

# Using New Age Recruitment Methods: Advantages and Disadvantages in Birth Cohort Research

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## ABSTRACT

The present study aimed to describe the experience of a birth cohort study using advertisements on Facebook and Instagram in the attempt to increase user traffic on a study website and increase the interest of potential participants. Two advertisement flights (82 days total) provided a link to the study website where further information could be obtained, and a form could be completed to show interest in joining. Study specific data, SM analytics, and landing page metrics were collected. During the two flights, 34 participants consented and 47 showed interest via the study website; 1,184,112 impressions and 691 engagements were recorded. Flight 1 and 2 had an initial 494% and 612% increase in the number of sessions, respectively. Pageviews saw an initial 369% and 448% increase, respectively. New age recruitment methods influenced the number of SM analytics of the study website and should be used as a supplement to traditional methods.

## KEYWORDS:

Social Media, Pregnancy, Recruitment, Facebook, Instagram, Advertising, Longitudinal Study, Social Networking Sites

## INTRODUCTION

Traditional methods of recruitment for human subjects research, such as phone calls, postal mail, and flyers, can fall short when targeting hard-to-reach groups. Hard-to-reach groups generally have defining characteristics such as: ethnicity, low socioeconomic status, and low literacy levels, which creates a barrier for research opportunities (Thanh et al., 2019). Groups such as minorities (Ejiogu et al., 2011), hard to locate populations (Russomanno et al., 2019), and pregnant persons (Arcia, 2014)

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have been cited in the literature as being hard-to-reach but crucial populations for recruitment into scientific studies. Thus, traditional recruitment methods may be leaving gaps within the outreach and contact aspects of recruitment for these populations. Specifically, traditional methods prove costly when considering the required resources (time, tracking, and money) needed (Tate et al., 2014). New age recruitment methods, such as social media (SM), may help close these possible recruitment gaps in hard-to-reach groups. In using SM during the recruitment process, studies are able to include more minorities (Iribarren et al., 2018), draw a higher percentage of women (Moseson et al., 2021), and have better outreach to younger and other hard-to-reach demographics (Santarossa & Woodruff, 2018; Whitaker et al., 2017).

SM is a collection of online platforms which aim to connect users and allow interactions between them (Aichner et al., 2021). SM can be further diversified into Social Networking Sites (SNSs), blogs, podcasts, and various forms of media which utilize the web as a platform for users to create, interact, and disperse information within a social network of users (Ellison et al., 2013). These sites can further be categorized by the number of daily users they receive, creating the tier of ‘mainstream’ SNSs. Roughly 53% of Americans receive their news from mainstream SNSs such as: Facebook, Instagram, Twitter, and YouTube (Shearer & Mitchell, 2021). When distinguishing between SNSs, Facebook has one of the largest amounts of active users, and currently has upwards of 2.8 billion members across a vast array of different countries (Huertas et al., 2021). In the United States, 69% of Americans (61% of all males, and 77% of all females) report that they use Facebook, with 70% of Facebook users visiting the site daily (Auxier & Anderson, 2021). To expand its reach even further, Facebook purchased the smaller SNS, Instagram, and obtained, along with the company, an average of 400 million daily active users. These 400 million include nearly 55% of young adults (18-25 years old), which increased Facebook’s outreach to the younger population (Alhabash & Ma, 2017).

Together, Facebook and Instagram have become an area of opportunity for outreach to potential research participants (Akers & Gordon, 2018). Facebook has been found to be the most cost- and time- effective recruitment strategy when compared to other SNSs such as Google Ads and Reddit (Moseson et al., 2021). In addition, previous studies have shown Instagram to be a feasible, cost-effective way to recruit participants (Ford et al., 2019). When compared to in-person recruitment; Instagram was shown to have a much lower cost than in-person recruitment, \$19 per participant compared to \$152 per participant (Kutok et al., 2021). Additionally, Instagram has been shown to positively change participants perceptions of the research program (Thomas et al., 2020). Specifically, Facebook advertisements allow for an array of ways to pick demographic information for target groups. One example of specifying demographics is Facebook’s ‘Pixel Feature’, which collects data from previous advertisement cycles (Flights) and creates a target audience that is most likely to click the advertisement (Meta). With the ‘Pixel Feature’, advertisement costs can drastically change as the flights progress, reducing the original cost per enrollment by as much as 54x (Lee et al., 2019).

Birth cohorts are longitudinal studies that require the recruitment and retention of pregnant persons in order to determine the casual relationship between potential risk factors during pregnancy and the health status of the newborn up to childhood or adulthood (Canova & Cantarutti, 2020). Pregnant persons are considered a hard-to-reach target, specifically early in pregnancy, often due to their discreteness in the first trimester (Arcia, 2014). Many of these longitudinal studies need to be able to recruit a certain number of participants, found through specific calculations, in order to have a high statistical power and run at a high confidence level (Sharma et al., 2020). Longitudinal studies often experience increased participant attrition when the duration of the study is long and the study contains frequent assessments (Teague et al., 2018). Additionally, when dealing with disease, birth cohorts need to be able to have a sample size that: is large enough to produce the disease in question, shows the progression of the disease, and reflects the population the study is applied to (Paneth & Monk, 2018). New age recruitment methods such as SM allow for a more feasible, cost- and time-effective method for recruiting a diverse selection of pregnant persons into a research study than the traditional methods of recruitment (Admon et al., 2016).

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