



The Effects of Hugh Jackman's Basal Cell Carcinoma Disclosure and Public Interest in Sunscreen



- Oklahoma State University Center for Health Sciences
- Oklahoma State University-Tulsa

Matt Ferrell¹ BS, Trevor Torgerson¹ BS, Jennifer Austin¹ BS, Jam Khojasteh PhD², Matt Vassar PhD¹.

Introduction

Basal Cell Carcinoma (BCC) is the most common human cancer, with approximately 4.3 million cases diagnosed each year.¹ BCC is often benign and easily treatable when detected early.² Public awareness for BCC is particularly important, as its major risk factors — increased sun exposure and number of sunburns — are largely preventable.³ In this study, we looked at the effects of the public's interest of sunscreen after Hugh Jackman's BCC disclosures.

Methods

We searched for social media posts related to BCC made by Hugh Jackman across 3 social media platforms: Twitter, Facebook, and Instagram. We then used Google Trends (<https://trends.google.com/trends/?geo=US>) to determine the relative search interest of "basal cell carcinoma". Once we determined the increases in BCC searches that were related to social media posts from Hugh Jackman, we then used Google Trends on December 23, 2019 to determine the relative search interest of "sunscreen". To forecast the expected search interest for BCC and sunscreen in the event that Hugh Jackman had not posted on social media, we used the autoregressive integrated moving average (ARIMA) algorithm.

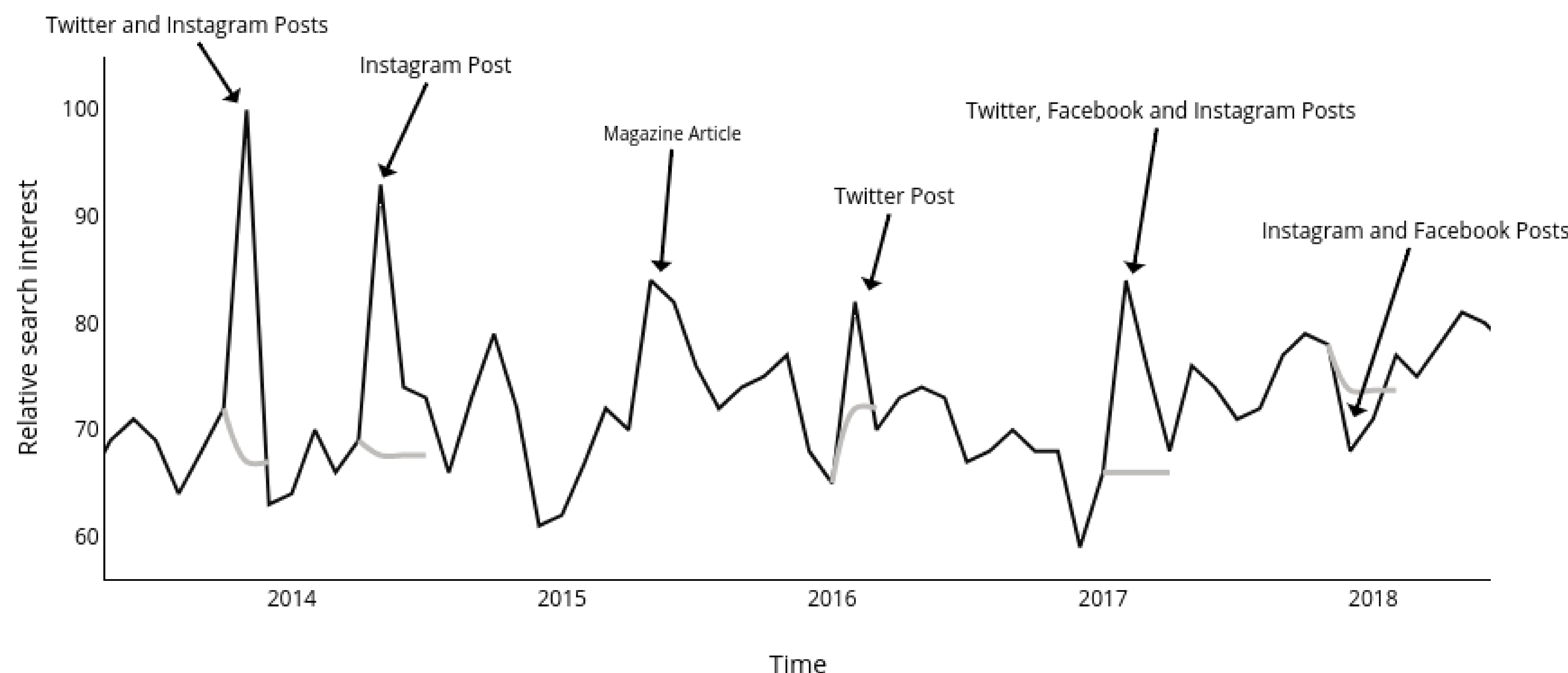


Figure 1: Relative search interest with respect to media posts
Daily search interest for "basal cell carcinoma" coinciding with social media posts from Hugh Jackman. Forecasted values are seen as gray lines.

Celebrity	Platform (# of followers)	Date of Post	Date of Post	Date of Post	Date of Post
Hugh Jackman	Twitter (13.2M)	Nov 2013	Feb 2016	Feb 2017	
	Instagram (23.3M)	Nov 2013	May 2014	Feb 2017	Dec 2017
	Facebook (23.4M)	Feb 2017	Dec 2017		

Table 1. Characteristics of Hugh Jackman's Social Media

Results

We found that three of the four times there were increases in BCC searches following Hugh Jackman's disclosures. With the increase in BCC searches found at the time of each post, we also found a 12.2% (95% CI, 6.0 - 18.5) increase for searches related to "sunscreen" two weeks following the post from May of 2014. In February of 2016, we found a 10.1% (95% CI, 5.4 - 14.8) increase in searches related to "sunscreen" the two weeks following. The February of 2017 posts were associated with an 11.1% (95% CI, 4.4 - 17.8) increase in searches for "sunscreen" the two weeks following. Finally, we found no correlation with the November of 2013 post and "sunscreen" searches.

Conclusion

Our data found an that there was an increase in sunscreen searches after disclosure from the popular celebrity Hugh Jackman. This suggests that celebrities could influence preventative measures of the public. Further research should be done to analyze the full impact of preventative measure taken by the public because of celebrities' personal disclosures of health issues.

References

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