The Impact of Notification on Response Rate and Response Quality for Online Surveys

Mikihiro Sato, Temple University
Jeremy Jordan, Temple University
Daniel Funk, Temple University

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Surveys are an important and often used method of data collection in sport management research (Jordan, Walker, Kent, & Inoue, 2011). Surveys can provide information not easily obtained through other methods and the use of the online surveys for data collection has increased significantly (Dillman, Smyth, & Christian, 2009; Pan, 2010; Werner, Praxedes, & Kim, 2007). For example, Jordan et al. (2011) found that from 1987-2008, only 1.2% of the articles published in the Journal of Sport Management (JSM) utilized online survey research methods. However, a new trend has emerged within JSM since 2008 as 39.3% of published papers utilized online survey data collection. This new trend raises fundamental questions related on-line surveys research: a) the quality of evidence being collected and b) the best way to collect it.

The value of data obtained from surveys, both on-line and off, is related to the overall quality of survey response. Survey response remains an important methodological consideration as academics and practitioners conduct, analyze, consume, and act on survey results to make informed decisions (Kano, Franke, Afifi, & Bourque, 2008). For example, a potential for systematic bias exist for a low response rate that can reduce the quality of evidence collected resulting in an inadequate information to make a decision. Hence, to better understand if a prevalence of systematic bias is found for studies with poor survey response, scholars have examined key metrics to assess survey response most notably response rate and response quality. These metrics are particularly relevant for assessing the quality of on-line survey data but also the willingness of participants to complete and return surveys.

A key factor related to survey response that has received attention is the use of notification, both prenotification (Kent & Turner, 2002), and postnotification (Kaplowitz, Hadlock, & Levine, 2004). Notification is an attempt to persuade participants to complete a survey by extending an invitation prior to the delivery of the survey (i.e., prenotification) and/or a reminder message sent after the survey has been delivered asking them to complete the survey (i.e., postnotification). In addition to response rate, scholars have also identified the importance of response quality when conducting survey research. One common method to examine response quality is item nonresponse or conversely, item completion rates (Barrios, Villarroya, Borrego, & Ollé, 2011). When the average number of questions respondents leave unanswered is small, the response quality for data obtained is considered high (Schaefer & Dillman, 1998). The impact that response rather and quality have on the overall survey response has led many to explore what strategies can be used to improve these metrics. The majority of this work has been conducted with mail based survey research with little attention given to whether these strategies would be as effective with online data collection methods.

Although the use of notification has been shown to maximize response rates in survey research (Dillman et al., 2009), previous work has demonstrated that online survey methods generally have lower response rates than traditional mail surveys (Shih & Fan, 2009). Additionally, little is known on the relationship between notification strategies (i.e., pre, post, or combination of notification) and response quality in online research. Therefore, the purpose of this study was to examine the role of notification on response rate and response quality with online survey research.

The population for this study consisted of 23,569 email subscribers of a daily electronic sport newsletter who were randomly assigned to one of four treatment groups. Group 1 (pre) received prenotification of the survey, Group 2 (pre/post) received both prenotification and postnotification, Group 3 (post) received postnotification only, and Group 4 (control) did not receive notification of any type. Groups 1 and 2 received a prenotification three days prior to the deployment of the survey and Groups 2 and 3 received a postnotification message seven days after the survey deployment. Group 4 did not receive a pre or postnotification message. Response rate was measured as the number of returned surveys (completed and partially completed) divided by the total number of survey requests sent out.
Response quality was determined based on the item completion rate assessed by the number of completed items divided by the total number of items.

Of the 23,569 participants included in this study, 1,884 usable surveys were returned for an overall response rate of 8.0%. There were no statistically significant differences between the four groups (pre, pre/post, post and control) on demographic characteristics confirming the random assignment of participants to each group. For response rate, Group 3 (post) had the highest response rate with 10.7%. Chi-square analysis revealed a significant difference by four groups ($\chi^2=81.892$, Cramer’s $V = .059$, p<.001). The post-hoc analysis showed that response rate of Group 3 (post) was statistically higher than that of Group 1 (pre) ($\chi^2=32.688$, Cramer’s $V = .053$, p<.001), Group 2 (pre/post) ($\chi^2=45.234$, Cramer’s $V = .062$, p<.001), and Group 4 (control) ($\chi^2=64.873$, Cramer’s $V = .074$, p<.001). Additionally, Group 1 (pre) was statistically higher than Group 4 (control) ($\chi^2=5.633$, Cramer’s $V = .022$, p=0.02). The item completion rate for each group ranged from 90.0% (Group 3) to 92.5% (Group 1 and 2). Because the Levene’s test revealed that the assumption of homogeneity of variance for the item completion rate was violated, the Welch F-ratio is reported (Field, 2009). The results indicated no significant differences between groups $F (3, 992.34) = 1.265$, p=.285, indicating that notification did not have an effect on response quality.

Findings from this study highlight the need for more research that evaluates how to best conduct on-line survey data collection. Overall, the results suggest that notification strategies developed and tested with mail survey methods may not be as effective with online survey research. Dillman et al. (2009) have suggested that the use of multiple contacts (e.g., notification) is likely to increase overall response rate. However, findings from this study do not support the use of both pre and postnotification strategies. For example, the postnotification only group resulted in a response rate significantly greater than the other three groups. The use of multiple contacts in this study did not increase response rate. In fact, the group that received multiple contacts had the third lowest overall return percentage among the four groups. One possible conclusion is that when completing online surveys participants prefer to receive fewer contacts rather than more. While notification strategy did have an impact on response rate, no such influence was found relative to response quality. Other implications and future suggestions for research will be provided at the presentation.