

Does Survey Mode Affect Study Results? A Comparison of Internet-Based and Onsite Surveys of Visitors to Prince William Forest Park, USA

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Introduction

Survey research is a primary tool for national parks and related protected areas to collect information about park visitation patterns, visitor and trip characteristics, and visitor attitudes concerning park management. Traditionally, these studies are administered using onsite and/or mail surveys to collect information from visitors. With the increasing availability to the public of the internet and the relatively low cost of administering internet-based questionnaires, it is possible that internet surveys could play an important role in conducting future visitor use studies. The purpose of this study is to assess the utility of internet-based survey methods for studies of visitors to national parks. To do this, a study was conducted at Prince William Forest Park to test whether independent samples of internet and onsite survey respondents from the same visitor population yield similar study results.

Methods

Sampling was conducted on six weekend days during October, 2005. Visitors were intercepted as they were exiting the park and asked screening questions to determine whether they were eligible for the study. Eligible visitors who were willing to participate in the study were randomly assigned to complete a questionnaire onsite or an identical questionnaire on the internet at a later time. Contact information, including an email address was collected from individuals participating in the in-

ternet-based survey. The internet-based survey was administered using a modified Dillman approach, including an initial email and three follow-up emails containing a link to the online survey. Study participants assigned to the onsite survey completed the questionnaire at a pullout near the entrance/exit station where they had been intercepted.

Results

Response rates for the onsite and internet surveys were 71.4% and 75.2%, respectively. Results of statistical tests suggest that there are no significant differences between the internet and onsite samples with respect to age, sex, race, education, and state of residence. These results suggest that the internet and onsite survey participants represent two independent samples from the same population of Prince William Forest Park visitors.

For the most part, there were no statistically significant differences in the distribution and central tendency of responses to questions concerning visitors' trip characteristics, attitudes toward park management, and preferences for facilities, services and programs between the internet and onsite samples. Nonetheless, some differences were observed. For instance, internet respondents were more likely than onsite respondents to report being a day use visitor and having visited an unpaved road in the park, while onsite respondents were more likely to report camping in an RV and driving for pleasure in the park. Significant differenc-

es between internet and onsite results were also observed for some questions concerning the importance of trip motivations. Significant differences were also observed on the importance of some aspects of park programs, facilities and services; however, there were no differences in reported satisfaction associated with any of the park programs, facilities and services included in the questionnaire. In questions where it was an option, onsite respondents were more likely to choose a 'don't know/not sure' response than internet respondents.

Discussion

While internet-based surveys may not be interchangeable with onsite survey methods for visitor use studies, the results of this study suggest that they may produce similar results. Differences between the results of the internet and onsite surveys observed in this study may be due to question formatting limitations within current internet survey software that prevented the use of identical layout for some questions. Differences observed in this study might also be due, at least in part, to the fact that internet and onsite survey respondents completed their questionnaires during different temporal phases of their park experience. If so, this would suggest that decisions about whether to use internet-based survey methods should consider whether the "post-trip phase" is the appropriate point in the recreation experience to collect the information sought. Lastly, differences observed between onsite and internet survey results may be due to chance, given that a large number of statistical tests (140 separate tests) were performed to compare the two samples.

Conclusion

When administered properly, this study suggests internet surveys provide a potentially cost-effective and time-efficient method to collect information about visitor use and users. However, additional research is needed to further assess the comparability of internet-based surveys to onsite and mail surveys, and to explore reasons for differences when they are observed.