

Publications on Using Social Media (Facebook) for Recruitment

The CADC Community Liaison and Recruitment Core reviewed six publications and report some methodological aspects of using social media for the recruitment of adults into research studies. The selected publications focus on the use of Facebook as it is the most used social media outlet. In the search for publications, there was a limited number of articles focused on recruitment of older racial/ethnic and sexual & gender minority (SGM) populations. We reported results based on age, race/ethnicity, gender, and education. As not all studies examined the same indicators and outcomes, comparisons across studies are difficult. The use of social media for recruitment, in particular Facebook, varied with most opting to pay for advertisement but some studies also choosing to use social media at no cost by exclusively utilizing the platform's no cost features.

Topics covered include:

- Comparison of traditional recruitment methods to social media recruitment methods
- Comparison of two social media platforms for recruitment
- Comparison of strategies using the same social media platform

Citation: Frandsen M, Thow M, Ferguson SG. The Effectiveness Of Social Media (Facebook) Compared With More Traditional Advertising Methods for Recruiting Eligible Participants To Health Research Studies: A Randomized, Controlled Clinical Trial. JMIR research protocols. 2016;5(3):e161. PMCID PMC4997003.

Summary: A retrospective observational analysis of a smoking cessation clinical trial to compare the effectiveness of Facebook versus traditional recruitment strategies. 376 participants were recruited from September 2014 – November 2015 in Tasmania, Australia with the concurrent use of Facebook and traditional media ads. The study showed that while Facebook was more cost effective for initial recruits, traditional media was more cost effective for enrolled and completed study participants. Participants recruited from Facebook were also younger (39.3) compared to traditional media (44.9).

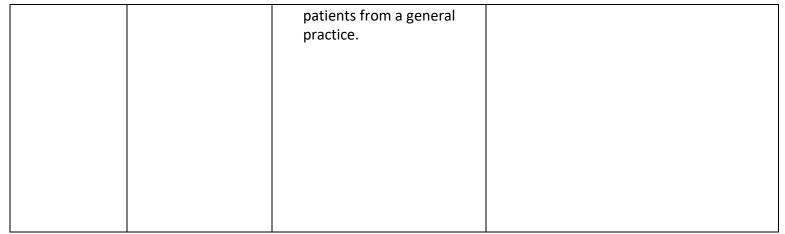
| Study Purpose | Population | Recruitment Methods | Results |
|---|--|--|---|
| To assess whether social media (Facebook) or traditional recruitment strategies (e.g., newspaper, flyers, radio, word of mouth) are more cost- effective for health research and how their participant samples compare. | Data from a larger smoking cessation clinical trial. Based on how participants had become aware of the study, they were grouped into either the social media or traditional media group. Inclusion criteria: Adult smokers (aged 18+), smoking 10+ cigarettes per day for the last 3 years with no intent to quite in the next month. Exclusion criteria: Current or recent (last 3 months) participation in a smoking cessation program. Existing medical conditions making them | Concurrent use of Facebook ads and traditional media ads. Flyers distributed at the University of Tasmania and surrounding shopping areas. Facebook ads targeted adults living within 25 km of recruitment site. Ads were capped at AUD \$30/day, with ads regularly turned on/off during the week. Newspaper ads, flyers, and Facebook ads directed interested people to the study website and prompt to enter contact info. Study team called these individuals confirm eligibly. Participants were enrolled after | Total of 414 interested individuals were screened for eligibility. Final sample of 376 participants recruited from 9/2014-11/2015 in Tasmania, Australia. Demographics: • Age (mean): 39.3 from social media compared to 44.9 from traditional media. • Ethnicity: not reported • Race: not reported • Gender: 46.7% Female from social media compared to 34.1% from traditional media. • Education: 14.1% College from social media compared to 21.8% from traditional media. Outcomes: 1. Study website visits to proportion of participants by study phase • Visiting the study website didn't result in participants that were more likely to be eligible, enrolled, or completed the study. • Fewer traditional media recruits visited the study |

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| unsuitable for nicotine patch or | completing enrollment session. | website than Facebook recruits. |
| varenicline treatment. | Participants completed the study after finishing full study protocol (6 weeks total). | 2. Cost of participants by recruitment strategy and study phase Facebook was more cost effective for initial recruits only. Traditional media was more cost effective for enrolled and completed study participants. Greater proportion of traditional media recruits were eligible, enrolled, and completed the study. 3. Demographics of enrolled participants Participants recruited via Facebook were younger and less confident in quitting smoking. No other demographic or smoking characteristic differences between recruits from Facebook or traditional media. |

Citation: Nash EL, Gilroy D, Srikusalanukul W, Abhayaratna WP, Stanton T, Mitchell G, Stowasser M, Sharman JE. Facebook advertising for participant recruitment into a blood pressure clinical trial. Journal of hypertension. 2017;35(12):2527-2531.

Summary: A retrospective observational analysis of a blood pressure randomized controlled trial to assess the effectiveness of Facebook to recruit middle-to older aged adults. 300 participants were recruited from three Australian cities using only conventional ads in the first 20 months and then adding Facebook ads in the last 4 months of the study. The study showed that Facebook ads were successful in increasing the number of enquiries and participants from two of the three recruitment cities.

| Study Purpose | Population | Recruitment Methods | Results |
|---|--|--|--|
| To assess the effectiveness of Facebook for recruitment of middle-to-older-aged adults into blood pressure clinical trials. | Data from a randomized controlled clinical trial in three Australian capital cities (Tasmania, Queensland, Australian Capital Territory). Inclusion criteria: • 18–69-year-old adults with high BP, currently taking BP meds. Exclusion criteria: • Taking 3+ BP meds, history of cardiovascular disease, or contraindicated medications. | Conventional ads (newspaper, radio, posters) used in first 20 months. After 20 months, 4 months of intermittent Facebook ads were added on. Broadcast at a 30–50-mile radius from study sites. Targeted to 35–69-year-olds. Ads placed in newsfeed on the Facebook page of the University of TAS. Ads would cease for the day after reaching daily cost budget (based on number of clicks on ad). Ad clicks directed to study website. Additional conventional ad added a few months prior to Facebook ads in one city. Included screening of approximately 5000 patients and letters to potentially eligible | Demographics: Ethnicity, Race, Gender, and Education not reported. • Age (mean): 60.9 from conventional recruitment methods compared to 58.7 after introducing Facebook ads. • Facebook ads successful at increasing the number of enquiries and participants in 2 of the 3 recruitment cities (smaller regional centers). • Australian Capital Territory: enquiries rose from 6.5 to 22/month and recruited participants rose from 1.8 to 7.3/month. • Tasmania: enquiries rose from 12.5 to 28.5/month and recruited participants rose from 4 to 9.3/month. • Queensland: Nonsignificant decrease of enquiries and recruited participants. • Facebook ads successful in recruiting participants from an older age bracket although the average age was significantly younger than those recruited from conventional ads (from 60.9 to 58.7 years). |



Citation: Stout, S.H., Babulal, G.M., Johnson, A.M. *et al.* Recruitment of African American and Non-Hispanic White Older Adults for Alzheimer Disease Research Via Traditional and Social Media: a Case Study. *J Cross Cult Gerontol* **35**, 329–339 (2020). https://doi.org/10.1007/s10823-020-09405-9

Summary: Researchers describe an Alzheimer's disease study's use of traditional media (newspaper), social media (Facebook, Twitter, Nextdoor, and Craigslist), and in-person recruitment (community speaking engagement events) for the recruitment of African American and Non-Hispanic White older adults in St. Louis, Missouri. Researchers obtained 546 individual responses across all recruitment sources and enrolled a total of 97 participants. 16.5% of enrolled participants were African American (AA) and the remainder were Non-Hispanic White (NHW). Researchers find that traditional media is the most effective recruitment method in obtaining responses and enrolling participants for both AA and NHW individuals. While social media is the second most successful recruitment method, it did not yield any AA responses, and shows to be a useful, nocost, and low-effort recruitment method.

| Study | Population | Recruitment Methods | Results |
|---|--|--|---|
| Purpose | | | |
| To describe the use of traditional media, social media, and in- person recruitment of African American (AA) and Non- Hispanic White (NHW) | Retrospective study of participants recruited for ongoing, longitudinal preclinical AD and driving study in St. Louis, MO. Inclusion criteria: 65 years or | Four community speaking engagements at a public library, senior independent living community, a university-sponsored community education event, and a church with 40-80 attendees per talk. PowerPoint presentations on | A total of 546 individual responses from the following recruitment sources (demographics only collected from enrolled participants): • 75% (409) from traditional media (96% from front-page Sunday newspaper article) • 53 enrolled: 10 AA participants • 7.3% (40) from social media (Facebook and Nextdoor only) • 15 enrolled, 0 AA |
| participants | older | aging, driving, | participants |
| for Alzheimer | | dementia, and aging | |

Cognitively disease (AD) research delivered by 2.2% (12) from university studies. study team. Each normal communications (Clinical varied from 5-45 o 8 enrolled, 3 AA mins and 15 minutes Dementia participants for Q&A. Rating of 0) 3.5% (19) from community Study flyer Driving on speaking engagements distributed at the average of at o 5 enrolled, 1 AA end. least weekly participants Social Media 12% (66) from word-ofadvertisements with mouth/snowball sampling. study flyer posted for o 16 enrolled, 2 AA approximately 2 participants months to: o Twitter - lab and Demographics of 97 enrolled participants: study staff's personal o Age (mean): 73.09 for NHW and feeds 70.25 for AA Facebook - personal Ethnicity: not reported and neighborhood Race: 83.5% NHW and 16.5% AA pages (limited to their o Gender: 36.1% Female for NHW and own neighborhoods). 12.4% Female for AA Craigslist in St. Louis o Education (mean), v: 17.21 for NHW Nextdoor in several and 16.08 for AA St. Louis metropolitan neighborhoods. Findings: Email newsletters Traditional media (print from Washington newspaper) was most effective University's Institute recruitment method for both NHW for Public Health. and AA individuals. • Traditional media: Social media (Facebook and Article in university Nextdoor) was the second most newsletter effective recruitment method but Front-page Sunday only for NHW participants. article by a local Social media was a useful, no-cost, metro newspaper low-effort recruitment method. with interview from 2 study investigators

and 2 research participants.

for digital.

Distribution included 200k for print and 18

 2 ads with study flyer in local weekly

| | newspaper focused on the AA community. | |
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Citation: Cowie JM, Gurney ME. The Use of Facebook Advertising to Recruit Healthy Elderly People for a Clinical Trial: Baseline Metrics. JMIR Res Protoc. 2018 Jan 24;7(1):e20. doi: 10.2196/resprot.7918. PMID: 29367186; PMCID: PMC5803529.

Summary: Researchers describe the use of Facebook advertising to recruit healthy adults over the age of 60 to an Alzheimer's disease drug clinical trial in Michigan over an eight-week period from August to October, 2016. Researchers fully enrolled their target enrollment of 45 participants. Of 621 individual responses across all recruitment sources, the majority of inquiries were from the Facebook advertising campaign, accounting for 72.5% of all inquiries. Researchers confirmed a high level of engagement with Facebook among older adults however the study overenrolled white participants, with minority enrollment that was not proportional to the demographics of the study site or US population.

| Study Purpose | Population | Recruitment Methods | Results |
|---|--|--|---|
| To show the effectiveness of using targeted Facebook advertisements to recruit people aged 60 years and older for a clinical trial. | Phase 1 clinical trial of an Alzheimer's disease drug at a single site in Michigan. Inclusion criteria: Adults aged 60 years and older. Healthy adults (nonsmokers, free from central nervous system medications, age-normal lab values, controlled diabetes if diabetic, no history of cancer, and healthy blood pressure. | Recruitment managed by a Contract Research Organization (CRO). Initial recruitment started in June 2016 for 11 weeks with traditional methods only including: 1. Personal referrals; 2. Mailers; 3. Billboards; 4. Bus ads; 5. Newspaper ads; 6. Outreach events. Due to low enrollment, additional strategies were implemented including: 1. Participant incentive raised from US \$2500 to US \$4000; 2. Personal outreach to local churches | Demographics of 45 enrolled participants: Age range: 60-78 years Ethnicity (White): 90% Race: not reported Gender: 64% Female Education: not reported A total of 621 individuals responded to the Facebook campaign, accounting for 72.5% of all inquiries. The CRO website and intranet produced 9.5%, Word of mouth/referral/event produced 7.5%, Print/newspaper ads produced 7%, and posters/flyers/mailers/billboards produced 3.5%. Facebook campaign 1 was twice as effective as average health care marketing online advertising with a cost of engagement of US \$1.23 Facebook campaign 2 showed that women slightly preferred the altruistic campaign, and men favored the typical campaign. The cost of engagement for the typical campaign was US \$0.91 and US \$1.27 for the altruistic campaign. Men were slightly more engaged with the Facebook campaign. Confirmed that people aged 55-64 are twice as likely to engage with |

and senior groups; sponsored Facebooks ads than 3. Facebook younger adults. advertising Minority enrollment was not launched by the proportional to US population nor sponsor that demographics of study site with the directed study overenrolling white participants. individuals to the **CRO** Two Facebook ad campaigns were conducted for 8 weeks. o Campaign 1: Used the same words and images from traditional campaign. Ads targeted towards Facebook users aged 60+ years, geographic communities within 60-mins. from clinical site, and with interests in Alzheimer's disease research medical research, and the Alzheimer's Association. o Campaign 2: Two target populations identified as "typical" (healthy older adults' content with study

activities) or

| "altruistic" | |
|------------------|--|
| (older adults | |
| interested in | |
| advancing | |
| scientific | |
| progress of | |
| Alzheimer's | |
| disease | |
| treatment). A | |
| Facebook | |
| algorithm was | |
| created for each | |
| based on | |
| keywords, age, | |
| geography, and | |
| income level. | |
| New social | |
| media specific | |
| text and images | |
| were used. | |
| | |

Topic: Comparison of two social media platforms for recruitment

Citation: Head, B. F., Dean, E., Flanigan, T., Swicegood, J., & Keating, M. D. (2016). Advertising for cognitive interviews: A comparison of Facebook, Craigslist, and snowball recruiting. Social Science Computer Review, 34(3), 360–377. https://doi.org/10.1177/0894439315578240

Summary: Researchers compared the use of advertising platforms, primarily Facebook and Craigslist, for recruitment of cognitive interview participants. Recruitment methods and outcomes are described and report that for one study, Facebook was a faster and more effective recruitment method while for the second study, Craigslist was faster and more effective. Demographic results showed that younger participants were recruited from Craigslist rather than Facebook.

| Study Purpose | Population | Recruitment Methods | Results |
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| Comparison of two studies to test the performance of Facebook versus Craigslist for recruitment of cognitive interview participants. | Inclusion criteria: Study 1 (Second Life): US adults aged 18 and over. Users of the international multiplayer online game, Second Life. Study 2 (long- term care): US adults aged 40-75 | Study 1: Three 1-week waves of ads with 1 week in between. Wave 1: Simultaneous Facebook and Craigslist ads. Craigslist ads in 5 US cities (Raleigh-Durham, NYC, LA, Houston, Minneapolis) Wave 2: Same as Wave 1 plus Craigslist ads in San Francisco, Santa Barbara, and San Diego. Wave 3: Facebook ads only. Study 2: One wave of Craigslist, Facebook, and internal employer-based classified page ads. Advertisements restricted to residents of 2 US cities (Raleigh- | Recruitment time period and final sample size for both studies were not reported. Demographics: Based on responses to screener survey. Study 1: Age (mean): 31.1 from Craigslist compared to 41.8 from Facebook. Ethnicity - Hispanic: 25% Hispanic from Craigslist compared to 7% from Facebook Race: 54% White from Craigslist compared to 81% from Facebook. Gender: 43% Female from Craigslist compared to 36% from Facebook. Education: 57% BA/BS and Postbaccalaureate from Craigslist compared to 27% from Facebook. Study 2: Only 5 participants from Facebook. Age (mean): 50.32 from Craigslist compared to 59.4 from Facebook. Ethnicity (Hispanic): not reported Race: 62% White from Craigslist compared to 80% from Facebook. Gender: not reported Education: 60% BA/BS and Postbaccalaureate from Craigslist compared to 80% from Facebook. |

| Durham, and | Study population largely determines |
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| Washington, DC) | whether Craigslist or Facebook will |
| | produce better recruitment results. |
| | |
| | Outcomes: |
| | 1. Recruitment speed: Differences across |
| | the two studies |
| | Study 1: Facebook was faster and more effective. |
| | Study 2: Craigslist was faster and |
| | more effective. |
| | 2. Demographic diversity: Mixed |
| | evidence with one consistent finding |
| | that Craigslist recruited younger |
| | participants than Facebook. |
| | Study 1: Relationship between |
| | recruitment method and education, |
| | ethnicity, and race. Craigslist recruits |
| | were significantly younger (31.1 |
| | mean) than those from Facebook (41.8 mean). |
| | Study 2: Relationship between |
| | advertisement type and marital |
| | status, employment status, and age. |
| | Craigslist recruits were also younger |
| | (50.3 mean) than those from |
| | Facebook (59.4 mean). |
| | 3. Professional participants: Mixed evidence |
| | Study 1: Showed evidence that |
| | Craigslist produced a larger number |
| | of professional participants than |
| | Facebook. |
| | Study 2: Little evidence of |
| | professional participants from either |
| | Facebook or Craigslist. |
| | 4. Geographic dispersal: Limited |
| | available data to test hypothesis but did |
| | see that greater geographic dispersion |
| | occurred from Facebook. |
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Topic: Comparison of strategies using the same social media platform

Citation: Valdez RS, Guterbock TM, Thompson MJ, Reilly JD, Menefee HK, Bennici MS, Williams IC, Rexrode DL. Beyond traditional advertisements: leveraging Facebook's social structures for research recruitment. Journal of medical Internet research. 2014;16(10):e243.PMCID PMC4259909

Summary: Researchers describe how two consumer health IT studies, one targeting adult Filipinos and the second targeting adults with Type 2 diabetes, use direct communication with administrators and members of Facebook groups and pages for recruitment. Researchers obtained 87 complete responses from August - December 2013 for Study 1 and 79 complete responses from May – June 2014 for Study 2. Due to the small sample sizes, researchers conclude that direct Facebook group/page recruitment is feasible for small qualitative research samples but not for large quantitative research samples. Researchers also find mixed results for sample representation across both studies but are successful in recruiting older adults.

| Study Purpose | Population | Recruitment Methods | Results |
|---|--|---|--|
| To assess the feasibility, benefits, and challenges of recruiting for consumer health information technology (IT) research studies using direct communication with Facebook groups and pages. | Inclusion criteria: Study 1: Adults aged 18 and older living in the US. Identified as Filipino (Target: specific ethnic group) Study 2: Adults aged 18 and older living in the US. Type 2 diabetes (Target: specific diagnosis) Facebook users | Study 1: Survey assessment of perception, use, and preferences for consumer health IT. Identified 78 Facebook groups and 69 pages targeting Filipino- Americans and then contacted the administrators of those groups/pages via private message about the study. Initially posted survey link directly to the groups/pages after admin approval, but due to low response (n=8), posts were made directly according to privacy settings. Study announcement | Study 1: 87 complete responses from August - December 2013. Study 2: 79 complete responses from May – June 2014. Demographics: Study 1: Age: 22% 18-29 yrs., 32% 30-49 yrs., 29% 50-64 yrs., 14% 65+ yrs. Ethnicity (Filipino): 93% identified strongly and very strongly Race: not reported Gender: 51% Female Education: 83% college or graduate degree Study 2: Age: 12% 18-29 yrs., 36% 30-49 yrs., 48% 50-64 yrs., 9% 65+ yrs. Ethnicity (Hispanic): 10% Race: 77% White, 12% Black or African American, 2% American Indian/Alaskan Native, 0% Native Hawaiian/Pacific Islander, 2% Asian, 7% Some other race Gender: 75% Female Education: 46% college or graduate degree. |
| | 1 | | Outcomes: |

made 5 times over 4-month period.

Study 2: multi-phased, mixed methods study of patient's use of Facebook to communicate health information.

- Created a study Facebook group with study information and materials.
- Identified and contacted 123
 Facebook groups and 137 pages targeting people with diabetes and racial and ethnic minorities.
- Admins of 56
 groups and 39
 pages responded
 to asking their
 members to join
 the study Facebook
 group.
- Research team posted on study Facebook group weekly on study progress, encouraging to recruit other, and to answer questions.
- Once study group reached 100 members, members were asked to complete the pre-study

- 1. Feasibility: Recruitment via Facebook is feasible for small samples for qualitative research but not for large samples for quantitative research. Study 1:
- Rate of study completion proportionate to the rate of posts made.
- No direct costs excluding personnel time.

Study 2:

- Rate of study completion proportionate to the actions of the admin research team.
- Direct cost of US \$118.17 or \$1.94 per eligible participant.
- 2. Representativeness: mixed results for sample representation for both studies. Study 1: Compared to Filipino community in the US using 2012 ACS data.
- Sample representative for gender, age, marital status, and birth country.
- Sample was more likely to be older than 65, married, and more educated.

Study 2: Compared to estimated American diabetic population on Facebook.

- Sample overrepresented women, blacks/African Americans.
- Sample underrepresented
 Hispanics/Latinos, Asians, and Native
 Hawaiian/Pacific Islanders.
- 3. Ethical Challenges: Concerns related to boundaries between researchers and participants for both studies including managing friend requests between study team and administrators/participants. For Study 2, concern about messaging to

| | survey via private message. | racial/ethnic groups and pages unrelated to health. |
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