

Increasing response rate with sport volunteer studies: A social exchange theory approach

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Abstract

Successful sport volunteer management demands retaining volunteers from year to year and gaining feedback with respect to their experience. It is common for sport event volunteers' psychometric characteristics to be assessed via on-site questionnaire. A well-designed questionnaire is crucial for improving response rate and increasing the quality of collected data. An adequate response rate is not only vital for meaningful interpretation of survey results, but also critical for acquiring a broad range of perspectives. The majority of research concerning response rate has focused on phone, mail, or web-surveys. Relatively little is known about the combination of techniques that could be utilized to increase response rate with on-site studies, while considering modes of data collection. Using social exchange theory as a framework, the purpose of this review is to explore various techniques researchers could implement to increase response rate with on-site survey studies. The overall discussion is conducted in the context of selected on-site sport volunteer studies and the growing literature devoted to sport event volunteerism.

Introduction

Volunteers are a core component of sport service delivery and an important element of sport event management, since they provide sport administrators with the ability to maintain and expand the quality and diversity of a sport entity's services (Strigas, 2003). Chelladurai (2006) noted 20% of the financial value within the \$260.3 billion volunteer industry pertains to sport and recreation. Indeed, many sport organizations would have difficulty surviving without the support of volunteers, which remain important to the viability of the overall sport system. As academia and industry have acknowledged the greater demand for volunteer human resources in sport, research can help understand: (a) the underlying factors that lead to initial voluntary participation; (b) psychometric properties of satisfaction, experience, and retention; (c) maximization of long-term benefits; and (d) mitigation of negative impacts (Kai, 2012). Clary and Snyder (1999) purported motivation affects three main areas of the volunteering process: recruitment, satisfaction with volunteer experience, and intention to volunteer in the future. Both motivation and satisfaction have been found to influence retention (Hsu, Wu, Wang, Hsiao, & Wu, 2013; Kim, Chelladurai, & Trail, 2007; Doherty, 2009; Kim, Trail, Lim, & Kim, 2009; Wicker & Hallmann, 2013). Thus, academic researchers often assess the volunteer experience at the conclusion of events in an attempt to determine volunteer satisfaction and future retention. This is frequently accomplished through utilization of on-site questionnaires.

Data collection for survey research is commonly accomplished through questionnaire, interview (by phone or e-mail), and lately via computer-based programs. Unarguably, each research methodology has its own distinct strengths and weaknesses. Therefore, the decision by researchers to use a specific technique is based upon desired research questions, respondents, and financial resources (Ransdell, 1996). Academic researchers continue to use surveys either

on-site, via mail, or on-line to examine psychometric characteristics of scores obtained from volunteers in sporting events. Since questionnaires are economical and easily administered regardless of the geographic location, their use in sport-related research is widespread. Specifically, one of the areas where academics have extensively utilized questionnaires is in sport event volunteer literature (e.g., Costa, Chalip, Green, & Simes, 2006; Elstad, 1996; Fairley, Lee, Green, & Kim, 2013; Farrell, Johnston, & Twynam, 1998; Giannoulakis, Wang, & Gray, 2008; Green & Chalip, 2004; Johnston, Twynam, & Farrell, 2000; Khoo & Engelhorn, 2011; Reeser, Berg, Rhea, & Willick, 2005; Strigas, 2003; Strigas & Jackson, 2003). Due to the prevalent utilization of on-site surveys in sport event volunteerism, the overarching goal of this research note is to discuss various strategies researchers could utilize to increase response rate within their studies. This discussion is performed in the context of social exchange theory.

Role of Response Rate

To begin with, it is important to delineate the essence of response rate and establish its role in academic research. Response rate is defined as the number of completed questionnaires divided by the number of eligible units in the sample (Skalland, 2011). A low response rate will negatively affect the external validity (i.e., the ability to generalize sample characteristics to population parameters) and statistical power (i.e., the probability a significant difference exists between groups) of a research study (Ransdell, 1996). There is a consensus among researchers that non-respondents can cause survey data bias because they may differ systematically from respondents. Nonetheless, the seriousness of this problem is hard to determine for specific questionnaires, and techniques to alter these biases are lacking (Teitler, Reichman, & Sprachman, 2003). Although a low response rate does not always lead to a response bias, it is assumed a higher response rate strengthens the questionnaire and lowers the potential of nonresponse bias (Dillman, 1991). Sakshaug, Yan, and Tourangeau (2010) noted self-administered modes of data collection tend to elicit lower response rates; the lower response rates may also produce greater nonresponse bias than interviewer-administered modes. In general, the overriding concern when selecting a mode of data collection is the need to maximize response rate and to minimize nonresponse bias.

The research literature is dominated by a plethora of tests on specific procedures and techniques for improving response rates, typically manipulated one or two at a time (e.g., Dillman, 1991; 2000; Dillman, Smyth, & Christian, 2009; Nulty, 2008). Don Dillman, in his series of publications and books including his most recent in 2009, explored the concept of applying social exchange theory in order to increase response rate (Dillman et al., 2009). Examples of techniques tested included financial incentives, material incentives, follow-up reminders, timing of follow-ups, personalization of correspondence, anonymity of response, questionnaire layout, questionnaire length, color of questionnaire, type of outgoing postage, type of return postage, content of cover letter, source of survey sponsorship, and higher rate of postage. Currently common in survey research is the utilization of multiple modes of data collection in an attempt to reduce data-collection costs or boost response rates (Ye, Fulton, & Tourangeau, 2011). A mixed mode survey design encompasses two or more modes offered to sample units in order to recruit respondents and measure their responses (Dillman et al., 2009). Apparently, people may demonstrate a mode preference (i.e., positive, neutral, or negative attitude) relative to face-to-face, telephone, mail, and internet modes (Olson, Smyth, & Wood, 2012). Couper (2011) noted degree of interviewer mode, degree of contact with the respondent, channels of communication, locus of control by the respondent, and degree of privacy afforded to the respondent constitute dimensions of data collection modes that have an impact on response rate, survey bias, and cost.

Purpose

Despite extensive research on response rate, especially for mail, phone, and web-surveys, limited research has addressed techniques that could be utilized to improve response rate with on-site survey studies. Thus, the purpose of this research note is to discuss ideas that could increase response rate with on-site sport volunteer studies by applying the social exchange theory and examining modes of data collection in research associated with event volunteers at sporting events. Evidently, illustrated issues and outcomes of this review may vary upon different studies and research fields. For example, research has demonstrated sport volunteers display different characteristics than volunteers in other special events (Farrell et al., 1998; Johnston et al., 2000). Therefore, the subject matter of response rate increase was examined through the context of sport volunteer studies and the growing literature devoted to modes of data collection and sport volunteerism. The paper has the following structure. First, a brief analysis of social exchange theory is presented. Second, the three tenets of the social exchange theory are provided. Third, data collection procedures and respective response rates from selected sport volunteer studies are illustrated. Finally, the authors discuss the application of social exchange theory to survey research and response rate, and outline implications for researchers.

Social Exchange Theory

Social exchange theory, introduced by George Homans, explains social change and stability as a process of negotiated exchanges between parties (Homans, 1961). The theory posits human relationships are formed by the use of a subjective cost-benefit analysis; humans subtract the costs of the relationship from the rewards it provides to determine its worth. Essentially, individuals choose to engage in relationships (e.g., with other individuals, institutions etc.) where they assert they might receive certain benefits with few to no costs. Benefits to the respective parties in the exchange process may be tangible or extrinsic (e.g., economic, services, information) and intangible or intrinsic (e.g., social, emotional; Doherty, 2009). The use of social exchange theory is extensive, since authors have applied the theory from anthropologic to economic/financial disciplines. Dillman and colleagues (2009) used the theory to explain why participants choose to fill out questionnaires and why others choose against it. By applying social exchange theory to survey research, the authors acknowledged three key guiding questions as to improving questionnaire response rate: (a) how can the perceived rewards for responding be increased, (b) how can the perceived costs of responding be reduced, and (c) how can trust be established so people believe the rewards will outweigh the costs of responding. Although Dillman's research is widely used to format questionnaires for online or mail distribution, limited description exists on how these concepts derived from social exchange theory might be a guide to increasing response rate with on-site surveys.

Strategies for Increasing Response Rate

Given the three tenets of Dillman and colleagues (2009), namely increasing rewards, reducing costs, and establishing trust, the following section discusses the application of the principles to on-site survey research.

Increasing benefits of participation

Dillman and colleagues (2009) proposed several ways to increase perceived benefits of participation in survey research. First, researchers should provide participants with information about the survey and how it will be used. Secondly, researchers should show appreciation, positive regard for participation, and gratitude. The authors also suggested the following techniques: supporting group values of participants, offering rewards upfront, making the questionnaire interesting, creating a sense of urgency, and providing social validation in the form that others, like target participants, have filled out the survey. Although absent from his discussion of application, Dillman's principles can be applicable not only to online or mail survey, but also to on-site survey research. For instance, monetary incentives represent a token of appreciation for the respondent. In some instances researchers present the study as an indirect benefit to respondents, since results of the study may have a direct or indirect impact on them. This notion was developed by Dillman (1991) with the Total Design Method (TDM), social exchange theory and its theoretical framework. The theoretical framework posits questionnaire recipients are most likely to respond if they expect perceived benefits of doing so will outweigh perceived costs of responding.

Decreasing costs of participation

Dillman et al. (2009) sought to increase the benefits of participation through social exchange theory and, simultaneously, decrease the costs of participation through various means. This cost-benefit framework suggests reducing costs may be as simple as creating a convenient method for response. Propositions include making the survey short and easy to complete, convenient to complete, avoiding subordinating language, and emphasizing the similarity of completing the survey to other tasks the participant has already completed. Dillman's conclusions reflect study results from Sanchez (1992), in which two separate questionnaires differing only in survey design elicited dissimilar response rates from participants. Notably, the questionnaire that did not allocate for consistent spacing or consistent visual images resulted in increased incomplete questions and survey responses, as well as skipped items. To this extent, Groves, Cialdini, and Couper (1992) supported the need to focus on the positive relationship between researcher and participant in order to reduce costs of providing sensitive information.

Establishing trust

The relationship emphasis Groves and colleagues (1992) suggested above reflects the third principle by Dillman et al. (2009). As part of social exchange theory, it is important for respondents to build trust in the capabilities of the researcher. If respondents trust the research study has a connection with an academic institution as opposed to a random study without affiliation, and the subject matter is valuable, salient, and has perceived quality, then they will be more willing to participate in the survey. Methods used to address this theory include achieving sponsorship by a legitimate authority, making the task appear important, understanding the demographic characteristics of the sample surveyed, and assuring confidentiality (Dillman et al., 2009). In terms of their quantitative review of experimental literature, Singer, Von Thurn, and Miller (1995) conducted an analysis of 113 research reports involving confidentiality assurances and various levels of sensitive information. Results indicated an assurance of confidentiality did affect response rate "whether measured as item nonresponse, response rate, and regardless of whether the assurance was verbal or technical" (Singer et al., 1995, p. 74). Interestingly, the authors purported elaborate assurances of confidentiality might heighten respondents'

perceptions of the sensitivity or threat of the survey, thus arousing suspicion rather than creating trust especially when combined with sensitive data.

Review of Sport Event Volunteer Studies

Review articles have been extensively utilized in academia as a tool to investigate and summarize previous research on a particular subject matter, thus making a pivotal academic contribution. To this end, academics implement various ways to collect information on a topic and draw conclusions. One common approach involves the *traditional* review, which may be called literature, narrative, or critical review within the literature (Hemingway & Brereton, 2009). Four additional methods have been also proposed as broader and more holistic alternatives of synthesizing past research: systematic review, meta-analysis, integrative review, and qualitative review (Schulenkorf, Sherry, & Trobe, in press). Evidently, each of the aforementioned techniques serves a different purpose and encompasses respective strengths and weaknesses. For instance, traditional reviews differ from systematic reviews in that they are not led via a peer-reviewed protocol, resulting in limited possibilities of replicating or generalizing findings (Hemingway & Brereton, 2009). Systematic reviews are predominantly used in healthcare, medical and nursing-related fields, and have increasingly replaced traditional narrative reviews and expert commentaries as an effective way of summarizing research evidence. Despite the appropriateness of this method for the medical sector, the enhanced quantitative focus of a systematic review may not be suitable for other fields that focus on qualitative research paradigms (Lichtenstein, Yetley, & Lau, 2008). To this extent, meta-analysis studies utilize a combination of evidence from multiple primary sources through statistical methods, a process that has the potential to enhance objectivity and validity of findings (Schulenkorf et al., in press). For the purpose of this paper, the traditional literature review approach, which is used to support and inform journal articles, was employed as the means to examine response rate issues in the context of social exchange theory.

The initial pool of academic studies was collected through SPORTDiscus and involved peer-reviewed articles published between 1996 and 2014. Key words for our search included *sport*, *volunteer*, and *event*. We chose the year 1996 as a starting block due to one of the very first sport event volunteer-specific articles published by Elstad (1996), where he examined perceptions of volunteers towards learning and satisfaction at the Winter Olympic Games in Lillehammer. SPORTDiscus contains a comprehensive list of sport-related studies that pertain to sport event volunteerism, and was chosen as the most suitable source of information for this review. It is understandable that the selected database is not exhaustive of *all* sport event volunteer-related studies, since we only searched for full-text articles in the English language. The initial phase of the search yielded 205 full-text articles. At this stage, one of the three key words (i.e., sport, volunteer, and event) encompassed within the title or abstract of the article guided our decision for inclusion or exclusion. In the second phase, further selection was established upon three main criteria: (a) combination of single and mixed modes of data collection, (b) inclusion of at least one on-site data collection method, (c) relatively high response rate (over 30%). Studies were also selected based on different sport settings (i.e., regional, national, international, and mega-event) for heterogeneity. It should be noted the selection process was not based upon “cut and dry” rules and criteria. For instance, despite the fact that some of the articles met the inclusion criteria, they were finally excluded due to limited information on data collection processes reported by the author(s) in the paper. Ultimately, 10 studies (see Table 1) that fit the purpose of this review were used as a point of discussion for issues related to response rate and collection modes.

Table 1: Overview of Sport Volunteer Studies (in chronological order without intending to be exhaustive)

Author(s)	Event	Sample Size	Mode of Data Collection	Response Rate
Johnston et al. (2000), Canada	1997 Canadian Scout Jamboree	$n = 290$	Mail and direct distribution	41.4% (combined)
Strigas & Jackson (2003), USA	Regional marathon event in Florida	$n = 60$	Direct distribution	70.5%
Green & Chalip (2004), Australia	2000 Sydney Olympic Games	$n = 1,702$	Mail and direct distribution	60.5% (combined)
Reeser et al. (2005), USA	2002 Salt Lake Olympic Games	$n = 136$	Voluntary pick-up	50.4%
Costa et al. (2006), Australia	2006 Sunbelt IndyCarnival	$n = 147$	Direct distribution	65.3%
Giannoulakis & Wang (2007), USA	National-scale martial arts event	$n = 54$	Direct distribution	49.1%
Han (2007), USA	2007 ING Georgia Marathon	$n = 305$	Direct distribution	30.5%
Giannoulakis et al. (2008), Greece	2004 Athens Olympic Games	$n = 146$	Voluntary pick-up and direct distribution	48.7% (combined)
Khoo & Engelhorn (2011), USA	2006 National Special Olympics	$n = 289$	Mail and direct distribution	54.7% (mail) and 55.2% (direct distribution)
Fairley et al. (2013), Korea	2011 Formula One Grand Prix	$n = 218$	Online survey and direct distribution	41.5% (combined)

As mentioned above, the specific sample is not exhaustive of on-site sport event volunteer studies; nonetheless, it represents diversity in terms of modes and techniques used to collect information from sport volunteers and, eventually, increase response rate. Finally, we divided the studies in two sections based on single versus mixed mode of data collection and presented them in chronological order.

Single data collection mode

To begin with, Johnston et al. (2000) researched 700 volunteers from the 1997 Canadian Scout Jamboree. Initially, the researchers handed out questionnaires, with a postage paid return envelope attached, to the sample population during the on-site registration. Respondents were also given the option of placing their completed surveys in a box at the Jamboree site by the end of the event. Fewer than 10 individuals returned completed surveys using the box. One month upon the event, a second copy of the survey was sent to non-respondents to encourage them to complete the questionnaire. The final return rate was 290 surveys or 41.4% of the original sample. Reeser et al. (2005), using a similar method to Johnston et al. (2000), researched volunteer healthcare workers at a polyclinic during the 2002 Salt Lake Olympic and

Paralympic Games. Volunteers were informed their participation was completely voluntary. Participants could pick up the questionnaire at selected distribution points, complete it, and return it to one of several collection points at their convenience. Subjects were encouraged to complete the questionnaire at the end of their volunteer assignment. A total of 136 of the polyclinic's 270 volunteers returned questionnaires, resulting in a 50.4% response rate.

Green and Chalip (2004) selected 17 work sites in order to recruit sport volunteer study participants from the 2000 Sydney Olympic Games. The researchers distributed survey packets to volunteers at the sign-in desks or in the break rooms. Each packet included a cover letter, a consent form for a follow-up survey, the survey, and a return envelope. Volunteers were asked to return the survey to a drop box provided in their respective venue. Of the total 2,800 surveys, 1,702 usable ones were returned for a response rate of 61%. An analogous technique was employed by Costa et al. (2006), who performed a study with volunteers at the Sunbelt Indy Carnival held on the Gold Coast, Australia. The researchers distributed survey packets to volunteers on-site and in break rooms. Each packet contained a cover letter explaining the procedure, the survey, and a return envelope. A box where volunteers returned completed surveys was placed in each break room. Volunteers were instructed to complete the enclosed survey, seal it in the return envelope provided, and place in one of the break room drop boxes. A total of 225 surveys were distributed, while 147 were completed and returned (65.3% response rate). Han (2007) utilized the prenotification technique with volunteers at the 2007 ING Georgia Marathon, USA. Volunteer coordinators were contacted in advance about the study, and they agreed to participate and permit an on-site survey during orientation sessions. Simultaneously, volunteers were given a letter explaining the project and requesting the participation of each individual volunteer in completing the survey. A total of 305 volunteers participated in the study with a response rate of 30.5%.

Finally, Strigas and Jackson (2003) emphasized indirect benefits for participants as an engagement tool for survey research in terms of their volunteer motivation pilot study at a regional marathon event in Florida, USA. The purpose of the study was to check flaws for item selection and content, as well as administrative procedures. The researchers hand-distributed the survey on-site while stressing the importance of participants' involvement in the study and the potential benefits for volunteers due to the outcome of the project. Sixty out of 85 volunteers filled out the survey, resulting in a response rate of 70.5%.

Mixed data collection mode

Giannoulakis and Wang (2007) performed a research project at the 2006 National Junior Taekwondo Championships in Atlanta, Georgia, USA. The researchers utilized the same administrative procedure performed by Johnston and colleagues (2000), without administering postage paid return envelopes. Volunteers were given a survey at the check-in area and were asked to return completed surveys into a box at any time throughout the event. From the 110 volunteers who participated in the event, only three individuals returned the completed survey to the box at the volunteer break area the first day. The second day of the event, the researchers introduced themselves at the volunteer check-in, stressed their affiliation with their respective research institute, and, above all, noted the importance of the study for improvement of the overall volunteer experience in future championships. Finally, 54 volunteers returned the completed surveys (49.1% response rate).

As far as on-site data collection at a mega-event is concerned, Giannoulakis et al. (2008) conducted a volunteer motivation study at the 2004 Olympic Games in Athens, Greece. The

researchers utilized two methods to select potential participants. First, questionnaires were placed at the volunteers' check-in and checkout area at the Olympic Aquatic Center, so participants could fill out a survey voluntarily. Second, the survey was hand-distributed by the research team to volunteers who offered their services in various functional areas of the Olympic Aquatic Center and the Olympic Village. Participants were asked if they would be willing to assist the researchers in assessing dimensions of volunteer motivation by completing the survey. It was clearly stated to all participants their involvement in the study was voluntary and the information would remain confidential. No incentives were utilized and no question required the subjects to disclose their name or other identifiable personal data. A limited number of surveys was finally returned to the box within the check-in area. On the contrary, most participants demonstrated enthusiasm to fill out a survey once the researchers introduced themselves, stressed the importance of the study, as well as their affiliation with an academic program and the Games' organizing committee. Eventually, 146 volunteers (48.8% response rate) completed and returned the survey.

More recently, Khoo and Engelhorn (2011) utilized mixed modes with volunteers at the 2006 USA National Special Olympics. Surveys were distributed through mail and direct distribution. A total of 289 out of 528 volunteers returned the survey. The response rate for mailed surveys and direct distribution surveys was 54.7% and 55.2%, respectively. Finally, Fairley et al. (2013) conducted a research project with 218 Korean individuals who volunteered at the 2011 Formula Grand Prix in Seoul, Korea. The authors used two methods of data collection as well. First, they approached potential participants during the three-day event in staff break areas and asked them to complete the survey. Furthermore, they utilized a database of 525 event volunteers in order to contact individuals via phone and e-mail and motivate them to fill out the survey. Eventually, the researchers collected 124 on-site and 94 online surveys, which yielded an overall response rate of 41.5%.

Discussion

This review explored common survey techniques utilized by researchers in sport volunteer studies to increase response rate with on-site data collection procedures and techniques. The proposed social exchange theory framework (Dillman, 1991; Dillman et al., 2009; Homans, 1961) was theoretically supported by evidence from on-site sport volunteer studies, thus providing insight into techniques used for increasing response rate within different modes of data collection. First of all, illustration of benefits to participants for their effective involvement in the research project is pivotal. In most sporting events, individuals are recognized for their participation and voluntary effort through recognition programs (i.e., certificates, memorabilia, volunteer of the event etc.). Survey administrators may present the study as an indirect benefit to volunteers, since outcomes of the project will have an impact on volunteers' motivation, satisfaction, retention, and overall experience with the event and the organization (see Strigas & Jackson, 2003). Furthermore, research has indicated participants may be more likely to respond if they feel the research is valuable or salient to their interests and mentality (Ransdell, 1996). This was evident in the studies by Giannoulakis and Wang (2007) and Giannoulakis et al. (2008). Researchers may cultivate the impression to potential research participants they are actually stakeholders of the study.

Another method to emphasize importance of participation includes dissemination of questionnaires to groups of volunteers during the event, along with the presence of researchers and assistants who could support self-compilation and guidance of respondents through the survey process. As Couper (2011) posited, the degree of interviewer involvement has

implications not only for costs, but also for errors of nonobservation (e.g., sampling and nonresponse) and measurement errors (e.g., effects on sensitive questions, ability to motivate, probe, assist etc.). Overall, researchers should put an emphasis on face-to-face interaction when performing on-site studies in order to not only enhance survey participation, but also support data quality. Furthermore, monetary incentives are widely used to help motivate survey participation (Singer & Couper, 2008), and they represent a token of appreciation for the respondent. To date, the possibility some monetary incentives may unduly influence some participants cannot be ruled out (Singer & Couper, 2008). Typically, on-site survey participants do not represent *professional* participants who repeatedly volunteer for experiments in order to acquire a monetary incentive.

Decreasing costs of participation is a particularly applicable principle to on-site studies, and there are a number of methods by which researchers can attempt to reduce costs of participation including questionnaire design, prenotifications, and modes of survey return. A well-designed questionnaire that is appealing, concise, practical, and easy to complete will improve response rate and the quality of collected data (O'Rourke & O'Rourke, 2002). The goal of the questionnaire format is to eliminate, or at least reduce, item nonresponse and measurement error (Lusinchi, 2007). According to outcomes of an open-ended questionnaire with volunteers at a national-scale martial arts competition (see Giannoulakis & Wang, 2007), respondents reported they would have preferred: (a) colored paper leaflet with the organizing committee logo on the cover page instead of the legal size white paper used for the study, (b) additional assurances of confidentiality and anonymity, and (c) brief description of the importance of the study within the questionnaire or verbally by the researchers. The design and logistics of a survey, not just the mode of administration, might eventually affect who responds to the survey and what they have to say (Nulty, 2008). Overall, it is recommended the questionnaire has a clear focus and purpose, questions are framed in a manner that attracts participants' attention, and the means to completing the survey are specifically illustrated to participants (Karan, 2011). Table 2 illustrates potential effects on response rate based on survey design and engagement.

Table 2: *Response Rate Percentages in Comparison to Completion Rates*

		Completion Rate	
		Low percentage of respondents	High percentage of respondents
Response Rate	High	<ul style="list-style-type: none"> • Good survey engagement • Survey may be confusing, too long, or irrelevant to respondents 	<ul style="list-style-type: none"> • Good survey engagement • Good survey design
	Low	<ul style="list-style-type: none"> • Issues with both engaging respondents and survey 	<ul style="list-style-type: none"> • Good survey design • Issues with engaging respondents

One of the suggested techniques for improving response rate is providing information to the participant about the study via prenotification by letter (Dillman et al., 2009). This specific technique may be employed with on-site studies if researchers possess a finalized list with individuals who will participate at the event. In general, providing prospective survey participants with a letter informing them in advance they have been selected for an upcoming study has a positive impact on response rates, irrespective of the data collection mode employed (Lusinchi, 2007). Indeed, it is vital to inform potential participants through a prenotification letter what the study is all about, why it is important, why they were selected to participate, and whether direct or indirect associated benefits exist (O'Rourke, 1999). In this way, potential participants are aware of the fact a study will take place on-site. For instance, volunteers in sporting events are preoccupied with performing their duties, meeting the requirements of their assigned position, and satisfying the needs of the organization. Thus, a prenotification letter may draw their attention and interest while they are not absorbed with their volunteer duties. Within our review, two studies (i.e., Costa et al., 2006; Green & Chalip, 2004) utilized the survey packet approach, which included a cover letter, the survey, and a return paid envelope. Han (2007) also used a prenotification letter with volunteers, after the researcher acquired approval from volunteer coordinators. Overall, the survey packet technique may constitute an efficient tool for sport event volunteer research, as it decreases costs of participation for respondents through information about the study, as well as convenience and practicality of filling out and returning the survey.

Review of the sport volunteer literature illustrated a common technique with on-site volunteer studies to have a survey box in place, where potential respondents return their surveys. However, in some of the cited studies (e.g., Giannoulakis & Wang, 2007; Giannoulakis et al., 2008; Johnston et al., 2000), the survey box technique did not appear to be particularly effective. Nevertheless, selecting the direct distribution option at sign-in desks, volunteer lounges, and break areas might have a positive effect on response rate (e.g., Green & Chalip, 2004; Strigas & Jackson, 2003). Establishing a communication channel with volunteer coordinators in order to identify the most effective data collection process during the sporting event is pivotal. It is wise not to interfere with volunteers' duties and responsibilities (i.e., decreasing cost of participation), while developing a fertile setting for participants to provide their responses (i.e., increasing benefits of participation), thus resulting in minimization of nonresponse rate. For instance, Reeser et al. (2005) facilitated a multitude of pick-up and delivery points for volunteers, and recommended participants fill out the questionnaire at the end of their assignments.

Finally, the establishment of trust might be a critical component to survey participation and maximization of response rate. Constant reassurances of confidentiality and anonymity, both verbally and technically, will cultivate a trusting relationship between the researcher and potential respondents. As an example, university sponsorship and strong affiliation with the organizing committee were promoted by Giannoulakis and Wang (2007) and Giannoulakis and colleagues (2008) at the 2006 USA National Junior Taekwondo Championships (affiliation with a research institute) and the Athens 2004 Olympic Games (affiliation with an academic program), respectively. Ransdell (1996) also noted university sponsorship could result in an increase of credibility with respondents based on survey affiliation with a university and if respondents have received prior benefits from the university. It is crucial, however, researchers maintain a delicate balance between confidentiality guarantees and the level of sensitivity of the survey, since it may increase respondents' anxiety levels while completing the questionnaire (Singer et al., 1995). Such an approach will have a negative effect on establishment of trust with respondents, response rate, and, ultimately, quality of data.

Interestingly, not all research on survey methodology supports the basic social exchange theory tenets, especially when compared to mail surveys. In their study of likelihood to participate in mail survey research, Greer, Chuchinprakarn, and Seshardi (2000) found the top three inducement factors were questionnaire content/perceived saliency by survey recipients, survey sponsoring organization (e.g., university versus commercial firm), and inclusion of an addressed, stamped return envelope. Monetary incentives, as suggested by social exchange theory, ranked sixth, and follow-up mailings and prenotification were at the bottom, ranked ninth and tenth, respectively. Indisputably, response inducement methods may be modified and applied accordingly to different scientific fields and data collection techniques. Furthermore, Grove et al. (1992) purported a cost-benefit analysis suggested by Dillman et al. (2009) should fall second to relationship building and consideration. To this extent, researchers should consider the basic assumption of social exchange theory with surveys; the fact that respondents' participation in a study is established upon the expectation that such relationship is mutually beneficial. In the case of this review, the potential collaboration between a sport volunteer and a researcher is based on reciprocal associations. Nonetheless, this reciprocity might be violated if the exchange ratio is imbalanced; namely, if the respondent experiences fewer rewards than costs as a result of the relationship with the researcher and the respective study (see Doherty, 2009). Interestingly, volunteering, by default, is inherently an exchange relationship, since volunteers invest their time and subsequent skillset to support an event; thus, individuals experience various benefits, as well as costs, in return (Doherty, 2009).

Although not all of Dillman's suggestions exist within sport event volunteerism research, the literature indicates an increase in benefits and decrease in cost of participation might have a positive impact on response rate, which is often regarded as the primary measure of quality when assessing the validity of survey data or comparing different surveys. Due to the fact that response rate may suffer from major limitations such as sampling issues and misclassification of eligible units as ineligible, "the response rate may be inadequate for comparing different survey's ability to identify and complete interviews for the target population" (Skalland, 2011, p. 89). Therefore, response rate may not be sufficient in comparing the selected sport volunteer studies that used different sampling frames or modes of data collection. Nonetheless, we observed when some of the studies employed mixed modes of data collection in order to increase response rate (e.g., Fairley et al., 2013; Khoo & Engelhorn, 2011), and when one mode of data collection (i.e., direct distribution) was not particularly effective (e.g., Giannoulakis & Wang, 2007; Giannoulakis et al., 2008). Unarguably, the drawbacks of one mode can be compensated for by the strengths of another. The utilization of more than one mode will increase response rates over a single mode, as well as bring in different groups of respondents than for a single mode, thereby potentially reducing nonresponse error (Couper, 2011).

Implications for Researchers

There is a compelling need for the examination of fluctuations in response rate based on the implementation of different strategic combinations and modes of data collection. Survey researchers could examine these strategic combinations for interactions, synergistic effects, or both on response rate. It is important authors elaborate further on the *procedure* section within academic papers, so future recommendations for increasing response rate with on-site survey studies could be proposed, tested, and adopted. Presumably, page restrictions with academic journals often lead authors to omit important insight on sampling procedures, distribution techniques, and response rates.

Comprehending demographic characteristics of the sample surveyed is pivotal so the questionnaire will be designed to satisfy specific needs of respondents. An appealing and attractive questionnaire will positively affect response rate. The implication is that data derived from surveys are likely to be somewhat more easily and validly used if surveys are appropriately designed and used for particular targeted purposes (Nulty, 2008). For instance, Doherty and Price (2005) found there are more male, young, married, and employed individuals within sport volunteer settings. Downward, Lumsdon, and Ralston (2005) further purported males would have more chance to be sport volunteers because they have higher levels of sport identity than females. In sport volunteer literature, scholars emphasize the importance of sport as a context of volunteering, basically assuming sport volunteers have a different psychology or attitude toward their work than other types of volunteers (Hwang, 2010). Sport volunteers provide their skills and time as far as the nature of the sport is concerned and they personalize sport by giving it a meaning. Hwang (2010), who compared psychological differences of sport volunteers (marathon) with non-sport (music) volunteers in terms of intentions of future volunteering associated with current volunteering experiences, found significant group differences in the level of identification related to the context of volunteering. Thus, when designing questionnaires researchers should take into account the context-specific identification of event volunteers by including questions related to the nature of the event and developing survey items attractive to the specific volunteer population surveyed. By utilizing face-to-face interactions, survey administrators could convey a sense of excitement similar to that associated with the event and one that may appeal to the particular volunteer segment. This sense of excitement, in combination with showing appreciation for respondents' participation, could result in enhanced survey engagement and higher response rates.

At this point we would like to acknowledge several limitations to the study. First, there was not a consistency among illustrated volunteer studies on sampling frames used, how many individuals were invited to participate in the study, how many subjects were initially contacted, and how many refused to participate. The list of peer-reviewed, full-text and English-based articles we searched via SPORTDiscus is certainly not exhaustive of *all* on-site sport volunteer studies. Since most of the studies cited were not experiments, we do not know what would have occurred if the technique in use was not implemented. In addition, a statistical summary or systematic assessment could not be provided on the response rate for the volunteer studies due to the aforementioned reasons. We showcased the information available in the respective manuscripts, thus we had no control of the conditions of the study or any additional input from the authors. Therefore, inferences on specific survey techniques that might have consistently resulted in higher responses rates were intentionally avoided. Finally, if volunteers invest their time and energy more readily than non-volunteers, one could imagine volunteers to be more willing to fill out surveys than the general population. This further decreases generalizability of any findings. Although we are not in position to assess in absolute terms the effectiveness of specific modes of data collection in the illustrated on-site sport volunteer studies, we realized mixes of mode and multiple modes may depend upon the nature of the study, the event, the target population, and the sample. Apparently, mode may be interpreted differently by individuals, and one mode may have varying outcomes for different populations. Comprehending the implications mode dimensions (e.g., degree of interviewer involvement, locus of control by respondents etc.) could have on survey errors and costs will support researchers in making decisions about the most effective mode to use for specific surveys, and help in understanding the effect of mode choice on resultant survey estimates (Couper, 2011). Omitting various mode dimensions or sources of error could have a negative impact in terms of on-site survey designs and strategies.

Conclusion

In essence, the crucial aspect in survey research is not necessarily a high percentage in response, but removal of barriers and biases for non-respondents. An adequate response rate is essential for promoting confidence in results, whereas a low response rate increases the likelihood of biased results. However, assertions regarding the constitution of adequacy of a particular percentage response rate seem to be made without theoretical justification. Nulty (2008) suggested it would be better if there was a theoretically justified, systematic way to calculate the required response rate. Determination of what constitutes an adequate response rate should be based on the evaluation design, how the results will be used, and standard practice ("Increasing Questionnaire Response," 2010). In relation to social exchange theory, our review of literature indicated important factors to influence response rate include: (a) salience of the topic, (b) a self-administered questionnaire one could fill out in a timely and practical fashion, (c) personalized request and communication, and (d) a sense of trust and respect in the interviewer.

Outcomes of this review are only suggestive and are restricted within the sport volunteerism field. This fact decreases the generalizability of the review's outcomes. Nonetheless, this study may stimulate further examination of data collection modes designed and implemented in other research fields, as well as further the line of inquiry related to response rate with on-site research projects. Academic research may address the issues of nonresponse bias with on-site studies by determining the characteristics of respondents in comparison to non-respondents. Additional issues that warrant further examination include format of questionnaire, on-site distribution and survey engagement techniques, evaluation of incentive strategies for participants, and variables mediating between confidentiality assurances and response. As far as the volunteer field of study is concerned, it would certainly be of interest to perform comparison studies on response rate or other survey research elements among different types of volunteers (e.g., sport, non-sport, social etc.), while considering the event context (e.g., profit vs. non-profit, local vs. national, mega-event etc.). Ultimately, effective assessment of volunteers' psychometric properties through maximization of response rate and enhanced data quality will assist sport organizations in planning, managing, recruiting, and retaining a strong volunteer base. A poor response rate may render any subsequent data relatively useless regardless of how much time, effort, and expense was devoted to preparing a well-developed instrument, a representative sample, and appropriate statistical methods of analyses (O'Rourke, 1999). After all, the implementation of strategies that will increase response rate is an endeavor worth the investment.

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