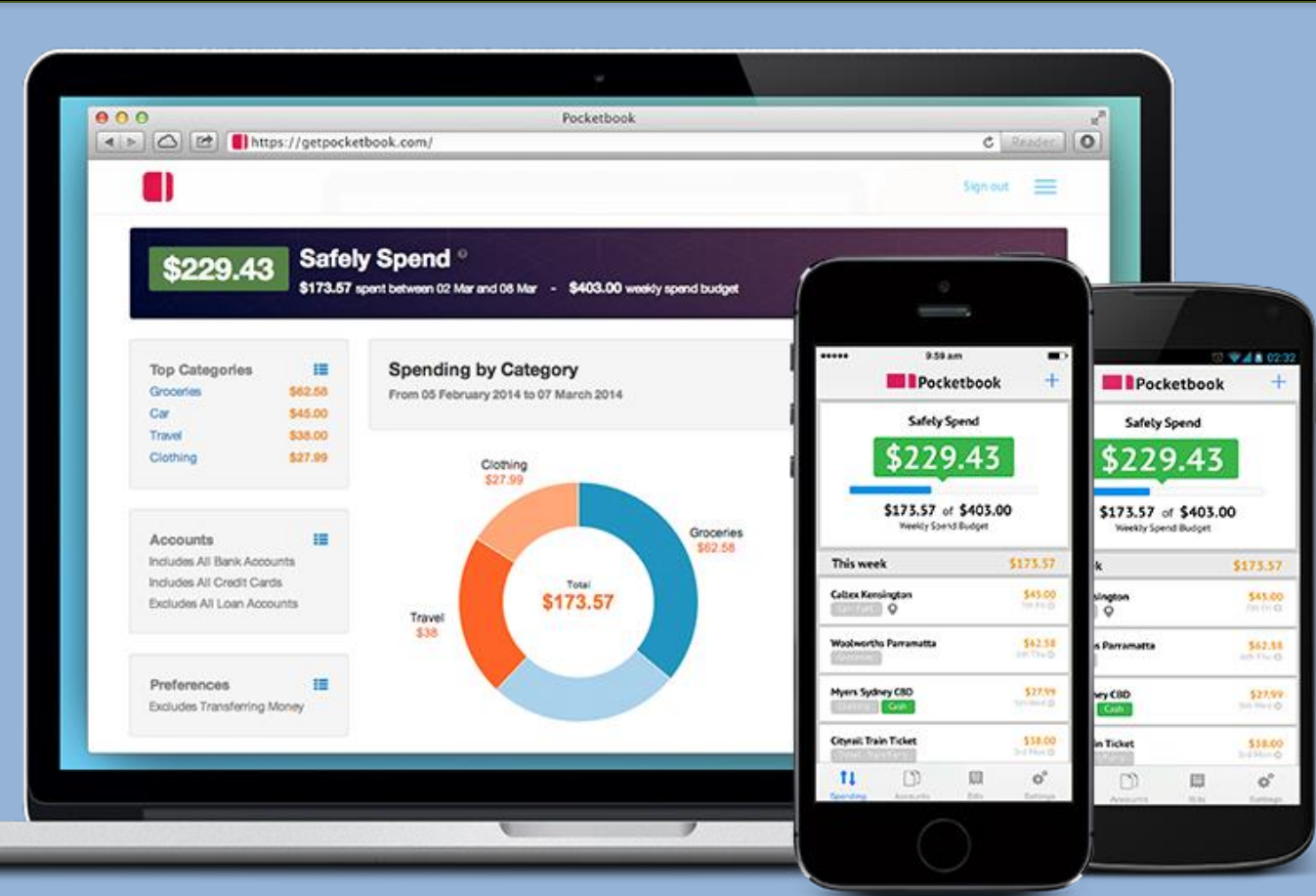


Dynamic Budget Monitoring: When Feedback Leads to Spending Acceleration

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Background

Consumers often create budgets and monitor their spending over the budget period. Accurate tracking of one's expenses helps curb spending (Krishnamurthy & Prokopec, 2010; Soman, 2001; Sussman & Alter, 2012). Consistent with this view, countless financial institutions and online apps (Mint) offer consumers real-time accurate feedback on their spending. Similarly, consumers are actively tracking to manage their spending.

Pilot Survey: Consumers' beliefs about the effect of feedback on spending.

"How do you think accurate spending feedback would affect your spending decisions?"

- A. Receiving feedback leads to **less** spending (**70.5%**)
- B. Receiving feedback **does not affect** my spending (**29.5%**)
- C. Receiving feedback leads to **more** spending (**0%**)

Factors Affecting Spending Under Budget Constraint

◆ Money available in the budget



◆ Future money slack (money *relative to time left*)



Abstract

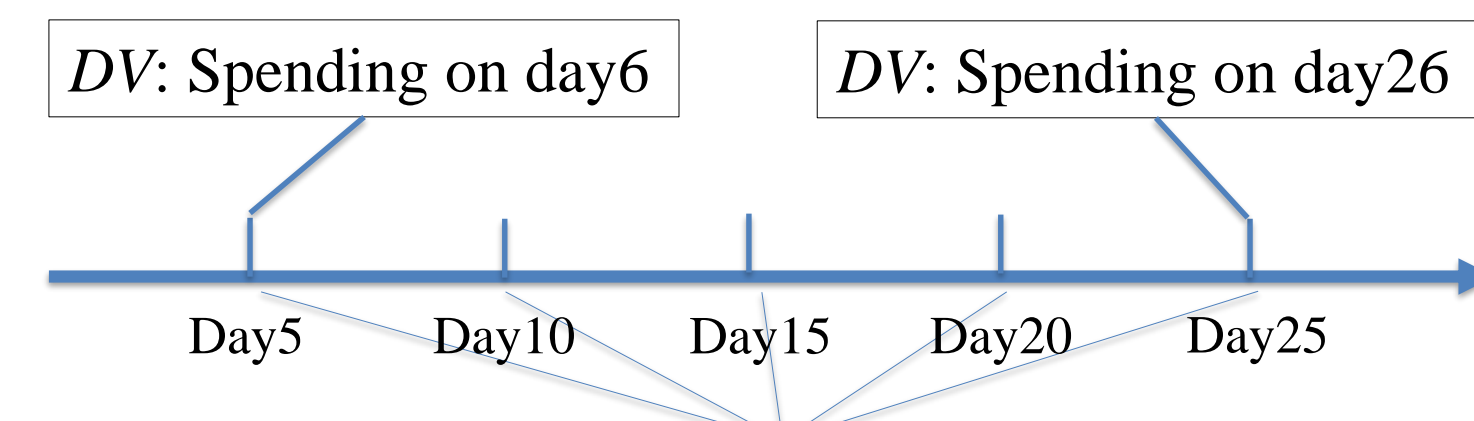
We show that receiving spending feedback (vs. no feedback) leads to an increase in spending over time, when there is money slack in the budget. We argue that consumers with no spending feedback focus on budget amount depletion. In comparison, consumers who receive spending feedback, focus on both budget amount left and time remaining in the budget period. As a consequence, consumers with no feedback decrease their spending over time, while consumers with feedback increase their spending over time. Changing consumers' interpretation of feedback in a time-insensitive manner attenuates spending acceleration.

Studies

Study 1

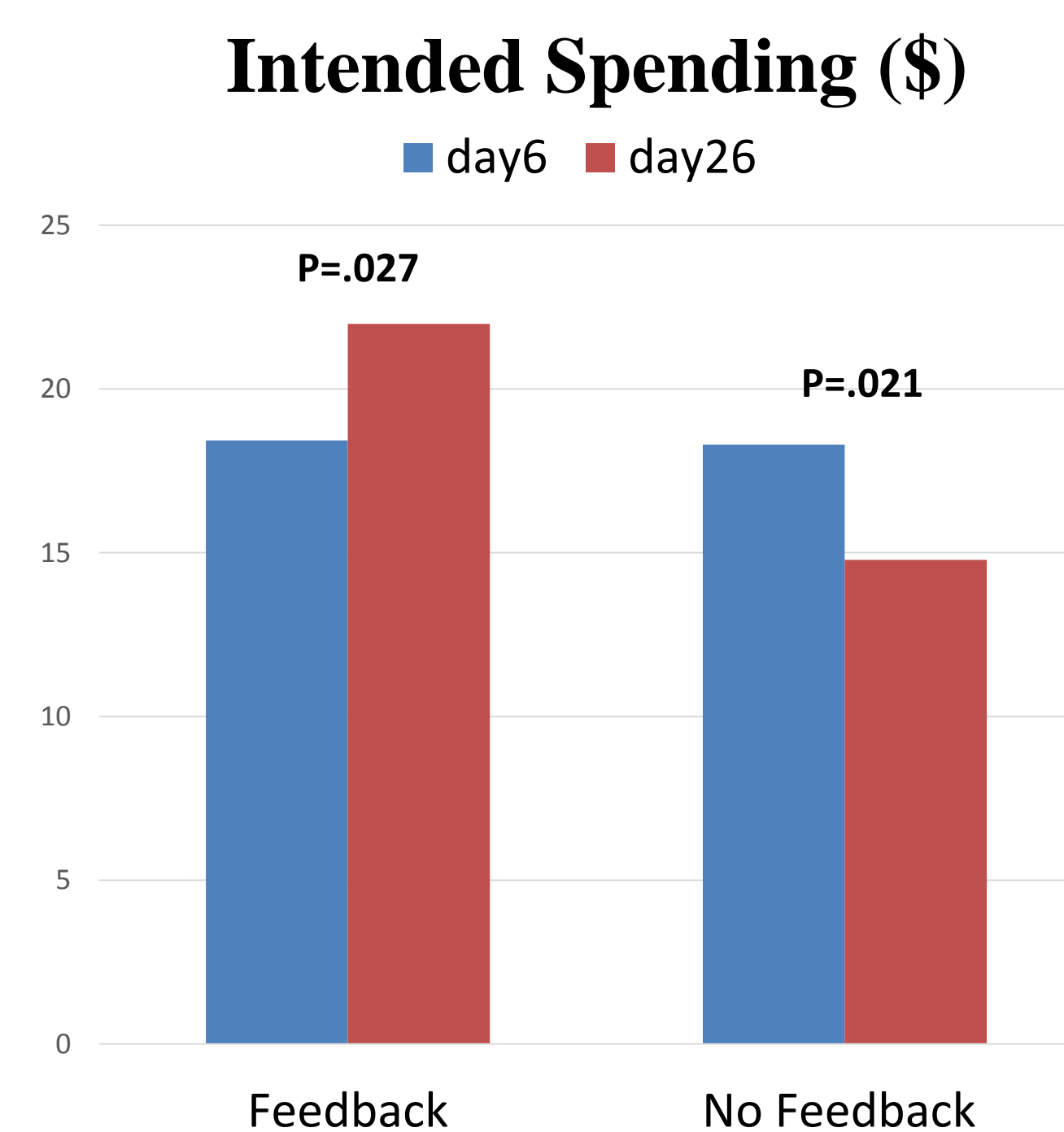
- **2 Spending Feedback** (present vs not, between subjects) X **2 Time** (on day6 vs day 26 of the budget, within subjects); N=145.
- DV: Spending amount

\$200/month for eating out



Feedback condition: Ps receive their cumulative spending record, once every five days during the budget month. (e.g. On the **5th** day of the month, you have spent **\$29** on restaurants.)

No feedback condition: Ps estimate their cumulative spending, once every five days during the budget month. (e.g. How much do you think you have spent in total until the **5th** day of the month?)



Feedback Effect: $F(1,143)=5.27, p=.023$.

Interaction: $F(1,143)=10.43, p=.002$.

→ **Receiving** (vs. **not receiving**) feedback **increases** (**decreases**) spending over time

Study 2

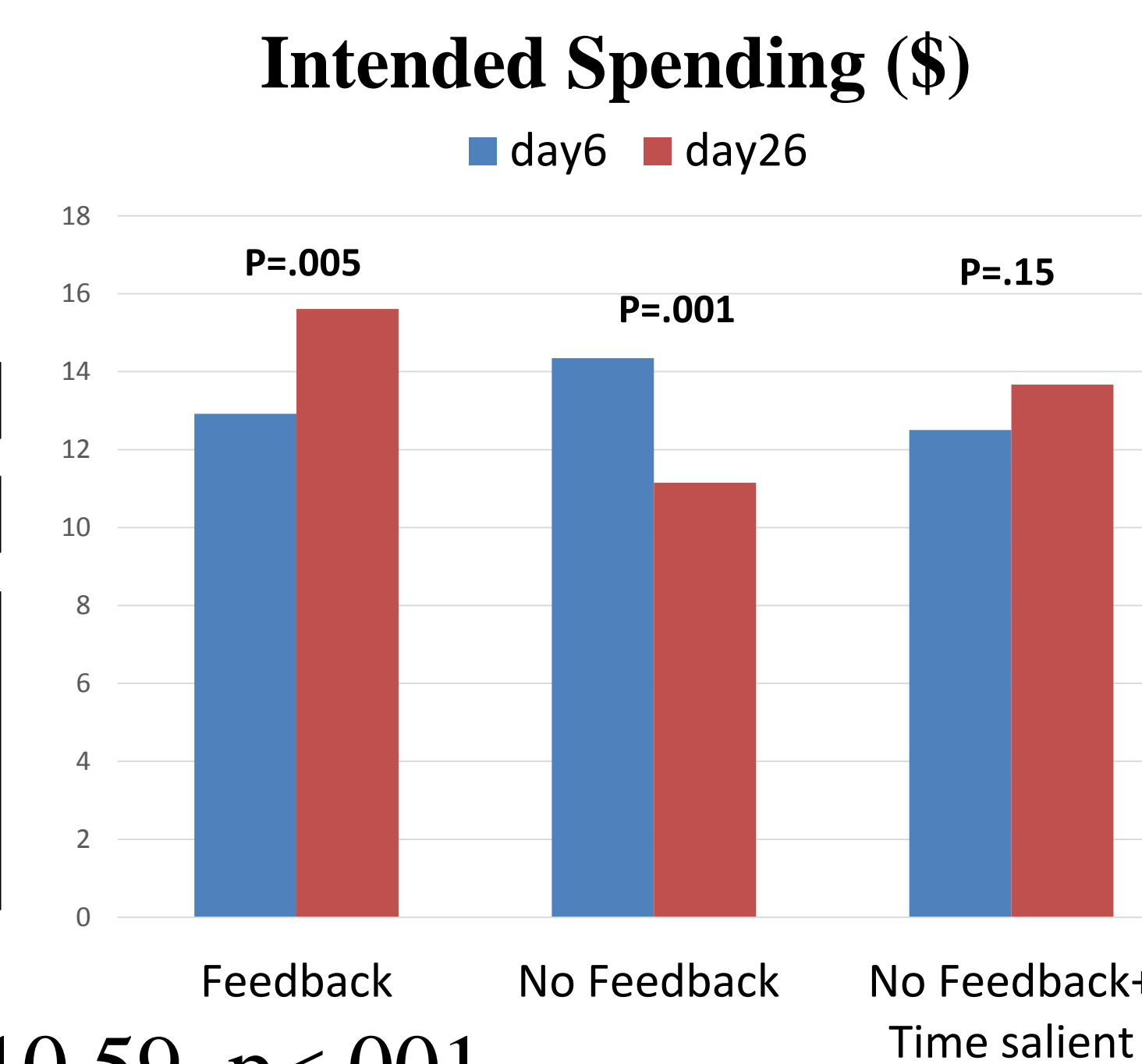
- **3 Spending Feedback** (present vs not vs not present+time salient, between subjects) X **2 Time** (on day6 vs day 26 of the budget, within subjects); N=237.
- DV: Spending amount

\$200/month for eating out

Feedback condition: Identical to study1

No feedback condition: Identical to study1

No feedback+Time salient: Ps are asked about time elapsed in the budget. (e.g. How many days have passed? How many days are remaining in the budgeting period?)



• **Interaction:** $F(2,234)=10.59, p<.001$.

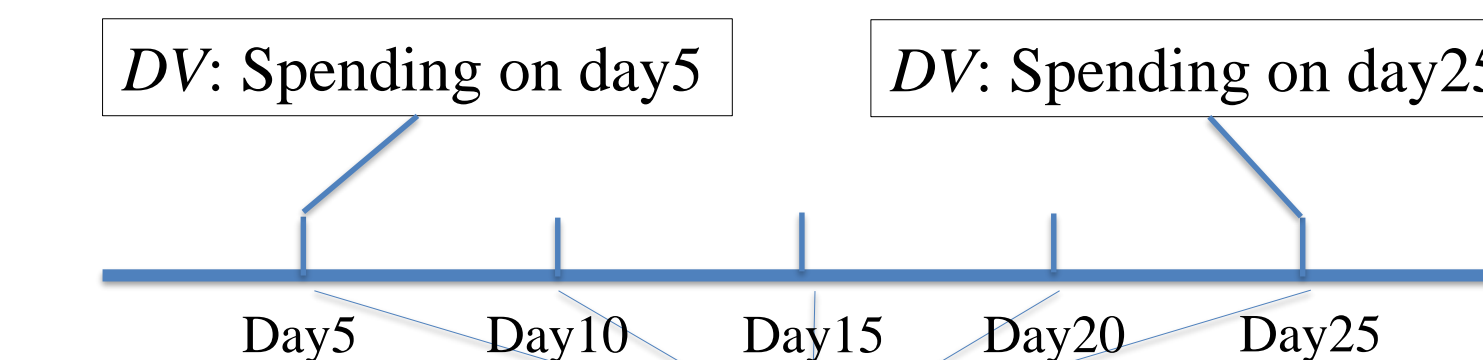
→ **Receiving** (vs. **not receiving**) feedback **increases** (**decreases**) spending over time

→ Making budget **time salient** to consumers in no feedback condition attenuates this difference.

Study 3

- **2 Feedback Interpretation** (focus on budget success vs. control, between subjects) X **2 Time** (on day6 vs day 26 of the budget, within subjects), N=107.
- DV: Spending amount

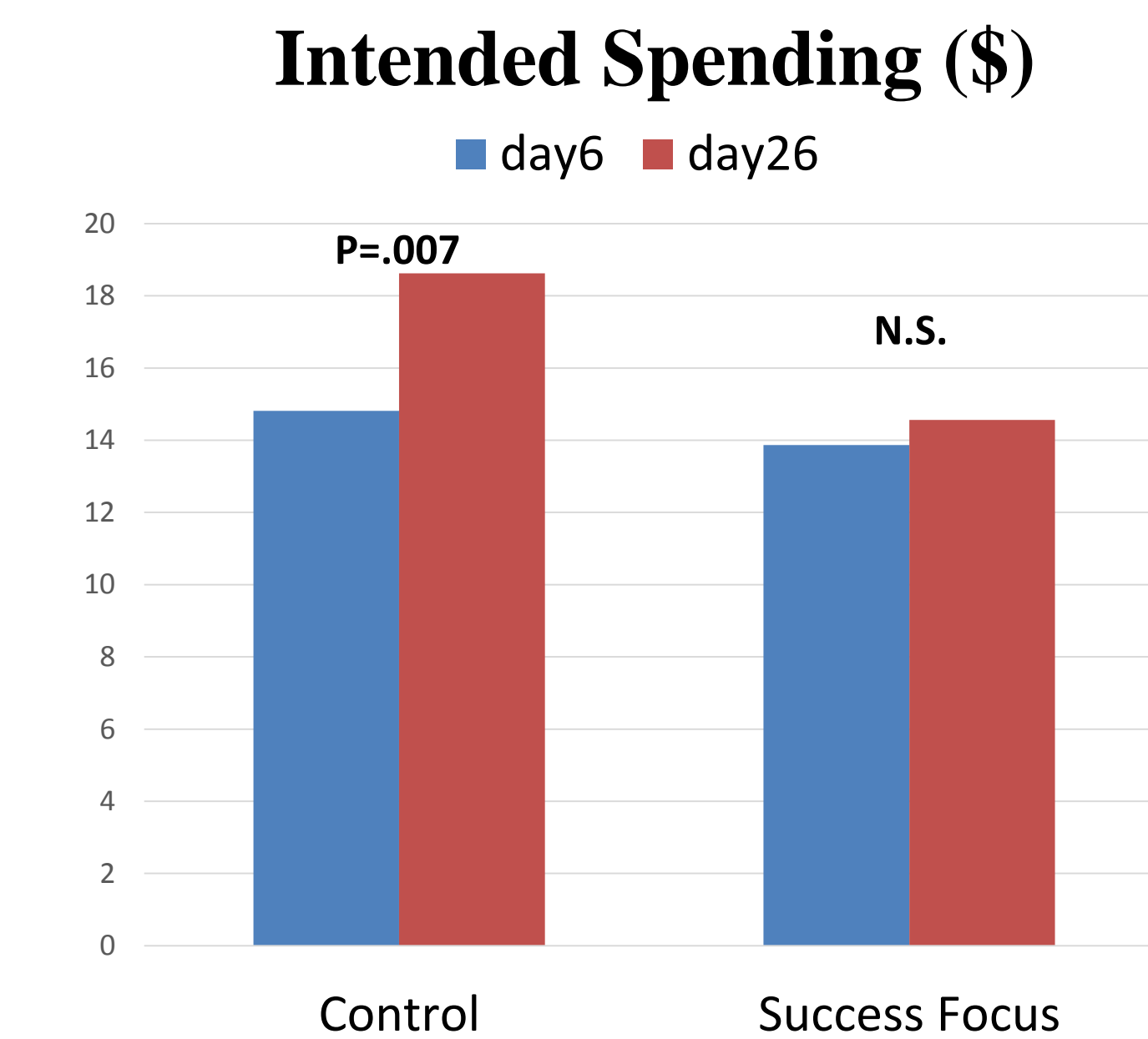
\$200/month for eating out



All Ps receive their cumulative spending record as in study 1 and 2.

Success focus: After seeing the feedback, Ps answered "How are you doing in terms of staying within your budget? (doing good/doing bad)"

Control: No question is asked after Ps seeing feedback.



Budget success perception is not sensitive to time.

→ **Receiving** feedback **increases** spending over time.

→ Making consumers interpret feedback in a **time-insensitive** manner **attenuates** spending acceleration.

Summary

We question the effectiveness of providing spending feedback for consumers budget adherence. Specifically, we demonstrate that providing repeated positive feedback to consumers can lead to spending acceleration, adversely affecting consumers, compared with situations where no spending feedback is present.

We also suggest ways to improve the framing of spending feedback, such as nudging consumers to interpret feedback in a time-insensitive way (e.g. as discrete success check) to attenuate spending acceleration.