

# **USING SOCIAL MEDIA FOR OBESITY TREATMENT AND PREVENTION PROGRAMS**

**Strategies and Lessons Learned**

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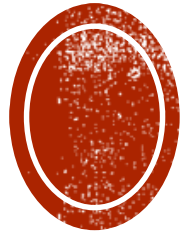
**University of South Carolina**



# USING SOCIAL MEDIA TO HELP...

1. Facilitate social support during weight loss interventions
2. Get participants to remain engaged





# **FACILITATING SOCIAL SUPPORT**



# TRADITIONAL FACE-TO-FACE WEIGHT LOSS INTERVENTIONS

- Group setting provide social support
- Counselor interactions provide feedback on behaviors







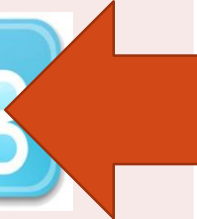
# SOCIAL MEDIA CAN HELP PROVIDE A PLATFORM FOR SOCIAL SUPPORT



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# STUDY 1: MOBILE POUNDS OFF DIGITALLY STUDY (MPOD)

Podcast only (n=49)	Podcast + mobile (n=47)
Twice weekly podcasts for 0-6 months	Twice weekly podcasts for 0-6 months
	Monitoring of diet and physical activity using app on mobile device
	Group and moderator support via Twitter
	 +  +  

# TWITTER AND SOCIAL SUPPORT

- Posts to Twitter were coded for type of support:
  - Informational
  - Tangible assistance
  - Esteem support
  - Network support
  - Emotional support
- Posts to Twitter were coded by 3 raters for type of social support.





# SUPPORT TYPE

10% Emotional:

@JanePod Don't feel bad, tomorrow is another day. Eat healthy and make sure to get some exercise!

0.5 % seem week/ I am n week 17 day I until I reach success?

you!!! ce:

@podmember sounds delicious! I just bought some vegan chik tenders from Bjs. Haven't tried them yet, but the picture looks good!! :)

7.4% Request: Guys! Help I fell off the wagon! Too much free food! Bakalava and beer... :( I feel bad.

75% Informational (mainly status updates): I'm at the gym, ready to work out!

■ Informational

■ Tangible Assistance

■ Esteem

■ Network

■ Emotional





# TYPES OF SOCIAL SUPPORT EXCHANGES OVER TIME

- All categories of social support decreased over time or remained the same except two:
  - Posts categorized under the **Compliment** sub-type of Esteem support increased from 44 posts (3% of total posts) at 0-3 months to 78 posts (7% of total posts) during months 3-6
  - Posts categorized as the sub-type of **Listening** under Emotional support increased from 70 (5% of total posts during 0-3 months) to 103 (9% of total posts during 3-6 months).



Turner-McGrievy GM, Tate DF. *J Med Internet Res.* 2011;13(4):e120.

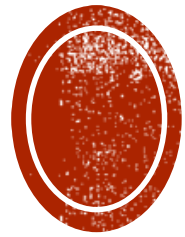


# TAKE-AWAY POINT #1

- Social support provided via social networks will mainly be status updates.
- Social networks mature over time.
  - Find ways to facilitate people getting to know one another if they've never met face-to-face.



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# GETTING PEOPLE ENGAGED DURING SOCIAL MEDIA- DELIVERED WEIGHT LOSS INTERVENTIONS

# STUDY 2: THE NEW DIETS TRIAL

- The New Dietary Interventions to Enhance the Treatments for weight loss (New DIETs) study randomized 63 participants to follow one of five diets for 6 months:
  - 2-month weight loss intervention
  - 4-month follow-up period
    - Monthly meetings
    - Private Facebook groups

Hales SB, Davidson C,  
Turner-McGrievy GM. *Trans  
Beh Med.* 2014 Dec; 4(4): 355-  
362.



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# NEW DIETS STUDY OBJECTIVES

- To examine
  - Whether different types of social network messages differentially affect participant engagement.

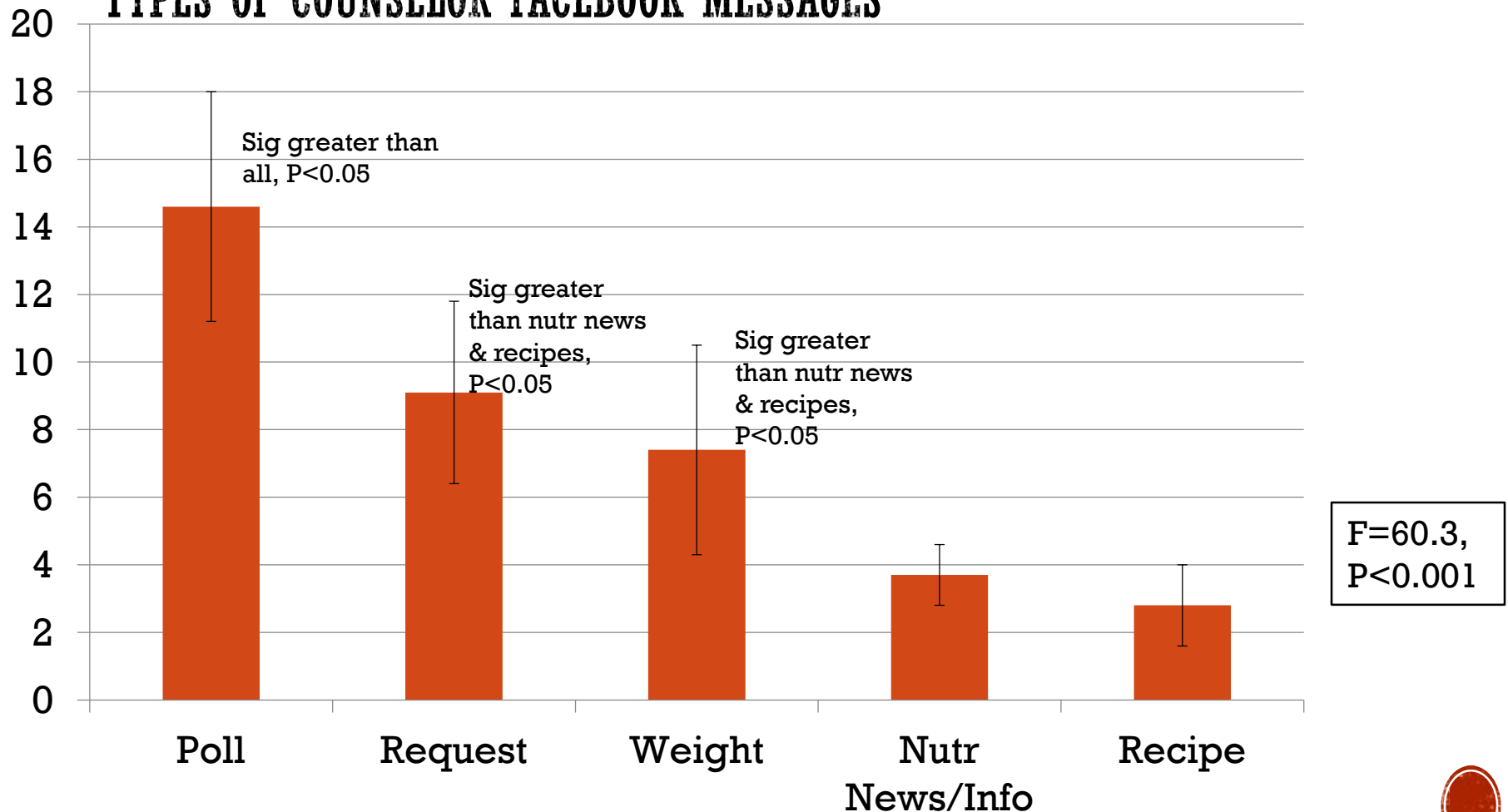


# FACEBOOK MESSAGE TYPES TARGETING SCT CONSTRUCTS

Message Types	Targeted Social Cognitive Theory Construct
Weight Loss	Self-control
Recipe	Behavioral capability Observational Learning (when links to videos of cooking demos were provided)
Nutrition Study, Science, or News	Situation
Poll	Targeted various constructs but was included to mirror the questions counselors would ask of participants during face-to-face meetings
Suggestion/Request	Expectations Emotional coping response

# WHICH MESSAGE TYPE PROMPTED THE MOST USER ENGAGEMENT?

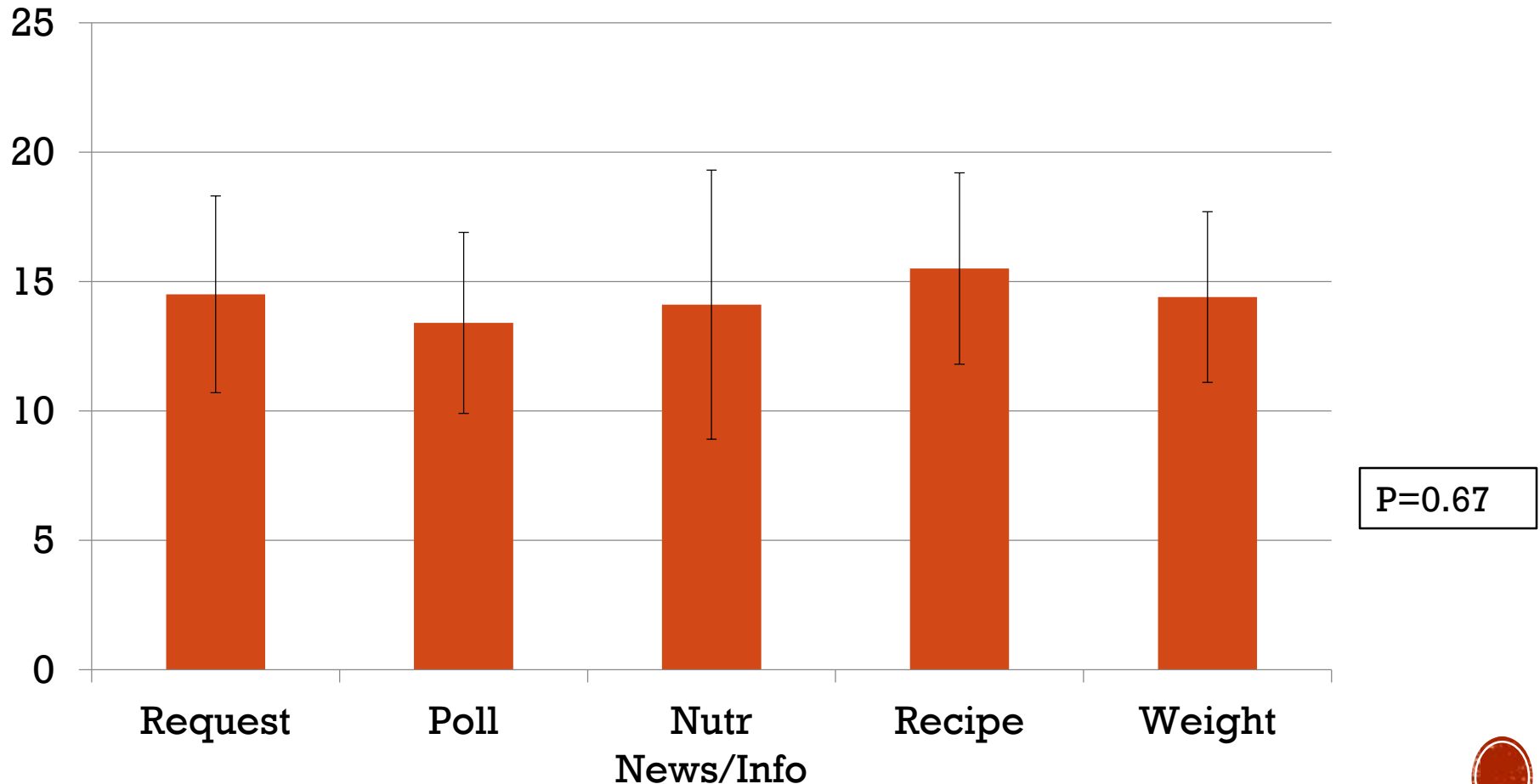
MEAN NUMBER OF COMMENTS AND POLL VOTES BY DIFFERENT TYPES OF COUNSELOR FACEBOOK MESSAGES





# EXPOSURE TO DIFFERENT TYPES OF COUNSELOR FACEBOOK MESSAGES

Mean number of views by message type



# RESULTS OF MESSAGE TYPE AND ENGAGEMENT

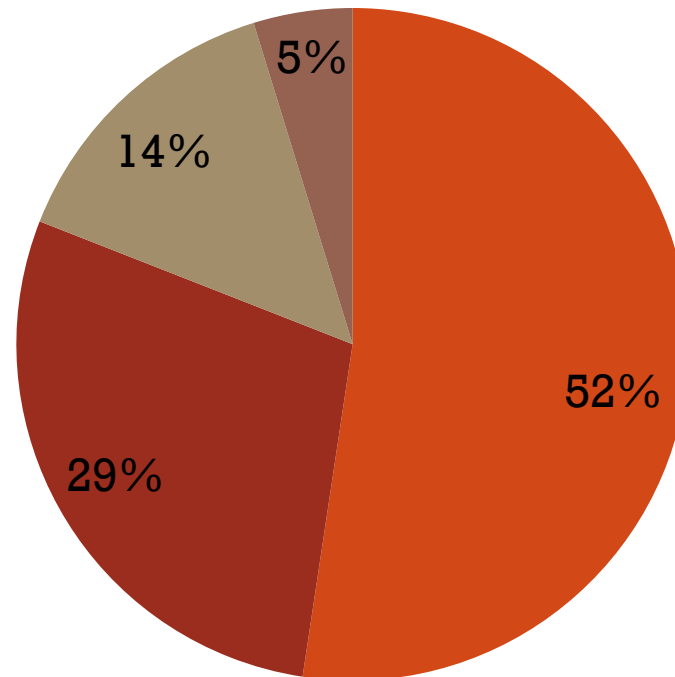
- Exposure was similar for all message types.
- Posts asking participants to vote in a poll or request/suggestions for the group are the most engaging.



# WHICH MESSAGES DID PARTICIPANTS REPORT LIKING THE MOST AT THE END OF THE STUDY?

## Message preference as reported by participant

■ Recipes ■ Nutrition news and info ■ Polls ■ Requests for suggestions



No one reported liking the weight posts.



# WAS ENGAGEMENT WITH FACEBOOK ASSOCIATED WITH WEIGHT LOSS?

- Facebook engagement was significantly associated with weight loss during the 4-month maintenance period ( $B = -0.09$ ,  $P = 0.04$ ) such that for every 10 posts, comments, poll votes, or likes to Facebook, participants lost a mean of 0.43 kg.



Adjusted  
for meeting  
attendance

Hales SB, Davidson C, Turner-McGrievy GM. *Trans Beh Med*. 2014 Dec; 4(4): 355-362.



# TAKE-AWAY POINT #2

- Create posts for users that allow them to engage.
  - Prompt them with questions, ask for feedback, polling mechanisms, etc.



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# **STUDY 3: HEALTH-E U: A CONTROLLED PILOT STUDY OF A TECHNOLOGY-MEDIATED BEHAVIORAL WEIGHT GAIN PREVENTION INTERVENTION FOR COLLEGE STUDENTS**

- Delia Smith West, PhD, Courtney M. Monroe, PhD, Gabrielle Turner-McGrievy, PhD, Beth Sundstrom, PhD, Chelsea Larsen, MPH, Karen Magrader, Sara Wilcox, PhD, and Heather M. Brandt, PhD
- The objective of this study was to examine a technology-based, media-facilitated weight gain prevention intervention for college students.

# HEALTH-E U: METHODS

- Undergraduates in two sections of a public university course were allocated to:
  - a behavioral weight gain prevention intervention (Healthy Weight; HW; N = 29) or
  - a human papillomavirus vaccination (HPV) awareness intervention (control; N = 29)
- The intervention delivered 8 lessons to each group via:
  - Electronic newsletters
  - Facebook postings
- The HW intervention targeted behavioral strategies to prevent weight gain and provided participants with:
  - Wi-Fi-enabled scale (FitBit Aria)
  - Physical activity tracking device (FitBit Zip)



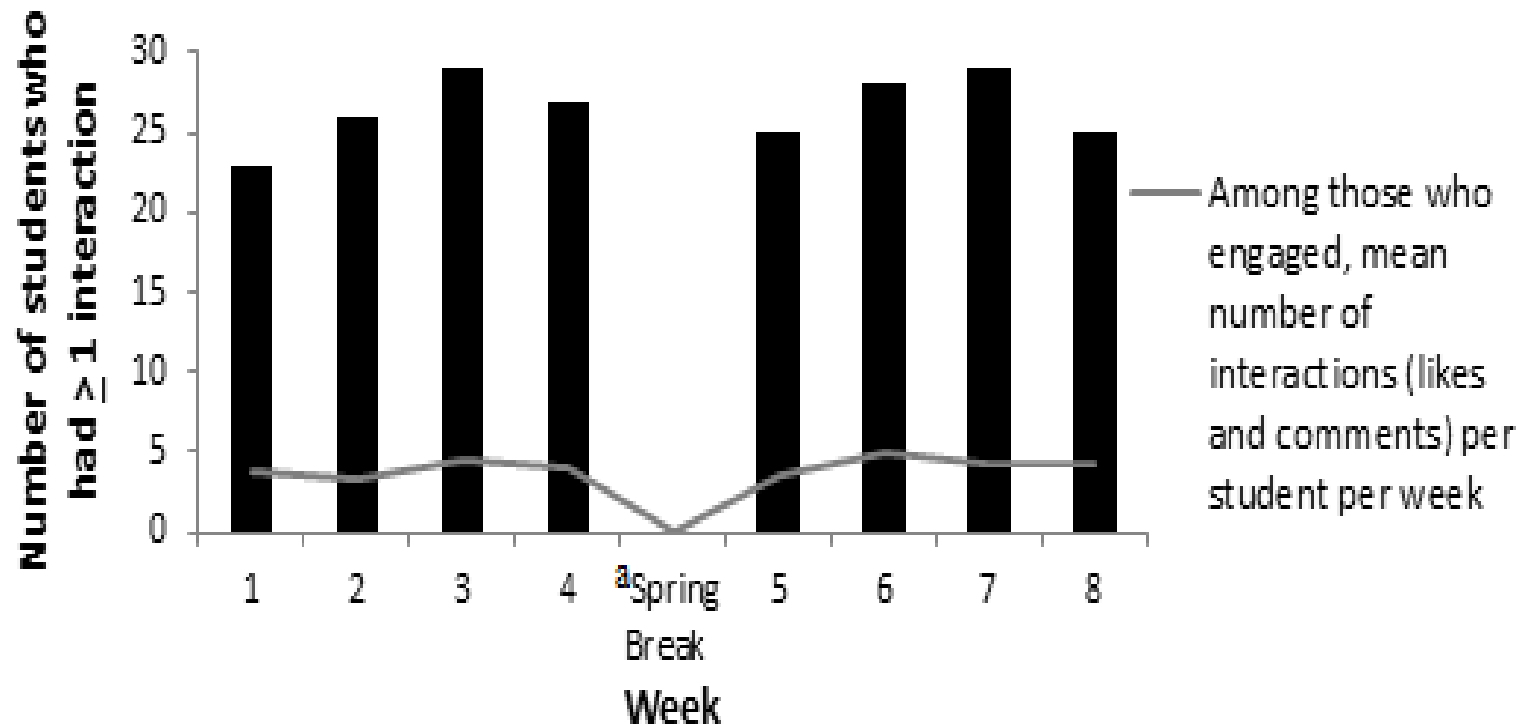


# HEALTH-E U: ENGAGEMENT WITH TECHNOLOGY

- Over 90% of students in the HW arm opened the electronic newsletters each week
- Mean of  $3.3 \pm 1.4$  Facebook interactions (comments and likes) per student each week
- 90% of the students initialized the FitBit Aria and Zip



# HEALTH-E U: ENGAGEMENT WITH FACEBOOK



# TAKE-AWAY POINT #3

- Know your audience! Engagement depends on other factors that may be happening in the lives of your users.



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# STUDY 4: THE SOCIAL POUNDS OFF DIGITALLY (SOCIAL POD) STUDY

- Sarah B. Hales, PhD; Gabrielle Turner-McGrievy, PhD; Homayoun Valafar, PhD; Sara Wilcox, PhD; and Rachel Davis, PhD
- **3-month pilot RCT** among overweight and obese adults (N=51)
- **Randomized to:**
  - **Comparison:** Podcasts + **commercial app** (n=26)
  - **Experimental:** Podcasts + **Social POD app** (n=25)



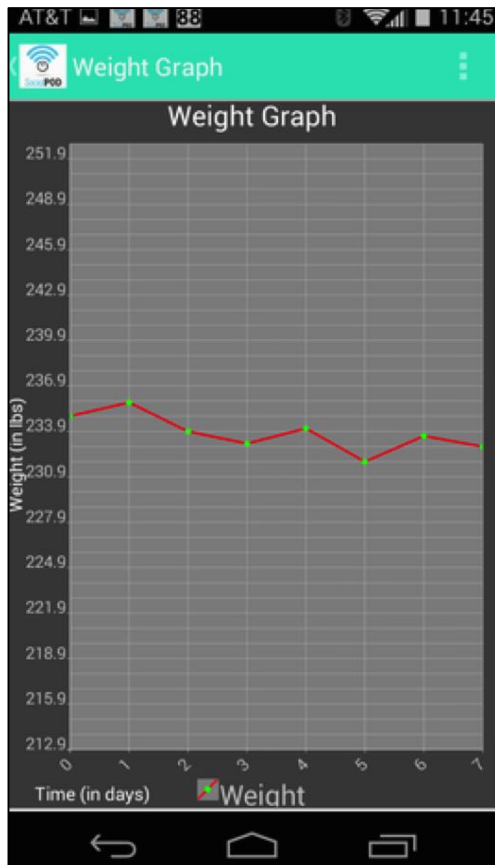
# INTERVENTION COMPONENTS

## Intervention Components and Theoretical Constructs Targeted by Group

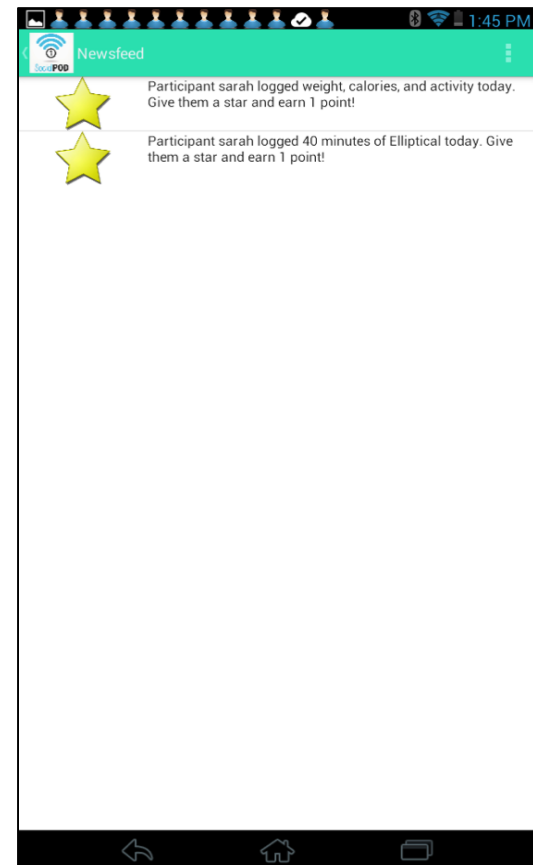
Intervention Component	Study Group	
	Experimental-Social POD app	Comparison-Commercial app
Podcasts	X	X
Diet, PA, and weight tracking	X	X
In-app notifications to track diet, PA, and weight	X	
Incentive system (points for self-monitoring behaviors)	X	
Stars sent by users to other users for achieving goals	X	
Within-app User-to-User messages for support	X	

# SOCIAL POD SCREEN SHOTS

## Weight Graph

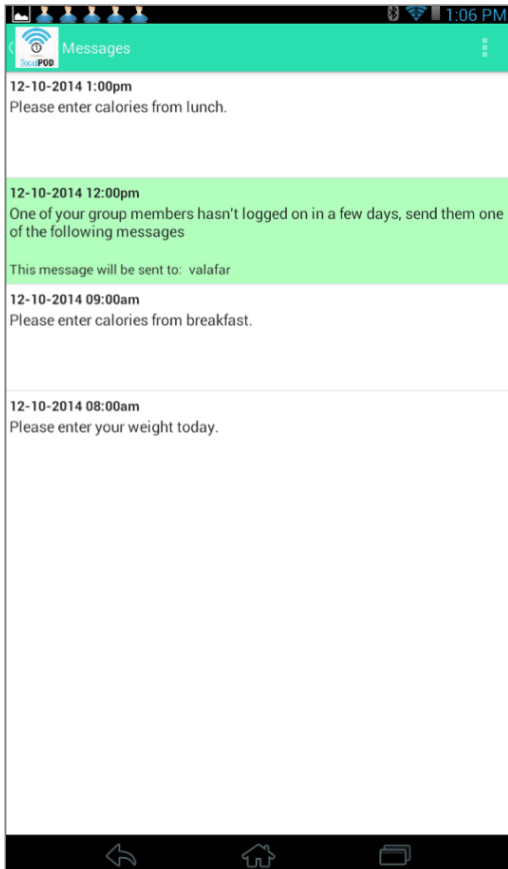


## Newsfeed

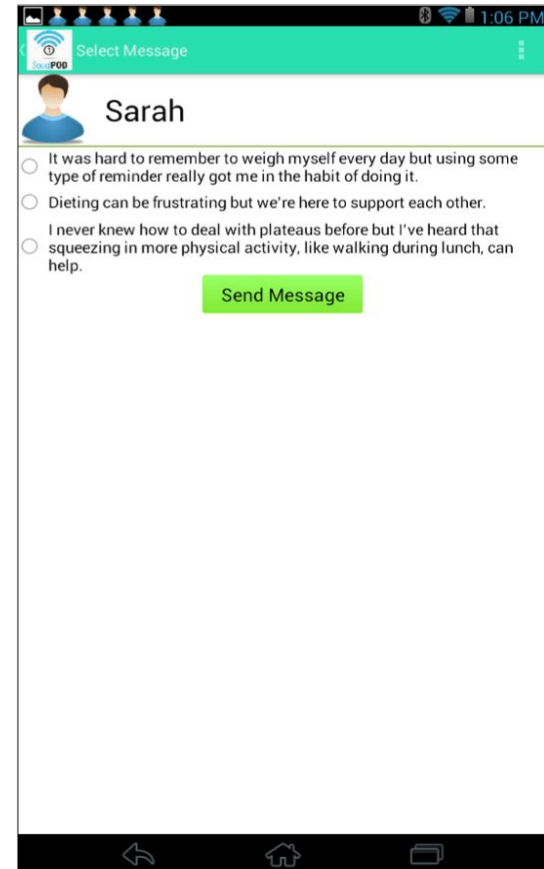


# SOCIAL POD SCREEN SHOTS

## Notifications



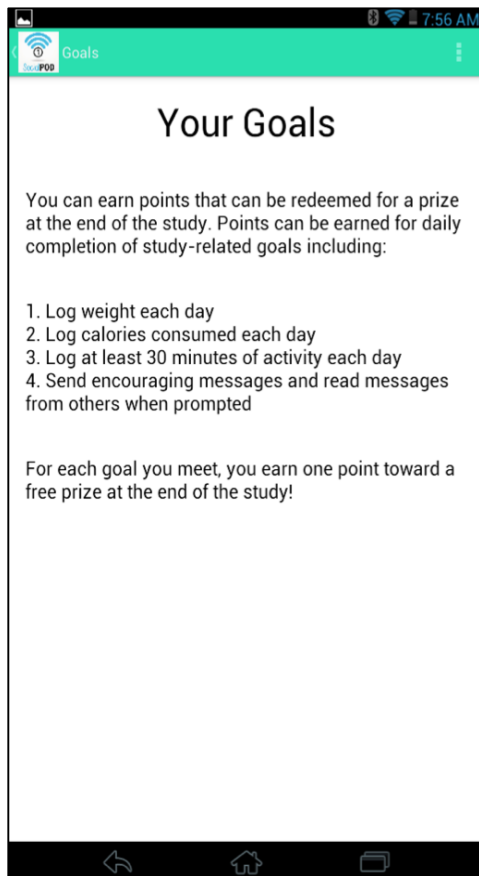
## User-user Messages





# SOCIAL POD SCREEN SHOTS

## Goals Page



## Point Tracker

The screenshot shows the 'Point Tracker' page of the Social POD app. It displays a table with three columns: 'Week Number', 'Number of Points Earned', and 'Total Points Earned'. The table lists data for 12 weeks. Week 6 is highlighted in orange, showing 5 points earned and a total of 25 points. Weeks 7 through 12 show 0 points earned and a total of 25 points.

Week Number	Number of Points Earned	Total Points Earned
1	0	0 total
2	0	0 total
3	1 point	6 total
4	1 point	11 total
5	9 points	20 total
6	5 points	25 total
7	0	25 total
8	0	25 total
9	0	25 total
10	0	25 total
11	0	25 total
12	0	25 total



# SOCIAL POD MESSAGING: TARGETED AREAS OF SOCIAL SUPPORT

Theoretical Construct Targeted	Type of Social Support	Sample User-user Message
Social Support	Emotional	I really feel like having support from others makes things easier – we're all here to support each other in this program.
Self-Efficacy + Social Support	Informational	Staying on this diet can be a challenge. There are times when I just want to stop but I try to keep in mind how good it will feel to accomplish my weight loss goals.
Outcome Expectations + Social Support	Informational & Situation Appraisal	I'm excited to be focusing on a healthy diet! It's a lot better than all those fad diets out there.

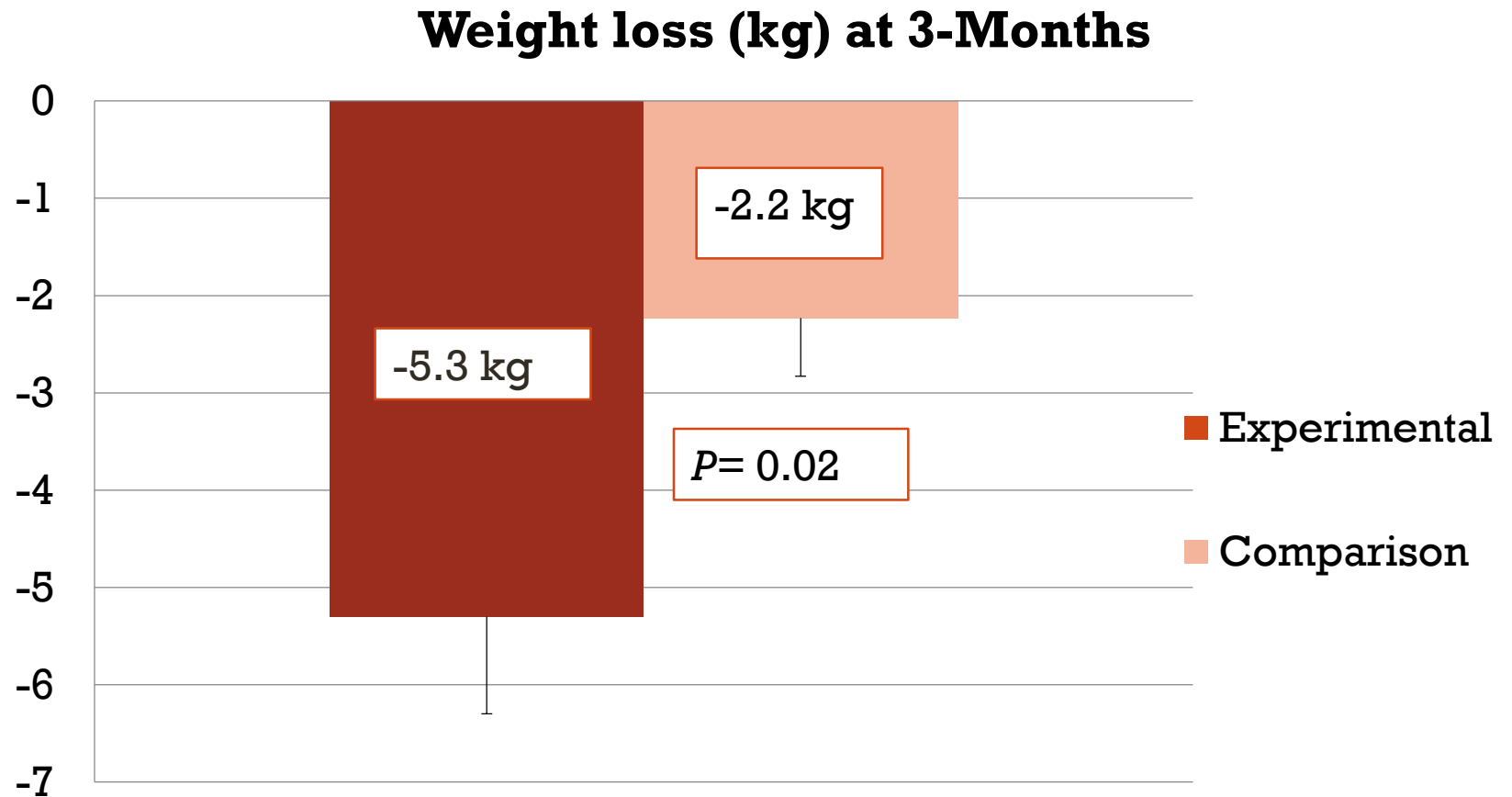


# SOCIAL POD PRIZES

- **Participants earned 1 point for each goal:**
  - Self-monitoring diet, weight, and physical activity each day
  - Sending a “star” of encouragement or a message to a participant
  - **Max = 4pts/day** (336 total)
- **Participants were told they could earn prizes for earning points**
  - 1 Prize = 60 points
  - 2 Prizes = 120 points
  - 3 Prizes = 240 points

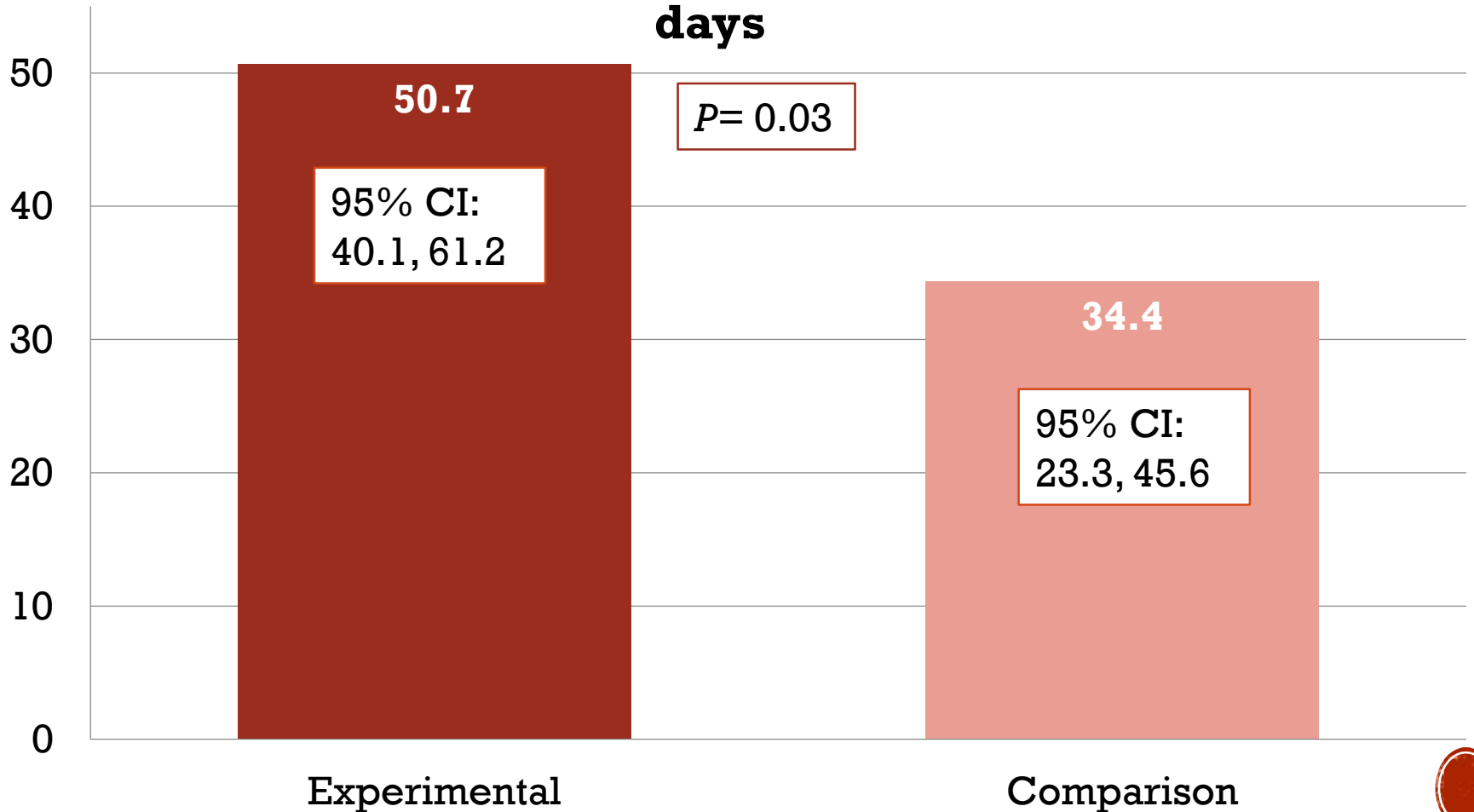


# WEIGHT LOSS



# APP USE

## Number of Days of App Use by Group out of 84 days



# TAKE-AWAY POINT #4

- Normalize expectations for behaviors through rewards!



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# CONCLUSIONS

- **Take-away point #1:** Social networks take time to develop.
- **Take-away point #2:** Create posts that will engage users.
- **Take-away point #3:** Know your audience.
- **Take-away point #4:** Reward users for participation.





# QUESTIONS

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