

An Analysis of Social Media Services at NWS Louisville to Enhance Forecast Operations and High-Impact Weather Event Decision Support

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Introduction

Social media refers to the websites and applications that allow users to share content with others. In response to the increasing use of social media for weather information, the National Weather Service (NWS) began using social media on an official basis in 2012. In 2015, the NWS in Louisville created a dedicated Decision Support Services (DSS) desk, which included social media. This study investigated how NWS Louisville used social media to develop a social media usage plan.



Questions

1. How did the switch to a DSS desk impact posting?
2. How does post frequency and average reach vary in the lead-up and aftermath of a high-impact event?
3. Does elapsed time between posts equal a difference in reach?
4. Which types of posts reach and are engaged by users?

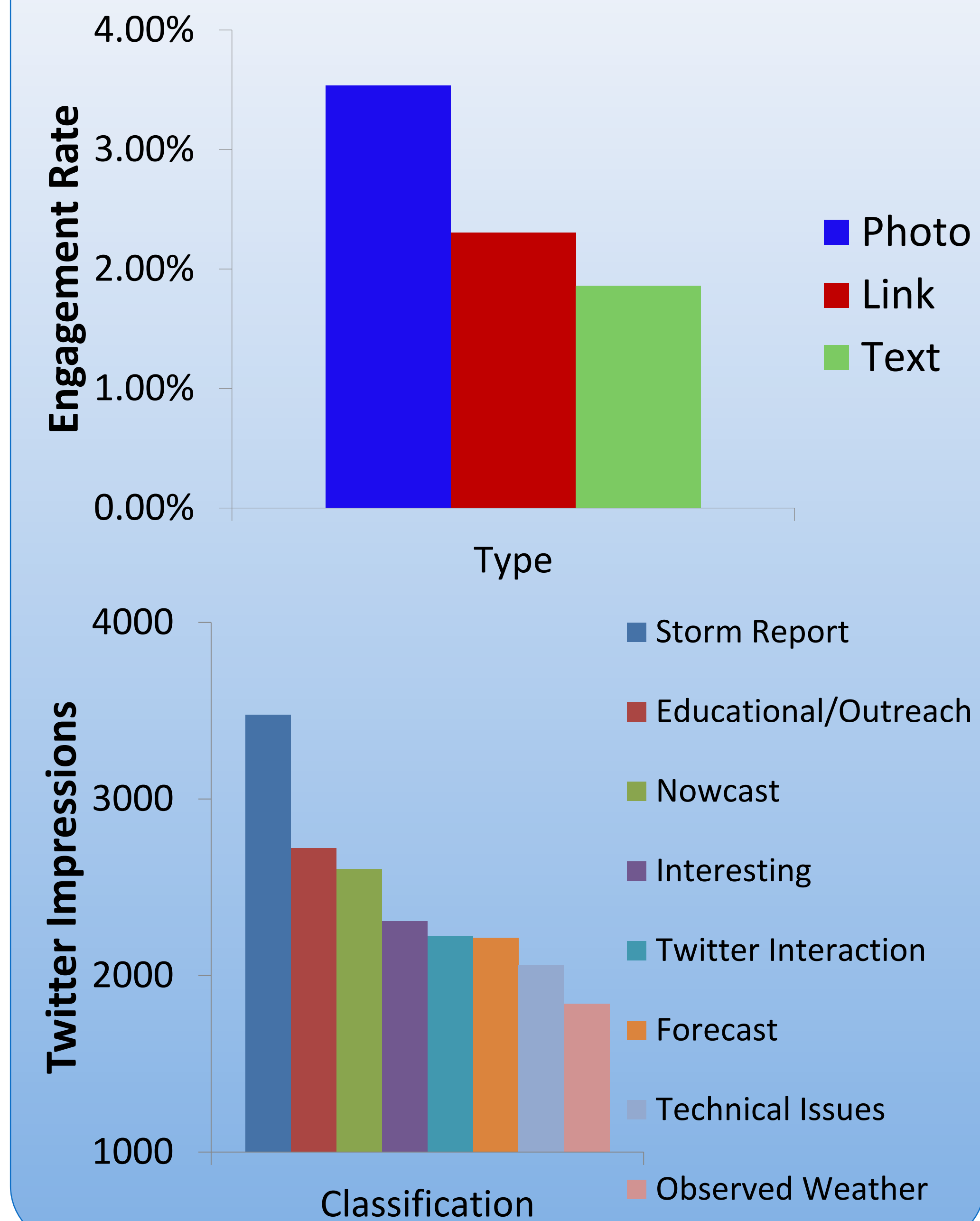
Definitions

Impressions: Total number of times a post is viewed, including when a user sees the post more than once (used interchangeably with reach)

Engagements: Total number of interactions with a post, including likes, comments, shares, and any clicks on post

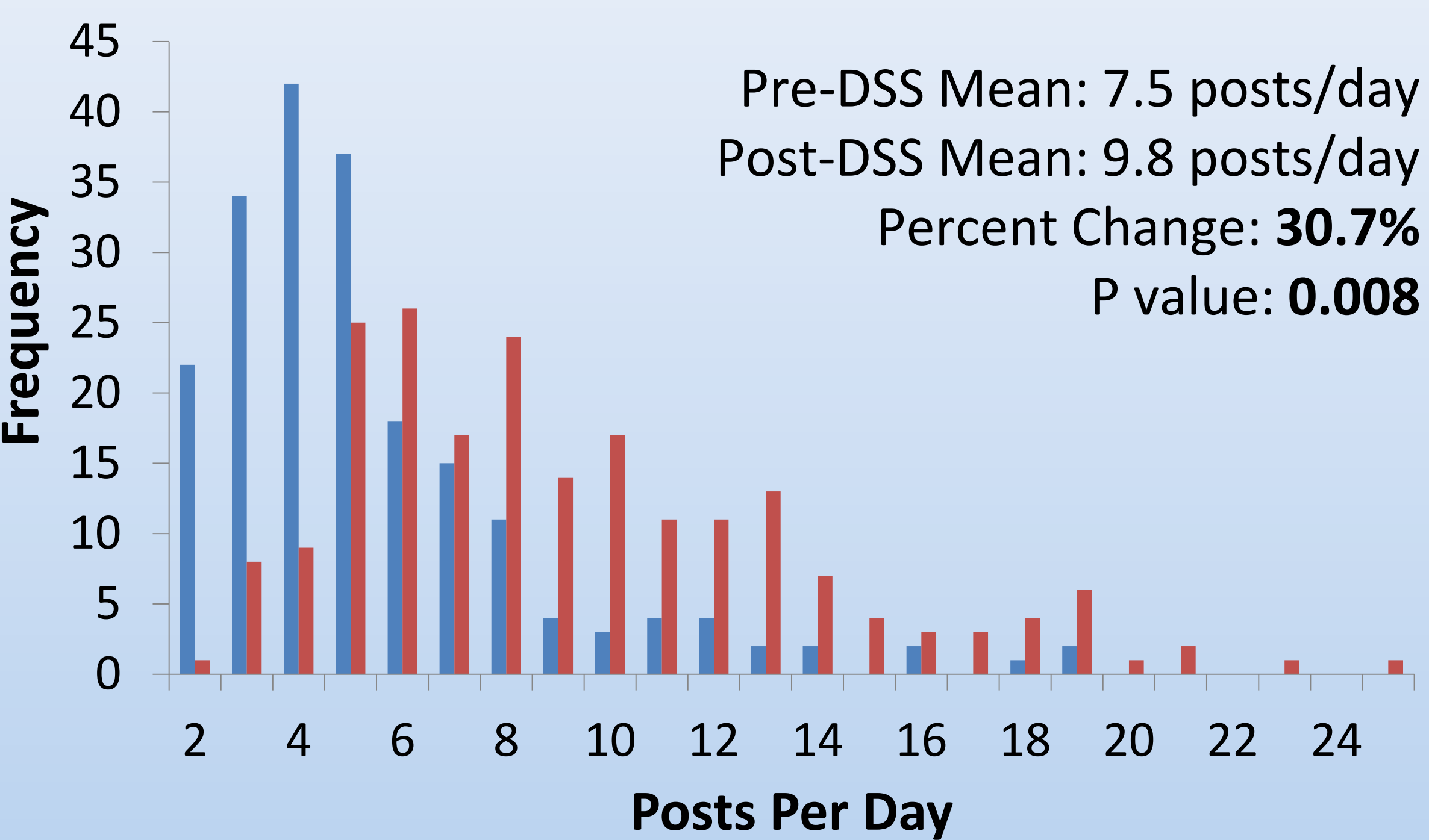
$$\text{Engagement Rate} = \frac{\text{Engagements}}{\text{Impressions}}$$

Results (Question 4)

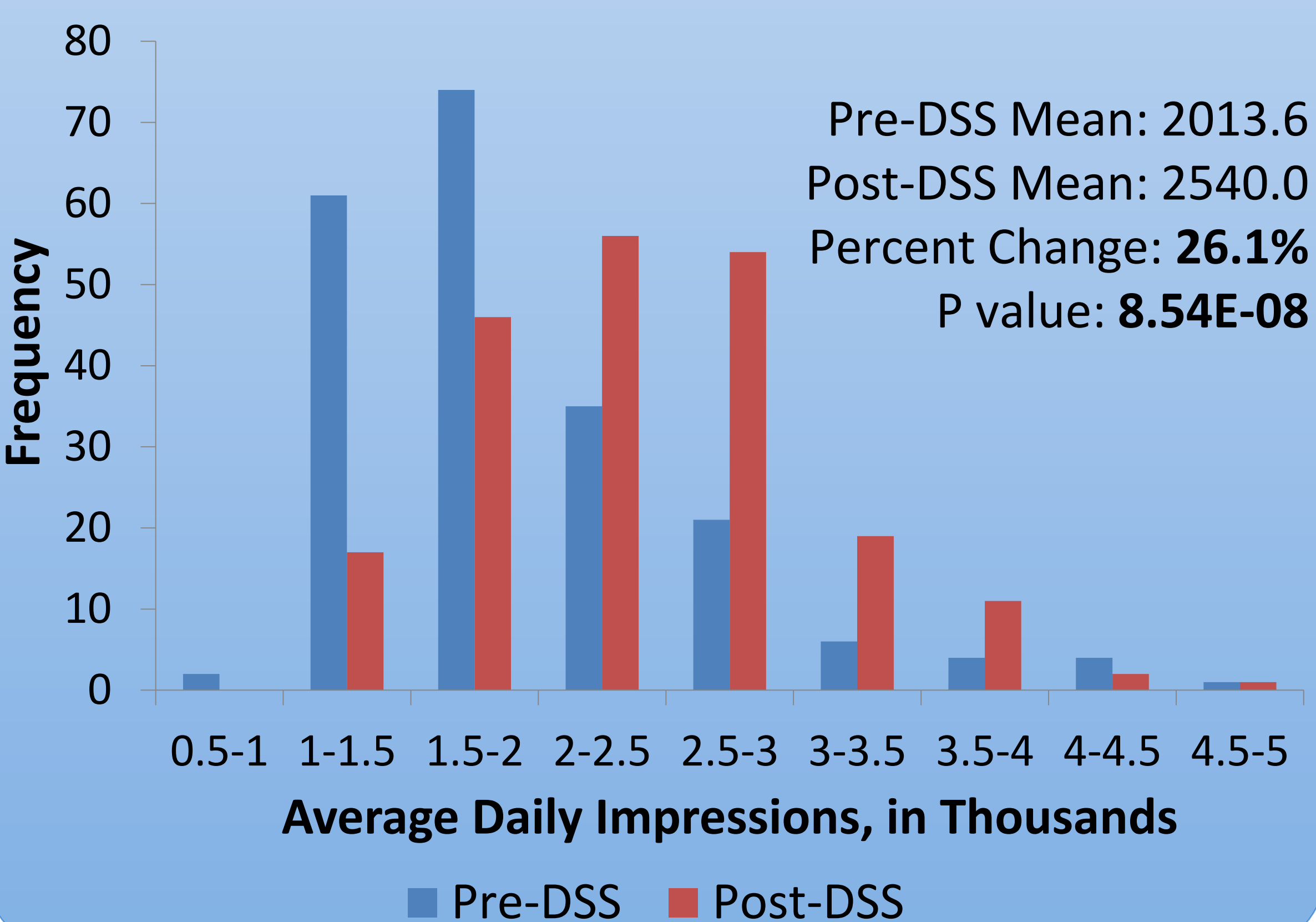


Results (Question 1)

Daily Post Frequency, Pre-DSS and Post-DSS Desk

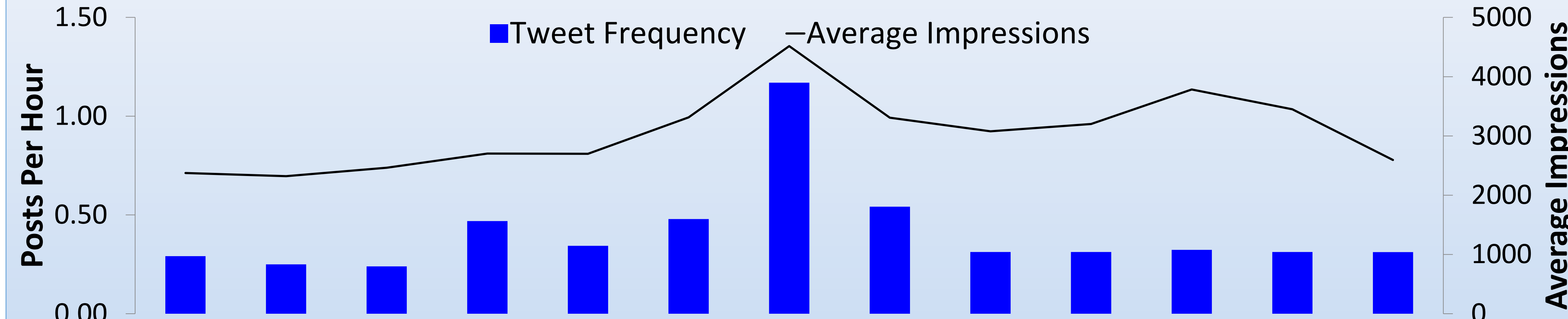


Average Daily Impressions Frequency, Pre and Post DSS Desk

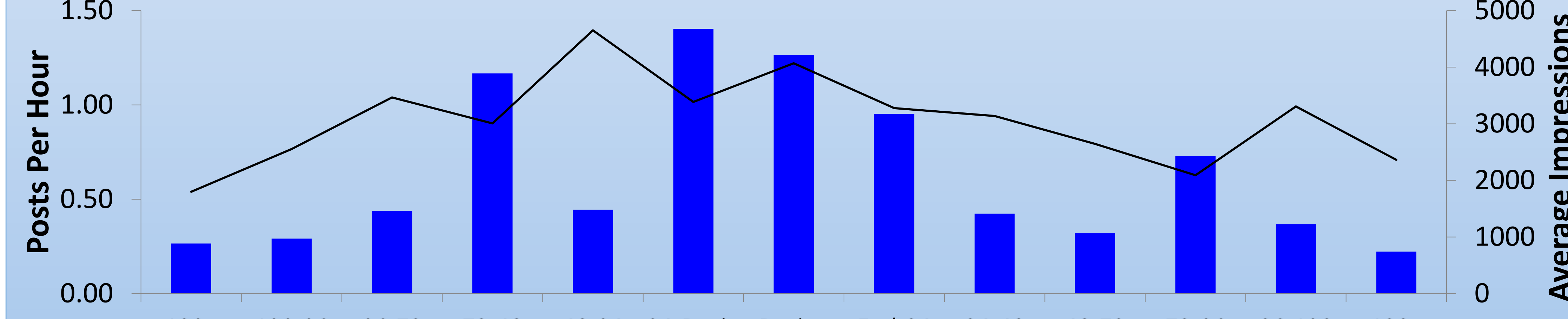


Results (Questions 2+3)

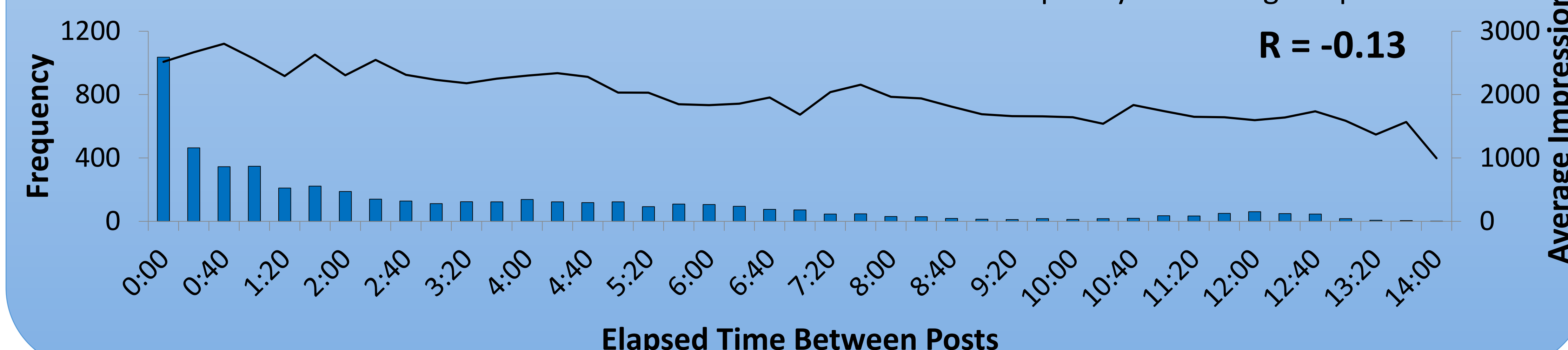
Aggregate Short-Fuse Events



Aggregate Long-Fuse Events



Frequency of and Average Impressions on Posts that Fall Within an Elapsed Time of Other Posts



Conclusions

- DSS desk has likely had impact
- Photos are the best medium
- More posts about long-fuse events
- No loss of reach due to frequent posting
- Focus on winter weather
- Humanize communications



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