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Use of Qualitative Research in Foodservice Organizations: A Review of Challenges, Strategies, and Applications

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Use of Qualitative Research in Foodservice Organizations: A Review of Challenges, Strategies, and Applications

Purpose – The purpose of this paper is to present the challenges encountered when conducting qualitative research in foodservice operations. Strategies to overcome identified challenges will be discussed.

Design/methodology/approach – The researchers have conducted food safety observations, interviews, and focus groups with more than 600 foodservice employees and managers. The researchers encountered multiple challenges including institutional review board approvals, managements' willingness to participate, and organizational and cultural barriers.

Findings – Obtaining in-depth, credible information through observations, interviews, and focus groups adds depth and breadth to hospitality studies. However, given high industry turnover, recruitment and retention throughout a study is problematic. Moreover, researchers encounter many barriers as they obtain data, such as establishing authenticity and overcoming Hawthorne and halo effects.

Practical implications – Participating in qualitative research can pose perceived and real risks to a foodservice's reputation as well as employees' and managers' employment status. This is particularly true when studying issues related to customers' well-being, such as food safety, which might be viewed as potentially libelous.

Originality/value – Practices for decreasing the drop-out rate among participants, minimizing the Hawthorne effect during observations, and increasing worksite consent rates will be outlined. Strategies to increase participation and thereby improve qualitative research have not been addressed in the hospitality literature.

Keywords: Focus groups, food safety, foodservice, interviews, observations, and qualitative research.

Article Type: Technical Paper

Introduction

The debate has continued in research circles whether qualitative research should be valued in the same manner as quantitative research (Gelo *et al.,* 2008; Mays and Pope, 1995; Smith and Heshusius, 1986). Questions of rigor and worthiness generally surface during these discussions. Despite the criticisms, proper, rigorous, and ethically conducted qualitative research methods can be considered when: investigating complex phenomena that are difficult to measure quantitatively; generating data necessary for a comprehensive understanding of a problem; and studying outcome variables as well as process variables. Investigating the context in which behaviors take place is also important in gaining insights into potential causal mechanisms, developing sound quantitative measurement instruments, and studying special populations (Achterberg and Arendt, 2008; Curry *et al.*, 2009). The aim of this paper is to provide other researchers with some of our "lessons learned" in conducting qualitative research while ensuring appropriate rigor.

Review of Literature

Qualitative and Quantitative Research

Qualitative research is not about the numbers, meaning it is neither about sample size nor about data being represented graphically. Rather, the qualitative researcher seeks to understand the depth and breadth of a topic area through rigorous study of phenomena by critically selecting participants, studying those participants thoroughly, and continuing data collection until no new themes emerge during data analysis. Additionally, data are often expressed descriptively as verbiage compared to more quantitative means, numbers. Table I summarizes the major differences between qualitative and quantitative research.

The lingo used in qualitative research helps define it. The terminology used to describe qualitative research and the processes used is different from that of quantitative research. For example, qualitative researchers will use terms such as participants or informants whereas quantitative researchers refer to a sample or subjects. Likewise, a qualitative researcher will address the trustworthiness of the data whereas a quantitative researcher will address validity. Proper use and application of qualitative terminology helps distinguish a novice from an expert qualitative researcher.

Although some have viewed qualitative research as a distinct type of research, others view it along a continuum with purely qualitative (i.e., ethnographic study) on one end of the continuum and purely quantitative (i.e., controlled laboratory study) on the other end (Achterberg and Arendt, 2008). Figure 1 displays various qualitative approaches and data source examples along the more qualitative portion of this continuum. As can be seen, ethnography and observation are generally viewed as more qualitative methods while semi structured interviews and structured content analysis are viewed as less qualitative. Various data sources are utilized depending on which method is selected. For example in ethnographic work, researchers generally keep a diary, collect artifacts, and take photos or videos to use for analysis purposes.

Qualitative Research in Hospitality
Qualitative research has progressed in fields such as anthropology, education, and management (Marshall and Rossman, 2006). Medical and health services research have also been using qualitative methods and funding agencies have been supportive of such methods (Curry *et al*., 2009). The need for qualitative research and the appropriateness of utilizing specific qualitative methods for research in the hospitality field have been recognized (Kwortnik, 2003; Walsh, 2003).

Hospitality and tourism researchers have utilized qualitative research as a single methodology (Dirks and Rice, 2004; Johnson *et al*., 2005; Paget *et al*., 2010; Papageorgiou, 2008**)** and as part of a mixed methods approach, utilizing both qualitative and quantitative research methods in the same study (Ineson *et al*., 2006; Parsa *et al*., 2005). Others have employed qualitative methods when more quantitative methodologies have failed to answer the research question (Mason *et al*., 2006). Riley and Love (2000) found that applied researchers used qualitative methods prior to employing quantitative methods whereas social science researchers generally used solely qualitative methods.

The versatility of qualitative research is evident; qualitative research has been conducted in various hospitality and tourism contexts such as lodging, commercial and non commercial foodservices, clubs, and tourism. Haiyan *et al.* (2010) used multiple qualitative methodologies to study human resources management aspects in China's hotels whereas Lockyer and Roberts (2009) used only focus groups to study New Zealand hotel guests. Severt *et al*. (2008) employed a triangulation data collection process using structured visits, unstructured visits, and interviews to study organization philosophy in one hospital. Chapman *et al*. (2010) used video cameras to observe foodservice employees' behaviors related to safe food handling techniques. Barrows (2000) studied the extent of training and challenges of training in private clubs; focus groups with club managers provided the data collection method. To study tourists' perceptions, Kivela and Johns (2003) interviewed Hong Kong tourists. As is evident from this brief summation and others not elaborated on, qualitative research methodologies have canvassed hospitality and tourism research topics including strategic management (Pouder and Clark, 2009), training (Anderson *et al.*, 2001; Barrows, 2000), and customer's perceptions (Kivela and Johns, 2003; MacKay and McVetty, 2002)

Achterberg and Arendt (2008) indicated that qualitative approaches are used when there is an inability to understand the problem using quantitative approaches and when it is important to understand the process variables (e.g., motivators to following safe food handling) not just the outcome variables (e.g., answering the question, did the employee follow safe food handling practices?). Although the data collection and analysis processes can be tedious, technological advances are being made to facilitate using qualitative methods in hospitality research (Pullman *et al*., 2005).

Approach/Methodology
The researchers have conducted multiple qualitative studies in foodservice operations and with foodservice employees. These have included observations, individual open-ended interviews, and focus groups. A brief critique of each method and the experiences researchers have had with each method will be covered in this section of the paper. A summation of the eight research

projects may be found in Table II. All research protocols involving human subjects were approved by the institutional review board (IRB) at each respective university.

Observations

Ethnography and participant observation are terms associated with qualitative observational studies. In ethnographic studies, the researcher integrates into the culture or community being studied. This generally is done over a considerable amount of time so the observer can assimilate into their new surroundings. The observed become immune to having the observer around after a period of time and therefore behave naturally. Other approaches involve participant observations, which may occur over a shorter period of time. The observer might also videotape the participant(s) being observed and keep records through field notes and study-specific observational forms. Observations allow for greater depth of understanding than focus groups or interviews because phenomena are studied in the naturalistic setting (Harris *et al*., 2009).

In Project 1, food safety practice observations were conducted with foodservice production employees in commercial restaurants. The research protocol involved 20-minute observations and 10-minute rest periods over three hours during a breakfast, lunch, or dinner shift. This schedule allowed for six total observation periods. Depending on the production system of the operation, observers could observe as many as four employees in one observation period. However, in the majority of operations, only three employees were able to be observed at one time by each observer. A total of 242 employees, representing 33 different foodservice operations, participated in the study. In this study, managers were called to recruit potential participants (Roberts *et al.*, 2008). Results of this study showed that training can improve behavior, but does not ensure behaviors will change. Conducting actual observations was a key element in this study, rather than relying on self-reported data as other studies have done.

For Project 2, two subsequent observational studies focusing on handwashing frequencies and methods were conducted. In the first study, Paez *et al*. (2007) developed a data collection tool and protocols to track handwashing behaviors in deli-type restaurants. Observations were conducted during phases of production and service in a limited menu setting for a total of 30 hours with 15 participants. The reliable data collection tool and standardized protocols were used in a subsequent study to assess compliance with handwashing behaviors described in Food Code 2005 (Strohbehn *et al.*, 2008). Sixteen venues representing four sectors of retail foodservice (assisted living for the elderly, child care, restaurants, and schools) and a range of scope of menu offerings, number served, service styles, amount of from scratch production, and employee tenure with the specific foodservice. Observations of 80 hourly employees were made at the beginning of the three-year project in the 16 operations with a data collection period of 15 hours in each facility during phases of production, service, and cleaning for a total of 240 hours. From these observations, compliance rates with Food Code recommendations of when and how hands were washed were collected for each sector of the industry, with training programs tailored to meet specific sector characteristics. Post-intervention observations were collected over a 3-hour period in each of the 16 units (48 hours total) at the end of the study. Both studies within Project 2 showed that actual handwashing practices were not consistent with Food Code recommendations (Food and Drug Administration, 2005).

In another study by Arendt and others (2011a), Project 3, foodservice employees of different age groups were observed. As compared to the Roberts *et al.* study (2008), each researcher observed

one employee for a 3-hour period on two different days for a total of 6 hours of observational time for each employee. A total of 25 employees were observed for the entire 6 hours resulting in 150 hours of data collection. Nine different foodservice operations participated in the study. Both commercial and noncommercial foodservice organizations were involved; hospital, university dining, school, long-term care facility, quick-serve restaurant, casual dining restaurant, catering, and deli retail. Observations indicated a gap between food safety knowledge and safe food behaviors.

Individual Interviews
In contrast to focus groups, individual interviews are used when one-on-one questioning is desired. Sensitive topics or certain interviewee characteristics lend themselves to individual interviews rather than focus group interviews. For example, if studying foodservice employees' specific food handling behaviors that may contaminate food, individual interviews may be more effective as the participants may not be willing to share their thoughts and behaviors freely when other foodservice employees are present. Kaplowitz (2000), when studying the socially sensitive topic of ecosystems with residents of Mexico, found participants were more likely to bring forth socially sensitive topics in an individual interview format as compared to focus group. The author noted complementary data from the two methods, not substitutive.

In Project 4, researchers conducted individual interviews with four upper-level managers of commercial and noncommercial foodservice operations (Arendt *et al*., 2011a). The goal of the project was to further inform the data collected from employees and supervisors about food safety knowledge, behaviors, and training during focus groups. Data were analyzed by four researchers experienced in qualitative data analysis, coded and themed. Independently developed themes were then compared and discussed until consensus was reached. Common themes were then identified among the researchers.

For Project 5, individual interviews were utilized in a study to explore barriers restaurant managers have to offering food safety training to their employees within the commercial foodservice environment (Roberts and Barrett, 2009). Twenty restaurant managers were interviewed and each interview lasted approximately 45 minutes to one hour. As one researcher focused on the discussion, a second researcher was present to record notes. Conversations were also audio-recorded and transcribed. Transcriptions were then compared to researchers' notes to ensure accuracy. Data were coded by the researchers to develop themes for further analysis. Examples of themes identified in the analysis included lack of time, costs associated with training, and high employee turnover. Results were used to build a questionnaire that was utilized with a larger sample.

Focus Groups
Focus groups, sometimes referred to as group interviews, allow the researcher to assemble a group of individuals with specific qualifications and/or characteristics. The focus group moderator poses open-ended questions to the members and allows the members to have a "coffee table" discussion about each question. One benefit of a focus group, as compared to individual interviews, is that members of the focus group can build on one another's ideas. A drawback is that certain members might dominate the discussion or conversely, not participate in the discussion. An experienced moderator and assistant moderator are recommended to assure focus group success (Krueger and Casey, 2009). Like individual interviews, data analysis involves the

process of coding and theming transcripts. Some researchers suggest that using computer-assisted qualitative software may enhance rigor of analysis (Kidd and Parshall, 2000).

Focus groups were used to elicit barriers among hourly employees to following proper food safety practices within the commercial restaurant environment in Project 6 (Howells *et al*., 2008). The research protocol involved a focus group led by one of the authors; an experienced moderator, with the assistance of an experienced assistant moderator who observed the session and took field notes during the conversation. Thirty focus groups were completed with a total of 159 employees. Each focus group lasted approximately one hour and had an average of six employees per focus group. A multitude of barriers were identified by participants, such as time constraints, inadequate knowledge, not having reminders, and lack of resources. Results were used to develop and test various interventions within the foodservice industry.

In a similar study (Project 7), focus groups were used to assess hourly employees' perceptions and develop practice recommendations for supervisors in foodservice operations working with multigenerational employees (Arendt *et al*., 2011b). Again, an experienced moderator facilitated the focus groups and an experienced assistant moderator observed the sessions and recorded detailed notes. Four focus groups were conducted with different age cohorts of foodservice employees (18-25, 26-40, 41-60, and over 60 years of age). A total of 32 participants were included in this study.

Project 8 focused on supervisors' roles in motivating employees to follow proper food safety practices (Roberts *et al*., 2012). Participants were recruited from two university towns in the Midwest. Future supervisors were recruited in hospitality management classes at the two universities and supervisors were recruited from foodservice operations in the two towns. As in the other focus group studies, an experienced moderator facilitated the focus groups and an experienced assistant moderator observed the sessions and recorded detailed notes. Three focus groups were conducted with an average of twelve participants per focus group. A total of 36 participants were included in this study.

Challenges
Challenges abound when doing any type of research, whether using a qualitative, quantitative, or mixed methods approach. Specific qualitative approach challenges related to the Institutional Review Board approval, recruitment, selection, retention, and data collection are addressed here.

IRB Approval
Before recruitment and data collection can begin, most researchers must go through the IRB approval process at their respective universities. This requires scrupulous planning and preparation of multiple documents for the approval process. In one observational study, whereby researchers (Arendt *et al*., 2011a) were proposing to observe foodservice employees in their work setting and then interview them after completing observations, eight attachments were required for the IRB submission process. Examples of attachment documents for this study included a recruitment script, observations form, debriefing script, informed consent, and interview guide. Because many employees in the region where foodservice organizations were recruited spoke Spanish rather than English, some materials written in English were translated into Spanish after approval and then resubmitted.

Although the time involved in documentation is one of the challenges, it is not unique to qualitative research as quantitative researchers working with human subjects must go through the same time-intensive process. The challenges lie in the advanced planning process and layout of specific observation and interview forms. Due to the emergent nature of qualitative research, it is not always feasible to anticipate what will happen in the field, in this case foodservice operations. Thus, the researcher is presented with a conundrum: it is unknown which documents or procedures to specify until one is in the field; yet data collection in the field cannot begin until approval is received. The ability to adapt research protocol based on results and/or participant feedback is vital to the success of qualitative studies; this adaptability includes flexibility in the types of questions asked, observational time, methods of recruitment, and number of sites recruited.

The lag time between submission and acceptance of IRB forms is a challenge that most researchers face. With universities experiencing limited resources and staff experiencing increased work expectations, the review period can often take six weeks to three months. IRB committees may schedule meetings on a weekly or monthly basis. Denzin and Lincoln (2005, pg. 38) addressed the challenges with IRBs when presenting qualitative research for approval. They provided explanation to these challenges as: IRBs being understaffed; members who are uninformed about qualitative research; lack of proper procedures; and methods unavailable for expediting exempt forms of research. In one study (Arendt *et al*., 2011a), the principal investigator was asked to attend an IRB meeting to clarify and defend the submitted work. Two questions posed by the IRB committee at that meeting were:

- "What would you do if you saw an employee intentionally put something in the food?"
- "How will you assure the supervisor/manager will not find out how the employee performed during your observations?"

Recruitment and Selection
The overall purpose in qualitative research is to search out the depth and breadth of an identified topic area. Qualitative research is used to develop theory, explore phenomena, and understand individuals in their natural setting (Achterberg and Arendt, 2008). Therefore, sample selection is generally done by recruiting participants who have unique knowledge about the topic being studied. Selection criteria are generally set prior to recruitment efforts. For the researcher to be successful in recruiting he/she must build rapport and trust with the potential participant; these relationships must be nurtured and developed over time. Once a participant agrees to join the study, it is important to continue relationship building. This means being responsive to questions in a timely manner and adhering to the parameters set in the recruitment phase. Without these inputs, the informant will not share openly and honestly, thereby impacting the overall trustworthiness of the study.

Morgan (1998) noted that recruitment problems are the main reason focus groups go awry. Unlike quantitative research that may use a rented list of contacts for survey distribution, qualitative researchers can struggle to identify potential participants (employees, supervisors/managers). Getting access to names and contact information is often only the first step to getting consenting participants. In some cases, potential participants also must gain consent from a higher authority, such as a manager, district manager, and/or owner. Getting past

the gatekeeper, that person in charge of granting access to an organization, is essential (Taylor and Bogdan, 1998). As Taylor and Bogdan wrote, "You want to convince the gatekeeper that you are a nonthreatening person who will not harm their organization in any way" (pg. 29). Another concern expressed by participants is the paperwork or documentation of consent that is required for observations, focus groups, or interviews. The question of "how will this information be used" must be answered satisfactorily by the researcher.

Show Rates and Retention
Getting participants into the project is followed by the challenge of retaining participants throughout the study duration. Many studies involve repeated observations of the same participants for various reasons (e.g., changes in behaviors). Participant drop-out creates missing data and results in an unusable case. In one study (Arendt *et al*., 2011a), multiple observations of 28 employees at different operations had a loss of 11%; three employees left the study after the first observation due to termination of employment or concerns continuing the study. In a three-year behavioral-based study exploring food safety practices (York *et al*., 2009), which was an extension of Project 1 (Roberts *et al*., 2008), 86% of participants dropped out of the study, yielding 33 participants completing the entire project.

Retention considerations also exist for other qualitative data collection sessions such as individual interviews and focus groups, even if multiple contacts with the same individuals are not part of the protocol. If an individual agrees to an interview or focus group, it is unknown until the session whether he/she will actually be present. Show rates for interviews and focus group work described in Table II ranged from 13% to 140% for employees and 100% for supervisors, potential supervisors, and upper-level managers. Once a participant shows up for the interview or focus group, the researcher is then challenged with making certain the participant stays through the entire session and provides thoughtful and truthful information. For example, in Project 6, half of the participants in one of the focus groups had to leave early. One participant had to leave early to pick up her son from school and four other participants had ridden with her. In another focus group, where researchers traveled two hours to get to the focus group location, none of the employees showed up for the session. Upon calling the operation's manager for an explanation, researchers were told employees left work early to go to the focus group together in one car, however, "they must have gotten distracted along the way".

An additional issue that has been identified is the challenge associated with gifts or compensation for participants. Due to the in-depth nature of qualitative research and the time it requires on the part of the participant, it is common to provide a "thank you gift" or some type of compensation for participants in a study. For most researchers, university protocol requires participants who receive compensation to sign a form acknowledging receipt of the money. Participants start to grow leery of all the forms and papers, particularly those who are not legal to work in the United States. In some organizations, employees were prohibited from accepting gifts because of organization policy and procedures.

Data Collection Approaches
During the data collection phase, challenges abound. The moderator of a focus group is particularly challenged with keeping all participants engaged and making certain no one dominates the discussion. Researchers are challenged with maintaining a neutral position when

collecting data and at times, this may be difficult to do given the passion researchers have for their chosen field of work. The horns and halo effects may be challenges researchers need to overcome when performing qualitative data collection. The halo effect occurs when the researcher sees one thing that a participant does well or an aspect the researcher admires and this clouds the researcher's ability to objectively collect data. In contrast, the horns effect occurs when the researcher sees something he/she dislikes about the participant and this overshadows the researcher's abilities to objectively collect data. Researcher fatigue, when conducting focus groups, interviews, and observations becomes another hurdle to overcome. The hospitality industry is diverse and therefore researchers conducting research in the industry are challenged to collect data from this diverse group. Language is just one area where diversity is manifested.

Data collection in the field is similar to the position of an "embedded reporter" in that researchers must be in the food production, service, or cleaning areas. It requires knowledge of operations to anticipate where best to stand, and where and when to move. Many foodservices have limited space in the back of the house, thus it is imperative the researcher be cognizant of potential risks from hot production equipment or employees' traffic routes. Another challenge in data collection is establishing rapport with the foodservice staff under observation. It is imperative the researcher "blend in" with the operational activities. Initially, there will be some Hawthorne effect demonstrated, but as the employees become accustomed to the researcher's presence, typical behaviors will resurface. In some cases, the manager or owner may not discuss the project with employees; resentment could be a factor.

Publishing Qualitative Research
After completing qualitative research, dissemination through peer-reviewed journals is desired but sometimes challenging. Often times manuscripts may be rejected outright or reviewers may not understand qualitative research and reject the manuscript due to small sample size or nonrandom sampling techniques.

Table III summarizes the challenges elaborated in this section and potential strategies. An in-depth discussion of strategies that can be used to overcome these challenges follows.

Strategies

IRB Approval
Strategies to help cope with the many challenges presented before and during IRB approval are as follows: 1) educate and work with the IRB and 2) develop adequate time into the research plan for meticulous planning and development of all IRB materials. Researchers should work with IRB members and provide them with an explanation of the hospitality industry. Experience has shown that committee members often have limited experiences with hospitality organizations, other than as customers, and therefore do not understand the hierarchical structure and workplace challenges such as turnover. Anticipating this limited understanding and providing background information about general procedures in the proposed data collection methods will help IRB members better understand the uncertainties when working with hospitality organizations and lead to project approval.

Developing a meticulous, standard protocol is essential and will assist with both the IRB process and data collection phase of the research. For work involving inherent threat to safety, such as the food safety work described, actions needed by the researchers must be well-thought out and understood. For example, if observers see or think they see an inherent threat to the safety of the food, actions must be taken. Ethically, researchers cannot condone intentional sabotage of food.

Recruitment and Selection
Qualitative research necessitates researchers to over-recruit to assure sufficient show rates. This is important for data collection methods that require participants to travel to a designated location, such as focus groups. However, it also is important for observation studies that involve multiple data collection periods. Missing data points for a participant yields them unusable in most study designs.

Once selection criteria for the foodservice organizations or employees have been established, contacts should be identified. When selecting organizations to contact, it is best to build upon a trusting relationship, particularly when researching sensitive and potentially libelous topics, such as food safety. As with quantitative research, typically surveys, alignment with the university is usually viewed positively. In foodservice-based research, this was particularly evident, perhaps given the recognition and educational materials each of the researcher's institutions has developed. Some of the research projects include Extension personnel who have a history of working with professional organizations to which some of the foodservice decision makers may belong, such as School Nutrition Association.

The chain of command cannot be ignored when recruiting potential participants. When searching for nonsupervisory employees, managers or those at higher levels in the organizations were contacted to get approval for posting recruitment flyers in the operation. Strategizing the time and mode of contact is essential. For recruitment of foodservice operations, contact via phone was most effective and calling during the morning worked best. Although obvious, contact during peak business hours (e.g., meal times) is not well received. For some types of operations, e-mail worked well and gave managers/owners more information that they could respond to at their convenience. The hospitality industry is still divided by those that embrace technology and those that do not see a need for it. Thus, multiple modes of communication will ensure messages are received.

In addressing gatekeepers and informants, these researchers' approaches are consistent with that of Taylor and Bogdan (1998, pg. 33): truthful, but vague and imprecise so that when an informant asks about the work during the recruitment or data collection phase, specific explanation is avoided to mitigate effects of bias. For example, when employees in one observational study (Arendt *et al*., 2011a) asked what observers were doing, researchers responded with a truthful but vague response such as, "We want to better understand how best to communicate information about work tasks". Okumus *et al*. (2007) in their work with international hotel groups noted the importance of negotiating with more than one member of the organization and building personal relationships. They also noted that it takes a substantial amount of time to get potential participants to commit, four months in their case.

Compensation should be appropriate for offsetting the time to participate, but not at a level at which it will serve as an incentive. For example, in some research the compensation has ranged from $15USD for multiple observations of an employee and a 15-minute interview (Arendt *et al.*, 2011a), recognizing the employee would already be doing their job, to $40USD for participation in a 90-120 minute focus group session outside of regular work hours that might have required travel (Arendt *et al*., 2011b).

Show Rates and Retention
Despite best efforts in recruitment, if employees do not show up for the observation, individual interview, or focus group, then all of the resources put forth have been lost without recognition of any benefit. Although there may not be much a researcher can do to make certain an employee shows up for their work shift or scheduled meeting, there are some specific strategies to ensure the best show rate possible. These strategies include careful selection of site for the focus group or observation, timely reminders about the upcoming data collection session, and developing a personal connection with the potential participant so they understand they will be missed if they do not show up when expected.

When selecting a site for the data collection session, consideration should be given to the distance a potential participant must travel and comfort level the potential participant will have in coming to the location. Some specific strategies when selecting a location include: one with access to public transit, one where potential participants feel comfort, one with adequate parking, and one that is easy to find. The following example illustrates care in location selection. A focus group was being established for foodservice employees over the age of 60 years. A conference room in the local library, available by public transportation, was used for this focus group. This older group of employees was familiar with the library, the library was easily accessible to them (within a 5 minute car or bus ride), and had adequate, well lit parking. More than 100% of those recruited and confirmed were present; one individual showed up for the session but had not confirmed attendance at the focus group.

Frequent reminders should be used up until and including the day of the data collection session, but not to the extent that they become obnoxious. The communication mechanism preferred by the potential participant should be considered. For example, phone call reminders were made to foodservice employees over the age of 60 years, while e-mails were used when reminding employees in the youngest age category. As technology and social networking continues to evolve, consideration could be given to text message reminders and use of social networking methods, such as Twitter, to improve show rates.

The keys to retention are participant comfort and trust in the researcher. Researchers can employ several strategies to achieve trust and comfort. Having experience in foodservice operations appears to help as the researcher can use terminology common to the participant, relate to the participant's work experiences, and demonstrate understanding of the situation being described. All researchers involved in Projects 1-8 had foodservice work experiences at both hourly and managerial levels of employment, which allowed them to build rapport with participants. Researchers in observational studies must demonstrate emotional intelligence and become accepted within the setting quickly in order to minimize observer bias. The ability to chat or put employees at ease is critical.

Likewise, appearance is important. A researcher does not want to stand out from the participants but be perceived as "one of them". For this reason, great care should be taken when selecting attire for observations, interviews, and focus groups. Compliance with organizational and regulatory policies is important. For example, when observing in a foodservice production area, researchers should be mindful to wear clothing and follow practices consistent with the Food Code (e.g. close-toed shoes and hair restraints). For work with foodservice personnel, it is important not to appear in clothing similar to foodservice inspectors as this may conjure up feelings of fear and distrust. In earlier work, not described in this article, white lab coats were worn while conducting observations in food production areas. While this was acceptable for non commercial types of operations, researchers have since concluded a more casual look is less intimidating. In subsequent on-site observations, researchers wore collared polo shirts (with university and project logos) and khaki slacks; similar attire to the uniforms worn in many foodservices.

Data Collection Approaches
Experience and extensive preplanning is necessary so that researchers can achieve objectives and participants can feel at ease with one another and/or with the researchers. One such preplanning activity is development of a checklist to make certain all necessary equipment is along when traveling to observation sites. Researcher's anxiety, stress, and disorganization are evident to participants and therefore will affect willingness of participants to contribute fully and truthfully, thereby affecting overall data quality.

Recording of observations can create some anxiety among participants. In more recent observations, researchers have used small (3 inch, pocket size) spiral notebooks to record specific behaviors (such as handwashing or checking temperatures) rather than a standard size pad of paper and clip board. This also allows the researcher to protect confidentiality of observations as the notebook can be slipped in and out of pocket when engaged with participants and supervisors.

When conducting observations in operations, it is of utmost importance to understand the climate and culture of the organization. If researchers have work experience in like operations, this is helpful. There may be opportunities for participant observation, whereby the researcher takes part in the activities of the organization. For example, it may be important to taste the food if offered in order to fit in and not offend those observed. Should participants' primary language be one other than that of the researchers', it is essential that a trustworthy interpreter be hired. Ideally, the research team would include someone who spoke the primary language of the participants, even for observational studies.

Publishing Qualitative Research
The best strategy for getting qualitative research published is to target journals accepting of qualitative work, explaining qualitative terminology that may not be familiar to reviewers/readers, and preparing a thorough methodology section. Certain journals, such as *Journal of the American Dietetic Association*, have developed specific authorship guidelines for publishing qualitative research (Van Horn, 2009). Likewise, Gibbert *et al.* (2008) have offered suggestions on how to write rigorous case studies and where to publish these.

Conclusion

This paper has addressed the challenges researchers face when conducting qualitative research with hospitality employees and managers using observations, individual interviews, and focus groups. Specifically, the challenges in obtaining institutional approval of qualitative research work, recruitment and show rates of potential participants, and retention of participants were explained. Strategies were identified to overcome or minimize these challenges. Working with IRBs, building trust with gatekeepers and participants, over-recruiting and most importantly, having experienced qualitative researchers are some of the strategies suggested.

The use of qualitative research methods such as observations, focus groups, and interviews was effective when conducting food safety research within the hospitality industry. The use of qualitative research methods has allowed the researchers to identify many complex variables that survey research alone would not have permitted. These findings include compliance of behavior with identified food safety standards, handwashing behaviors, motivators and barriers to follow food safety practices, and manager and employee perceptions of food safety.

There is a place for qualitative methods in hospitality research. Selection of this type of methodology should be in alignment with the research purpose and questions. Qualitative research should be used if depth and breadth of understanding is sought. However, as with any research method used, whether it is qualitative, quantitative, or a combination, rigorous standards must be maintained during the entire research process. By anticipating potential challenges in advance, researchers can take a proactive approach to implementing strategies and assure that rigorous standards are upheld throughout the qualitative research process.

Table I: Comparisons between qualitative and quantitative research

	Qualitative	**Quantitative**
Purpose	Develop theory	Apply theory
Process	Inductive	Deductive
Sample size	Smaller	Larger
Sample selection	Purposeful	Random
Setting	Natural setting	Laboratory setting
Data	Words	Numbers
Analysis	Hand coding/ theming	Statistical tests
	Computer assisted software programs	Statistical software packages

Table II: Summary of qualitative food safety studies conducted by authors

| Project (Reference)	Methodology Selection Criteria	Number of Participants	Variable of Interest	Analysis Methods
Project 1 (Roberts *et al.*, 2008)	**Observations** Hourly foodservice employees in commercial operations	242	Behavioral compliance with identified food safety standards	T-Tests; simple linear regression
Project 2 (Paez *et al.*, 2007; Strohbehn *et al.*, 2008)	**Observations** Food preparers at deli operations Hourly employees in commercial and non-commercial retail foodservices	15 80	Handwashing behaviors	Frequencies; qualitative evaluation of methods
Project 3 (Arendt *et al.*, 2011a)	**Observations and Interviews** Nonsupervisory employees at commercial and non-commercial operations, based on age cohort	25	Behavioral compliance with identified food safety standards	Research observation, independent theme identification, and consensus
Project 4 (Arendt *et al.*, 2011a)	**Individual Interviews** Upper level managers, commercial and noncommercial foodservice operations	4	Motivators to following safe food handling practices	Research observation and consensus
Project 5 (Roberts and Barrett, 2009)	**Individual Interviews** Restaurant managers	20	Barriers to offering food safety training to employees	Research observation and consensus
Project 6 (Howells *et al.*, 2008)	**Focus Groups** Hourly restaurant employees	159	Barriers to following proper food safety practices	Research observation and consensus
Project 7 (Arendt *et al.*, 2011b)	**Focus Groups** Hourly retail foodservice employees, based on age cohort	32	Perceptions of foods safety	Research observation and consensus
Project 8 (Roberts *et al.*, 2012)	**Focus Groups** Retail foodservice supervisors, based on age cohort	36	Motivators to following safe food handling practices	Research observation and consensus
TOTAL NUMBER OF PARTICIPANTS		**613**		

Table III: Challenges and strategies when conducting observations, individual interviews, and focus groups

Approaches	Challenges	Strategies
Observations	Advanced planning for IRB approval	– Educate and work with IRB. – Develop timeline so ample time for meticulous planning and material development. Add in as much flexibility as possible
	Recruitment and selection	– Set selection criteria, establish a trusting relationship, follow chain of command, and nurture relationship over time. Make contacts at non-peak business hours, the earlier in the day the better – Over recruitment, build a comfortable trusting relationship with those observed, researchers experience in field, clothing similar to those being observed, understand climate of the organization
	Retention	– Use native speaker or interpreter – Speak truthfully yet vaguely about the project
	Thank you gifts and forms	– Let participants know forms will not be with the data collected – Set the dollar amount at a level that compensates for time, but isn't an incentive to participation
Individual Interviews	Show rate/retention	– Reminder calls, build relationship/common bond
	Diverse languages	– Use native speaker or interpreter

Table III: Challenges and strategies when conducting observations, individual interviews, and focus groups (continued)

Focus Groups	Recruitment – getting past the gate keeper	– Establish and nurture trusting relationships – Follow chain of command
	Show rate/retention	– Over recruitment, convenient locations, collect preferred contact information, reminder "calls", develop personal connection
	Participants' engagement and domination	– Develop comfort and trust, small talk, common bond, light food and beverage, blend in clothing, set rules for the group

	Moderator concerns
	    - Horn and halo effect
	    - Researcher influence
		– Experienced moderator, relaxed and organized moderator, extensive preplanning, set protocols and checklists

Figure 1: Qualitative methodology continuum identify methods and data sources used

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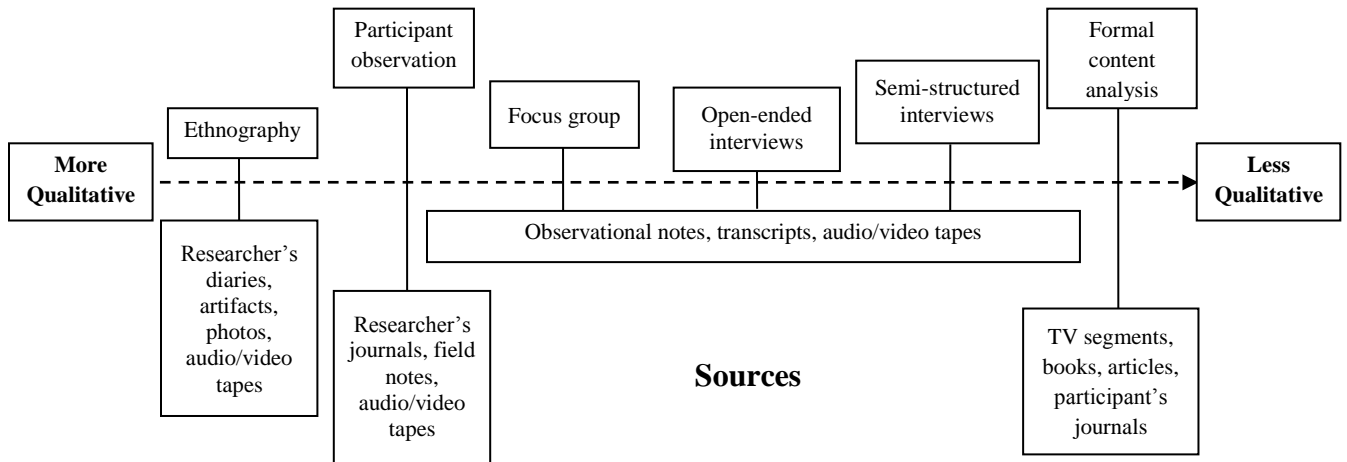
References

Achterberg, C. and Arendt, S. (2008), "The philosophy, role, and methods of qualitative inquiry in research", in Monsen, E.R. (Ed.), *Research: Successful Approaches*, 3rd ed., American Dietetic Association, Chicago, IL, pp. 65-74.

Arendt, S., Roberts, K.R., Strohbehn, C., Ellis, J. and Paez, P. (2011a), "Manager's impact on motivating foodservice employees to follow safe food handling practices: Perspectives of multigenerational employees", working paper, Iowa State University, Ames, Iowa, 15 April.

Arendt, S., Strohbehn, C., Paez, P., Correia, A., Shelley, M. and Meyer, J. (2011b), "Barriers and motivators for following safe food practices: Age cohort qualitative analysis", working paper, Iowa State University, Ames, Iowa, 1 August.

Anderson, N., Groves, D.L., Lengfelder, J. and Timothy, D. (2001), "A research approach to training: A case study of mystery guest methodology", *International Journal of Contemporary Hospitality Management,* Vol. 13 No. 2, pp. 93-102.

Barrows, C.W. (2000), "An exploratory study of food and beverage training in private clubs", *International Journal of Contemporary Hospitality Management,* Vol. 12 No. 3, pp. 190-197.

Chapman, B., Eversley, T., Fillion, K., MacLaurin, T. and Powell, D. (2010), "Assessment of food safety practices of food service food handlers (risk assessment data): Testing a communication intervention (evaluation of tools)", *Journal of Food Protection,* Vol. 73 No. 6, pp. 1101-1107.

Curry, L., Nembhard, I. and Bradley, E. (2009), "Qualitative and mixed methods provide unique contributions to outcomes research", *Circulation,* Vol. 119 No. 10, pp. 1442-1452.

Denzin, N. and Lincoln, Y. (2005), "*The Sage Handbook of Qualitative Research*", Sage Publications, Inc., Thousand Oaks, CA, pp. 38.

Dirks, D. and Rice, S.K. (2004), "Dining while black: Tipping as social artifact", *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 45 No. 1, pp. 30-47.

Food and Drug Administration. (2005), "*Food code (Report No. PB 2005-102200)*", U.S. Department of Commerce Technology Administration, National Technical Information Service, Virginia.

Gelo, O., Braakmann, D. and Benetka, G. (2008), "Quantitative and qualitative research: Beyond the debate", *Integrative Psychological and Behavioral Science,* Vol. 42 No. 3, pp. 266-290.

Gibbert, M., Ruigrok, W. and Wicki, B. (2008), "What passes as a rigorous case study?", *Strategic Management Journal*, Vol. 29 No. 13, pp. 1465-1474.

Haiyan, K., Cheung, C. and Hanqin, Z. (2010), "Career management systems: What are China's state-owned hotels practicing?", *International Journal of Contemporary Hospitality Management*, Vol. 22 No. 4, pp. 467-482.

Harris, J., Gleason, P., Sheean, P., Boushey, C., Beto, J. and Bruemmer, B. (2009), " An introduction to qualitative research for food and nutrition professionals", *Journal of the American Dietetic Association,* Vol. 109 No. 1, pp. 80-90.

Howells, A.D., Roberts, K.R., Shanklin, C.W., Pilling, V.K., Brannon, L.A. and Barrett, B. (2008), "Restaurant employees' perceptions of barriers to three food safety practices", *Journal of the American Dietetic Association*, Vol. 108 No. 8, pp. 1345-1349.

Ineson, E.M., Lyons, A. and Branston, C. (2006), "Cross cultural change, adjustment and culture shock: UK to USA", *Tourism*, Vol. 51 No. 1, pp. 3-20.

Johnson, C., Surlemont, B., Nicold, P. and Revaz, F. (2005), "Behind the stars: A concise typology of Michelin restaurants in Europe", *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 46 No. 2, pp. 170-187.

Kaplowitz, M.D. (2000), "Statistical analysis of sensitive topics in group and individual interviews", *Quality & Quantity: International Journal of Methodology*, Vol. 34 No. 4, pp. 419-431.

Kidd, P.S. and Parshall, M.B. (2000), "Getting the focus and the group: Enhancing analytical rigor in focus group research", *Qualitative Health Research*, Vol. 10 No. 3, pp. 293-308.

Kivela, J. and Johns, N. (2003), "Restaurants, gastronomy and tourists: A novel method for investigating tourists' dining out experiences", *Tourism,* Vol. 51 No. 1, pp. 3-20.

Krueger, R.A. and Casey, M.A. (2009), *Focus Groups: A Practical Guide for Applied Research*, 4th ed., Sage Publications, Inc., Thousand Oaks, CA.

Kwortnik, R.J. (2003), "Clarifying "fuzzy" hospitality-management problems with depth interview and qualitative analysis", *Cornell Hotel and Restaurant Administration Quarterly,* Vol. 44 No. 2, pp. 117-129.

Lockyer, T. and Roberts, L. (2009), "Motel accommodation: Trigger points to guest accommodation selection", *International Journal of Contemporary Hospitality Management*, Vol. 21 No. 1, pp. 24-37.

MacKay, K. J. and McVetty, D. (2002), "Images of first-time visitors to Queen Charlotte Islands and Gwaii Haanas National Park Reserve", *Journal of Park & Recreation Administration,* Vol. 20 No. 2, pp. 11-30.

Marshall, C. and Rossman G.B. (2006), *Designing Qualitative Research*, Sage Publications, Inc., Thousand Oaks, CA.

Mason, D., Tideswell, C. and Roberts, E. (2006), "Guest perceptions of hotel loyalty", *Journal of Hospitality & Tourism Research,* Vol. 30 No. 2, pp. 191-206.

Mays, N. and Pope, C. (1995), "Education and debate – Qualitative research: Rigour and qualitative research", *British Medical Journal*, Vol. 311 No. 6997, pp. 109-112.

Morgan, D. (1998), *Planning Focus Groups*, Sage Publications, Inc., Thousand Oaks, CA.

Okumus, F., Altinay, L. and Roper, A. (2007), "Gaining access for research – Reflections from experience", *Annals of Tourism Research*, Vol. 34 No. 1, pp. 7-26.

Paez, P., Strohbehn, C. and Sneed, J. (2007), "Handwashing frequencies and methods used in deli-types of foodservice operations", *Food Protection Trends*, Vol. 27 No. 11, pp. 903-908.

Paget, E., Dimanche, F. and Mounet, J. (2010), "A tourism innovation case: An actor-network approach", *Annals of Tourism Research*, Vol 37 No. 3, pp. 828-847.

Papageorgiou, G. C. (2008), "The human dimension of tourism – Supply-side perspectives", *Annals of Tourism Research*, Vol. 35 No. 1, 211-232.

Parsa, H.G., Self, J.T., Nijite, D. and King, T. (2005), "Why restaurants fail", *Cornell Hotel and Restaurant Administration Quarterly,* Vol. 46 No. 3, pp. 304-322.

Pouder, R.W. and Clark, J.D. (2009), "Formulating strategic direction for a gated residential community", *Property Management*, Vol. 27 No. 4, pp. 216-227.

Pullman, M., McGuire, K. and Cleveland, C. (2005), "Let me count the words: Quantifying open-ended interactions with guests", *Cornell Hotel and Restaurant Administration Quarterly,* Vol. 46 No. 3, pp. 323-343.

Riley, R.W. and Love, L.L. (2000), "The state of qualitative tourism research", *Annals of Tourism Research*, Vol. 27 No. 1, pp. 164-187.

Roberts, K.R, Arendt, S., Strohbehn, C., Ellis, J. and Paez, P. (2012), "Educating future managers to motivate employees to follow food safety practices", *Journal of Foodservice Management Education*, in press.

Roberts, K.R. and Barrett, B. (2009), "Behavioral, normative, and control beliefs impact on the intention to offer food safety training to employees", *Food Protection Trends*, Vol. 29 No. 1, pp. 21-30.

Roberts, K.R., Barrett, B.B., Howells, A.D., Shanklin, C.W., Pilling, V.K. and Brannon, L.A. (2008), "Food safety training and foodservice employees' knowledge and behavior", *Food Protection Trends*, Vol. 28 No. 4, pp. 252-260.

Severt, D., Aiello, T., Elswick, S. and Cyr, C. (2008), "Hospitality in hospitals?", *International Journal of Contemporary Hospitality Management*, Vol. 20 No. 6, pp. 664-678.

Smith, J.K. and Heshusius, L. (1986), "Closing down the conversation: The end of the quantitative-qualitative debate among educational inquirers", *Educational Research*, Vol. 15 No. 1, pp. 4-12.

Strohbehn, C.H., Sneed, J., Paez, P. and Meyer, J. (2008), "Handwashing frequencies and procedures used in retail food services", *Journal of Food Protection*, Vol. 71 No. 8, pp. 1641-1650.

Taylor, S.J. and Bogdan, R. (1998), *Introduction to Qualitative Research Methods,* 3rd ed.*,* John Wiley & Sons, Inc., New York, NY.

Van Horn, L. (2009), "New author guidelines include qualitative research section", *Journal of the American Dietetic Association,* Vol. 109 No. 1, p. 17.

Walsh, K. (2003), "Qualitative research: Advancing the science and practice of hospitality", *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 44 No. 2, pp. 66-74.

York, V.K., Brannon, L.A., Shanklin, C.W., Roberts, K.R., Howells, A.D. and Barrett, E.B. (2009), "Foodservice employees benefit from interventions targeting barriers to food safety", *Journal of the American Dietetic Association*, Vol. 109 No. 9, pp. 1576-1581.