

# Respondents Playing Fast and Loose?: Antecedents and Consequences of Respondent Speed of Completion

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# Sub-optimal Response in Surveys



- **Survey satisficing** occurs when respondents respond in ways that shortcut cognitive processes, often selecting responses that are reasonable but without a thorough memory search or sufficient information integration (Krosnick, 1991; 1999).
- As the cognitive and manual demands of the survey increase or as respondents exhaust the resources they are willing or able to devote to completing the survey, satisficing increases.

# Sub-optimal Response in Surveys



- Typically, satisficing has been viewed as requiring some degree of **conscious decision making** and **motivated behavior** (i.e., respondent tries to fulfill the survey goals but with less effortful and less accurate responses).
- However, there are many instances of respondent behavior that result in less-than-accurate responding unrelated to motivated behavior and may be affected by question design or survey context. We believe that the term '**sub-optimal behavior**' rather than 'satisficing' is a more inclusive term that captures respondent behavior that is associated with less-than-accurate responding unrelated to motivation.

# Sub-optimal Response in Surveys



- **Satisficing is seen as a consistent survey strategy which a respondent engages in throughout the survey, often reflecting increasing use of shortcuts through the survey process as fatigue or annoyance increases.**
- **By contrast, sub-optimal responding may vary from moment to moment in the survey based on fluctuations of motivation, comprehension, understanding, retrieval, and response selection.**

# Sub-optimal Response in Surveys



- Asking a respondent to use the same response format for a series of repeated items (such as ‘Strongly Agree’ to ‘Strongly Disagree’) in grids is prone to one form of sub-optimal response – **non-differentiation**.
- This may especially be true in online or mail surveys and less likely to be true in situations with human interviewers.

# Sub-optimal Response in Surveys



**In most cases, non-differentiation is seen as a deterrent to high quality data. Non-differentiation is seen as:**

- **a dishonest or mistaken response (a bias)**
- **an inattentive response (error), or**
- **an approximate response rather than the respondent's true response based on the respondent's overall evaluation (some good measurement plus some error)**

# Sub-optimal Response in Surveys



**Besides non-differentiation, there are a number of other indicators of sub-optimal responding:**

- **Speeding through the survey (measured in elapsed time)**
- **Middling responding (central tendency response pattern)**
- **Respondent discontinuance of the survey (suspend rates)**
- **Failure at trap questions (e.g., compliance traps or consistency traps)**
- **Random responding**
- **Response order effects – primacy or recency**

# FOQ2 Study - Method



- **Study was conducted with the Advertising Research Foundation as part of the Foundations of Quality 2 Project (FOQ2) initiative. Questionnaire was finalized in November, 2012 and the online survey fielded from January 9, 2013 to January 24, 2013.**
- **Questionnaire length –**
  - **Online: median 23.6 minutes; mean 25.7 minutes**
  - **Phone: mean 22.7 minutes with about half the number of questions**
- **Respondents were obtained from 17 different opt-in sample providers, each contributed approximately 3,000 respondents.**



## FOQ2 - Fielding



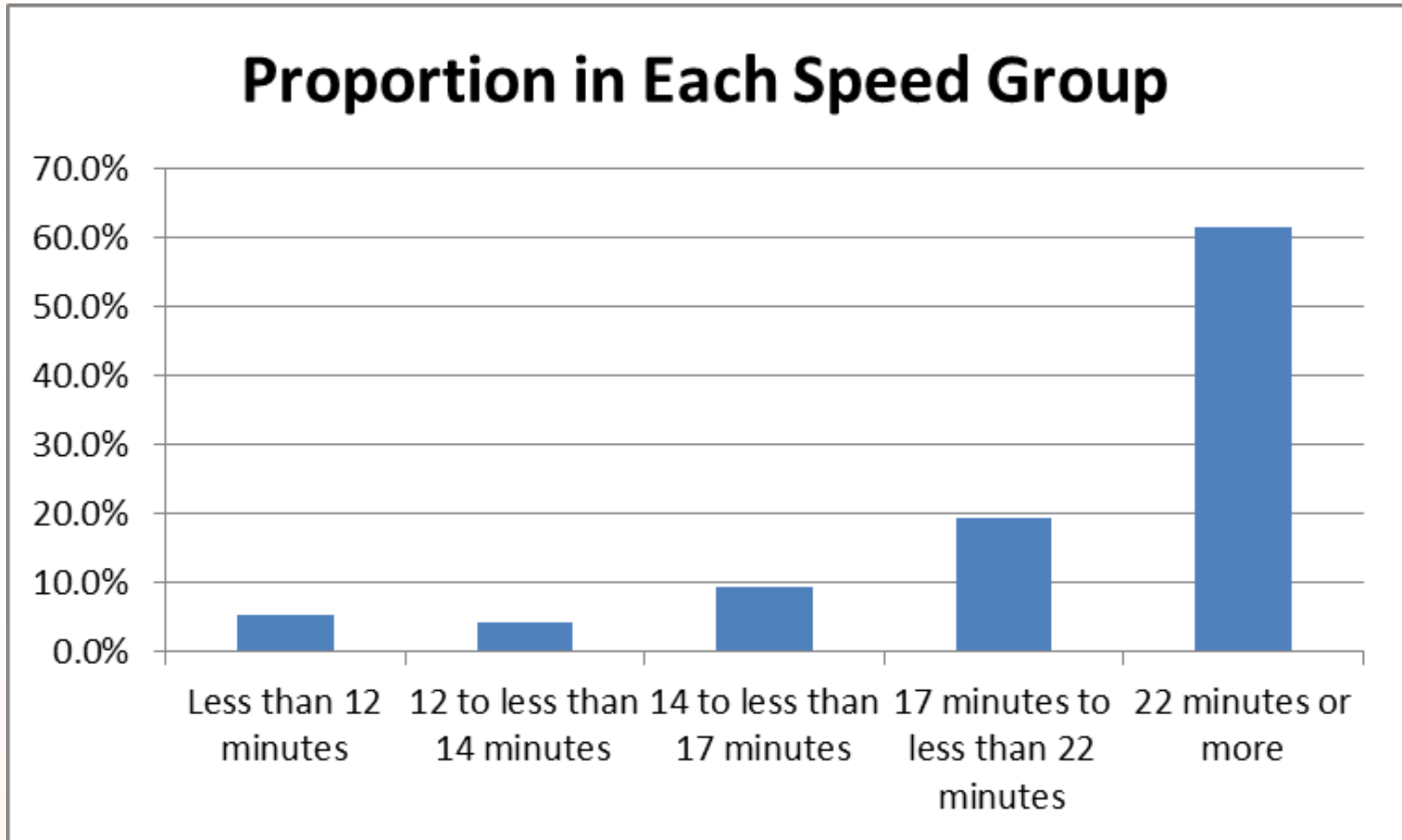
- **For the online mode, respondents were de-duplicated within-provider based on unique machine fingerprint while in field.**
- **For analyses in this paper we include only those respondents from Sample Methods A, B, and C (total n = 57,104). As such, this study includes only online respondents.**

# FOQ2 Sub-optimal Results Overall

# Respondent Behavior - Speed



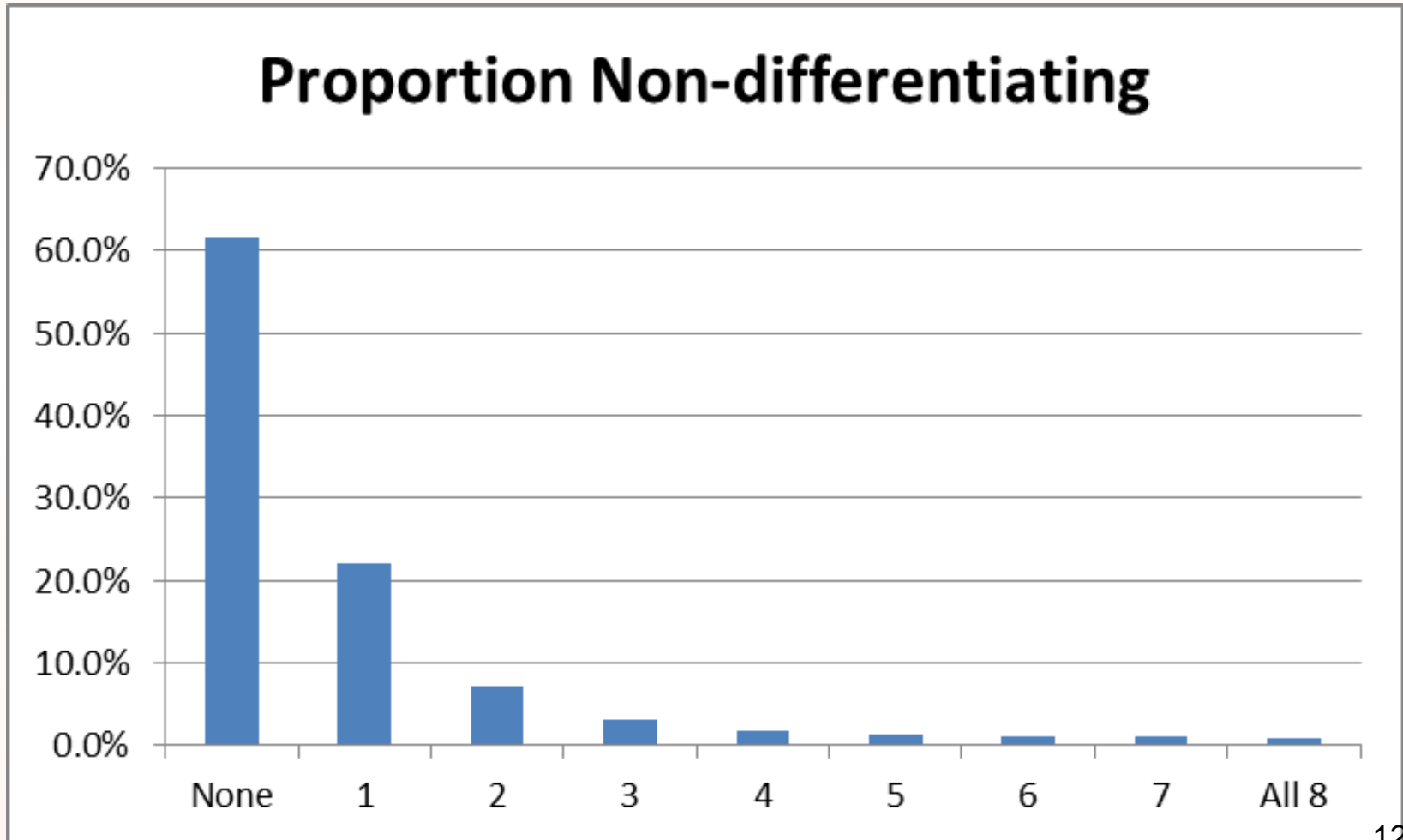
Created 5 speed groups based on length of time to complete the survey



# Respondent Behavior – Non-differentiation



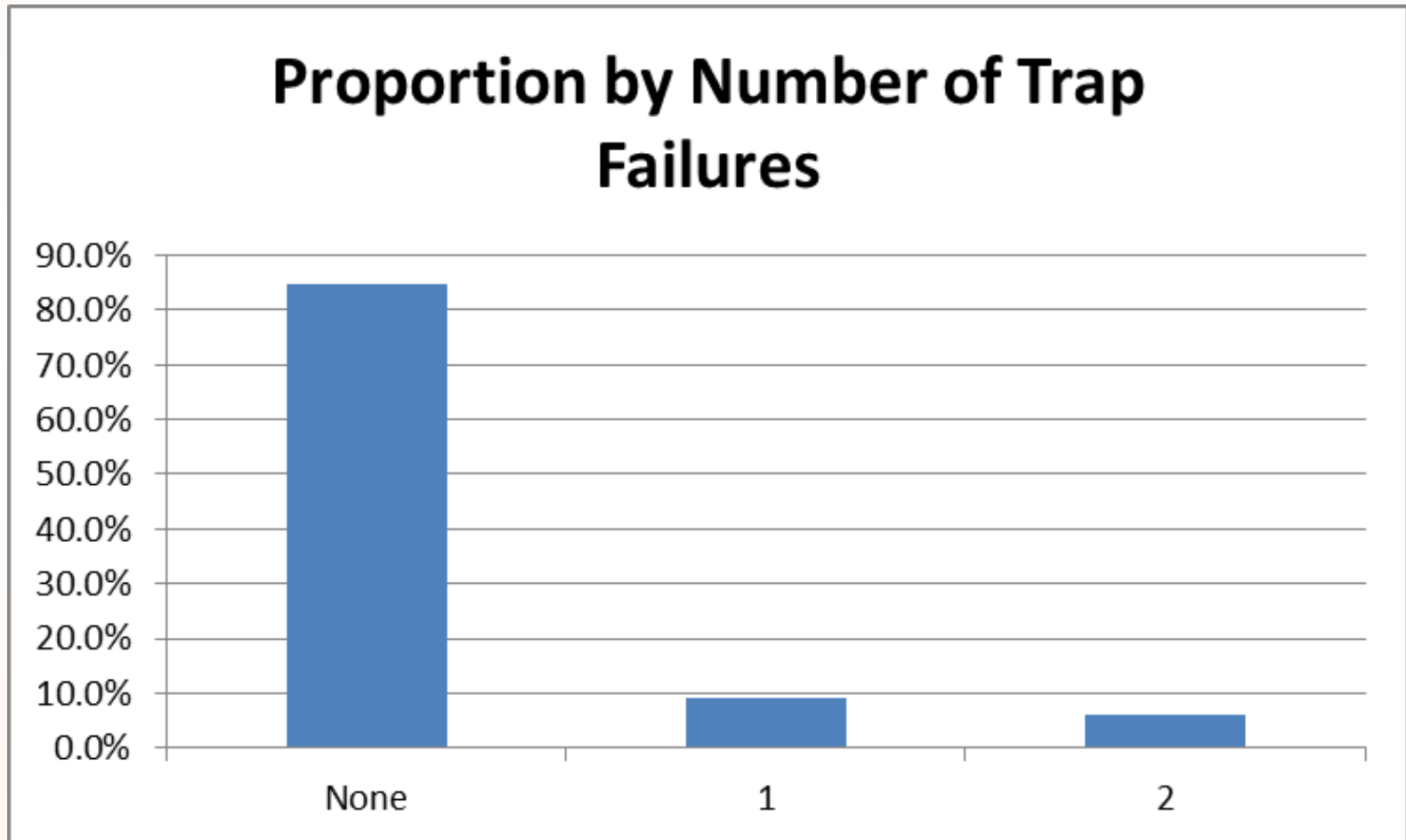
Computed non-differentiation score based on 8 grids



# Respondent Behavior - Traps



Had 2 items that were traps (e.g., Open item – please click “Not at all important”)

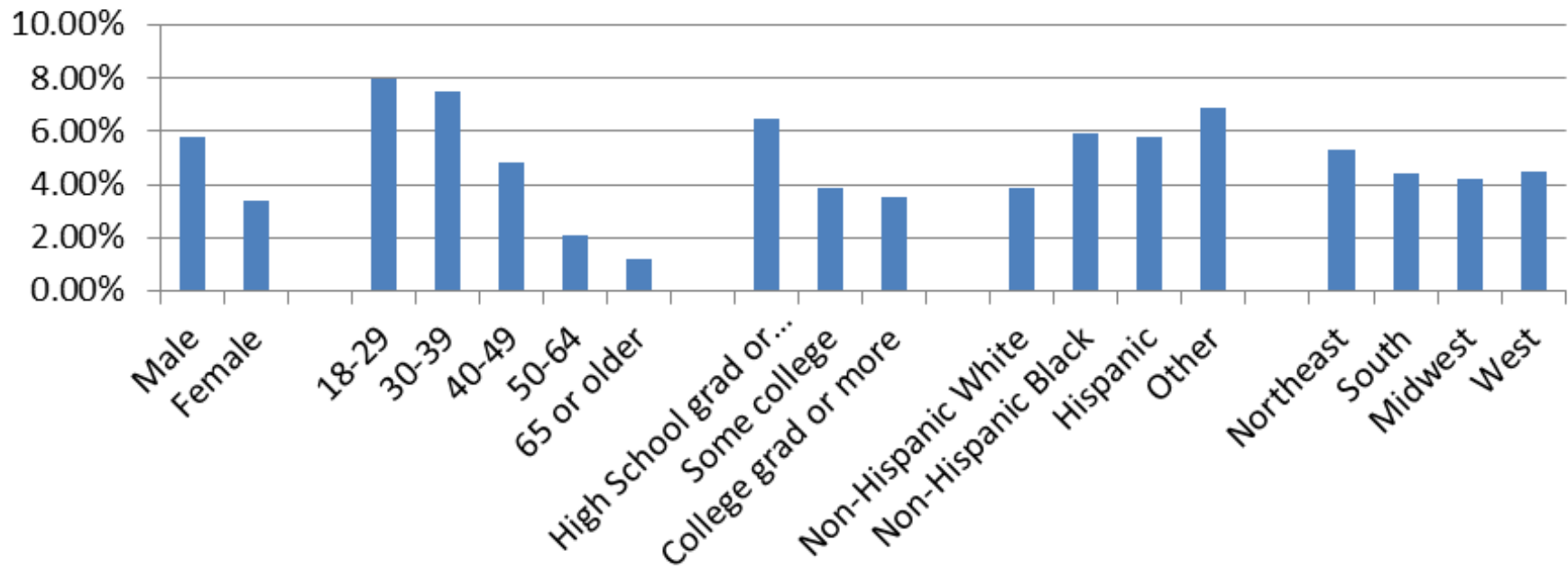


# FOQ2 Sub-optimal Behavior and Demographics

# Correspondence of Egregious Non-differentiation with Demographics



## % Egregious Non-differentiation by Demographics

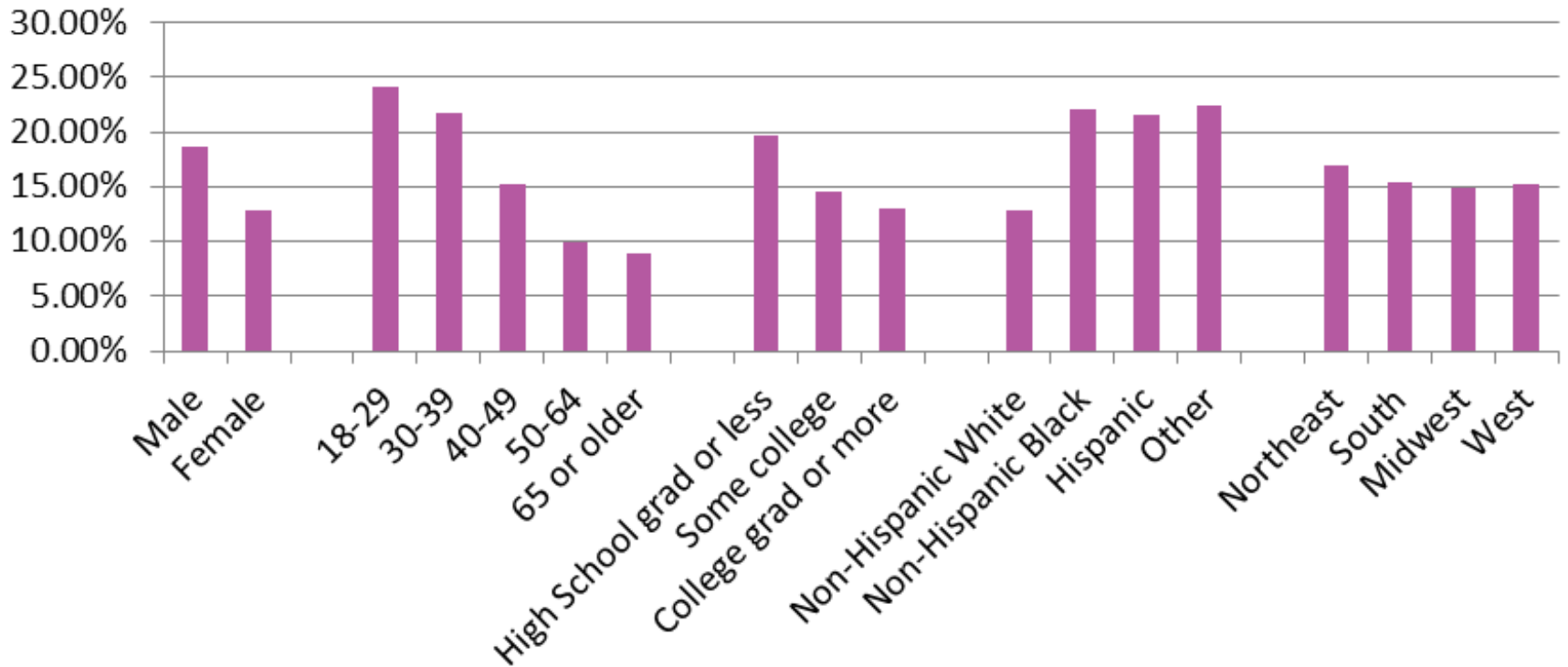


Group means use covariates to control for other demographic variables (e.g. analysis of sex controls for age, education, race, region).

# Correspondence of Trap Failure with Demographics



## % Failing at Least 1 Trap



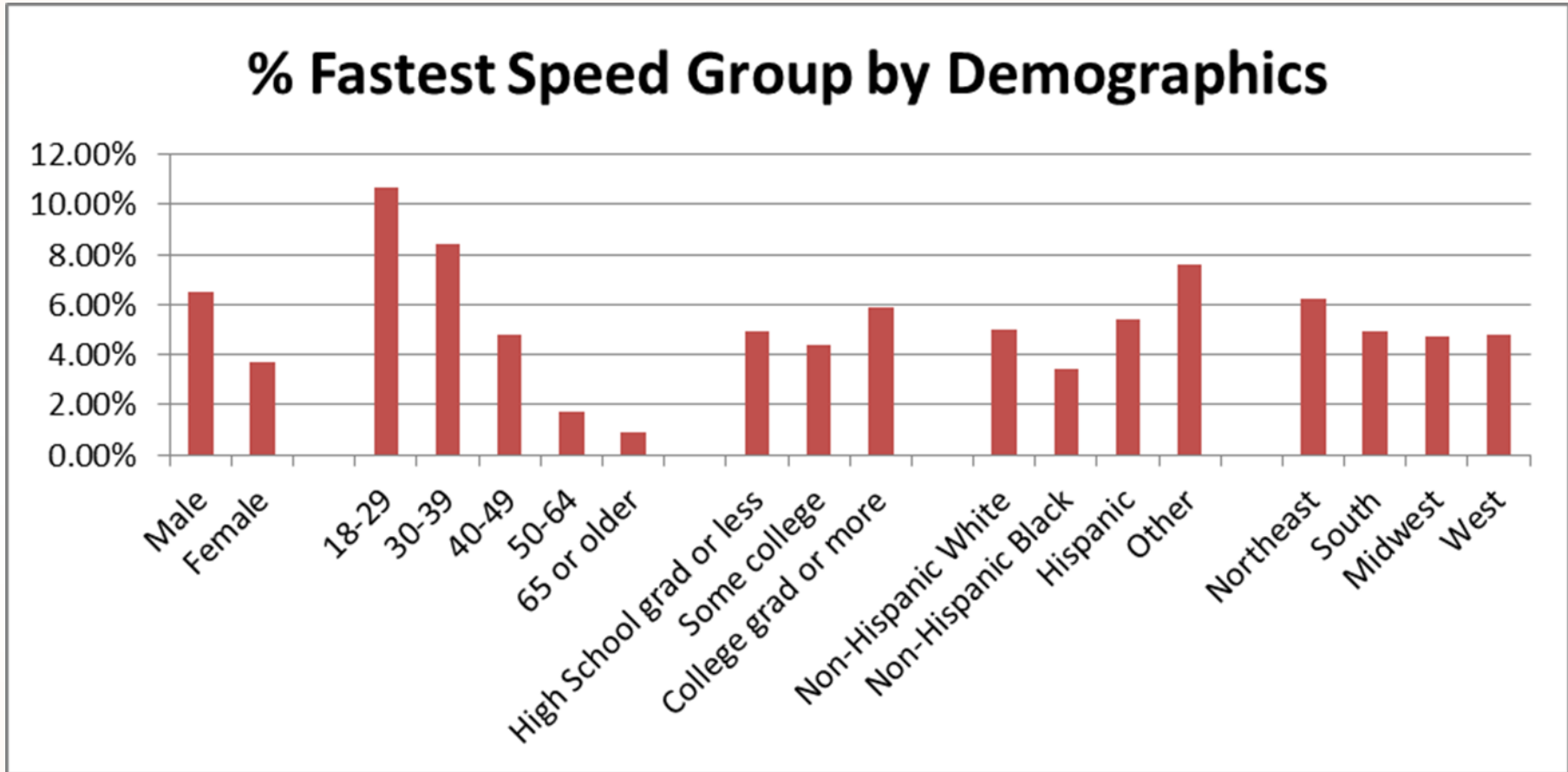
Group means use covariates to control for other demographic variables (e.g. analysis of sex controls for age, education, race, region).



# Correspondence of Speed with Demographics



Speeders were more likely to be male, young, and from Northeast



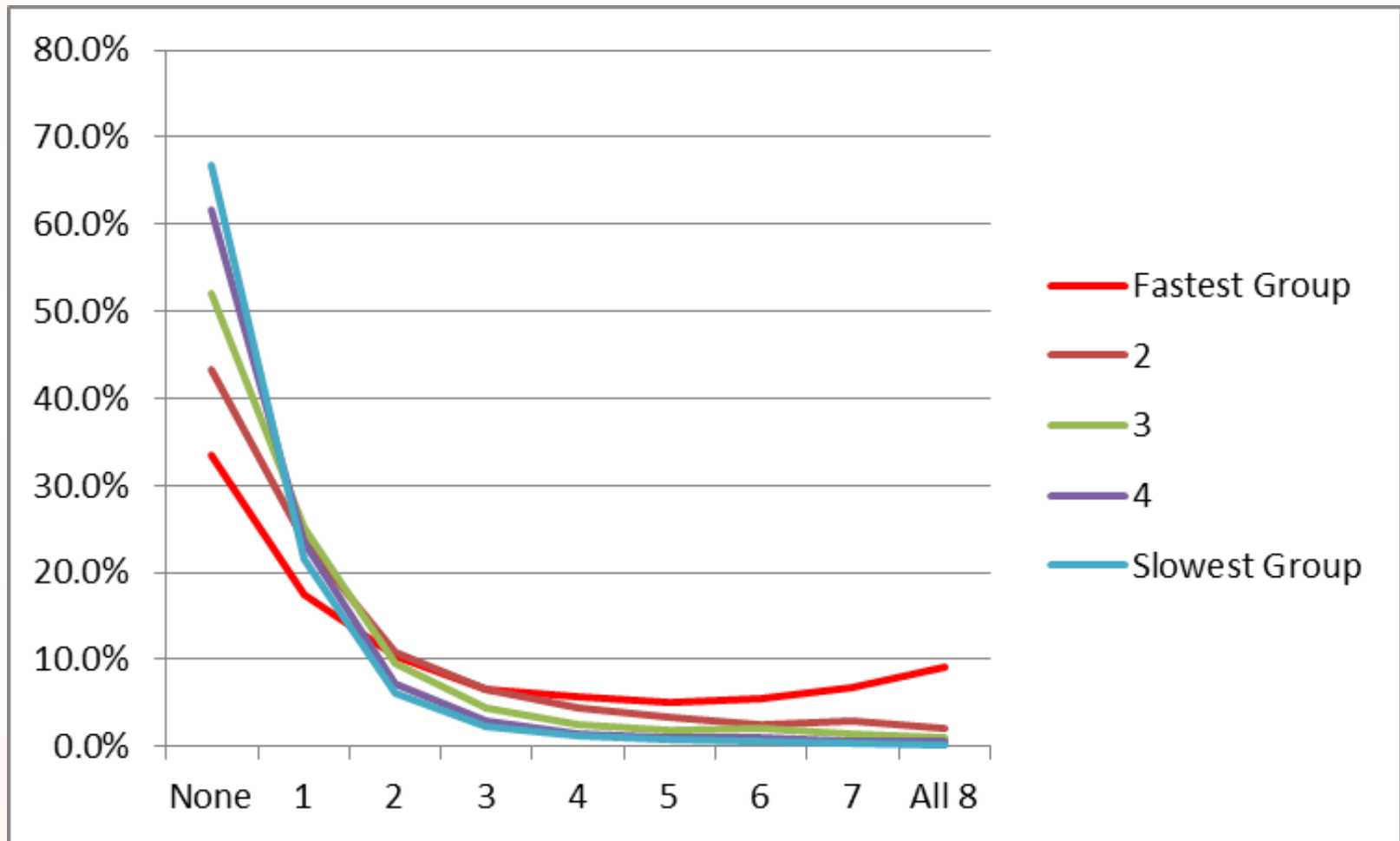
Group means use covariates to control for other demographic variables (e.g. analysis of sex controls for age, education, race, region).

# FOQ2 Sub-optimal Behavior Correspondence

# Correspondence of Speed with Non-differentiation



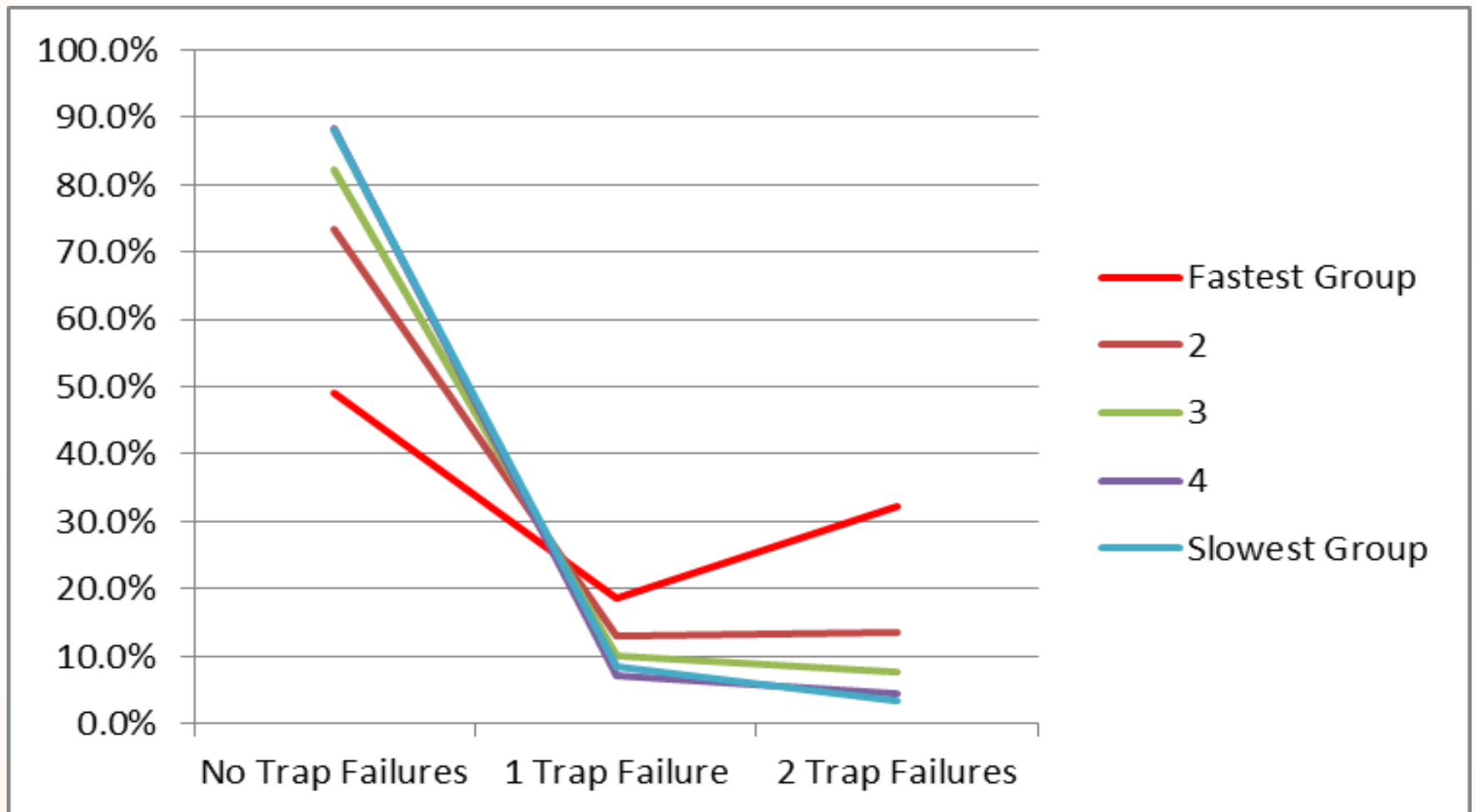
The fastest group showed more non-differentiation



# Correspondence of Speed and Trap Failures

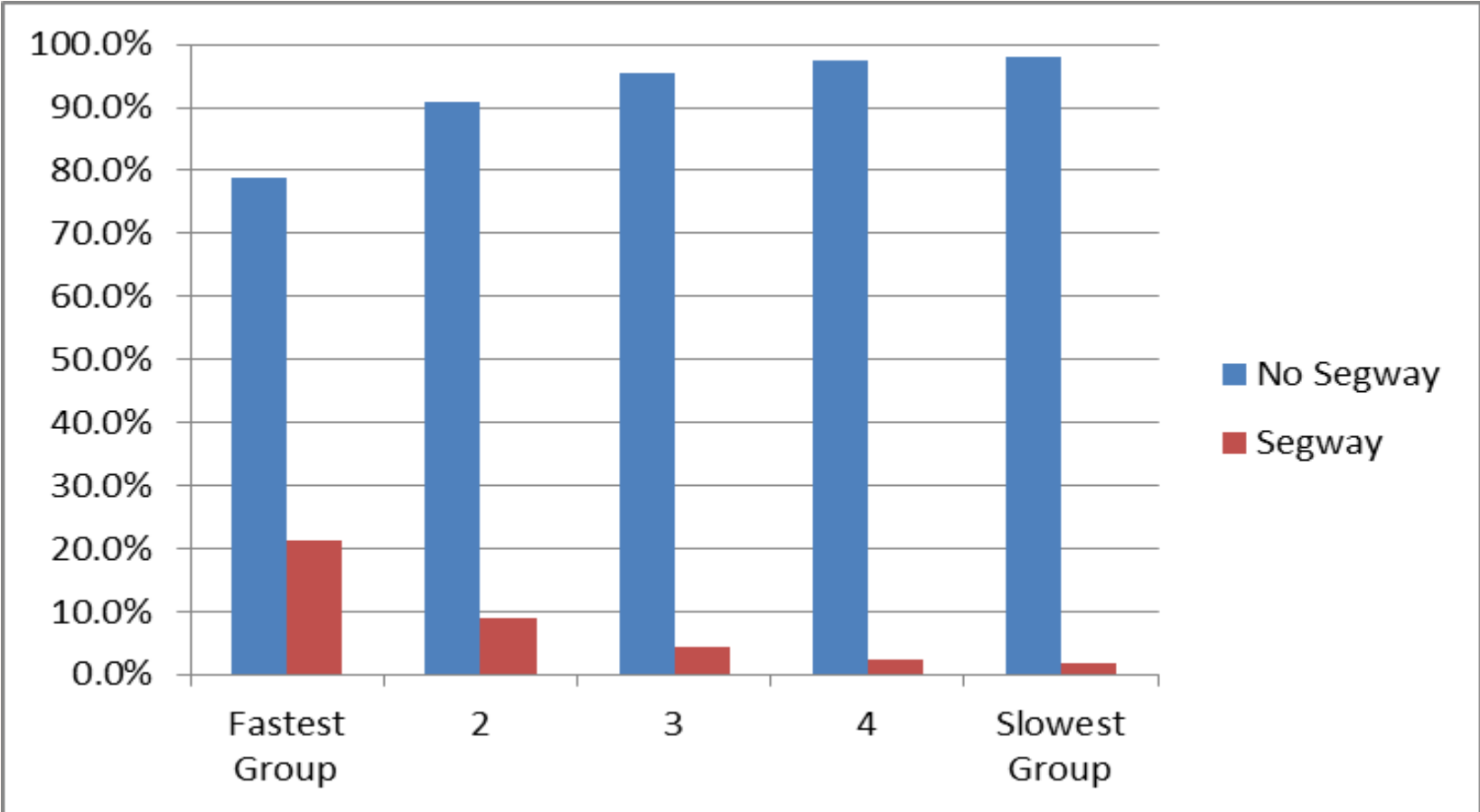


The fastest group showed the highest rate of trap failures



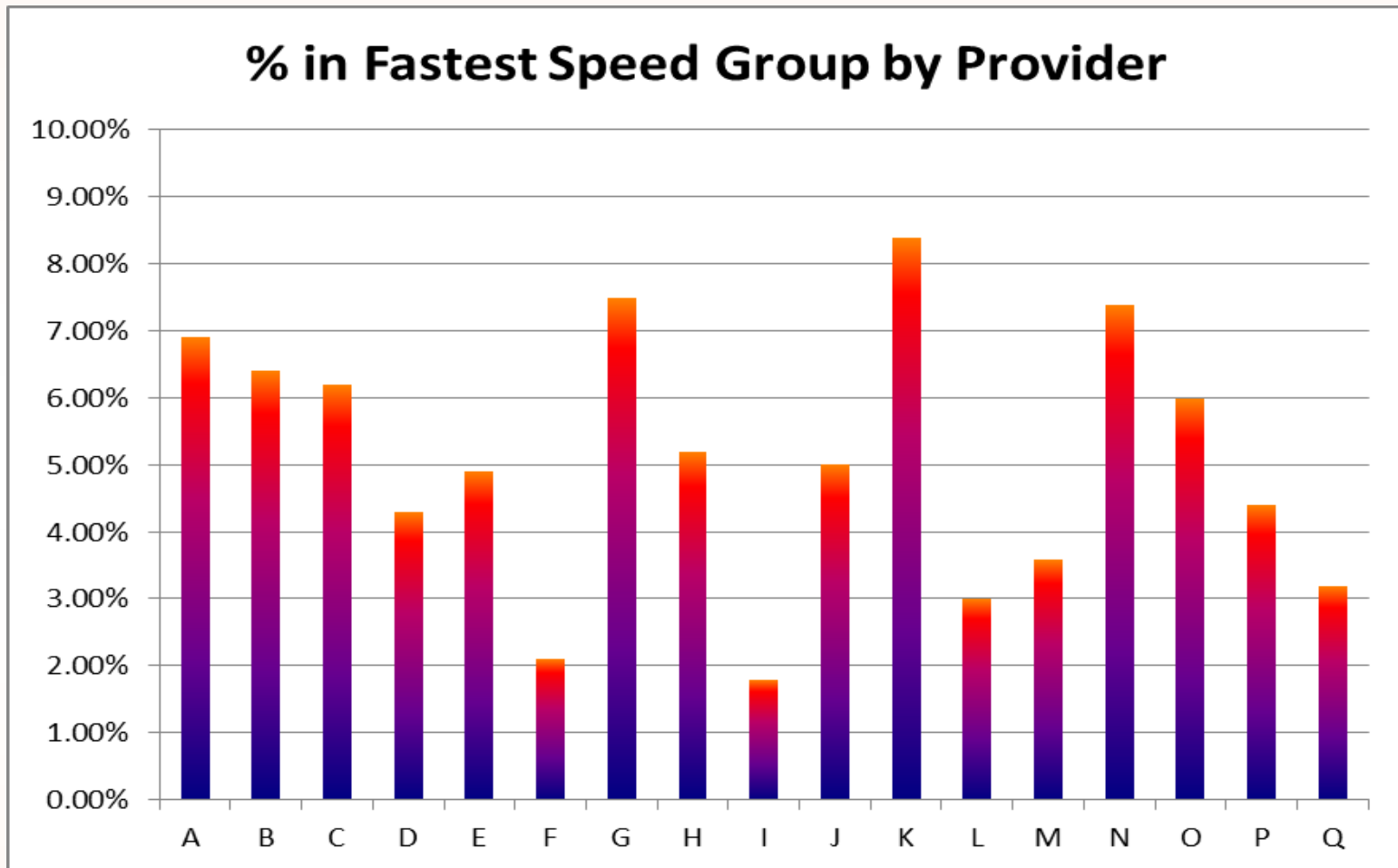
# Correspondence of Speed with Rare Behavior

The fastest group showed the highest occurrence of rare behavior (purchase of Segway past 6 months)



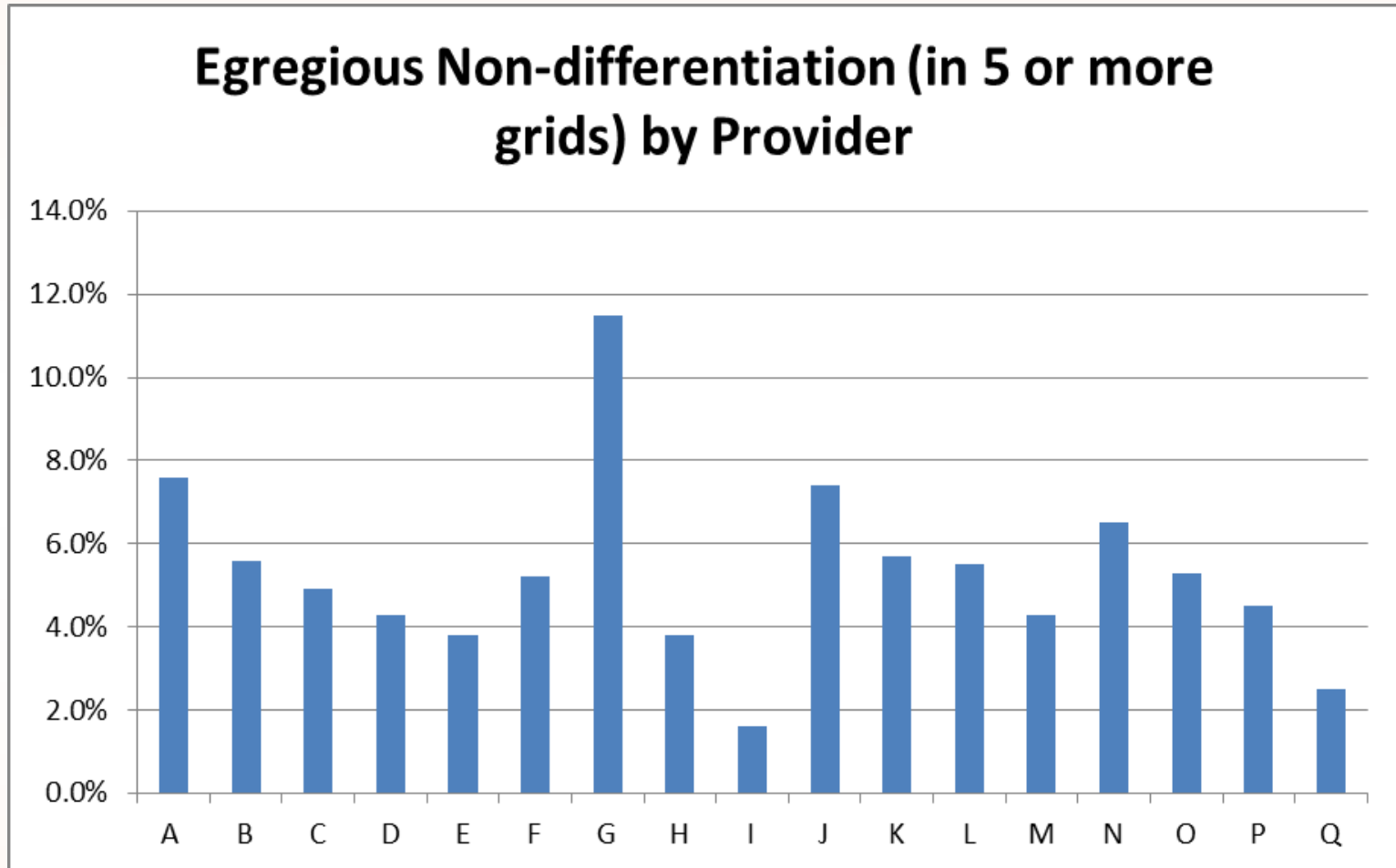
## **FOQ2 Sub-optimal Results by Provider**

# Respondent Behavior – Differences in Speeders by Provider



Using unweighted data for Methods A, B, and C only; differences due to age, sex, region, race/ethnicity, and education are controlled for through covariate analyses.

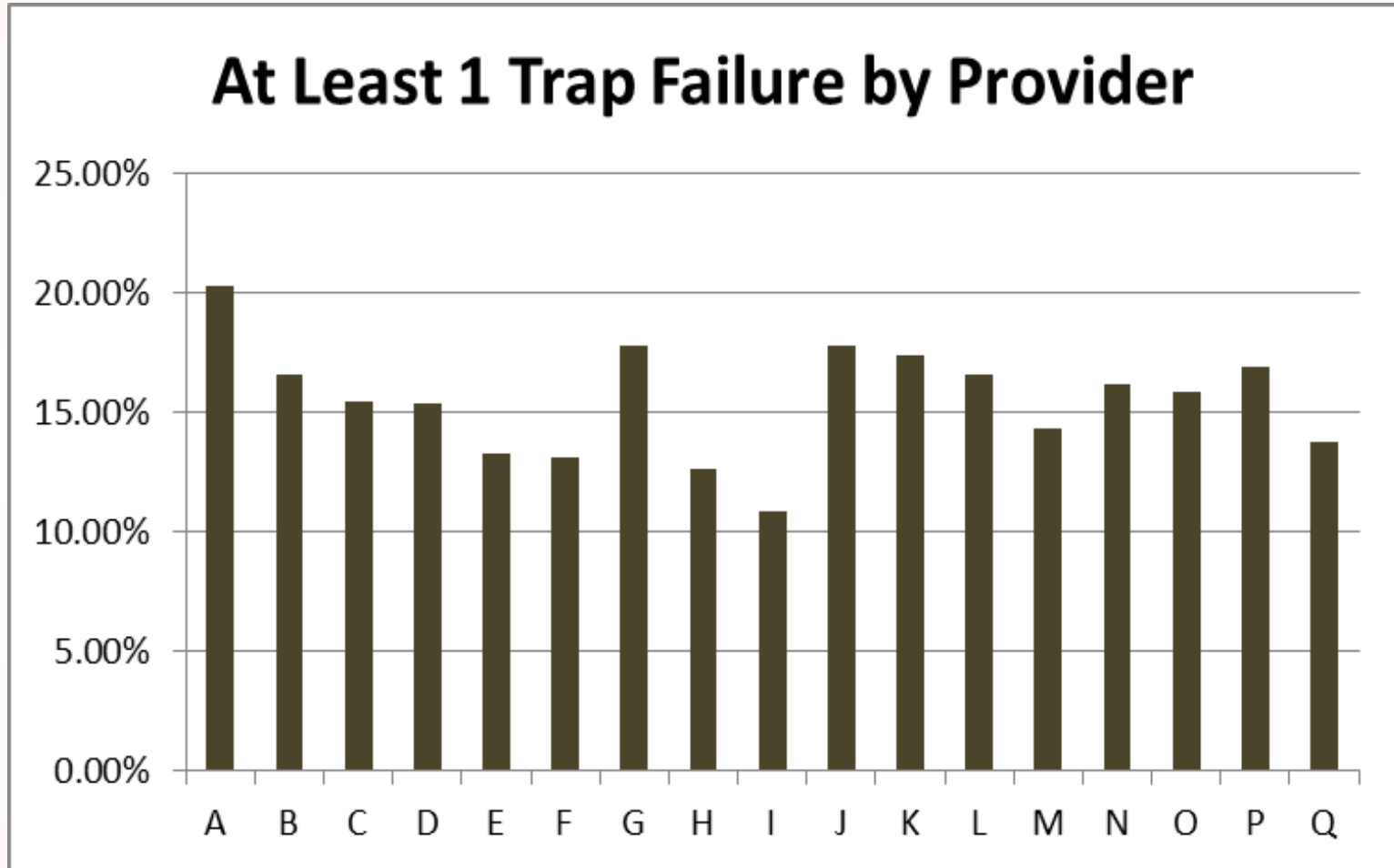
# Respondent Behavior – Egregious Non-differentiation by Provider



Using unweighted data for Methods A, B, and C only; differences due to age, sex, region, race/ethnicity, and education are controlled for through covariate analyses.



# Respondent Behavior – Traps by Provider



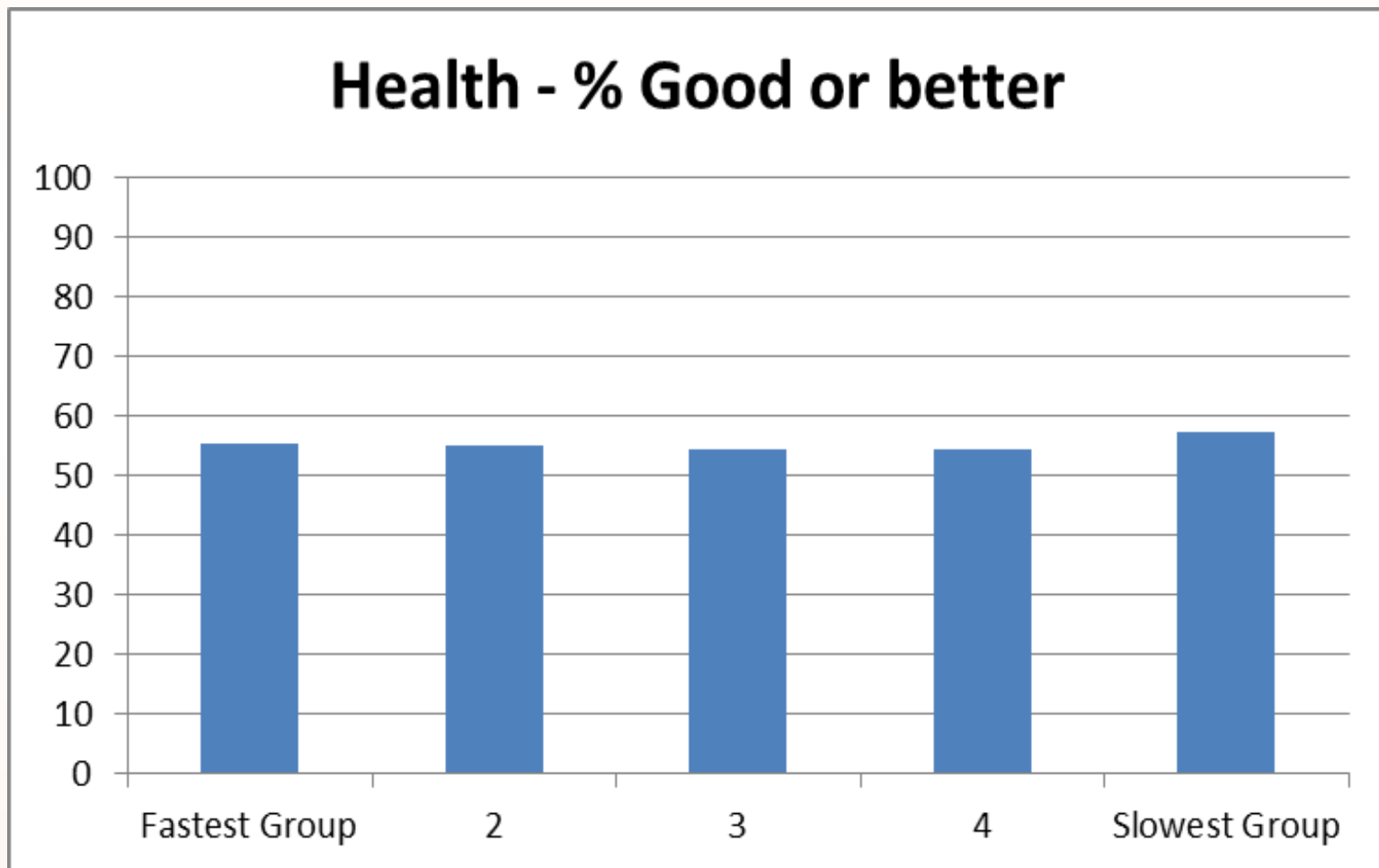
Using unweighted data for Methods A, B, and C only; differences due to age, sex, region, race/ethnicity, and education are controlled for through covariate analyses.

# **Influence of Sub-optimal Behavior on Substantive Responses**

# Correspondence of Speed with Health – Good or better



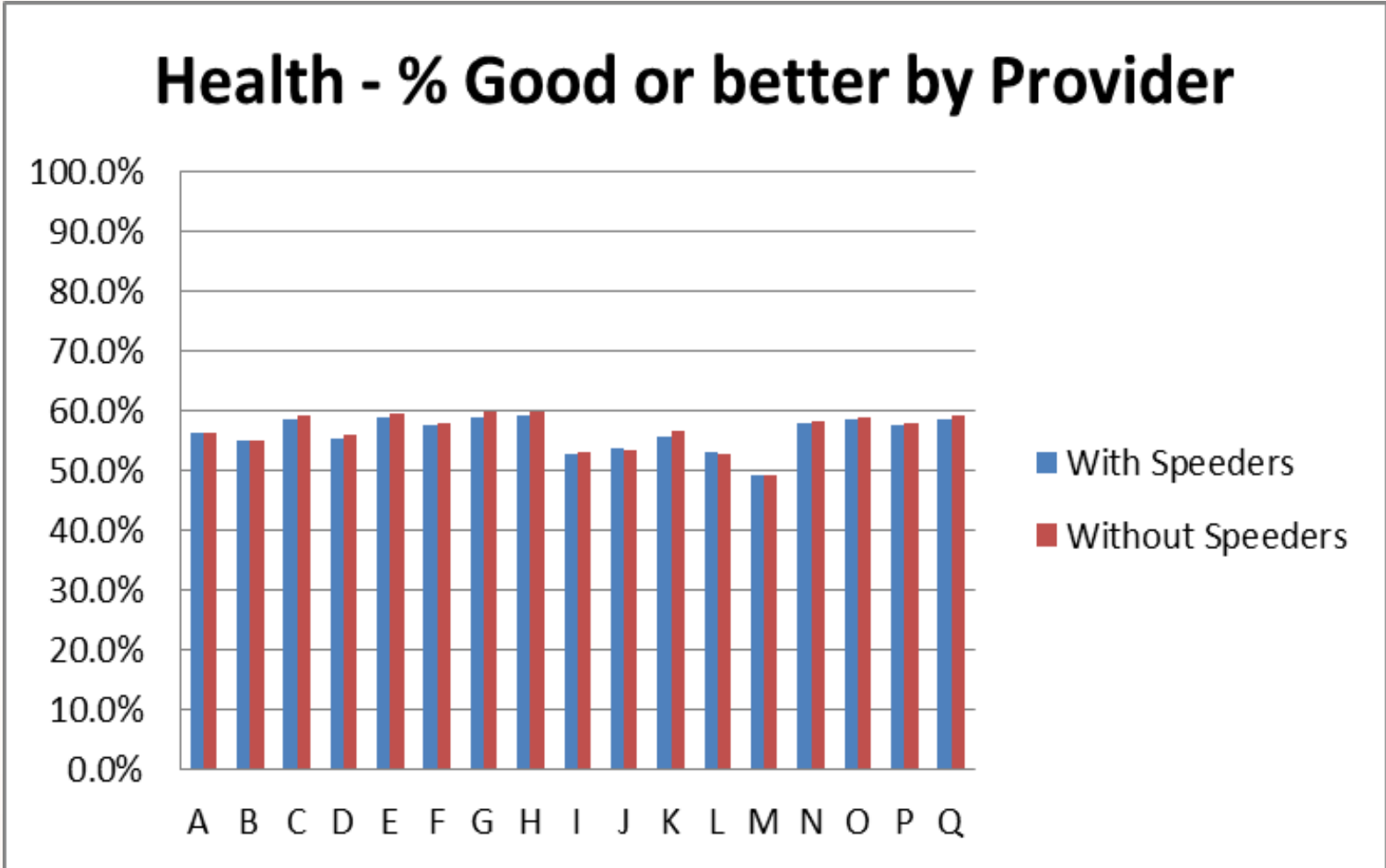
The fastest group showed no difference in self-rated health from the other groups – slowest was higher.



# Correspondence of Speed with Health – Good or better



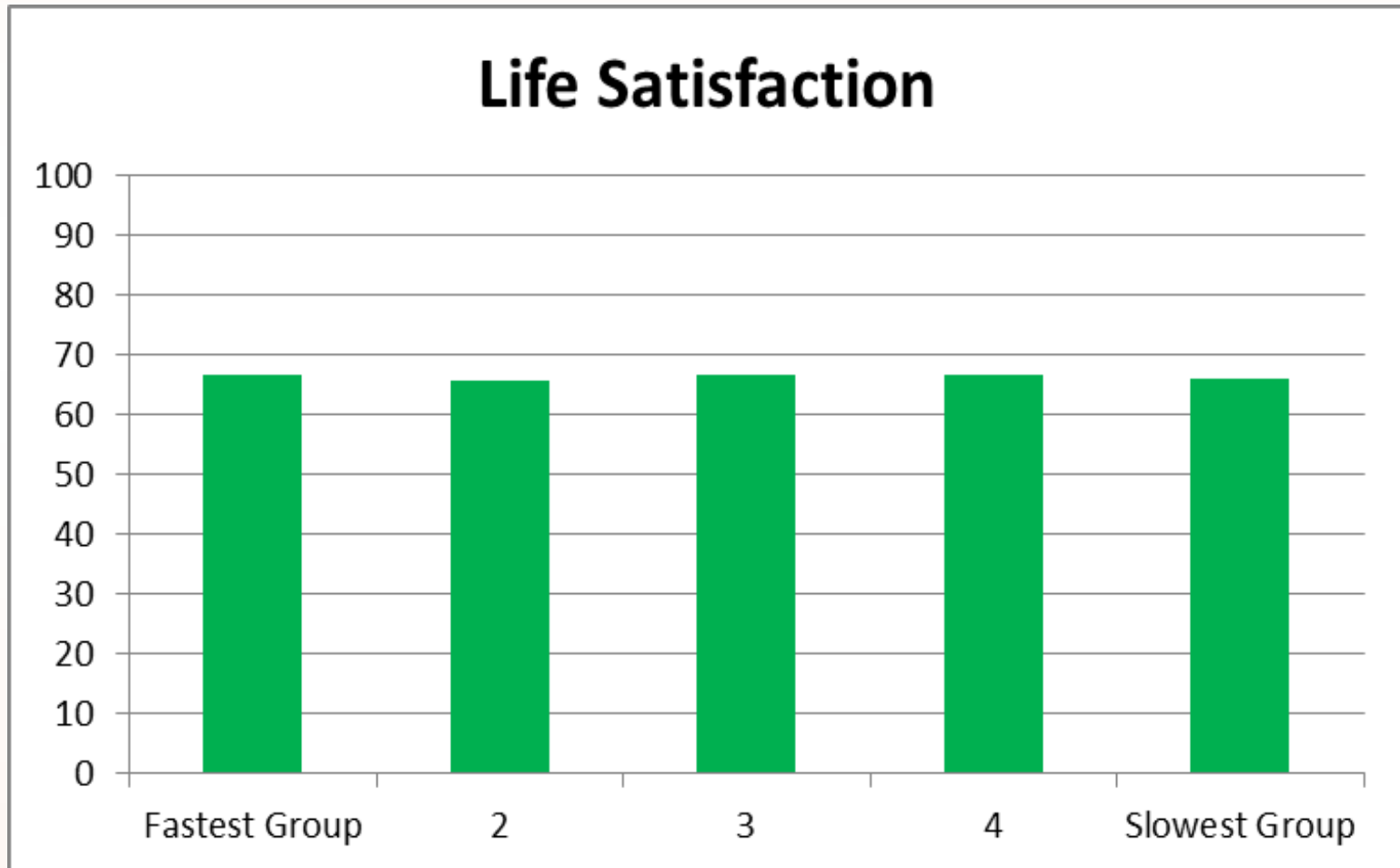
The differences between providers were greater than differences due to speeders.



# Correspondence of Speed with Overall Life Satisfaction



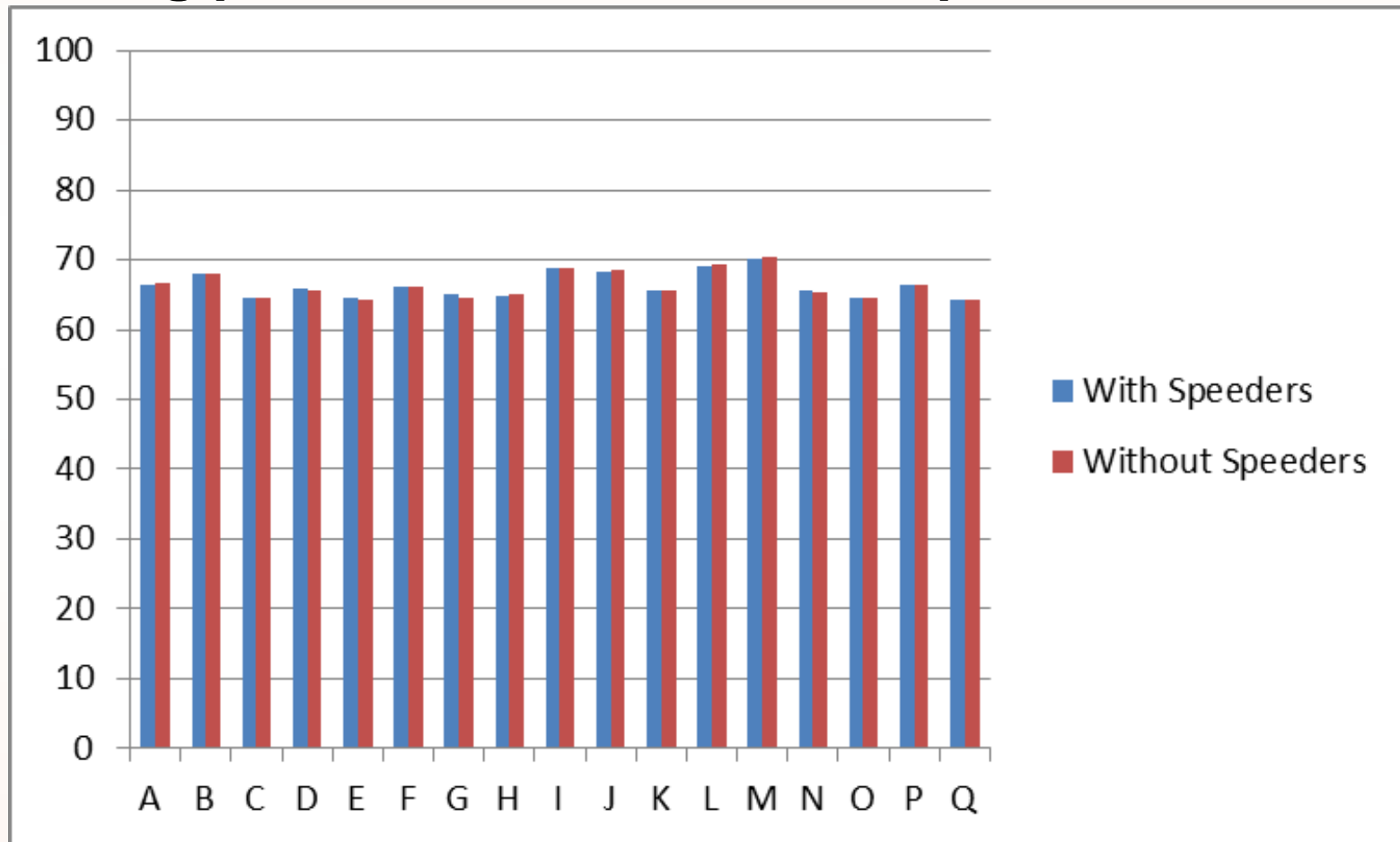
The fastest group showed no difference in self-rated life satisfaction.



# Correspondence of Speed with Overall Life Satisfaction



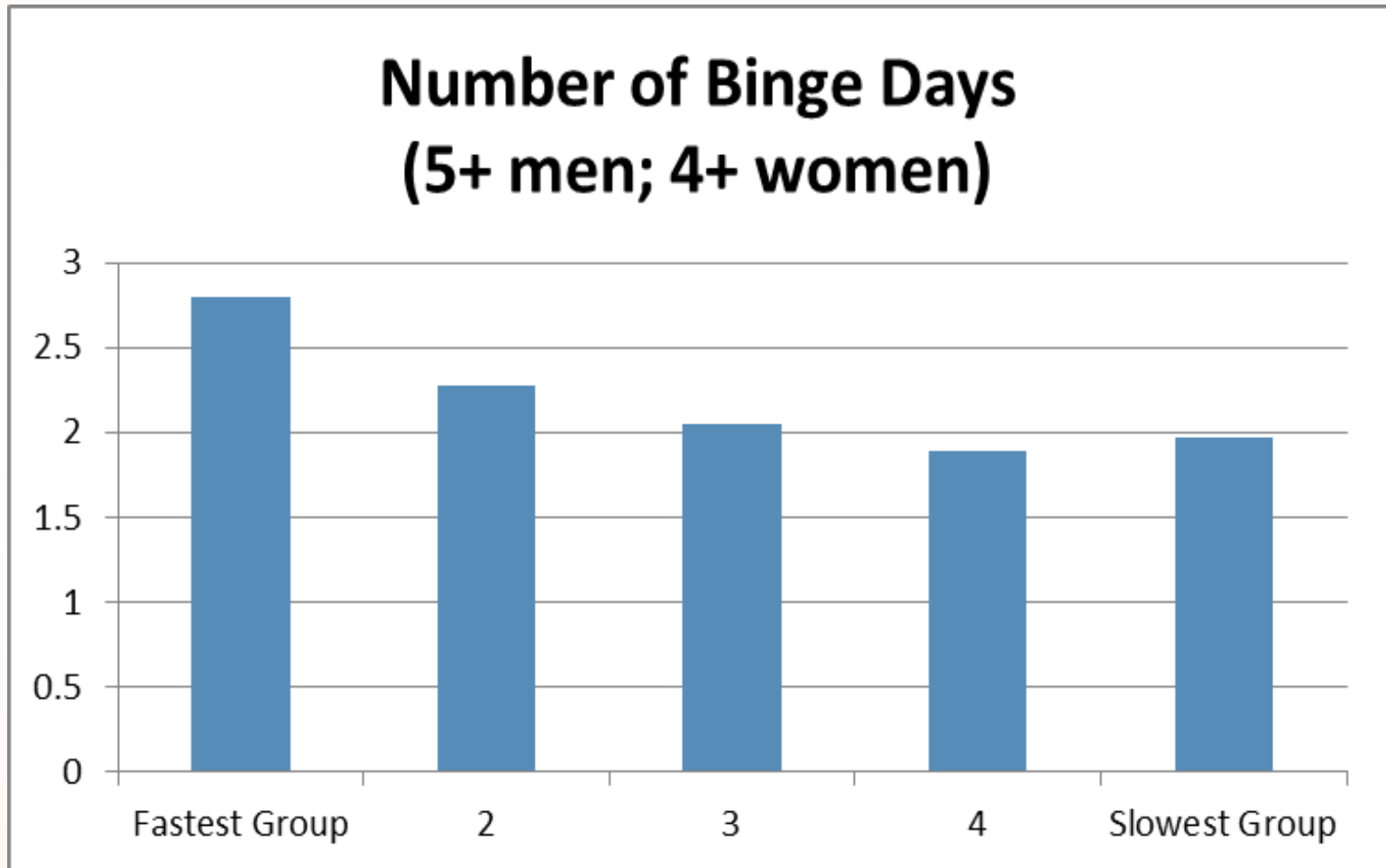
**Again, some differences in self-rated life satisfaction among providers, but not due to speeders.**



# Correspondence of Speed with Binge Drinking



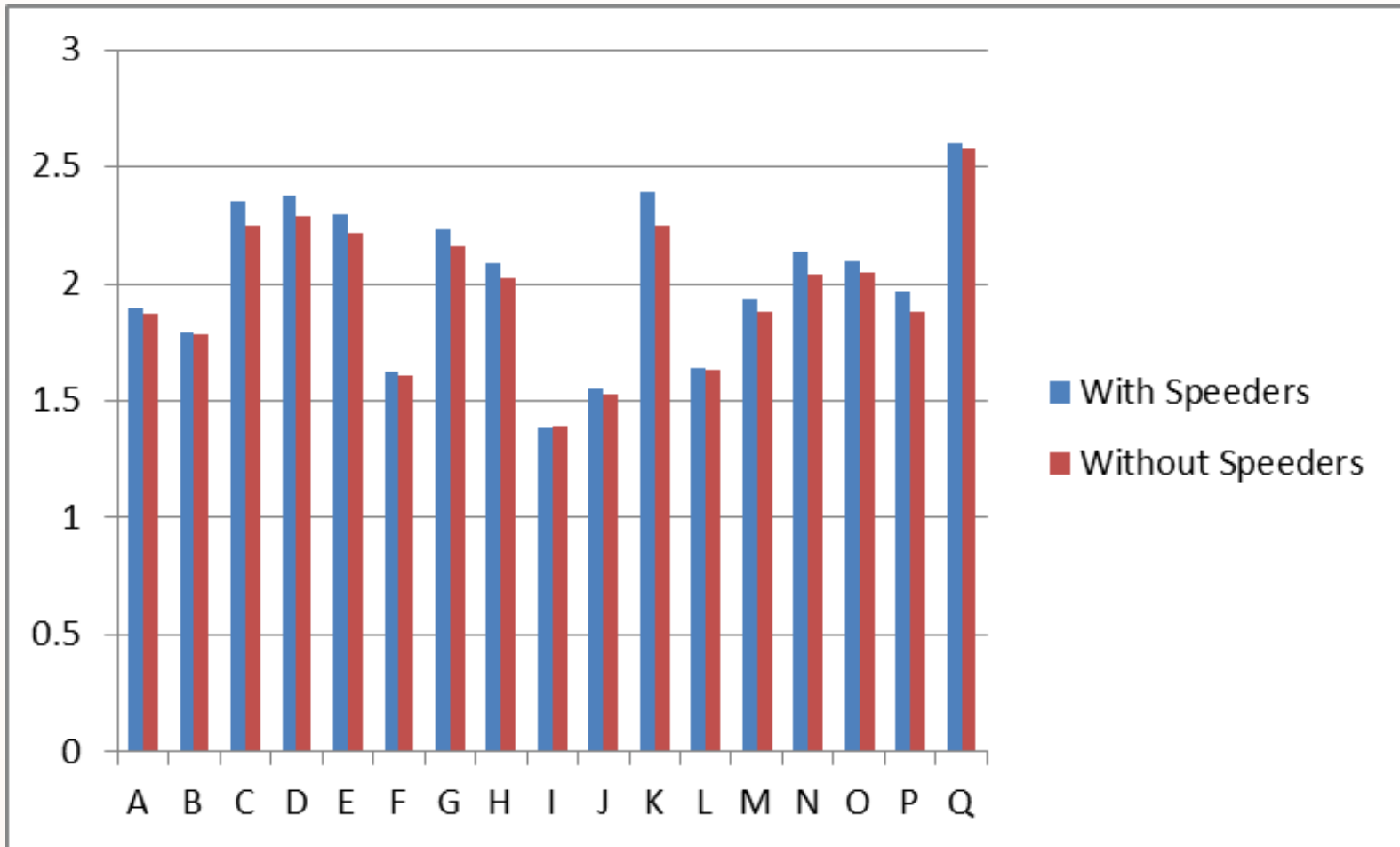
The fastest group indicated significantly more days of binge drinking in past 30 days than the other groups.



# Correspondence of Speed with Binge Drinking



Removing speeders dropped number of binge days somewhat, but the biggest differences were by provider.

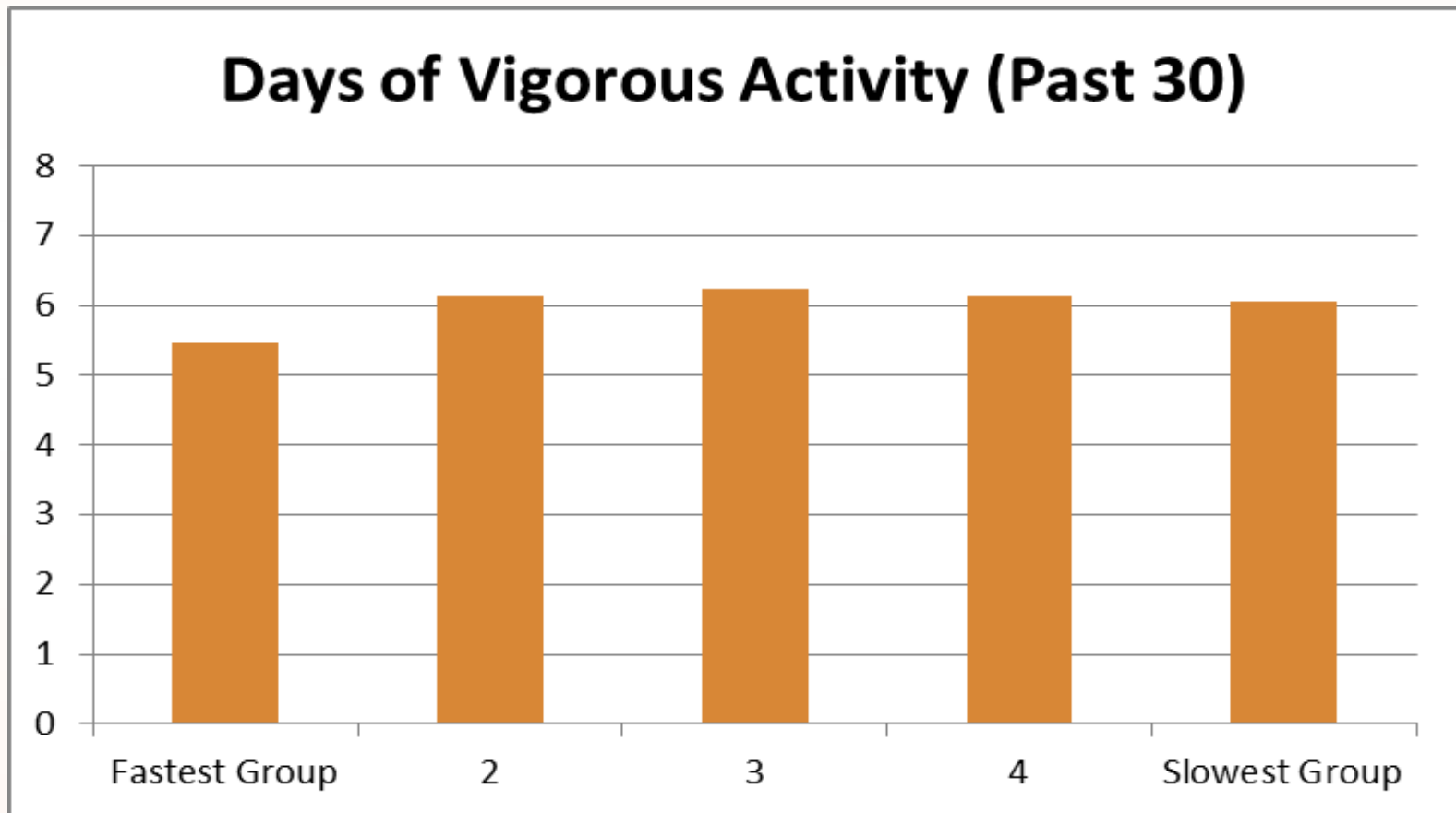




# Correspondence of Speed with Physical Activity



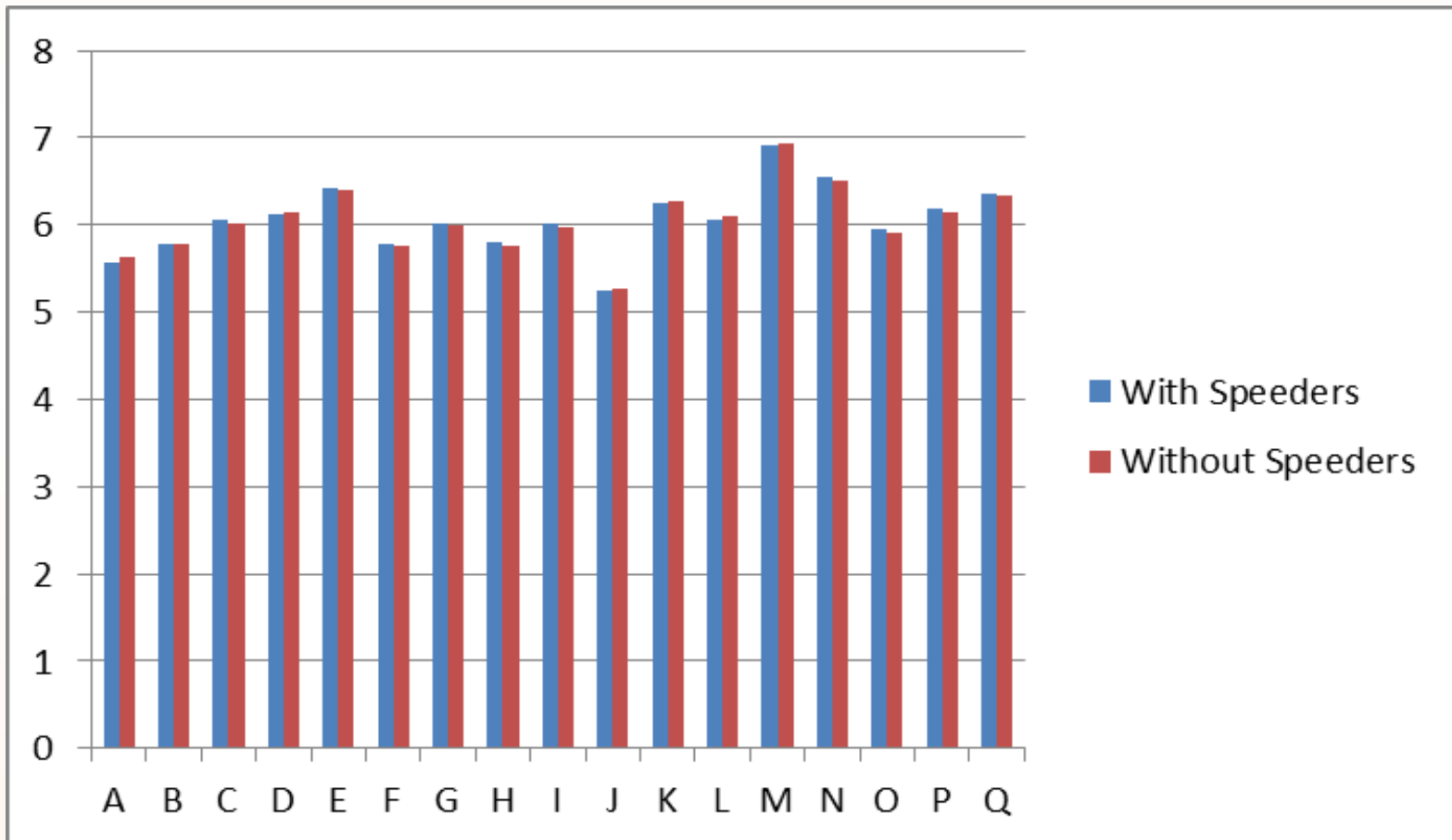
The fastest group indicated significantly fewer days of participating in vigorous physical activity (past 30 days) than other groups.



# Correspondence of Speed with Physical Activity



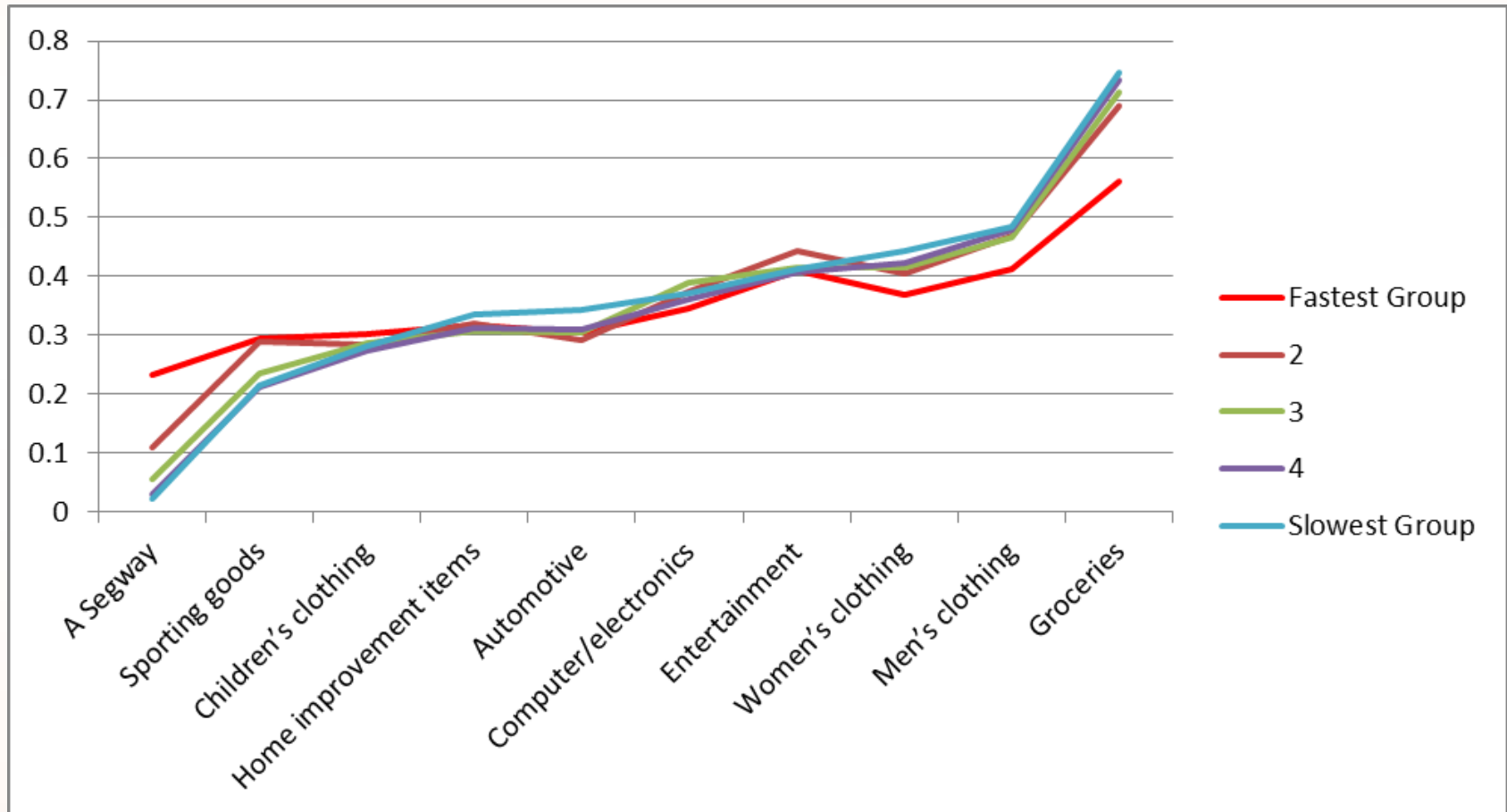
**Deselecting Speeders did not significantly affect the pattern of results across all providers. Sample provider was the biggest influence on number of days of vigorous activity.**



# Correspondence of Speed with Products Purchased in Past 6 Months



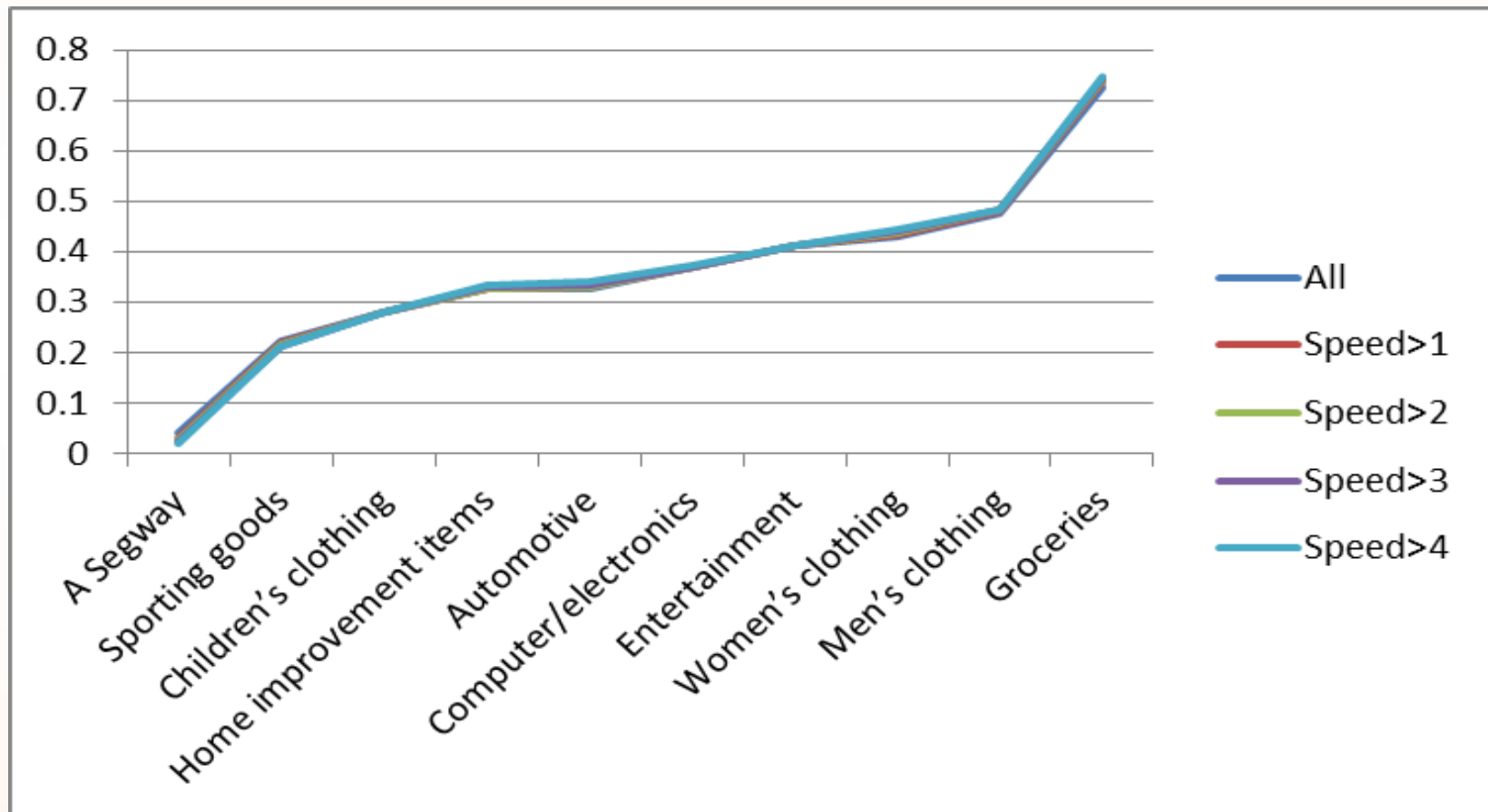
The fastest group showed some differences in product purchase, but order was relatively the same as other speed groups.



# Correspondence of Speed with Products Purchased in Past 6 Months



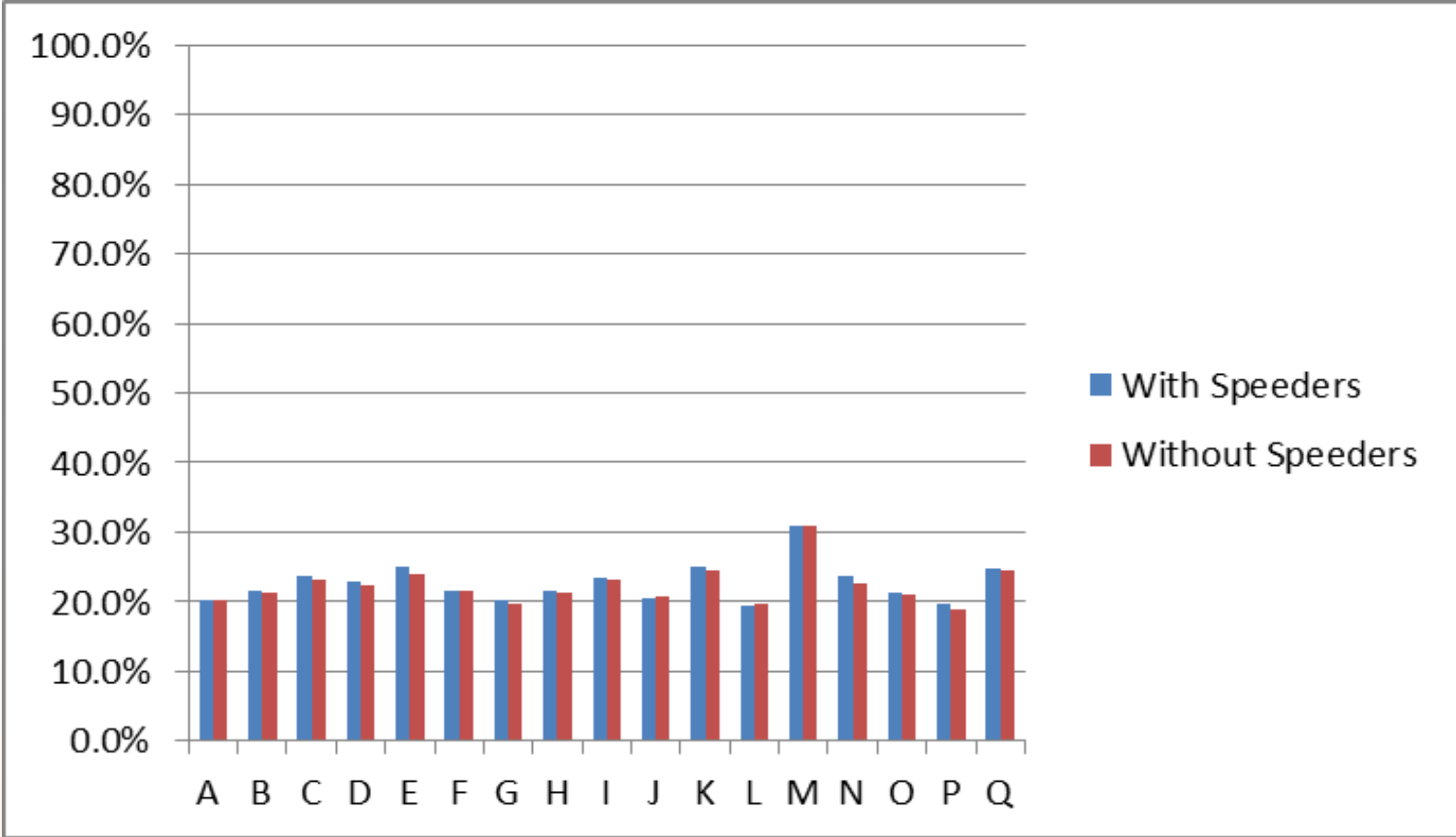
**Peeling the Onion – deselecting those who sped did not change results overall.**



# Correspondence of Speed with Products Purchased in Past 6 Months



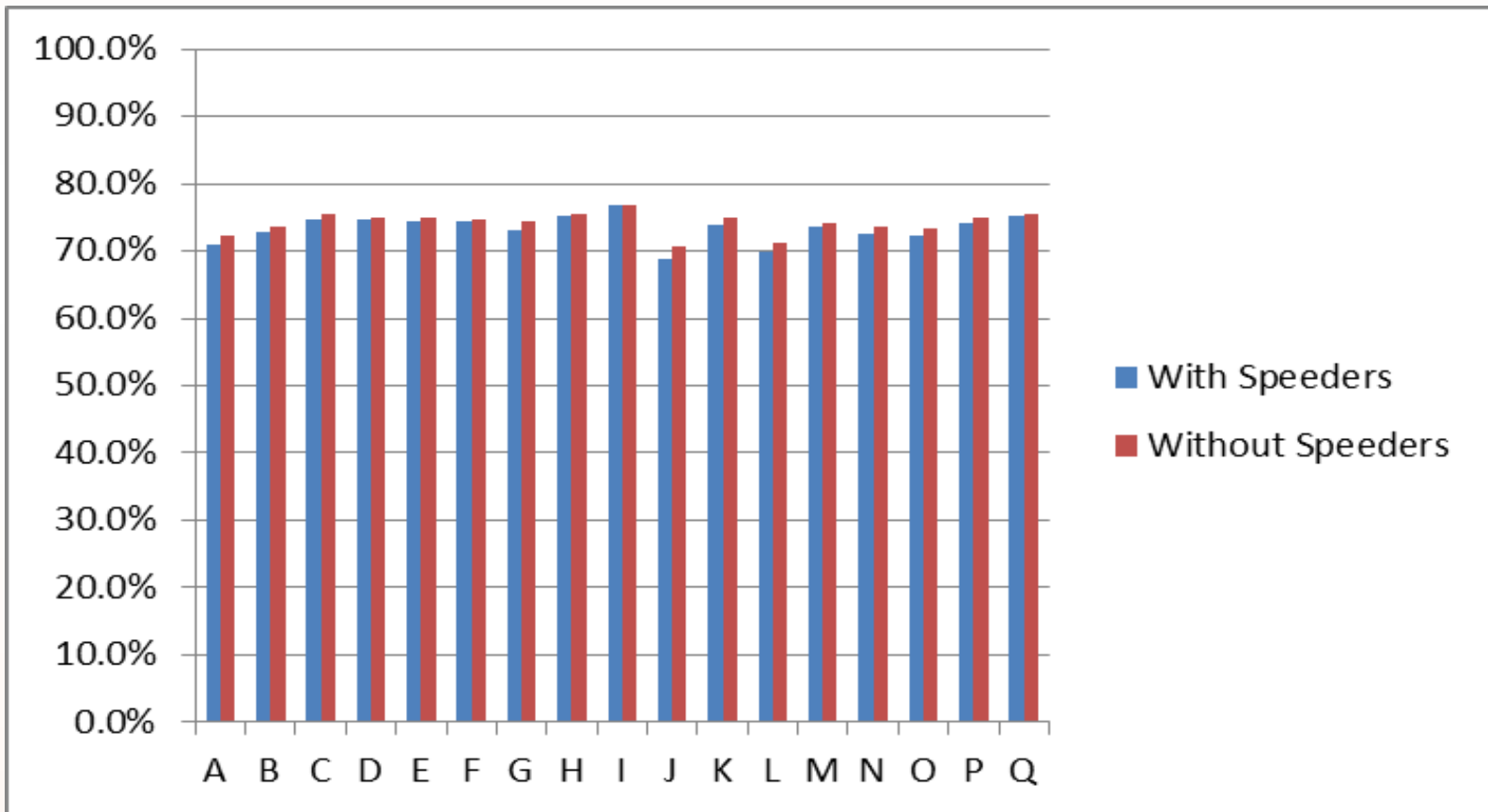
Comparing results by provider for Purchase of **Sporting Goods** - Deselecting those who speed reduced reports of purchase slightly, but didn't change overall order of purchase results across providers.



# Correspondence of Speed with Products Purchased in Past 6 Months



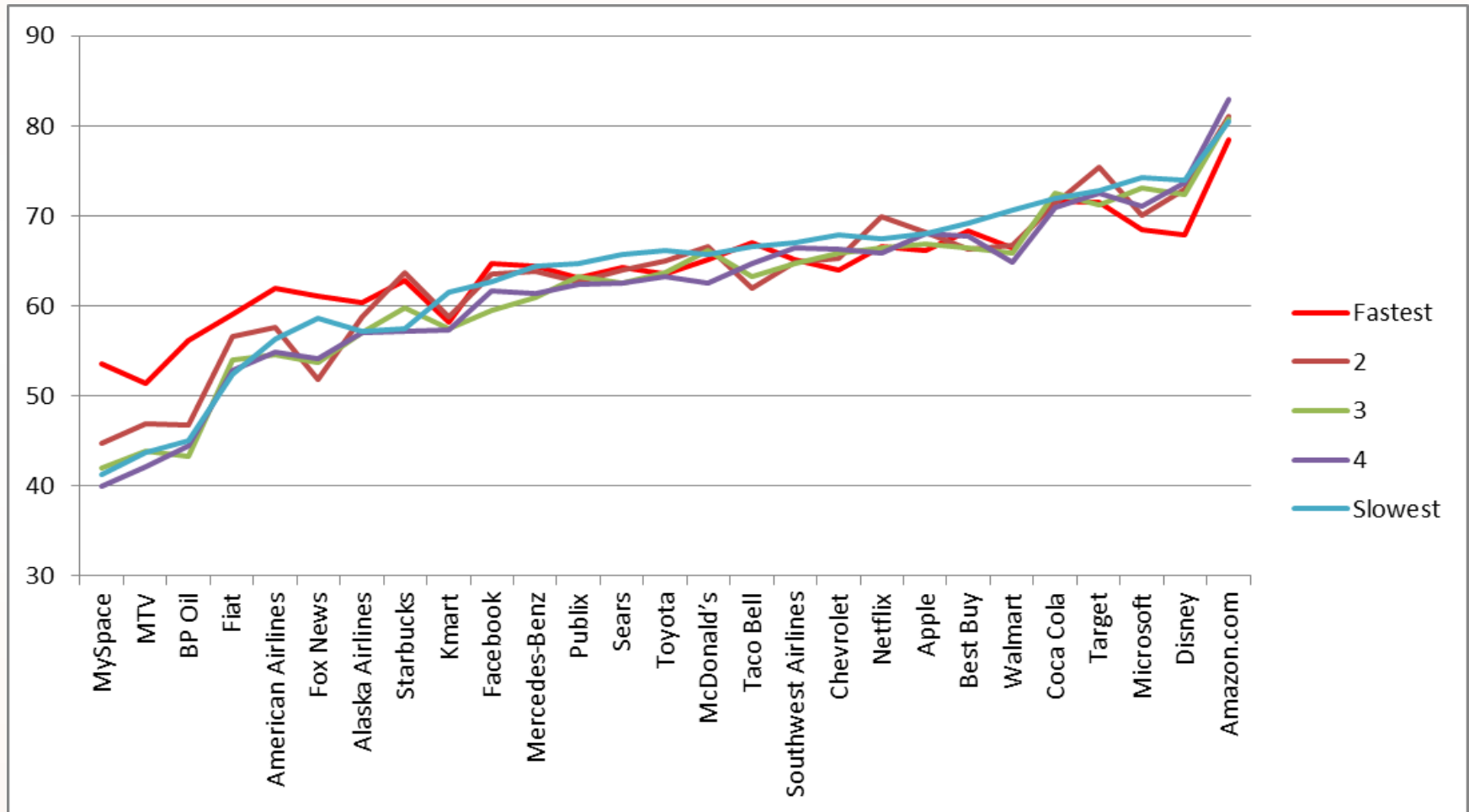
Comparing results by provider for Purchase of **Groceries** - Deselecting those who sped increased reports of purchase slightly, but did not change overall order of purchase results across providers.



# Ratings of Brand Liking Based on Speed



Brand liking by speed was most different for the fastest group, but still showed a general correspondence.

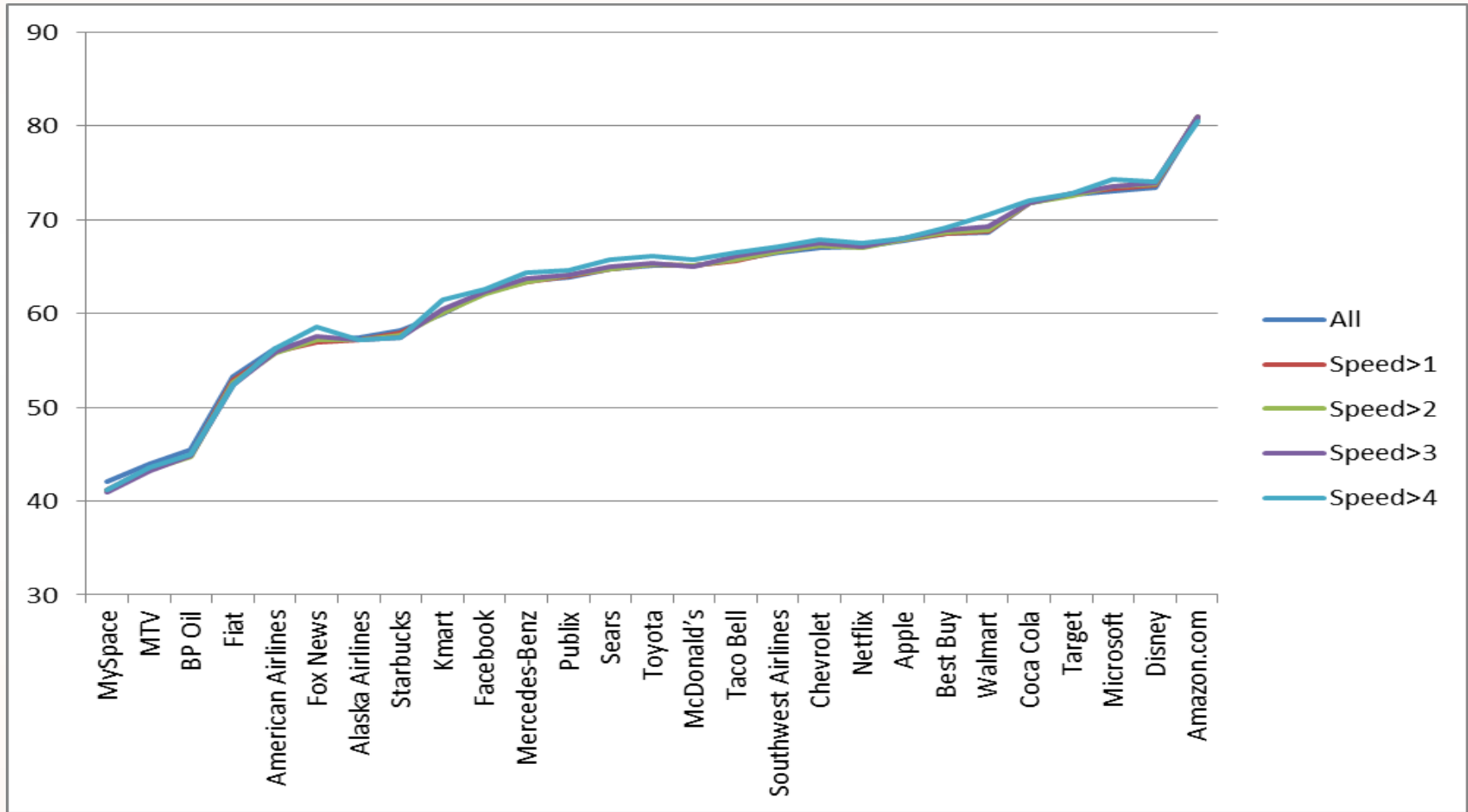


0 = Strongly Dislike; 100 = Strongly Like

# Ratings of Brand Liking Based on Speed



Peeling the Onion - Deselecting those who sped did not change overall results much across 27 different brands.



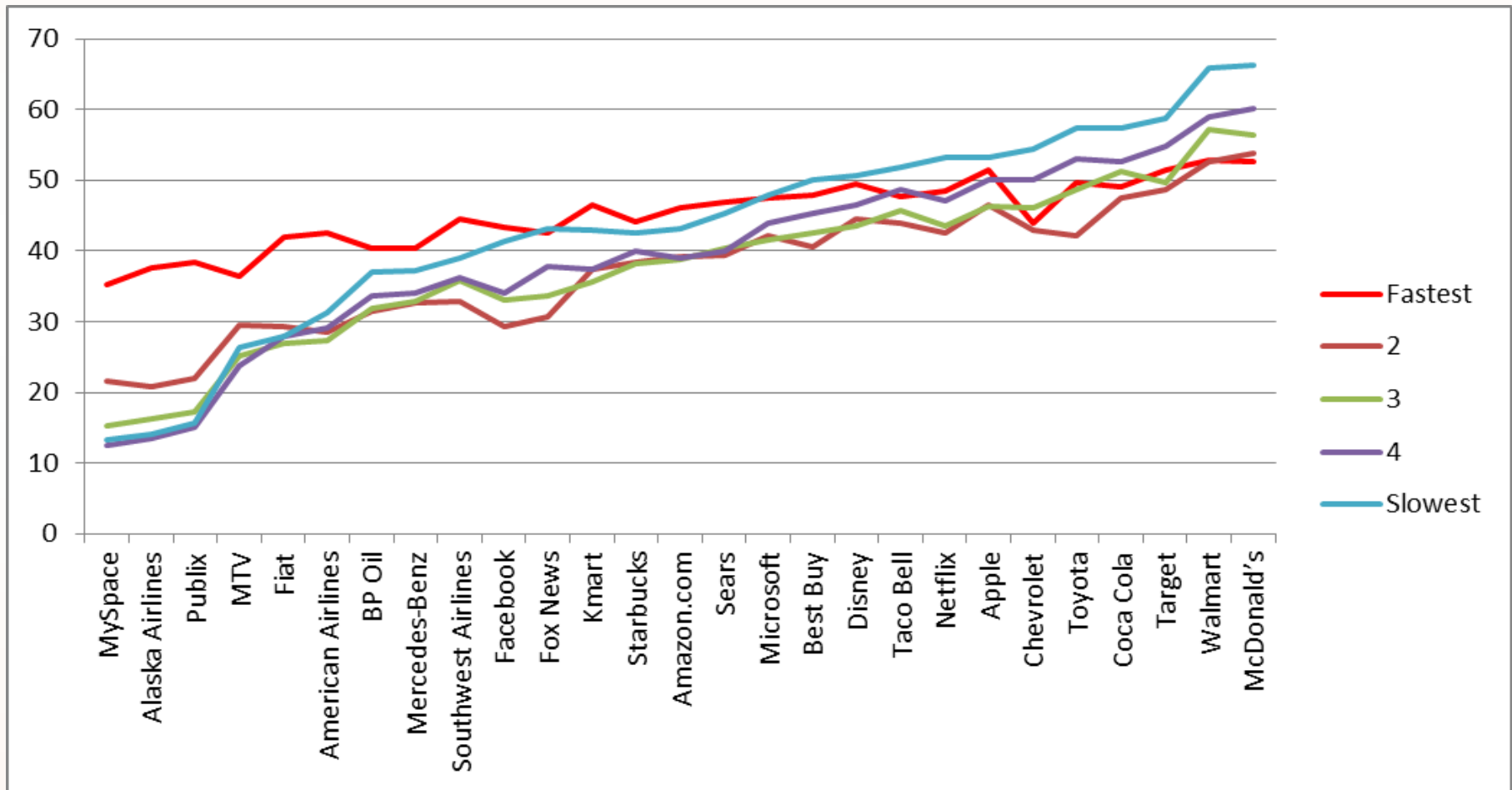
0 = Strongly Dislike; 100 = Strongly Like



# Ratings of Ad Exposure – Past Year



Ad exposure based on speed was most different for the fastest group, but still showed a general correspondence.

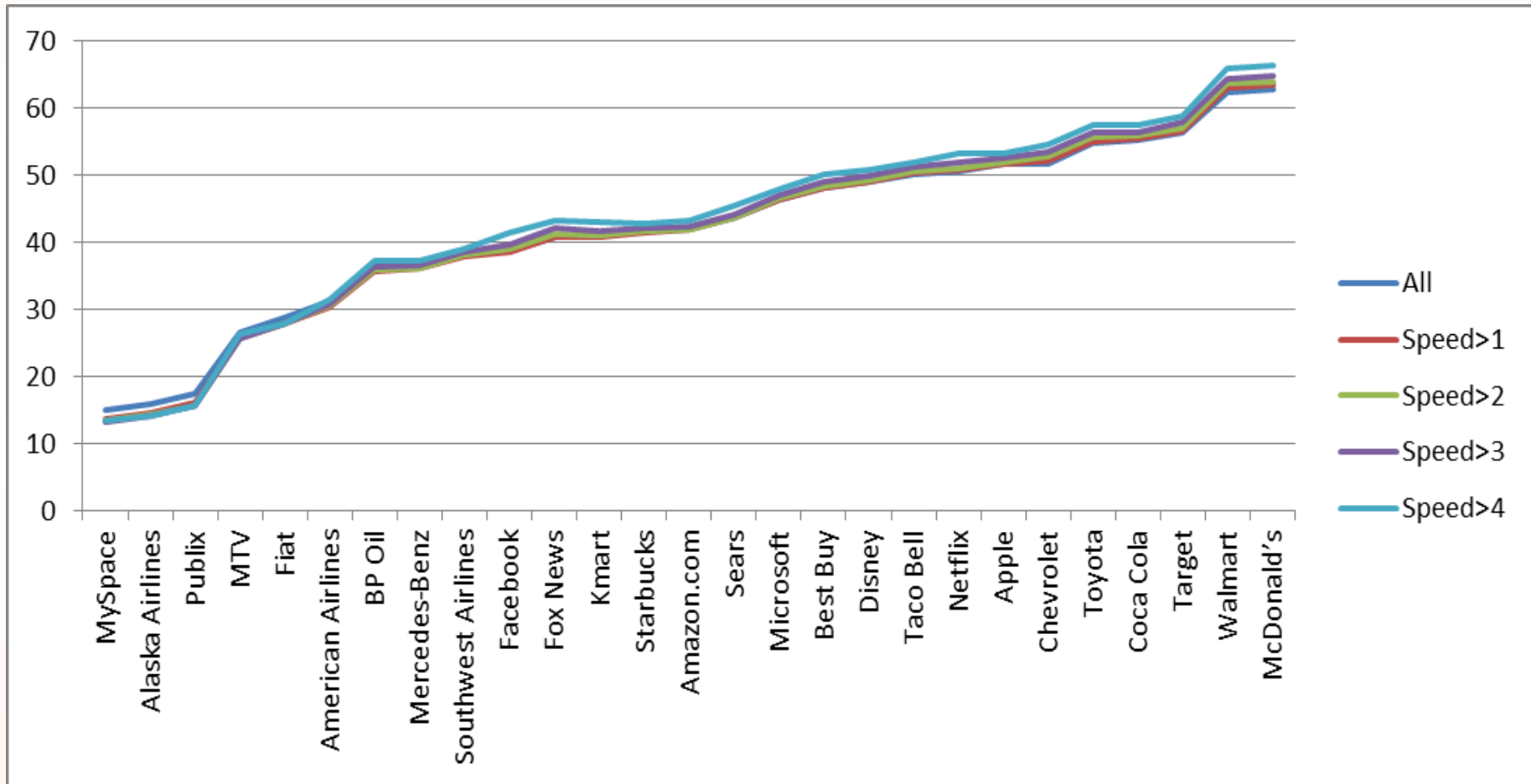


0 = None at all; 100 = A great deal

# Ratings of Ad Exposure – Past Year



**Peeling the Onion - Deselecting those who sped did not change overall results much across 27 different brands.**

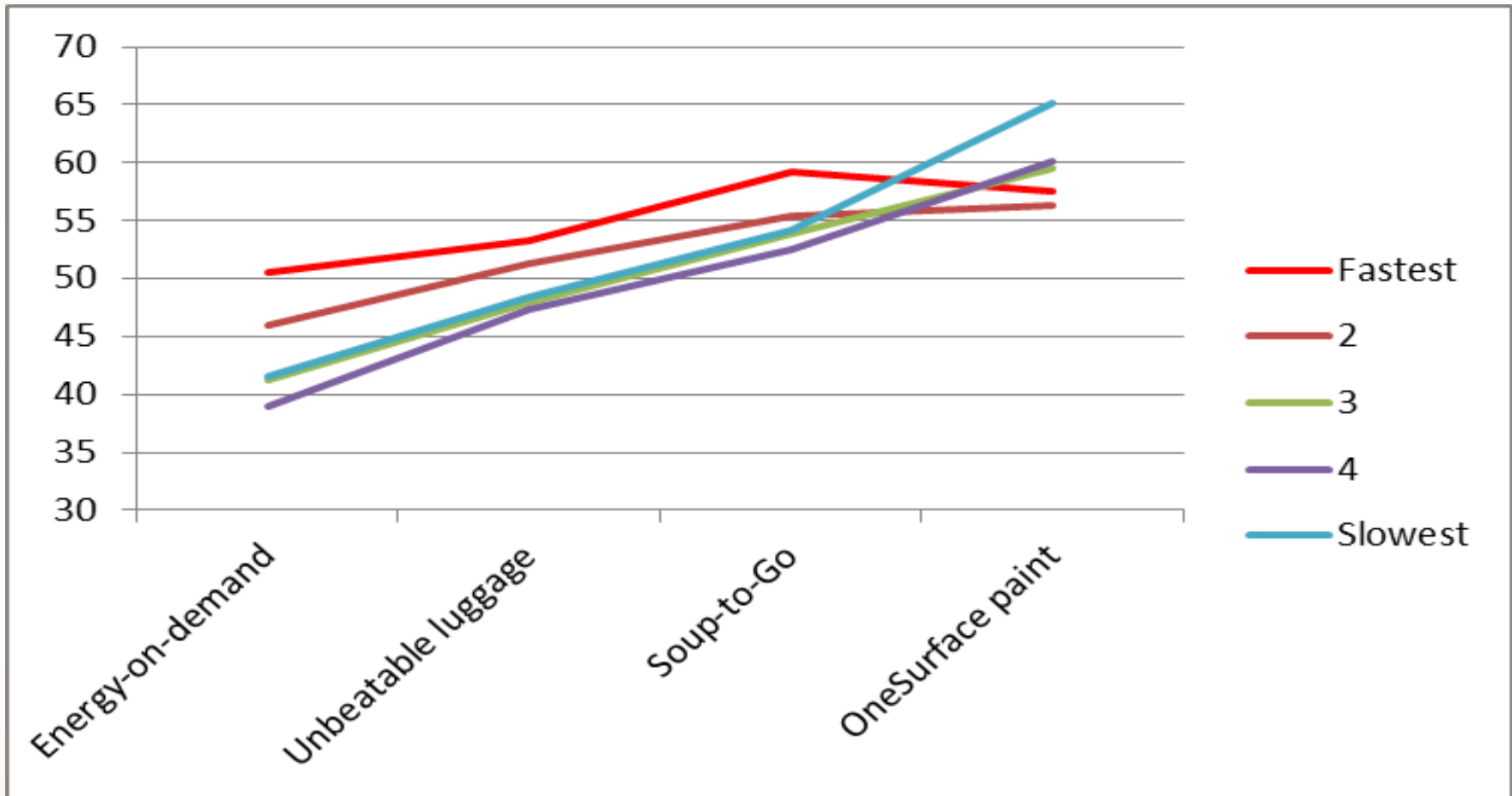


0 = None at all; 100 = A great deal

# Ratings of Purchase Likelihood Based on Speed



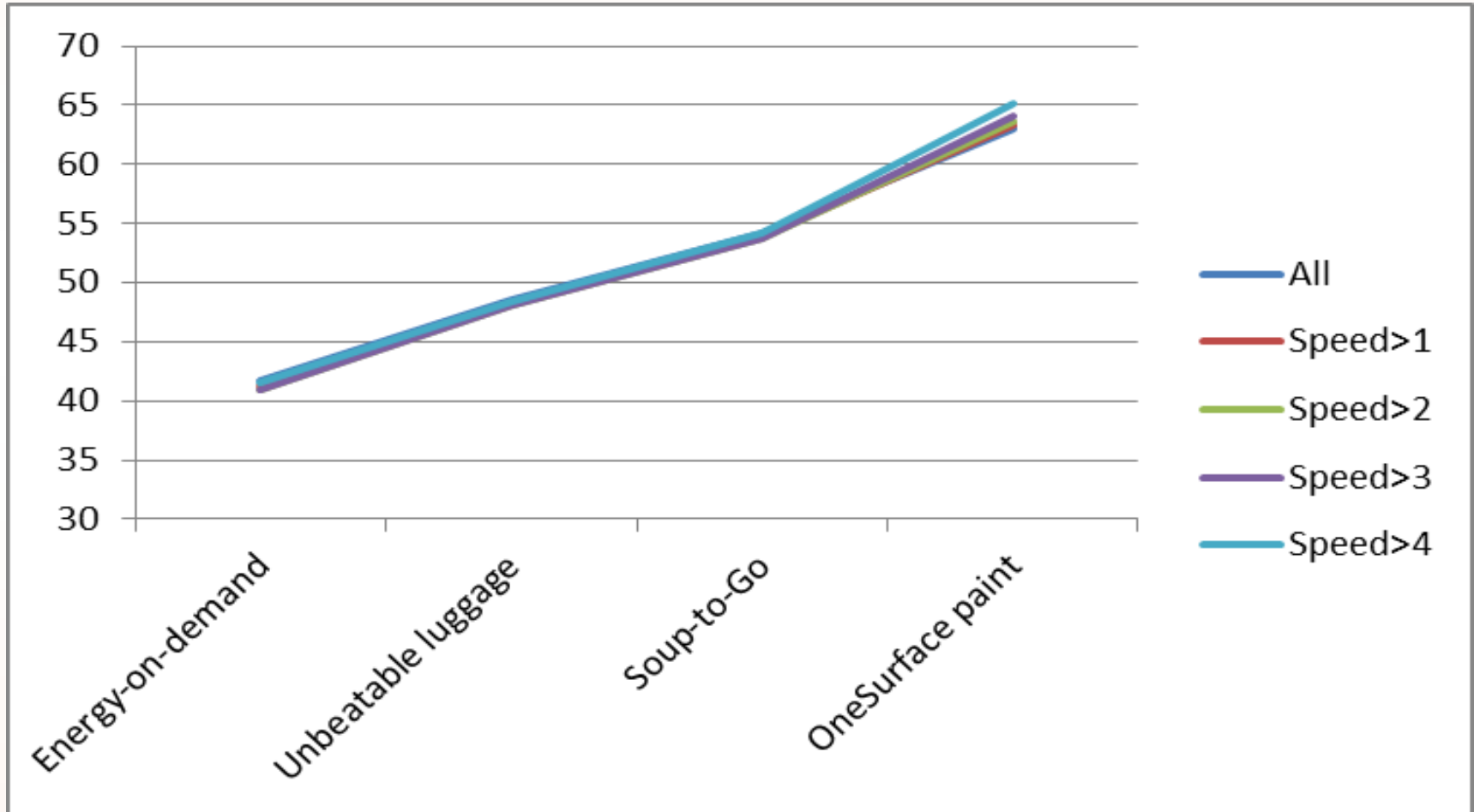
Speed showed some differences for one product, likely due to demographic differences (younger more likely to speed)



# Ratings of Purchase Likelihood Based on Speed



**Peeling the Onion - Deselecting those who sped did not change overall results for likelihood to purchase new product concepts.**



# Conclusions



- **Removal of non-differentiators in the study has little effect on survey means. Similarly, removal of speeders has very little effect on overall survey means.**
- **Non-differentiators appear to be younger, less educated, as has been found previously.**
- **Adding to these findings, non-differentiators appear to be more characterized by a higher conformity need and lower need for cognition.**

# Conclusions



- **Sub-optimal behavior (speeding, trap failures, non-differentiation) generally occurs at low rates in well-designed surveys – most respondents demonstrate attention to the task.**
- **Sub-optimal behavior rarely has a major effect on aggregate estimates (means, proportions). Speed of survey completion has far less effect, if at all, on overall results than the sample provider does.**
- **When results differ by speed of completion, the results for the fastest groups are often consistent with expectations based on their demographics (those who speed are more likely to be young and male, the results often reflect these demographics). There is a potential for sufficient quality of response from those deemed as being of poor quality.**

# Conclusions



- **For all the energy expended on identifying those with low quality responses, they may make less of a difference in results than focusing more clearly on what makes for a good sample provider – sample providers do not appear interchangeable.**
- **Further, when sub-optimal behaviors occur at higher rates, they generally indicate a poorly designed survey – some combination of too long, too boring, or too difficult for the intended respondents. Most respondents do not enter a survey with the intention of not paying attention or answering questions in sub-optimal ways, but start to act that way as a result of the situation they find themselves in.**
- **Deselecting more respondents who exhibit sub-optimal behaviors may increase bias in our samples by reducing diversity, making the sample less like the intended population.**

# Conclusions



- **To reduce sub-optimal behaviors, pay attention to respondents - shorten the survey, reduce redundancy, and reduce survey difficulty for respondents.**
- **Sample provider differences are more substantial and variable in their effects on results than sub-optimal behaviors are. More attention needs to be devoted to what empirically makes for good non-probability sample and yields reliable and valid results.**





**Thank You!**

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