

# **Participant Recruitment in an Online World: Using Blog Comments and Forum Posts**

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The recruitment of participants to online research can be difficult when they must meet restrictive requirements, a situation we faced in recruiting the parents of 2-month-olds. Here we describe a new method, blog commenting, and compare it to the more common online technique of posting recruitment information on parent-oriented online forums. In the blog method, we searched blogs for infant-specific terms and phrases; we then read entries from those retrieved blogs and identified ones written by a parent of an appropriately aged infant. We then posted to the blog a comment in which we invited the parent to participate and to visit our research web site. Rates of study completion and most participant characteristics did not differ for blog- and forum-recruited participants. We discuss the particular strengths and weaknesses of blog recruiting and conclude that it is well suited for topics that people care to write about.

In a cacophonous world of advertising messages how can a researcher attract potential participants to research studies? Traditional marketing and promotion campaigns indiscriminately vie for everyone's attention and represent the most expensive option, and one that virtually no researcher can afford. At the opposite cost extreme one can post a recruitment ad to online want-ad sites like [www.Kijiji.com](http://www.Kijiji.com) and [www.Craigslist.com](http://www.Craigslist.com). These free alternatives depend on the search behaviors of those who are looking for a particular product or service, which limits their effectiveness for researchers because few individuals actively peruse want ads in search of research participation. It is not surprising, then, that virtually all research

recruitment falls between the poles of mass marketing and free online search. For example, some researchers can use captive participants from undergraduate subject pools, whose members are required to participate in research as part of a course requirement. Others find participants by advertising in local newspapers, by contacting community organizations, or by consulting informal networks of friends and acquaintances. We have learned that such traditional recruitment strategies can now be supplemented or replaced by relatively inexpensive online strategies.

Nearly all human research demands a narrowing of focus to participants who share some defining characteristics such as a particular age, gender, or life experience. Identifying a segment of the population is a particular strength of online recruitment strategies. Google, Inc., for example, brilliantly combined search methodology with a system for presenting advertisements (“sponsored links”) to those who, based on their search terms, are likely to be interested in the advertised product. Thus, it is possible for the researcher to present recruitment messages online to those who enter particular search terms or phrases (e.g., an ad can appear whenever someone searches for the phrase *toilet training*). The cost of online presentation of such an ad is free, and it may appear thousands of times. Moreover, the researcher/advertiser only has to pay \$1 or \$2 if the searcher clicks on the ad to visit the research study website, which sounds like a good deal. However, because most visitors to a study website do not continue to participation and study completion, and the rate of conversion of visitors into participants is often quite low (e.g., 1-15%). Thus, paid online advertising can be much more expensive than one might first anticipate; for example, Graham, Milner, Saul, and Pfaff (2008) reported an average online advertising cost of US\$38 per registrant in a smoking cessation study.

A much less expensive online approach is to post free notices to online forums. Forums

are online sites where individuals share information around some common set of interests. For example, parenting forums are popular, and many parents use them as a source of health and childcare information (Sarkadi & Bremberg, 2005). Forum members presumably comprise a more homogeneous group than web users in general because of their shared interests, and the researcher can capitalize on a potential match between the topic of the research project and the interests of forum members (e.g., Koo & Skinner, 2005).

The match between a researcher's needs and an online forum's members may be overly broad. We encountered this problem in our research on infant motor development, and for the present study, we needed to find the parents of infants in a very narrow age range (1- to 2-months of age), which meant that relatively few forum parents would have a baby in the desired age range. This problem prompted us to find a more focused, and previously unreported, recruitment strategy that is the focus of the present report, posting recruitment comments to blogs.

Blogs (short for *web logs*) are easily updated, chronologically organized online journals, which have incredibly diverse content that may involve anything from a personal on-line diary to photographs, videos, or political punditry. Anyone with web access can start a blog, and the availability of free, user-friendly blogging software makes it easy to establish and maintain a blog without any technical expertise. The number of blogs has exploded in recent years; [BlogPulse.com](http://BlogPulse.com) a blog-focused search engine recently reported more than 127 million blogs in existence.

Many web-comfortable parents start blogs about their children, both as a virtual baby book and as an easy way to keep friends and relatives informed. Many such blogs are public, and most of those allow for the posting of reader comments on the published entries. We realized that we

could use blog-oriented search engines to identify parent blogs and to use the blog's comment feature to invite the blogging parent to participate in our research. Moreover, by reading the blogs we could usually determine the age of the infant, which allowed us to focus recruitment on participants who met our specific research requirements.

We began with the question of how a researcher can attract potential participants to research studies, and we believed that online strategies offer some advantages over traditional recruitment approaches. More specifically online recruitment facilitates the recruitment of specific types of participants, which is particularly important for developmental researchers; in our case we needed to find the parents of very young infants. Here we report on an approach not previously described in the literature, blog commenting, and compare it to a more widely used online strategy, the posting of recruitment notices to online forums.

## ***Method***

We conducted a longitudinal study on when babies are first able to roll over independently, and we recruited participants from both online forums and blogs. For both recruitment methods, each participating parent completed a common online survey, where we asked them for information about their baby's general health and motor attainments like rolling over. We also collected some general demographic and parent information. After completing the initial survey, participants continued with the longitudinal portion of the study. For present purposes, however, we focus only on the initial survey and compare the characteristics of blog-recruited to forum-recruited participants.

We searched for parent-oriented forums, registered when necessary, and contacted the moderator of the forum. We identified ourselves as researchers and requested permission to post a description of our study to the forum. Moderator responses varied and included: a) permission,

b) refusal, c) offers to post a message on our behalf, or d) redirection to a particular forum dedicated to research. If we received no reply from the moderator after several days, we proceeded with a posting. If asked, we removed the post immediately. We successfully posted to 26 forums, some of which included multiple sub-domains. We also contacted one Facebook group, and requested and received permission to post. The text of our post to forums follows:

"Hi everyone, I am part of a university research team interested in how infants develop. We have just put up a new research study for parents of 2-3 month olds. If you want to learn more about your infant, as well as how other infants around the world develop, please come check us out at [our study URL]. We also have other studies for parents of 9-to 36-months-olds at [second URL]. Best wishes, ...".

To find blogging parents we used specialized search engines that focus on monitoring blogs (e.g., [IceRocket](#) and [BlogPulse](#)) and identified recent blogs containing phrases likely to be used by parents of infants (e.g., "...is 1 month old..."). We then visited each of 371 blogs to determine from the content if the blogger was the parent of a healthy infant less than three months old. We excluded 109 cases where the blog: a) had no information about an infant (e.g., the site was about a pet); b) was solely a photography site; c) mentioned that the baby had been hospitalized for more than a month; d) had no activity for several months; or e) restricted posts to specified persons. We then posted the following message to the remaining 262 blogs:

"I was interested to read your blog. As a parent, you may be interested in being part of a university study I'm involved with. It's about how infants and children develop. It wouldn't take much of your time, and it's a great way to contribute to knowledge by reporting on

your own experiences. For more details go to the following address after copying it into your browser window, [our study URL]. Best wishes."

We also e-mailed 27 friends and acquaintances, who either were parents of children or knew parents of infants in the age range required. Two of them forwarded our message to others who then posted to a parenting forum.

A visitor to our site first encountered a welcome page that described our study in general terms and highlighted our goal of recruiting two-month-olds. This was followed by a consent page, which stated that the research had been approved for ethics and described the rights of participants and the responsibilities of the researchers. We listed phone numbers and email addresses for our university's ethics office and the principal investigator, and the participant was encouraged to print a copy of the form for future reference.

A participant encountered five web pages after granting consent: 1) *Source*, a single question about how the visitor learned of our research; 2) *About Child*, questions about child's birth, birth date, and health, geographic location, and questions about sleep and play positioning; 3) *Child Health* questions; 4) *About Parent*, questions about family demographics, such as the respondent's gender, year of birth, education, marital status, religious beliefs, and subjective socio-economic status (Goodman et al., 2001); and 5) *Postures*, descriptions and photographs of a series of infant milestones like crawling, and the parent was asked to indicate for each if their baby had reached that milestone. We invited participants to record their baby's progress for six months and, on a final page, we thanked and asked them for an email address, which was necessary for participation in the longitudinal part of the study. Participants were free to omit any item except the consent and infant birth date questions, which were required to continue the survey.

Our interest here is whether and how forum and blog recruits differed in their demographic characteristics and in their online behavior (e.g., how many items they completed). We had no *a priori* hypotheses about how, or if, the two groups would differ.

## **Results**

Over a 25-day recruitment period for the study, 918 visitors viewed the study's welcome page. Of these, 444 (48%) consented to participate and 315 (34%) answered the first question about how they learned of the study. This question was the basis for identifying our two groups (forum-recruited vs. blog-recruited), and we excluded for the present analysis the 49 participants who arrived at the study because they had heard about the study from a friend or relative or from a Facebook or Myspace source. Remaining were the 209 parents who learned of the study from a forum post and 57 who learned from our blog posts.

**Participant characteristics** are summarized in Table 1 below. Female infants comprised 48% of the sample, and mean values for gestational age, birth weight, and birth length were unremarkable. All of the participants reported being the biological parent of the described infant, and 97% of the respondents were the mothers, mostly married, and predominantly Christian. Education level varied widely, with representation from parents with a high school education to those with doctorates, as did Subjective Social Status. Although participants came from 8 different countries, North Americans dominated the sample, which was probably a result of the forums sampled (selected because they were the largest).

**Table 1**  
**Selected characteristics of combined blog and forum sample (n's vary from 232-258)**

	Mean	SD	Percent
Parent age (years)	29.6	4.6	
Subjective Social Status (0-10)	7.2	1.5	
Infant Age (weeks)	11.9	3.5	
Gestational age (weeks)	39.5	1.5	
Birth weight (g)	3494	505	
Birth length (cm)	50.5	4.8	
Country			
United States			61
Canada			22
United Kingdom			9
Australia			4
Other			4
Parent Marital Status			
Married			85
Common law			11
Separated / divorced / never married / other			4
Education			
High school			10
Some college or university			41
Bachelor's degree			26
Graduate school			22

**Online behavior** may differentiate bloggers from forum readers, and we developed four measures of online behavior. The first was *time on site*, or the number of minutes the browser was open at the site. As one would expect, this measure was highly skewed (mean = 37, median = 9), so we took the log of minutes to create a more symmetrical distribution (mean = 1.1, median = 1.0). Our second online behavior measure was the *Last item completed* (out of 44 possible items), which produced a highly bimodal distribution (M = 39, Median = 44); a few



participants quit early, whereas most remained until all, or nearly all, items had been completed. Our third online measure was *Pages with data*, which was created by assigning one point for each of the five core web pages that resulted at least one completed response and summing ( $M = 4.5$ ,  $Mdn = 5.0$ ). Lastly, we considered whether the participant provided an *Email address*, which was necessary for continuing with the longitudinal aspect of the study. We then compared the two groups by using t-tests (two-tailed) for the first three of the above measures and a chi-square test for the email measure. The two groups did not differ in any of these four online behavior measures.

**Demographic characteristics** may differentiate bloggers from forum participants, so we then looked for possible demographic differences between the groups. We thought that bloggers might be more likely to complete our survey because their invitations were more personalized, so we classified recruit type (blog vs. forum) by email completion (yes vs. no). Forum recruits did not differ from blog recruits in their likelihood of finishing, 66% vs. 67%,  $X^2(1) = 0.03$ , *ns*. We then compared the two groups on the variables in Table 1 and found that they did not differ on any of them except marital status,  $X^2(3) = 9.1$ ,  $p < .05$ ; 98% of blog recruits were married; whereas, 81% of forum recruits were. Forum users were more likely to be divorced or separated, which may have motivated forum membership as a source of support from other parents.

**Response rate** to a recruitment method is of interest to many and can be calculated in various ways (Groves & Lyberg, 1988). We adopted Shih and Fan's (p. 251, 2008) *minimum response rate* definition, which would be the ratio of those who completed our survey to the total number of blogs, 262, to which we posted. We defined *completion* as the provision of one or answer on every substantive page (i.e., a 5 on our *Pages with data* measure). Forty-five of our blog-recruited participants met this criterion, for a response rate of .17 (45/262). We could not calculate response rate for forum participants because we were not able to collect information on

the number persons exposed to our post (such information is available on some, though not all, forums).

**Reactions to our blog posts** could have prompted action by the blogger or additional comments in response to our post. Consequently, we returned to each of the 262 blogs between five and six months later and found that our comment had remained on 64% and had been removed from 31% of the blogs. The remaining 6% of the original blogs either had disappeared completely or had been restricted to invited individuals. In no cases were there any follow-up comments to our post, and we received no complaints about any of them.

### ***Discussion***

The present study demonstrates that invitations posted to online forums and carefully selected blogs can be a successful technique for recruiting special populations to a developmental research study. Blog posts were labor intensive but successful for finding a very specialized population of young infants. Seventeen percent of parents who we recruited in this way completed our initial online survey, which is a very high yield rate compared to other internet recruitment approaches. For example, we have used Google adwords to recruit parents to other studies and have found our yield rate to be far lower, 1-3%. This difference in yield probably arises from the fact that we visited each blog and searched for clear evidence that the blog was about an infant in the desired age range, a procedure that helps to maximize the match between the blogger's characteristics and our study's needs. Automated adword recruitment likely results in a poorer fit between the study's needs and the participant's characteristics.

The matching of potential participant to our study began with our choice of search terms used to find blogs, and we learned that the specificity of search terms used to find blogs was crucial. Overly inclusive terms or phrases (e.g., *my baby*) resulted in many off-target hits;

whereas, specific phrases used by parents (e.g., *turned 2 months old*) were much more successful. This search constraint means that topics associated with distinctive words and phrases are well suited for a blog recruitment approach (e.g., the search engine *IceRocket.com* identified 33 blog reports for the phrase “I was diagnosed with MS” during a three-month period). This aspect of blog recruitment means that, to be successful, a researcher will need to have a good understanding of colloquialisms and language usage in the target population of potential recruits.

Blog recruitment is inexpensive in terms of equipment and software because all one needs is a computer and internet access. However, blog recruitment is labor intensive because finding and reviewing blogs for suitability is time consuming, first to exclude inappropriate cases and, second, to post individual invitations to the blog. We did not collect data on the time we spent on blog recruitment, but we believe that blog recruitment has a higher cost in time spent per obtained participant than did forum recruitment. Researchers who have little money but do have student assistance could readily capitalize on this cost profile of blog recruitment.

A common question is whether data from online-recruited samples are representative of the general population. The simple answer is, no; no online sample is a random sample of the population. This non-representativeness feature of online studies is shared by virtually all developmental studies in the published literature; very, very few developmental studies are based on random samples drawn from a population. More crucially, most developmental studies do not have the estimation of a population parameter as a goal, a goal that would make the representativeness issue critical. Rather, most developmental studies are hypothesis driven, and what is essential for these hypothesis-testing studies is adequate variability on the relevant variables. Sample diversity was clearly evident in our web sample of parents and undoubtedly greater than that found in the typical infancy research study. For example, our parents' ages and

educational backgrounds covered the spectrum, and the range of scores on other variables was wide as well. Such sample diversity was facilitated by a relatively large sample size, which is hard to achieve for infancy research. Online recruitment of special populations makes possible the realization of sample sizes that would be impossible with most other recruitment approaches, and a large sample enables the inclusion of many predictor variables, not just a few.

Although online recruitment has a number of advantages, it also has some limitations, several of which we have mentioned. The blog recruitment method has a unique limitation; it can only work for topics that individuals are willing to write about and share publicly. That said, a striking feature of many of these blogs was bloggers' willingness to disclose many personal details of their lives. Certainly an unusual willingness to self-disclose may characterize bloggers, but not be a general trait in the population. Unfortunately, we did not collect any personality measures to check on this possibility, and future researchers may wish to consider whether bloggers and non-bloggers differ on personality characteristics such as extraversion and neuroticism. The fact that bloggers' babies are typical in their birth sizes does not guarantee that they do not differ in other ways.

Blog recruitment may be most useful for topics that are deeply engaging to people -- matters of personal importance like relationships, family, health, life, and death. Babies and children will always be priorities for people, but other topics like health and relationships will also be salient for bloggers -- and important for many research questions.

Do these internet recruitment methods work? For our purposes, they certainly did. We found that the combination of forum and blog posts was effective in generating traffic (more than 25 visitors per day) from persons who were presumably that was interested in our study: one in four visitors who arrived at the first page of our website completed our survey. It is difficult to know how well our rate of success might generalize to studies on other research topics and target

populations. How an individual will respond to these recruitment methods will depend on the nature of the research, how it is described, the time required, and many other factors.

Nevertheless, millions of individuals regularly use the web, and many of them will respond to blog and forum posts to consider, and possibly complete, an online developmental research study.

## **References**

- Goodman, E., Adler, N. E., Kawachi, I., Frazier, A. L., Huang, B., & Colditz, G. A. (2001). Adolescents' perceptions of social status: Development and evaluation of a new indicator. *Pediatrics*, *108*, 1-8.
- Graham, A. L., Milner, P., Saul, J. E., & Pfaff, L. (2009). Online advertising as a public health and recruitment tool: comparison of different media campaigns to increase demand for smoking cessation interventions. *Journal of Medical Internet Research*, *11*(1), e2.
- Groves, R. M., and L. E. Lyberg. 1988. An overview of nonresponse issues in telephone surveys. In R. M. Groves, P. P. Biemer, L. E. Lyberg, J. T. Massey, W. L. Nicholls, and J. Waksberg (Eds.), *Telephone survey methodology* (pp. 191–211). New York: Wiley.
- Koo, M., & Skinner, H. (2005). Challenges of Internet Recruitment: A Case Study with Disappointing Results. *Journal of Medical Internet Research*, *7*(1):e6 (Available at <http://www.jmir.org/2005/1/e6/HTML>).
- Sarkadi, A., & Bremberg, S. (2005). Socially unbiased parenting support on the Internet: a cross-sectional study of users of a large Swedish parenting website. *Child: Care, Health & Development*. *31*, 43-52,
- Shih T. H., Fan, X. T. (2008). Comparing response rates from Web and mail surveys: A meta-analysis. *Field Methods*, *20*, 249-271.