



Brief Report

The impact of phone calls on follow-up rates in an online depression prevention study

R.F. Muñoz^{a,b,*}, Y. Leykin^{a,b}, A.Z. Barrera^{a,b}, C.H. Brown^c, E.L. Bunge^{a,b}^a Palo Alto University, Palo Alto, CA, United States^b i4Health, Palo Alto, CA, United States^c Department of Psychiatry and Behavioral Sciences, Department of Preventive Medicine, Northwestern University Feinberg School of Medicine Chicago, United States

ARTICLE INFO

Article history:

Received 7 December 2016

Received in revised form 8 February 2017

Accepted 14 February 2017

Available online 22 February 2017

Keywords:

Internet interventions

Depression

Prevention

Phone calls

Follow-ups

ABSTRACT

Background: Automated Internet intervention studies have generally had large dropout rates for follow-up assessments. Live phone follow-ups have been often used to increase follow-up completion rates.

Objective: To compare, via a randomized study, whether receiving phone calls improves follow-up rates beyond email reminders and financial incentives in a depression prevention study.

Method: A sample of 95 participants (63 English-speakers and 32 Spanish-speakers) was recruited online to participate in a “Healthy Mood” study. Consented participants were randomized to either a Call or a No Call condition. All participants were sent up to three email reminders in one week at 1, 3, and 6 months after consent, and all participants received monetary incentives to complete the surveys. Those in the Call condition received up to ten follow-up phone calls if they did not complete the surveys in response to email reminders.

Results: The follow-up rates for Call vs. No Call conditions at 1, 3, and 6 months, respectively, were as follows: English speakers, 58.6% vs. 52.9%, 62.1% vs. 52.9%, and 68.9% vs. 47.1%; Spanish speakers, 50.0% vs. 35.7%, 33.3% vs. 21.4%, and 33.3% vs. 7.1%. The number of participants who completed follow-up assessments only after being called at 1-, 3- and 6 months was 2 (14.3%), 0 (0%), and 3 (25.0%) for English speakers, and 2 (18.9%), 0 (0%), and 1 (7.7%) for Spanish speakers. The number of phone calls made to achieve one completed follow-up was 58.8 in the English sample and 57.7 and Spanish-speaking sample.

Conclusions: Adding phone call contacts to email reminders and monetary incentives did increase follow-up rates. However, the rate of response to follow-up was low and the number of phone calls required to achieve one completed follow-up raises concerns about the utility of adding phone calls. We also discuss difficulties with using financial incentives and their implications.

© 2017 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Attrition from follow-up is a significant concern in most intervention research. For Internet interventions, it is one of the most pervasive and troubling issues. Significant follow-up attrition can compromise the interpretation of findings from a clinical trial, either by obfuscating the outcomes, or by making the conclusions about outcomes too optimistic or too dismal (depending on who drops out). Either way, attrition presents a problem for both science and for the patient populations clinical trials aim to help. Attempts to counteract follow-up attrition often take two forms, sometimes employed jointly: financial incentives, wherein participants are paid for completing follow-ups, and social nudges (e.g., calling participants, or sending them letters). However, Internet

interventions may face specific challenges that could make such strategies less effective, as described below.

Utilizing financial incentives to increase retention in Internet interventions itself represents a challenge. As the requisites to enter Internet studies tend to be low, and payments are often anonymous, participation strictly for financial gain becomes a threat to the study validity. Opportunities for “gaming the system” or downright exploitations by deceitful individuals are omnipresent. Internet interventions must contend with “professional research participants”, individuals who enter the study multiple times, or even automated “bots” (Prince et al., 2012).

Maintaining ecological validity presents several other challenges. Many Internet interventions are meant to be used as widely as possible. Such scalability can best be reached with unsupported interventions, that is, interventions that are fully automated and do not rely on any human contact. Utilizing methods of attrition reduction that cannot be sustained after the official study is completed may reduce the ecological validity of the study. Aside from the challenge of ensuring honest participation, financial incentives that are sufficiently attractive to

* Corresponding author at: Institute for International Internet Interventions for Health (i4Health), Palo Alto University, 1791 Arastradero Rd., Palo Alto, CA 94304, United States. E-mail address: rmunoz@paloaltou.edu (R.F. Muñoz).

participants are probably not realistic for use with large populations (such as worldwide samples, see Muñoz et al., 2015). Similarly, utilizing assessment methods that require human contact (e.g. phone calls) may create additional social pressures that would be unavailable outside of the research context and may likewise be too expensive to use in the context of widespread dissemination. Nonetheless, because human contact (and financial incentives) increases follow-up rates, these methods are often implemented within a research context. Indeed, in our earlier work phone contact has resulted in respectable follow-up rates (Muñoz et al., 2009). An important element that increases follow-up rates appears to be human contact during the recruitment process. For example, in three trials of Internet-based cognitive-behavioral therapy which instituted phone diagnostic interviews at the beginning of the trial, follow-up rates were between 74% and 84% (Dear et al., 2015), 97% (Andersson et al., 2012), and even 100% by Hedman et al. (2011), which is remarkable even for face-to-face interventions. Though such procedures appear to increase adherence, they may be practical only for studies that involve relatively small samples (e.g., perhaps up to several hundred participants) and for interventions that do not intend to be scaled to larger populations.

Reviewers of an earlier version of this article pointed out that there are also differences between intervention completers and study completers. Ecological validity in the context of open access to Internet interventions (versus the context of randomized controlled studies) suggests that completion rates are likely to be similar to that of Massive Open Online Courses (MOOCs). The median certification rate (a proxy for “completion” for our purposes) for courses provided by Harvard and MIT in a four year period has been reported to be 7.7% (308,000 individuals) among 4 million participants, and 30% (149,400 individuals) among 498 thousand participants who stated that they intended to earn a certificate (Chuang and Ho, 2016). Note that although the percentages are small, the actual numbers are impressive. It would have taken decades to provide the courses to that many people using traditional in-person methods. The field of Internet interventions may need to begin valuing *actual number* of individuals who complete Massive Open Online Interventions (Muñoz et al., 2006; Muñoz et al., 2015), rather than focusing primarily on the *percentage* of those who complete them. To evaluate the effectiveness of the interventions, however, does require increasing the number of study completers, that is, those who provide follow-up data. Given that many participants are unlikely to do so at official follow-up assessment periods, it is important to obtain measures of clinical outcome at every visit to the intervention sites, so that we can at least report the last score provided by the participant.

Because participants in online interventions enter the study through the Internet, they may expect most of the contact to be online, or prefer to keep anonymity, so they may be more reluctant to provide a correct phone number or to pick up the phone and speak to the study personnel at follow-up.

The purpose of this report is to describe our efforts to increase follow-up rates in a clinical trial of an internet-based depression prevention intervention, conducted in Spanish and English. The goal of the project was to determine, in a randomized study, whether adding live phone calls to financial incentives and email reminders would increase completion of follow-up data at 1, 3, and 6 months. We present our follow-up rates, and discuss the difficulties we faced in the conduct of this investigation.

2. Methods

2.1. Participants and recruitment

Spanish- and English-speaking adult (18 years of age and older) residents of the United States, who reported fluency in Spanish or English, consistent access to the Internet, and screened positive for high-risk for major depression (without meeting criteria) based on their self-

reported symptoms on the PHQ-9 were eligible. Participants were recruited online via Google Ads that invited individuals to join an online “Healthy Mood” study to help them manage their mood. The advertisements initially included payment information, however, an overwhelming number of early visitors were “bots” (automated study entries likely meant to obtain the participant fees by entering the study repeatedly). We paused recruitment, identified and removed the bots, and restarted recruitment with the modified advertisements, which no longer mentioned monetary incentives. Participants were informed of monetary incentives as part of the consent form. Thus, ($n = 23$) English-speaking participants were recruited with the original ads, which mentioned incentives, and the rest of the English-speaking participants ($n = 40$) were recruited via ads that did not mention incentives. The Spanish-speaking sample was unaffected, as recruitment to the Spanish language version of the study commenced just after English-speaking recruitment was restarted.

Participants were screened for eligibility, and those eligible read and electronically signed the informed consent before entering the study. Participants gave their phone number, completed baseline questionnaires, and received access to the Healthy Mood site, which contained mood management lessons based on cognitive-behavioral therapy.

All participants also received monetary incentives in the form of online gift certificates to a popular online megastore. Participants received US\$10 for completing each of the three follow-up assessments (1, 3, and 6 months after consenting), and a US\$20 bonus if all three follow-ups were completed. Thus, a participant could earn up to US\$50. At each follow-up point, all participants received up to three emails in one week, inviting them to complete follow-up by following an embedded link.

Participants were randomized to two conditions.

1. Call: Those randomized to the Call condition were phoned (up to ten attempts were made to reach them) and asked to complete the surveys by phone if they did not fill out the survey online.
2. No Call. Those randomized to the No Call condition received no phone calls.

All participants were informed, via the consent form, that they may receive phone calls if they did not complete follow-up surveys online. Thus the participants were blind to condition.

Based on our experience with smoking cessation Internet trials (Muñoz et al., 2006, 2009), we estimated a 65% completion rate with phone call follow-ups vs. a 40% completion rate for monetary incentives without phone call follow-ups (a slight improvement over email reminders alone). For a two-sided 0.05 level test of differences in proportion followed-up, with 40% completion in the financial incentive alone group and 65% in the financial incentive + phone call condition (relative response of 1.625), we estimated needing 70 subjects in each arm or 140 total subjects to achieve 80% power. We set as our target 150 subjects (75 in each group) to determine the impact of phone calls in addition to incentives in follow-up completion.

3. Results

3.1. Sample

The total sample consisted of 95 participants, of whom 63 were English speakers and 32 were Spanish speakers. The Spanish-speaking participants were 35.5 ($SD = 10.90$) years old, on average, and 25 (78.1%) of the sample were women. The English-speaking participants were 36.4 ($SD = 10.38$) years old, on average, and 25 (39.7%) of the sample were women.

As described below, in the English sample, initial recruitment advertised the study as a paid study, and marked differences in recruitment rates were observed between the periods when the study was advertised as a paid study, and when payments were no longer mentioned. Thus, in the Call condition, when the study was advertised as a paid study, 14 participants in the Call condition and 9 in the No Call condition

Download English Version:

<https://daneshyari.com/en/article/4972716>

Download Persian Version:

<https://daneshyari.com/article/4972716>

[Daneshyari.com](https://daneshyari.com)