

Use of rideshare services to increase participant recruitment and retention in research:
Participant perspectives

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Abstract

Recruitment and retention of participants are important factors in empirical studies. Methods that increase recruitment and retention can reduce costs and burden on researchers related to the need for over-recruitment due to attrition. Rideshare services such as Uber and Lyft are a potential means for decreasing this burden. Data are presented for a study ($N=42$) in which rideshare services were utilized for participant transportation to and from study visits during a two-session, in-laboratory research study. Retention at visit two was greater than 95% in the initial study. In a follow-up survey of the participants from the original trial, participants ($N=32$) reported that the rideshare service was an important reason they returned for all study visits. Participants reported whether they would prefer differing levels of additional monetary compensation or a ride from a rideshare service. When the additional compensation was less than \$15, participants reported a preference for the rideshare service. Rideshare services may represent a relatively low cost means for increasing study retention. Specifically, findings indicate that rideshare services may not be crucial for initial participant recruitment, but for their retention in multi-visit studies.

Introduction

In health, behavioral, and social sciences, human laboratory and randomized control trials are imperative to further science and interventions (Epstein, 1993; Siddiqui et al. 1996; Good & Schuler, 1997; Cooley et al., 2003). Two critical aspects of addiction research and studies generally are recruitment and retention (Gul & Ali, 2010). Recruitment is the process by which potential research participants are made aware of and then enrolled in the study (Gul & Ali, 2010), while retention refers to participants staying in the study and completing study visits (Patel et al., 2003).

When researchers fail to recruit and retain participants, findings can be invalid, inconclusive, and insufficient to answer research questions (Chang, 1990; Mason, 1999; Gross & Fogg, 2001). In addition, attrition can be costly and result in using greater resources, extending studies, and in some cases, terminating studies prematurely (Treweek et al., 2013). Research suggests that telephone reminders and financial incentives are advantageous ways to recruit and retain participants (Treweek et al., 2013). Specifically, studies have shown that participants increase their willingness to participate when compensation increases (Bentley, 2004; Halpern, 2004), regardless of the risk of adverse events that may result from study participation (Bentley, 2004).

With the advent, popularity, and low cost of rideshare services such as Uber and Lyft, it is important to understand if and how such services may represent a novel and advantageous strategy to recruit and retain participants. Past studies have shown that reimbursing for taxi services was not always an effective method for recruitment and retention (Gross, 2001). However, rideshare services may be more advantageous given the researcher's capability to order the rides remotely at the scheduled time, track participants' rides to the study location, and

an account can be set up and facilitates hassle-free payment for the service. Use of rideshare services also reduce participants' burden. The aim of this study was to assess participants' perceptions of the use of a rideshare service in terms of the impact it had on decisions to return to study visits in a recently completed, multi-visit study. We also examined how providing rideshare services in future studies would influence participants' decisions to participate in studies. Finally, we aimed to understand whether differing levels of additional compensation or rideshare services would be better for recruitment and retention.

Material and Methods

Participants and procedure

The current study recruited participants from a recently completed study. The purpose of the original study was to understand the impact of acute alcohol intoxication on waterpipe smoking patterns and toxicant exposure. The completed research study recruited 21 dyads ($N = 42$) of current waterpipe smokers and drinkers for a two-session, in-laboratory study. Each visit included survey completion, two blood draws, breath tests (breath alcohol concentration and carbon monoxide), and alcohol or placebo administration followed by a waterpipe smoking session lasting up to two hours. 42 out of 44 (95.5%) of participants were retained in the study.

Retention methods included regular calls to participants, relationship building between research staff and participants, fair compensation (\$125 per visit) with a bonus (\$20) for completing both study visits, and transportation to and from study visits via a rideshare service. Participants who completed both study visits in the original study were invited to provide feedback on their experiences with the primary aim of understanding the role of the provision of a rideshare service in their choice to complete both study visits. Prior to completing study procedures, participants provided informed consent. All data were collected remotely via a brief,

online survey. Participants were compensated with a \$5 gift card. Of the 42 who completed the original study, 32 ($M_{age} = 25.7$, $SD_{age} = 3.0$; 57.6% male; 78.8% Caucasian) completed the current study. The university's Institutional Review Board approved all study procedures.

Use of Rideshare

All participants were required to utilize rideshare services (e.g., Uber, Lyft) for their transportation to and from the research site. Ten to twenty minutes prior to the scheduled study visit, the research staff contacted participants to ensure they were ready for the ride request to be placed. If confirmed, research staff placed a request for a rideshare service to pick up the participant at their home address and bring him or her to the laboratory. Following each visit, research staff placed a request for the rideshare service to pick up the participants at the laboratory and take them to their home addresses.

Measures

Reasons for study completion. Participants completed 11 items assessing the importance of different recruitment and retention strategies in their decision to complete both visits of the original study. Items were rated on a Likert scale from 1 (*not at all important*) to 7 (*extremely important*). See Table 1 for a complete list of recruitment and retention strategies that were assessed.

Intention for future study participation. Intention for future study participation was measured by 10 items. Participants reported their agreement with each item. Each item completed the sentence beginning with "I would participate in another study like this if..." Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). See Table 1 for a complete list of recruitment and retention strategies that were assessed.

Multiple Choice Procedure (MCP). To further understand participant preferences for rideshare services in addiction research, participants completed a MCP (Griffiths, Troisi, Silverman, & Mumford, 1993) task in which they were presented with the choice between varying levels of additional compensation or a ride to and from the study via a rideshare service. Participants were instructed: “*Imagine you have been invited to participate in an in-person research study similar to the one you previously completed in our laboratory. Below is a list of monetary values and free Uber rides. Please choose between the monetary value and Uber ride for each set. In other words, for each set, would you rather have the money or a free Uber ride to your study visit?*” Monetary values ranged from \$0.00/free to \$1,000. The crossover value, or point where a switch in preference occurred from the rideshare service to the monetary value, was used to indicate the importance of rideshare compared to additional compensation.

Results

Participants reported that the provision of transportation via a rideshare service was an important reason they returned for all study visits ($M = 5.75$, $SD = 1.70$). Participants reported that the provision of a rideshare service was more important in their decision to complete all visits than reminder texts from staff ($M = 4.97$, $SD = 1.84$, $t(31) = 2.60$, $p = .014$), reminder calls from staff ($M = 4.66$, $SD = 1.81$, $t(31) = 2.86$, $p = .007$), and alcohol being provided at study visits ($M = 4.56$, $SD = 2.23$, $t(31) = 2.65$, $p = .012$). However, compared to the provision of a rideshare service, participants rated the staff being nice ($M = 6.47$, $SD = 1.30$, $t(31) = -2.26$, $p = .031$) and the visits being fun ($M = 6.47$, $SD = 0.88$, $t(31) = -2.35$, $p = .025$) as more important in their completion of all study visits.

Overall, participants reported that they would participate in a similar study that offered rideshare services in the future ($M = 4.13$, $SD = 0.75$). However, compared to other recruitment

strategies, participants reported a preference for nice staff ($M = 4.56$, $SD = 0.62$, $t(31) = -2.95$, $p = .006$), fair compensation ($M = 4.81$, $SD = 0.40$, $t(31) = 4.98$, $p = <.001$), the option to participate with a friend ($M = 4.63$, $SD = 0.55$, $t(31) = 3.22$, $p = .003$), and fun study visits ($M = 4.69$, $SD = 0.54$, $t(31) = -3.97$, $p = <.001$) compared to the provision of rideshare services to and from study visits. See Table 1 for complete results.

The crossover point on the MCP was observed from \$10 to \$15 such that at levels of additional compensation below \$15, participants showed a preference for the rideshare service. However, participants showed a preference for compensation when the monetary value exceeded \$15 (see Figure 1).

Discussion

The current study is the first to examine participants' perceptions of the use of a rideshare service on their decision to return to study visits and participate in future studies. In the current study, provision of rideshare services was reported to be an important reason participants completed all visits of the original study. Participants also reported they would be interested in completing a future study that provided transportation via a rideshare service. Provision of rideshare services was rated as more important for continued participation than other common recruitment and retention strategies, such as building rapport with participants and providing reminders for study visits. Alternatively, when considering strategies that would be important in their decision to participate in future studies, participants rated fair compensation and an enjoyable study visit as more important than provision of rideshare services. These seemingly discrepant findings may indicate that rideshare services may not be crucial for the initial recruitment of participants into studies, but for their retention in studies that require more than one on-site visit.

The use of rideshare services may be a cost-effective way to retain participants. We investigated the trade-off between providing additional compensation and providing transportation via a rideshare service. The crossover point may indicate that additional compensation is more beneficial than provision of rideshare services at values greater than \$15 but that rideshare services may be more effective if participants live close to the study site and rides cost less than \$10 per participant.

The results of the current study, coupled with the outstanding retention rate (95%) in the original study, indicate that provision of transportation via rideshare services is means for increasing retention that should be shared with other research teams. The decreased costs and burdens on research staff related to a decreased need to over-recruit to address attrition may result in significant saved costs. In addition, research staff can also be aware of exact arrival time of participants given that the rideshare services provide real-time locations of the transportation. Given the high retention rates in the original study that appear to be related to the use of a rideshare service, it is likely that the avoided costs of over-recruiting to replace participants lost to follow-up outweigh the costs associated with providing rideshare services. This strategy may be particularly helpful for recruiting and retaining individuals with inconsistent methods of transportation or financial barriers that would make obtaining reliable transportation and attending study visits difficult. Utilization of rideshare services in addiction studies in which substance administration is required can reduce additional time and resource burden on researchers. Rideshare services represent a means by which to ensure participants arrive home safely. In the case of alcohol administration studies, particularly those using low alcohol doses, use of rideshare services may limit the need for research staff to remain in the lab with participants until their breath alcohol concentration is 0.000.

While the current study is an important step in understanding the integration and use of rideshare services in research, the current study had two primary limitations. First, we did not utilize a control and are therefore unable to compare differences in recruitment and retention in studies that did and did not use rideshare services. However, the study demonstrated exceptional retention relative to typical studies in the literature so the retention procedures were successful. It is impossible to conclude with strong inference that rideshare was the critical ingredient, but participant reports are consistent with this conclusion. Second, the current study may not generalize to other study designs, studies with different aims and methods, or different participant populations.

Despite the large number of studies that require multiple in-lab visits, there has been little research on novel retention and recruitment strategies, an area that is critical for the success of such research. As illustrated in the current study, use of rideshare services for in-lab studies may be a worthwhile strategy for increasing retention in research. Utilization of rideshare services should be considered to supplement existing and established methods for improving study recruitment and retention in multi-visit studies.

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Table 1.

Importance of recruitment and retention strategies compared to provision of rideshare services

	Recruitment/retention strategies			
	M	SD	t	p
<i>Reasons for study completion</i>				
Rideshare service was provided *	5.75	1.70	--	--
The study visits were in the evening	5.47	1.90	0.64	.526
The staff was nice	6.47	1.30	-2.26	.031
I received reminder texts messages	4.97	1.84	2.60	.014
I received reminder calls from staff	4.66	1.81	2.86	.007
Alcohol was provided at study visits	4.56	2.23	2.65	.012
Hookah was provided at study visits	5.28	1.42	1.17	.252
The compensation was fair	6.28	0.96	-1.78	.084
I would feel bad if I did not attend all visits	5.72	1.69	0.07	.944
I got to complete study with my friend	6.31	0.90	-1.74	.092
The study visits were fun	6.47	0.88	-2.35	.025
<i>Intentions for future study participation</i>				
Rideshare service was provided*	4.13	0.75	--	--
The study visits were in the evening	4.38	0.71	-1.61	.118
The staff was nice	4.56	0.62	-2.95	.006
I received reminder texts messages	4.06	0.67	0.44	.662
I received reminder calls from staff	3.88	0.79	1.54	.133
Alcohol was provided at study visits	4.25	0.84	-0.89	.379
Hookah was provided at study visits	4.13	0.79	0.00	1.00
The compensation was fair	4.81	0.40	-4.98	<.001
I got to complete study with my friend	4.63	0.55	-3.22	.003
The study visits were fun	4.69	0.54	-3.97	<.001

Note. $N = 32$. *all t-tests compared use or rideshare to the other strategy.

Figure 1. Multiple Choice Procedure - Rideshare versus Compensation Crossover

