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Short or Rapid Communication

Facebook recruitment of Chinese-speaking participants for hypertension education

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Abstract

Effective dissemination of health information to a desired population can be a challenging and expensive process, particularly to Chinese-Americans. Print and radio advertisements are limited by geographic, language, cost, and demographic barriers. The expense and efforts necessary to overcome these challenges can delay the distribution of knowledge and make it more expensive than necessary. The advent of web-based advertisements through media platforms such as Facebook offers a new method of reaching target audiences who can be both cost-effective and specific. A Facebook advertisement was displayed for 48 hours and consisted of a 26-character Chinese text body. The advertisement linked to an external informational video on hypertension prevention. Demographic information including age and gender were recorded. Descriptive statistics were used to compare reach and number of ad clicks between age groups. The 48-hour campaign reached a total of 508 people. Of those reached, 289 participants (56.9%) were between the ages of 55–64 years, and 170 participants (33.5%) were 65 years or older. The campaign also generated 52 link clicks. The results show that Facebook is a promising method of engaging Chinese-Americans. It is particularly effective in reaching the older female population and is a cost-effective alternative to print-based advertisements. *J Am Soc Hypertens* 2018; ■(■):1–3. © 2018 American Heart Association. All rights reserved.

Keywords: Advertisement; Chinese; Facebook; Hypertension.

Background

Hypertension is a major threat to the cardiovascular health of the world's population. Among Chinese populations, 26.6% of adults have hypertension, and that number is only expected to increase due to lack of awareness and treatment.¹ Despite multiple countries' initiatives to combat this worldwide epidemic of hypertension, there are still very few resources or programs supporting Chinese populations.² This is a major concern due to the increased risk of morbidity and mortality in the elderly population.³ Therefore, assessment of cost-effective methods to reaching this underprivileged population is an important step toward hypertension management and prevention in Chinese communities.

The Internet has proved to be an important resource for the dissemination of knowledge. Online resources provide

a wealth of knowledge, and anyone around the world can access it. Even with the availability of resources, studies have shown that Chinese populations still fail to recognize the risks and signs of hypertension.⁴ Facebook is a social media service accessible by people all around the world, with an estimated 72% of adult internet users using Facebook.⁵ Facebook advertisements are cost-effective and have the potential to be shared among friends. With the current lack of dissemination of health knowledge among Chinese communities, Facebook advertisements provide an affordable and targeted method of spreading awareness to these underserved communities. This study aims to examine the practicality of Facebook advertisements at sharing hypertension knowledge with Chinese-speaking populations.

Methods

A Facebook advertisement was on display for 48 hours and consisted of a five-character Chinese title and a 26-character text body. The advertisement invited the reader

Conflict of interest: None.

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to click the ad to watch an external informational video on YouTube about hypertension prevention taught in Chinese. The video covered the etiology, treatment, and methods of prevention of hypertension.

The target age group was Chinese-speaking adults who were 45 years or older. This study includes Facebook users who could read Chinese and saw the Facebook ad during the 48-hour advertisement period.

Data were obtained by Facebook Analytics and YouTube Analytics. Demographic information including age and gender were recorded. Parameters included reach, number of clicks, cost, and average viewing time. Reach was defined as number of views. Descriptive statistics compared reach and number of ad clicks between age groups.

The cost for advertisements was \$0.04 USD per click for age groups 45–54 years and 65+ years old and \$0.07 USD per click between 55 and 64 years. Gender had no influence on cost.

Results

The 48-hour campaign reached a total of 508 people, of which 487 (96%) had demographic information available. Of those reached, five males (18%) and 23 females (82%) were between the ages of 45–54 years, 33 males (11%) and 256 females (89%) were between the ages of 55–64 years, and 31 males (18%) and 139 females (82%) were 65 years or older.

The campaign generated 52 link clicks, indicating a click-through rate of 10.2%. Demographic information was available for 49 link clicks, of which one male participant (100%) was between the ages of 45 and 54, two males (9%) and 21 females (91%) were between the ages of 55 and 64, and five males (20%) and 20 females (80%) were 65 years or older.

The YouTube video generated 53 views, totaling 252 minutes watched of the 14-minute long video. The average viewing time was 4.75 minutes per view. A total of 40 (75%) of views were from external links, indicating that 13 views (25%) were not due to the Facebook advertisement.

The total cost over the 48-hour period was \$2.65 USD. The cost for participants aged 45–54 years totaled \$0.04. The total for participants aged 55–64 years was \$1.61 and \$1.00 for 65 years and older.

Conclusion

This study explored the practicality of Facebook advertising to a targeted Chinese population and suggests that Facebook can be a useful tool in hypertension education. To our knowledge, this study is the first to look at the effects of online advertising to a targeted Chinese-speaking population. Although online advertising has been used for

study recruitment, it has not been used to approach communities who speak other languages.⁶ Based on the results, Facebook appears to be a promising method of reaching possible study participants who are 45 years or older, particularly those who were 55 years and older. The data also indicate that more females than males would be reached through these methods, with 418 (86%) of those reached being women. The results from YouTube show 40 (77%) of people who clicked the link ended up watching the informational video, resulting in an average cost of \$0.06 USD per person. These results indicate that this may be a viable and cost-effective method to connect with targeted populations.

A limitation of this study was the short time frame. The advertisement was only placed for 48 hours, leaving only a small window for responses to the advertisement. A longer study would be more representative of the actual demographic that would respond to a real Facebook initiative. Facebook's demographic reports provided limited demographic data and could also be inaccurate due to participants not having their real age or gender listed in their Facebook profile, which would decrease the accuracy of the demographic reported. The average view time of 4.75 minutes was less than half of the total 14-minute length of video, indicating most viewers did not watch the entire video. This may indicate an inability to hold a consumer's attention for such a long period or may indicate a disinterest in the information provided. Future studies could examine shorter video lengths and a longer campaign period to determine the effectiveness of Facebook advertisements. This study also did not assess participants' knowledge about hypertension before and after the Facebook campaign, making evaluation of the effectiveness of the campaign difficult.

Research has shown a connection between low health literacy and disease in Chinese-Americans.⁷ The elderly Chinese population has also been found to have poor computer and health care literacy in general.⁸ Our results show that despite this data, Facebook may be a useful method to share health information with the older Chinese-speaking population. Studies examining the connection between health literacy and hypertension have also shown that literacy decreases incidence of hypertension in Asian communities.⁹ This finding highlights the value of being able to reach this underserved population and provide them with valuable information about their health.

Cost and accessibility have always been barriers to the effective dissemination of knowledge. Based on our data, Facebook can be both a cost-effective and precise method for providing hypertension information targeted toward specific demographics. Advertisements would be able to provide individualized information to each population to directly address risks that they face. Costs are only accrued upon link clicks, ensuring only those who find the

information relevant will contribute to the expense of providing this information.

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