

RESEARCH METHODS AND TECHNOLOGY BRIEF REPORT

Leveraging social and digital media for participant recruitment: A review of methods from the Bayley Short Form Formative Study

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Introduction. Social media is increasingly being used in research, including recruitment.

Methods. For the Bayley Short Form Formative Study, which was conducted under the the National Children's Study, traditional methods of recruitment proved to be ineffective. Therefore, digital media were identified as potential channels for recruitment.

Results. Results included successful recruitment of over 1800 infant and toddler participants to the Study.

Conclusions. This paper outlines the methods, results, and future research opportunities.

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Introduction

The National Children's Study (NCS) conducted formative research to develop a short form of the widely used *Bayley Scales of Infant and Toddler Development*[®], 3rd edition (Bayley-III[®]) [1]. The Bayley-III[®] is a copyrighted instrument generally regarded as the standard for early childhood developmental assessment. Of key consideration for the NCS was that the Bayley-III[®] provides norm-based measurement of children's cognitive, language (receptive and expressive language), and motor (gross and fine motor) skill development. It was determined that having the Bayley-III[®] available as a short form as part of the NCS would substantially reduce participant burden and costs by reducing time in the field and training time. In addition, the Bayley-III[®] Short Form could serve as strong baseline measures to anchor the NCS, enable future comparisons with various outcome measures, and to parse the effects of various exposures on children's development.

For these reasons, NCS sought to examine the feasibility, acceptability, and cost effectiveness of implementing the Bayley-III[®] Short Form at 6, 12, 18, 24, and 36 months in the NCS. The Bayley Short Form Formative Study (the Study) sought to recruit 850 parents of infants and toddlers who lived within the Washington, DC metro area and could bring their child to offices in Rockville, MD to participate in the Bayley-III[®] Short Form test activities with a data collector (or have the data collector travel to their house) for about an hour. However, recruitment of parents of infants and toddlers via traditional methods like mass mailings and telephone targeting proved ineffective.

Given this, the feasibility of other nontraditional methods—namely digital and social media—to recruit this audience were considered. Duggan *et al.* [2] report that 75% of parents use social networking sites and 14% of all mothers in the United States with at least 1 child in their household report turning to social media sites for advice [3]. Further, there are a few studies that have examined health promotion through social media [4, 5], the findings from which indicate potential for using blogs, Twitter, and other online communication channels, not only for increasing awareness but also to influence decision making.

Despite this, there are risks that come with using digital and social media including the fact that representativeness and generalizability are weak [6]. To determine the feasibility of using social and digital media

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for recruitment, the Study weighed the pros, for example popularity and utility of social media among parents, and cons, for example lack of representation among the sample and the difficulties of online data validation, of using digital media for recruitment. The Study opted to use these media based on the fact that the study sample did not have to be representative and it aimed to test the Bayley Scales among a targeted group of users who were screened for participation, limiting any online data validation concerns.

This paper reviews an exploratory study that aimed to test digital and social media methods for recruitment. This study builds on an earlier research by testing these channels as pathways for study recruitment. This paper reviews the study design and methods, the findings, and future research opportunities. Finally, it acknowledges the limitations of this study.

Methods

Digital methods used for recruitment to the Study fell into 2 main categories—paid advertising and unpaid outreach. Paid advertising was posted across 3 platforms—Facebook, Google, and Twitter. Ads were placed targeting potential participants based on geography, parental status, and/or interest in parenting topics. These ads directed users who clicked on them to an online sign-up page on Westat's Web site.

Unpaid publisher outreach identified influential online writers, bloggers, and other publishers who would be interested and willing to write about the study and recruitment effort for their targeted audiences. This effort consisted of outreach to 3 main publisher types—mommy list serves (neighborhood email lists that parents opt into), parenting message boards (online forums parents visit to discuss parenting issues), and mommy blogs and social profiles. The mommy list serves were found on Yahoo, Google, and other similar group-type platforms. For blogs, social profiles and list serves, editors, and/or administrators were contacted and asked to publish Study sign-up information. For outreach to message boards, administrators were contacted for permission only, and then the message was posted directly by the Study recruiter to the board. Across all posted messaging, information about the Study, incentives, and a link to the sign-up page were included. The online sign-up page captured basic information for screening and follow up. Recruitment took place over 65 weeks from April 2014 through June 2015.

Results

The digital recruitment efforts for the Study resulted in 1 800 web sign ups. Of the screeners emailed, 68% ($n = 1\,446$) completed forms were returned; and of these, 71% ($n = 1\,035$) were eligible to participate in the study; 48% ($n = 1\,020$) were recruited into the Study. Detailed data about the number of Study participants recruited by platform is included in [Table 1](#).

It is worth noting that the origin of ~12% ($n = 225$) of the sign ups could not be determined. We believe that some of these may have come from users who heard about the study from another parent, "Googled" it to find out more information, and then signed up.

Table 1. The number of study participants recruited by platform

Variable	Category	n	%
Paid channels	Facebook	1560	52
	Google	260	5
	Twitter	520	4
Unpaid channels	List serves	260	13
	Message boards	130	4

Discussion

Findings from this exploratory study of digital and social media use in study recruitment hold several implications for future work in this area. First, the targeting in digital media is advanced. Facebook, as well as other social media platforms, have the unique advantage of gathering specific demographic and behavioral information that is voluntarily offered by users. Combined with web traffic data, this makes it extremely easy to reach highly precise target audiences like parents of toddlers in the Washington, DC area. Moreover, this is an area that continues to improve. In fact, during this effort, Google launched new targeting capabilities, which allowed advertisers to target directly to parents. Overall, this kind of advance targeting helps to reduce costs and improve performance of the advertisements by ensuring that only relevant audience members are reached.

As well, the social network effects of digital and social media can be clearly seen in the results of this Study. The success of Facebook in driving sign ups was in part due to the sharing and commenting functionalities available on the social network. Study participants would actively share the post on their own timeline, as well as "tag" their friends in the comments of the post to get their attention, both of which led to additional sign ups. Similarly, Twitter advertisements and nonpaid forum posts were successful because of the re-tweeting and commenting functionality of both of these types of platforms.

Together, the ability to identify and reach the right people in digital and social media as well as encourage the diffusion of these recruitment messages throughout social media networks led to the recruitment of a high number of qualified participants.

Limitations

The Study's participants were drawn from a convenience sample. As well, the target audience of the Study being parents and caregivers was an ideal audience for the use of social media as a channel for recruitment; studies focusing on other audiences would need to test social media advertising with these groups to see if they can be recruited as easily and swiftly. Finally, these social media platforms continue to change making it critically important that future investigators understand nuances of the platforms in order to implement similar recruitment advertising campaigns successfully.

Conclusions and Future Research

The findings from this study suggest a number of key considerations for researchers contemplating the use of social and digital media for recruitment. The advanced targeting options of these channels can lead to the identification of the right people online swiftly and easily. This coupled with the social network effects of these channels can result in the broad dissemination of study-related messages through trusted channels—and lead to successful recruitment of study participants. In the face of waning voluntary study participation, this can be a real benefit to researchers in their work. Future studies should also consider how to target other audience groups to test this method with nonparents. Finally, future work should seek to be more efficient and effective by staying on top of emerging social and digital media trends, and making the sign-up process turnkey.

Declaration of Interest

None.

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