



# Factors associated with increased Dental service utilization among adults residing in North America – A practice management exploratory study

Shashank Kannan BDS, Thomas T Nguyen DMD MSc FRCD(C)

## Introduction

- Over time, researchers have directed their attention towards comprehending the utilization patterns of dental services, aiming to enhance the effectiveness of delivering dental care
- There are several components such as socio-demographic factors, household income, education level, geographical factors, etc., which can influence dental service utilization<sup>(1)</sup>
- Understanding these factors helps the dentist in “demassing the market” i.e., categorizing the clients into homogenous subgroups. Demassing the market is a vital step for targeted advertising<sup>(2)</sup>
- Targeted advertisement aids dentists to tailor their services according to the client information which thereby increases the productivity<sup>(2)</sup>
- This exploratory review is done to identify the factors influencing dental service utilization and categorize them based on the information from the literature into “users” and “non-users”. This profile will be used for targeted advertisements of dental clinics in social media platforms<sup>(2)</sup>

## Objective

Phase 1: To develop targeted advertisements using customized patient profile based on the factors influencing dental service utilization  
 Phast 2: To explore the possible outcomes of targeted advertising for McGill Dental Clinic in Montreal

## Methodology

- We conducted a broad scoping of the literature using electronic databases (Medline Ovid, PubMed) and Google scholar to identify the factors influencing the dental services utilization
- These factors were used to profile the patients into two categories- “Users” and “Non-users”. Users are patients who regularly utilize dental services and non-users are those patients who refrain from using these services
- Inclusion Criteria:
  - Studies done in North America
  - Participants age: 18-64
  - Participants in middle and upper middle SES
- Exclusion Criteria:
  - Participant age below 18 or 65+
  - Participant in lower SES
- The profile created were used in targeted advertisement for McGill dental clinic. The advertisements were posted for the period of 4 days

## PATIENT PROFILE AND ADVERTISING STRATEGY

Table 1:

Users	Non-users
Dental Insurance • People who have dental insurance • Medicaid beneficiaries • Privately insured	Dental insurance: • Middle income individuals without dental insurance
Ethnic Background: • Caucasians • Asians aged 50-64	Ethnic Background: • African American and Native American • Asian aged 20-49
Racial Background: White individuals	Racial Background: Black women
House-hold income • Higher house-hold income	Religious Background: • Orthodox and ultra-orthodox jews
Education level • High education level	Geography: • People living in food deserts
Military personnel: • Females • Air Force personnel • Native American • Higher education	Military personnel: • Black recruits, • Individuals aged 19
Immigrants: • Immigrants who lived longer	
Social support: People who have increased social support	
Pregnancy: • Increased dental visitations before pregnancy • Early entry into PNC • Marital status(married women) • Education levels and healthier lifestyle behaviors	

Fig. 1:

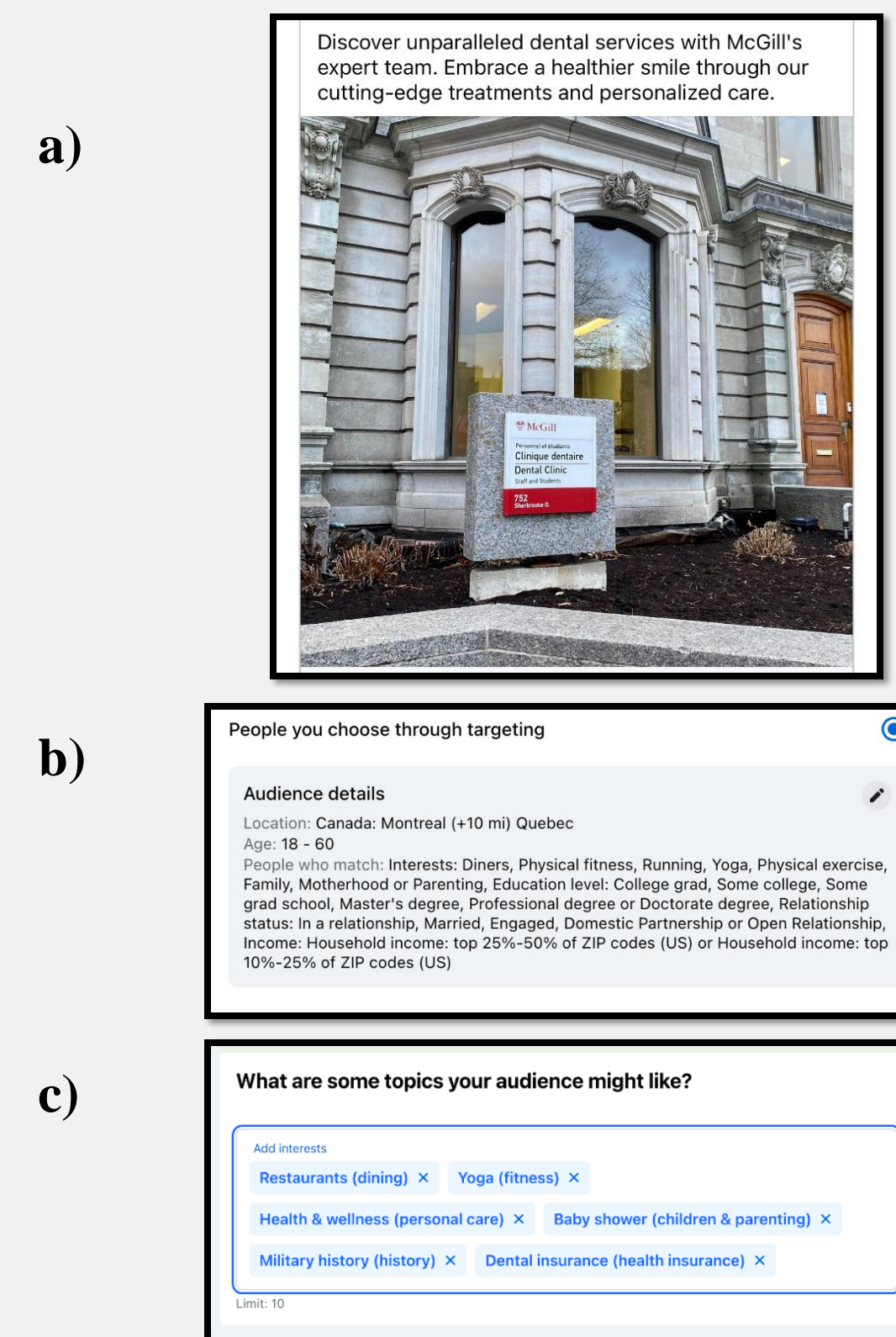
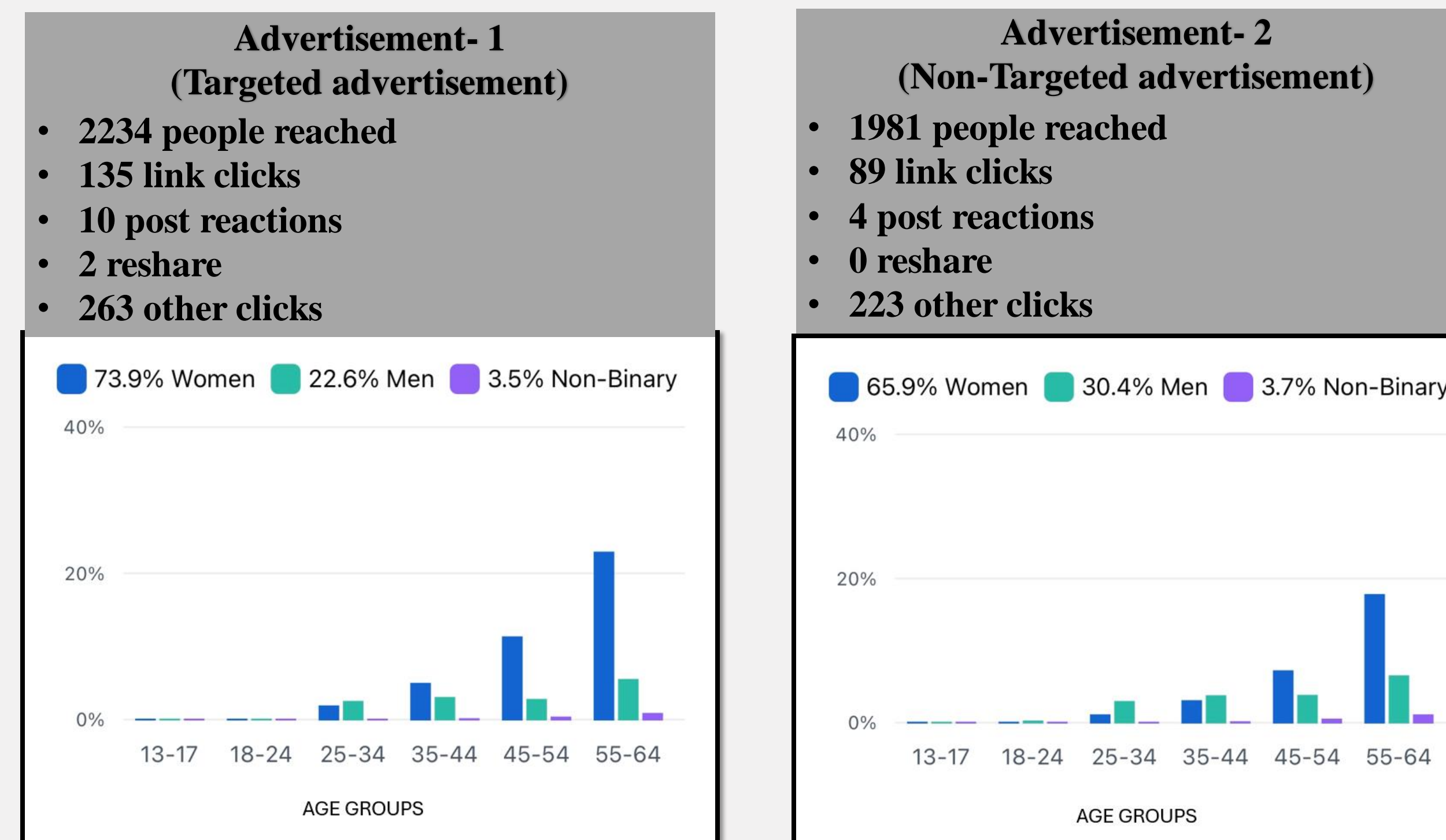


Fig. 2:



## Results

- After conducting the literature search and screening relevant articles, we found 37 articles eligible for data extraction (shown in Table 1)
- Two ads were created on the Facebook platform, one as non-targeted advertisement and one as targeted advertisement using the “user” patient profile

Table 2:

Overall reach rate	12.8% higher among targeted ads
Click rate	51.7% higher among targeted ads
Reaction rate	2.5x more (250%) among targeted ads
Conversion rate	6% targeted vs 4% non-targeted

## Discussion

- A study done by Alalwan et al shows that higher interaction with social media ads demonstrate higher intent to utilize the services being marketed<sup>(3)</sup>
- We are primarily considered the overall reach rate, click rate, reaction rate and conversion rate as metrics since the advertisements redirect the users to the clinic website
- Targeted ad demonstrates higher reach to people and encourages people to click the link in the ad in comparison to non targeted ads.
- People reacted more emotionally to targeted ads and showed higher conversion compared to non targeted ads

## Conclusions

- From this study we understand the importance of comprehending the factors associated with dental service utilization and how it can be applied in targeted advertisements using social media platforms
- The results show that targeted ads are better in engaging the users compared to non-targeted ads which implies that dentists should focus more on using targeted ads as a strategy to increase their service utilization instead of non-targeted ads

## Future Directions

- Dentists can use this pilot study to modify their dental practice management to increase their clientele
- Further research needs to be conducted in this domain to identify more in-depth marketing strategies

## References

- Cha AE, Cohen RA. Dental Care Utilization Among Adults Aged 18-64: United States, 2019 and 2020. NCHS Data Brief. 2022 Apr;(435):1-8. PMID: 35575758
- Rutsohn P, Ibrahim NA. An analysis of the demand for regular dental health care: implications for marketing. Health Mark Q. 2000;17(3):25-37. doi: 10.1300/J026v17n03\_03. PMID: 11010218.
- Alalwan, Ali. (2018). Investigating the impact of social media advertising features on customer purchase intention. International Journal of Information Management. 42. 65-77. 10.1016/j.ijinfomgt.2018.06.001..

## Contact

shashank.kannan@mail.mcgill.ca