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USING IN-DEPTH INTERVIEWS AND A SINGLE-SUBJECT DESIGN TO IDENTIFY “THE ONE”: A FEASIBILITY STUDY FOR SERVICES AND RETAIL MARKETING RESEARCH

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ABSTRACT

This study merged the process of in-depth interviews within an experimental single-subject design to determine if an individual participant could be identified who would predict future group aggregate responses. Findings suggest the feasibility of identifying one individual who would predict group responses in terms of both content and relative rank-order value of concepts. The process of identifying ‘The One’ is offered as a viable alternative for marketers engaged in services and retail marketing research. Outcomes suggest appreciable cost and time benefits when employing this process in strategic marketing research.

INTRODUCTION

Marketing research is a critical function in business. It is vital that as the complexity of business and consumer dynamics increases, assessing the development and feasibility of alternative strategies in marketing research is paramount. A majority of marketing researchers use large samples and operationally segment by age, SES, education, etc. in order to gain consumer insight (Bailey et al., 2009). Although the use of qualitative methods like in-depth interviewing is not uncommon in marketing research, it is often criticized because it lacks the statistical rigor demanded by quantitative researchers (see Krefting, 1991). Therefore, the strategy of merging in-depth interviews within an experimental single-subject design is the focus of this alternative form of research. Specifically, is it realistic and efficient to build predictive forecasting into the single-subject design using in-depth interviewing? Ultimately, the goal of this research is to suggest a viable technique for services and retail marketers to use in research that utilizes qualitative and quantitative methodology when $N = 1$.

LITERATURE REVIEW

An in-depth interview is an established interdisciplinary qualitative research technique employed for data collection and analysis; it is

designed to elicit information from a participant in order to achieve a holistic understanding of a specific point of view, or to explore areas of interest for further investigation (Berry, 1999). However, this is not to imply that there is a singular, standardized method of the in-depth interview or a population of best fit. In fact, more than 25 years ago, Hitchcock and Hughes (1989) enumerated various types of interviewing procedures like: structured; survey; counseling; diary; life; ethnographic; informal; and conversational interviews, depending on the population and the researcher’s question(s) of interest. For clarification, in-depth interviewing is acknowledged as the most frequently utilized approach in qualitative research in the field of business (Yin, 2003). Moreover, Jamshed (2014) acknowledged that across all disciplines engaged in qualitative research, in-depth interviewing is the most frequently employed.

For a structural guide and detailed understanding of in-depth interviewing, Granot et al. (2012) contrasted the three stage approach (three-interviews, 90 minutes each) offered by Schuman (1982) with a single in-depth interview (one-interview) maintaining a focus on the three main issues or themes. The researcher’s goal was to propose a method that addressed the pragmatic concerns of participant accessibility and time constraints. Regardless of the approach, Granot et al. highlighted the assumptions and procedures of in-depth interviews, which briefly include the following: listen more and talk less; follow-up and clarify points of interest; not ask leading questions; maintain open-ended queries; go with the ebb

and flow of a conversation; reconstruct events; and use silence as an interviewing tool. As a result, a researcher using in-depth interviewing will have the ability to fine-tune hypotheses, as well as generalize any thought process from participants to the general population (Jamshed, 2014). However, it is recognized that research generalizability must be tested and validated with quantitative statistical techniques.

CONCEPTUAL FRAMEWORK

This research is not intended to limn the literature of in-depth interviewing techniques or processes. Moreover, it is not suggesting that in-depth interviewing is without criticism or weakness. A comprehensive overview of such limitations can be found in Hammersley (2007), where the researcher highlights the necessity for a common set of practice guidelines like: research design; process methodology; and a serious need for scientific rigor that bridges the qualitative-quantitative divide. Therefore, in phase two of this study, the research methodology calls for turning the single-subject design upside down by employing in-depth interviewing in an innovative manner that allows for predictive validation.

Single-subject designs are not new, in fact, the methodology was operationalized over 50 years ago by Sidman (1960). As an overview, Horner et al. (2005) discussed how single-subject research is a rigorous, scientific methodology used to define basic principles of behavior and establish evidence-based practices. The researchers further explain how single-subject research is experimental rather than correlational or descriptive, and its purpose is to document causal, or functional, relationships between independent and dependent variables (p. 166). In most cases, single-subject designs require a logical visual comparison across conditions (Parsonson & Baer, 1978). However, single-subject research can be interpreted using statistical analyses (Todman & Dugard, 2001), yet the research design, validity and generalizability must be considered.

For a complete overview of the theory, process and traditional assessment options, the interested reader should refer to Kazdin (2011). Moreover, Kazdin (1978) had previously pointed out that one of the primary weaknesses with the single-subject analysis is the problem of visual inspection. This is the principal reason that Gentile, Roden, and Klein (1974) recommended incorporating the use of statistical tests with any single-subject design. It also should be stressed, that as a general rule, in-depth interviews are focused on insights derived from an individual, whereas, single-subject designs typically focus on an individual's internal dynamics given an identified stimulus.

Lillie et al. (2011) suggested that the ultimate goal of an n-of-1 trial is to determine the optimal intervention or solution to a problem using objective data-driven criteria. The researchers were specifically focused on medical applications. However, a general application of this goal across disciplines was discussed and is consistent with theory. In the end, Lillie et al. argue that n-of-1 trials demand serious attention among researchers. Nikles et al. (2006) agree with the practice of using the n-of-1 or single-subject design in research. However, the researchers stress combining n-of-1 trials in order to assess the utility and feasibility of applying outcomes. In short, coordinated n-of-1 studies have the potential to change evidence-based research; and may result in an optimal solution that will allow for stratification of future reference groups (Lillie et al., 2011).

RESEARCH PURPOSE AND QUESTIONS OF INTEREST

The purpose of this research is to merge the process of in-depth interviewing with the practice of single-subject design for predictive purpose; therefore, bridging the qualitative-quantitative divide. The two questions of interest are: (1) Can one individual be identified from in-depth interviews who best reflects the sentiments, ideas and concept formulation of a group? (2) Is it feasible to apply the results from one identified individual, given in-depth interview results to predict future group behavior?

METHODOLOGY

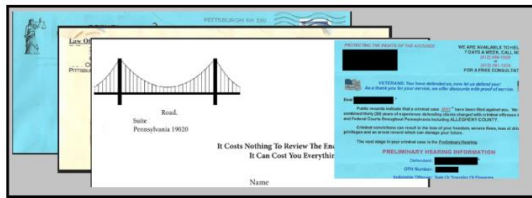
This research utilized a convenience sample of 30 subjects who had previously volunteered to participate in marketing research for a proprietary research organization, although never selected. This group of participants was randomly selected from a regional normative pool in order to control for selection bias (segmented according to SES and Education). Limiting participants to a zip-code region was a pragmatic function necessary to complete the in-depth interviews. All interviews were conducted by one trained Ph.D. facilitator with more than 25 years of professional experience.

THE PROCESS

All participants agreed to view envelopes and read a sales solicitation letter from legal firms and openly discuss their thoughts and feelings about the marketing literature. The prompt given to participants was: "Legal firms often send out solicitation letters to potential clients. If you were a potential client, please discuss your thoughts and feelings about the following envelopes; specifically, with respect to if you would open the envelope." This process included nine types of envelopes and twenty assorted solicitation letters; all envelopes and letters were sampled

from actual law firms from the Commonwealth of Pennsylvania (see Table 1).

Table 1. Sample Envelopes and Solicitation Letter



In phase one of this research, in-depth interviews with participants focused on what was visually appealing or held a tactile preference for envelopes. Individual participants then discussed and listed all the envelope features that they believed would lead a potential client to open the solicitation letter. Within 72 hours, each participant received an email of key group findings highlighted by bullet points obtained from all the in-depth interviews. Participants were asked to select the top 10 findings (out of 18). This same process ensued for the solicitation letter (out of 30).

Within twenty-four hours, individual participants received another (second) email requesting that they now rank-order the cumulative top-10 list obtained from all thirty participants (rank-ordered from most to least important). Researchers collected the data, and individual ranks were summed for each participant; then rank-ordered again according to a cumulative group mean score for both the envelope and solicitation letter. Table 2 is a sample format of the process.

Table 2. Sample Format of Data Entry

Area	P2	P3	P4	P5	P6	P7	P8	M	R
Copy	1	3	2	1	7	9	3	3.7	1
Logo	8	9	10	7	2	10	5	7.2	4
Stamp	2	2	4	6	5	2	10	4.4	2
UR	9	5	7	2	9	1	6	5.5	3

In Table 2, Area reflects the concept being assessed by rank (i.e. only 4 used in this sample); for example, Copy (professional copy); Logo (professional logo) Stamp (USA Icon Postage Stamp); UR (Urgent Call to action). Participant identification is symbolized by P2, P3, etc. (only 7 of 30 used for this sample) and their rank-order assignment of each area is recorded in the column entries. The abbreviated M in the table represents the Group Mean scores (given the sum of individual ranks for the group); and R is the new functional rank-order of the Group Means.

As a validity measure, a small expert panel (N = 3), each with more than 10 years of experience in their respective field (Communication Design; Graphic Design; and Market Research) agreed to participate and simply rank-order the same lists/concept areas (envelope and solicitation letter) as the participants. Again, their rank-orders were handled the same as the participants described earlier. The expert panel did not assess the envelope or solicitation letter; they merely rank-ordered the concepts that emerged from the in-depth interviews.

STATISTICAL ANALYSIS

Individual ranks were correlated with the Group Mean (reflected group consensus) using the bivariate correlation process, Spearman Rank-Order. Correlational analysis and resulting coefficients were graphed for both visual and statistical comparison. Alpha levels were set at .10 given the exploratory nature of this research. In addition, this same process was applied to the expert panel.

The qualitative analysis utilized proportional analysis. Specifically, each participant response(s) was/were assessed by dividing the number of hits (agreement with a group key point) by the total number of key points. Therefore, if an individual participant had discussed and listed 4 key points, but the group offered 20, this participant had a Concept Score of .20.

RESEARCH FINDINGS

Table 3 highlights the correlation coefficients (R-values) between individual participant rank-order and the cumulative group rank-order mean with respect to the envelope evaluation. Participant P24e has the highest correlation weight .733; $p = .016$ with the group mean. Participant P28e has a correlation weight of .685; $p = .029$. No other participant had a significant relationship with the cumulative group mean. P24e had a concept score of .77, and P28e concept score was .72. The relationship between participant R-value and Concept Score was .82, $p < .01$ (two-tailed). No significant relationship was found between the Expert Panel and rank-ordered group mean responses; although by anecdote, the trend was a negative relationship.

Table 3. Envelope: Participant to Group Mean Relationship

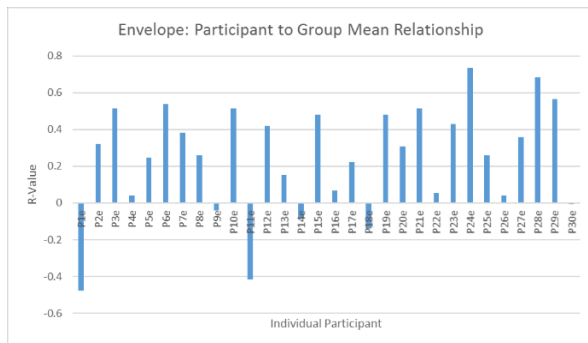
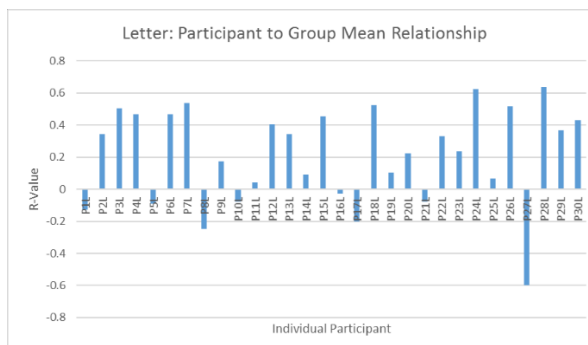


Table 4 highlights the correlation coefficients (R-values) between individual participant rank-order and the cumulative group rank-order mean with respect to the solicitation letter. Participant P24e has a correlation weight of .624; $p = .05$ with the group mean. Participant P28e has a correlation weight of .636; $p = .04$. No other participant had a significant relationship with the cumulative group mean. P24e had a concept score of .76, and P28e Concept Score was .70. The relationship between participant R-value and Concept Score was .579, $p < .001$ (two-tailed). No significant relationship was found between the Expert Panel and rank-ordered group mean responses; although by anecdote, again the trend was a negative relationship.

Table 4. Letter: Participant to Group Mean Relationship



DISCUSSION AND IMPLICATIONS

Results suggest that a single participant could have been identified (P24) that would have given researchers a very strong indication of what other group participants were feeling and thinking in phase two of this study, without facilitating 30 additional in-depth interviews. This finding has pragmatic implications, specifically, financial and time-related.

For clarification, each participant received a small stipend for participation, however, more important than the economic factor is the time-related factor. The Envelope phase of this research required 50 + hours to conduct the in-depth interviews. The Solicitation Letter phase required an additional 75 hours. If there would have been further iterations, the time-related factor becomes exponential and costly.

It is interesting to note that the Expert Panel's rank-order of relevant factors for both the envelopes and solicitation letters was not significantly related to the cumulative group mean scores of the participants. This suggests that an expert consultant acting independently may not be valid or effective in assessing or developing a strategic marketing strategy as when conducting multiple in-depth interviews. In theory, an expert consultant is assumed to be "The One" most likely to articulate points of differentiation that resonate with any identified niche or population. However, perhaps that is why many market researchers employ in-depth interviews, focus groups and administer field surveys.

The findings of this research suggest that it is feasible to identify a single-subject who theoretically and in practice predicts and proffers relevant information previously only available from cumulative group interviews. In addition, results suggest approximately 75% of the pertinent information was obtained from "The One" identified in analysis. For marketers using a single-subject design followed by an empirical analysis of multiple in-depth interviews, this process suggests another method for retail and service marketers to use in consumer research. The research findings can be depicted by the acronym "THE ONE" as presented in Table 5.

Table 5. "THE ONE"

Targeting or identifying a single-subject from multiple in-depth interviews to predict future responses is feasible.

Having a single-subject design is pragmatic, reducing financial and time-related factors (iterations) in research.

Every participant response is important. However, one participant may possess a communal value.

Only an empirical analysis of in-depth interviews using a single-subject design addresses the issue of qualitative rigor in research.

Numerical assignment of rank-ordered concepts appears to have both pragmatic and predictive value; the ranks allow for determining the relative value of concepts and the ranks appear to have predictive validity.

Every marketer can benefit from having an additional research tool and process; findings offer another research design format for assessing conceptual areas related to marketing and for testing the model itself.

One final discussion point involves the qualitative-quantitative distinction as introduced in this research. The research design outcomes suggest that this division between the qualitative and quantitative models may not be warranted given the designed used in this research. In fact, perhaps the qualitative-quantitative distinction is perhaps more of a continuum, therefore, permitting descriptive responses to be empirically manipulated and tested. The process allows for qualitative data to be categorized and quantified for empirical analysis; therefore, this process of in-depth interviewing of the single-subject allows for both the development and testing of predictive hypotheses.

LIMITATIONS AND FUTURE STUDY

Several caveats must be noted. Participants in this study were segmented proportionally according to known demographics, such as gender, age and race. However, complete psycho-demographic profiles, such as a clinical IQ and psychometric personality assessment data, were available and utilized in the normative segmentation process. Therefore, this group of participants was unique.

A marketer typically uses basic segmentation rules and may apply a random selection model. In this study, very specific information was known about each participant prior to selection and outcome results may be more reflective of IQ and psychological segmentation versus demographic variables; and most market researchers would not be privy to such information. Two additional limitations should be noted. First, this study examined barristers' solicitation efforts; therefore, generalizability beyond this content area must be tested. Second, the research design tested conceptual areas and not actual sales results. Further study must determine if increased sales result from implementing the outcomes of this type of research.

Future study warrants an examination of other statistical techniques for identifying "The One" – for example employing factor analytic models. Furthermore, data in this study suggested a significant relationship between the participant's individual R-value (i.e. with the cumulative group mean) and the operationally defined Concept Score. This anecdotal finding and process merits further investigation.

Finally, findings mandate that "The One" hypothesis be empirically replicated before general acceptance of the technique to be considered a viable or feasible

marketing research technique. Future study perhaps could find that N may have to exceed one ($n > 1$); however, that exact number is unknown at this point. Likewise, population, brand or concept application, as well as participant psycho-demographics is unclear; hence the limits of application or generalization must be established. Similarly, since this study had no ability to control for personal attribute vectors, such as, traits, personality descriptors, morals, etc. future study is warranted; as is the testing of if Likert scaling would yield the same results as rank-order analysis.

CONCLUSION

Study findings suggest that merging in-depth interviews within an experimental single-subject design with empirical analysis is a viable research option for services and retail marketing research warranting further investigation. Outcomes in this research found it was possible to find "The One" participant that is representative of cumulative responses; therefore, if further iterations were required, it is conceptually feasible to interview only "The One" if time or financial constraints warrant such an action. However, it is clear, generalizability of this research model must be tested with multiple populations, brands and include psycho-demographics. In a nutshell, model replication is needed for this promising research tool.

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