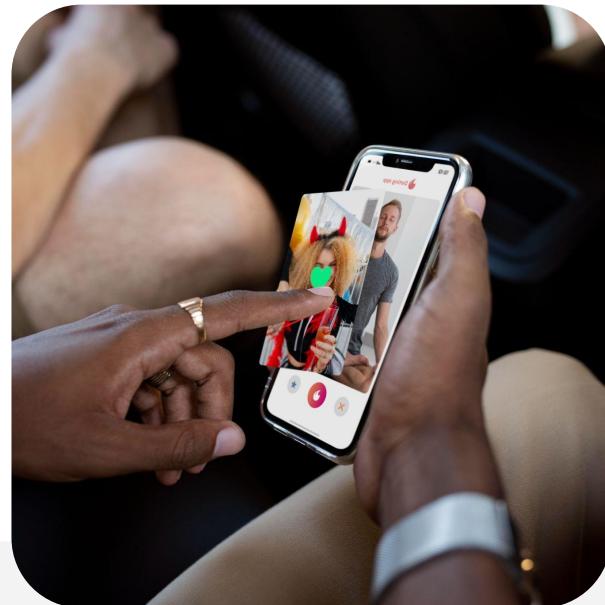
<i>Dependent variable: swipe_rate</i>	
	(1)
Intercept	0.233 *** (0.037)
interest_in	0.171 *** (0.064)
treatment[T.B]	0.049 (0.048)
treatment[T.B]:interest_in	-0.032 (0.096)
Observations	83
R ²	0.137
Adjusted R ²	0.104
Residual Std. Error	0.202 (df=79)
F Statistic	3.754 ** (df=3; 79)
Note:	* p<0.1; ** p<0.05; *** p<0.01

- No interaction effect between treatment and Interest_in.



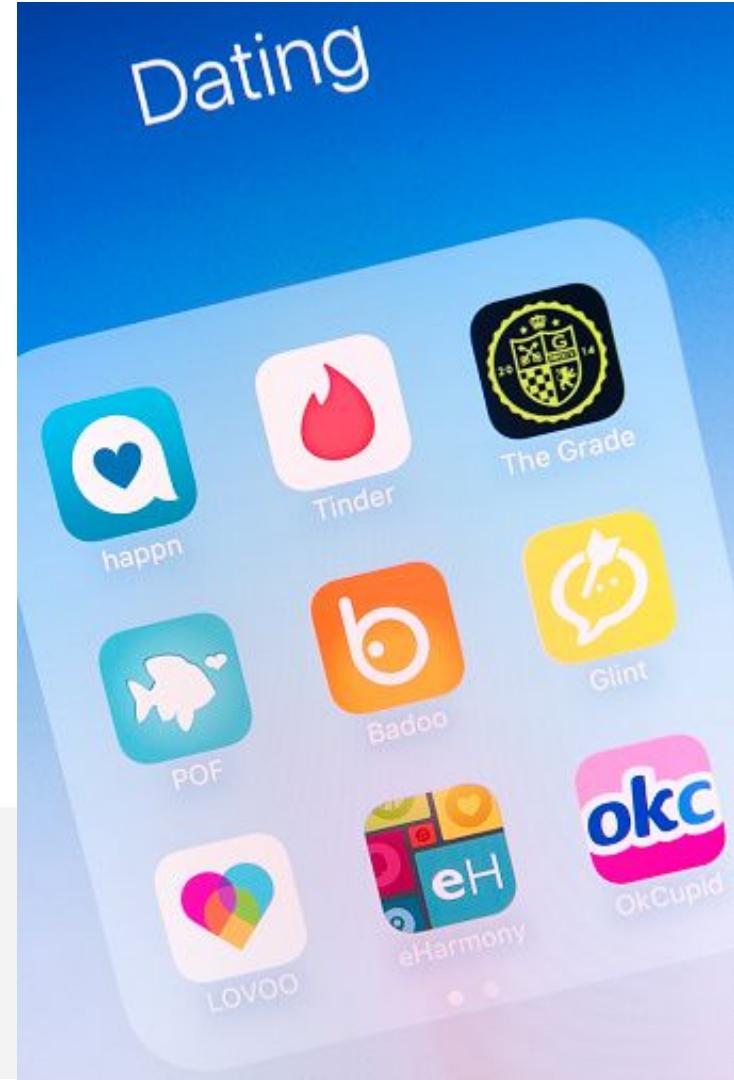
Conclusion

- Coefficient for the treatment is positive but NOT statistically significant.
- Interest in female significantly increases swipe rate



Challenge & Limitation

- Practical Implementation: Due to time and budget constraints
- Profile Diversity: A narrow range of profiles





Thank You

Q & A

