

Interviewer Characteristics Associated With Productivity, Cost Efficiency, and Retention

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Abstract

The costs associated with recruiting and training field interviewers (FIs) for in-person surveys are significant, often amounting to thousands of dollars per FI. It is therefore desirable to hire and train FIs who will remain on the study through its completion and will work cost efficiently. We examine FI characteristics associated with high productivity, cost efficiency, and retention in the field. These characteristics include age, education, sex, previous FI experience, pay rate, and location of residence. We address the following research questions. Are higher productivity and better cost efficiency associated with: 1) Higher rates of pay? 2) FIs living in the areas where they work? 3) Previous field interviewing experience? And (4) what are the characteristics of the FIs who are retained until the study is complete? Results may be used to inform interviewer recruitment and training.

Key Words: Interviewer effects; interviewer hiring; interviewer productivity; interviewer retention; low-income populations

1. Introduction

Managing and minimizing costs on studies that incorporate in-person interviewing is challenging. One aspect of this challenge is controlling the costs associated with the recruitment, hiring, and training of field interviewers. Because these costs can amount to thousands of dollars per interviewer and large-scale field studies can employ 100 interviewers or more, keeping recruitment and training costs low can provide substantial savings.

Key cost drivers for interviewer training include the mode of survey administration, the location(s) of the training, the duration of the training, and the subsequent rates of interviewer retention and attrition. It is beneficial and desirable to recruit, hire, and train interviewers who will (1) remain on the study through its completion and (2) perform cost-efficiently in the field. These attributes minimize the amount of time and money spent recruiting and training replacement personnel and the number of training sessions. Papke and colleagues (1980) found that variability among different training sessions affected subsequent interviewer performance. The potential for inconsistent training argues for having as few training sessions as possible, which can best be achieved by keeping retention rates high. Additionally, prior research has indicated that the longer field interviewers work on a given study, the more efficient they become at administering the interview (Olson & Peytchev, 2007). The challenge lies in predicting what type of interviewer is most likely to work efficiently and remain on the study until its completion.

Past analyses have found that certain interviewer characteristics are positively associated with retention and with productivity in the field. Williams and colleagues (1999) found that retention rates were higher among female interviewers than among male interviewers and that older field staff were easier to retain than younger staff. In terms of productivity,

several interviewer characteristics have been found to affect performance. Norris and Hatcher (1994) found that older interviewers, interviewers with prior field experience, and those with higher levels of education produced slightly higher response rates than their counterparts. These results were replicated in an analysis by Safir and colleagues (2006) that showed that older interviewers, experienced interviewers, and females elicited higher cooperation rates at time of first contact than did younger interviewers, those with no prior experience, or males. Couper (1991) also found that experienced interviewers tend to elicit higher response rates than new interviewers. In addition, Fowler and Mangione (1986) found that among a team of field interviewers with no prior experience, female interviewers experienced significantly lower refusal rates than did males. Collectively, these studies suggest that age, experience, and sex are all important factors in obtaining cooperation from respondents.

Once cooperation is obtained, interviewer characteristics affect the interview itself. Olson and Peytchev (2007) found that staff with prior interviewing experience work faster and more efficiently from the start of field work, and that across all field staff, efficiency increases over time. Interviewer age has been linked to the successful collection of sensitive information, with older interviewers outperforming younger interviewers (Berk & Bernstein, 1984). An interviewer's confidence level, which may be influenced by level of experience, is also positively associated with increased productivity (Mierzwa et al., 2002). One conclusion that can be drawn from this body of work is that there are important connections between the type of interviewer hired and the results obtained in the field. In this paper, we build on these findings by examining key interviewer characteristics that are associated with three performance outcomes—productivity, efficiency, and retention.

Data for this study originate from Round 2 of the Study of Community Family Life (SCFL), an in-person survey of about 4,000 households in six low-income urban areas.¹ The survey collected data on marriage and relationship status, attitudes toward marriage and childbearing, household structure, and child well-being, as part of the evaluation of the Community Healthy Marriage Initiative. Round 2 was conducted between October 2009 and April 2010.

Recruiting and retaining interviewers can be especially challenging in low-income communities. Interviewers cite concerns about personal safety, not feeling comfortable in the communities, and the sensitive nature of the research topics that are often undertaken in these communities. The motivation behind this study was to test hypotheses about the interviewer characteristics that are desirable when staffing a study in a low-income community. Additionally, the survey had not performed as expected in its first administration; Round 1 was marked by interviewer attrition (around 30 percent), pay rates, and interview costs that were all higher than anticipated. For future rounds, we sought information about (1) whether it was worth the investment to target experienced interviewers and interviewers who lived in the low-income areas where they worked, and (2) whether higher-paid interviewers were worth the added cost. Further, we sought to maximize the return on our training investment by hiring interviewers who would be retained. Specifically, we identified four research questions:

1. Are *experienced* interviewers more productive and cost-efficient in the field?

¹ The SCFL was sponsored by the Administration for Children and Families, Department of Health and Human Services and conducted by RTI International.

2. Are interviewers who *live in the study area* more productive and cost-efficient?
3. Are interviewers who are *paid higher rates* more productive and cost-efficient?
4. What interviewer characteristics are associated with *retention*?

2. Methods

For the analysis, we examined the interviewer characteristics shown in Table 1 below and tabulated for the 87 interviewers assigned to the study.

Table 1: Interviewer Characteristics

Interviewer Characteristic	Mean or Percentage
Age	50.7
Sex	
Female	80.5%
Male	19.5%
Race/ethnicity	
White	44.6%
Black	41.4%
Hispanic	14.0%
Education	
High school	12.6%
Some college	35.5%
College degree	26.4%
Graduate degree	25.4%
Live within the study area	
Yes	18.4%
No	81.6%
Experienced as a field interviewer	
Yes	35.6%
No	64.4%
Retained	
Yes	80.5%
No	19.5%
Pay rate	\$13.40

The interviewers were a diverse group with regard to education and race/ethnicity. Approximately half had less than a college degree (48 percent) and half had a college degree or higher (51 percent). In terms of race/ethnicity, 45 percent were white, 41 percent were black, and 14 percent were Hispanic. The overwhelming majority (82 percent) were female; the mean age was about 51. The mean pay rate was \$13.40 per hour, although this varied by experience, location, and skills. Approximately 18 percent lived in the study area where they worked, and 20 percent left the study before their assignment was complete. Slightly more than one third had previous experience as a field interviewer.

The performance metrics we examined were productivity and cost efficiency in the field, and retention. Indicators of productivity were (1) the number of interviews the interviewer completed and (2) the total number of hours he or she worked over the duration of the study. Indicators of cost efficiency were each interviewer's average (1) labor hours per completed interview; (2) miles traveled per completed interview; and (3) expenses per completed interview, which included mileage, incentive, per diem travel

costs, and any other miscellaneous expenses. Retention was defined as the interviewer remaining employed by the study until his or her assignment was complete.

All analyses for this paper were bivariate. For categorical variables, we tested differences in means using two-sided *t*-tests. For continuous variables (pay rate, average labor hours per case, etc.), we calculated Pearson correlation coefficients. For all analyses, statistical significance was defined as $p < 0.05$.

3. Findings

3.1 Interviewer Experience

Table 2 shows the relationship between productivity and cost efficiency, and interviewer experience. We hypothesized that interviewers with previous interviewing experience would work more productively and efficiently as a result of their experience. Further, we hypothesized that they would be retained in higher numbers because of their familiarity with interviewing and its requirements, and (in some cases) longstanding ties to RTI. In this and subsequent tables, the productivity measures are in the first two rows, the efficiency measures are shown in rows 3–5, and the retention measure is in row 6. Significant differences are indicated by an asterisk in the difference column.

Table 2: Productivity and Cost Efficiency by Interviewer Experience

(* $p < 0.05$ using a two-sided *t*-test)

	Experienced	Not Experienced	Difference
Total interviews completed	43	34	9
Total hours worked	353	275	78
Hours per interview	8.1	8.2	0.1
Miles per interview	64	74	10
Expenses per interview	\$87	\$75	\$12
Retained	94%	73%	21%*

There is one significant difference between experienced and inexperienced interviewers and that is in retention. Of the experienced interviewers, 94 percent were retained compared with 73 percent of the interviewers who were not retained. Although not statistically significant, experienced interviewers completed more interviews on average (43) compared with not experienced interviewers (34). The difference in completed interviews is likely correlated with differences in retention. Experienced interviewers had longer periods of employment on the study and therefore more opportunity to complete interviews. Experienced interviewers, however, did not necessarily work more cost efficiently. There were no statistically significant differences in the cost measures between interviewers with experience and those without experience.

3.2 Interviewer Location

Table 3 shows the relationship between interviewer location (i.e., address of primary residence) and both productivity and cost efficiency. The study area in each of the communities was defined as a group of 6–10 contiguous zip codes, from which the household sample was selected. Interviewers were classified as either living in the study area, or living outside the study area. We hypothesized that interviewers who lived in the study area would have higher productivity and cost efficiency because they needed to travel fewer miles to their assigned cases and, being of the community, would better understand its distinctive character and how to persuade people to participate.

Table 3: Productivity and Cost Efficiency by Interviewer Location
(* $p < 0.05$)

	Live in Study Area	Live Outside Study Area	Difference
Total interviews completed	45	36	9*
Total hours worked	294	305	11
Hours per interview	6.4	8.5	2.1*
Miles per interview	31	79	48*
Expenses per interview	\$49	\$86	\$37*
Retained	69%	83%	14%

Indeed, interviewers who lived in the study area completed more interviews (45) than interviewers who lived outside the study area (36). Further, they did so more efficiently. Hours per complete, miles per complete, and expenses per complete were significantly less among interviewers who lived in the study area. Because they needed to travel less distance, they could complete more work in less time and with lower expenses.

There is a notable difference, although not statistically significant, between retention rates among those who lived in the study area and those who lived outside the area. Interviewers who lived inside the study area were less likely to be retained (69 percent) than interviewers who lived outside the study area (83 percent). This finding is consistent with our observations in Round 1 of the survey.

3.3 Interviewer Pay Rate

Interviewers command different rates of pay depending on their experience level, location, and skills (for example, bilingual or highly experienced interviewers are paid a premium). In this analysis, we sought to examine whether interviewers who are paid higher rates are more productive and cost efficient, and more likely to be retained. We hypothesized that higher pay would be associated with improved retention because the job would be more financially rewarding and alternatives would be less attractive. We were unsure, however, whether higher pay would motivate interviewers to work more productively or efficiently. Table 4 shows the relationship between interviewer pay rate and these performance metrics.

Table 4: Productivity and Cost Efficiency by Interviewer Pay Rate(Table entries are Pearson correlation coefficients or comparisons of means. *= $p < 0.05$)

	Pay Rate
Total interviews completed	.37*
Total hours worked	.36*
Hours per interview	.00
Miles per interview	-.02
Expenses per interview	.20
Retained	\$13.66 (retained) vs. \$12.25 (not retained)*

This table shows that pay rate was positively associated with productivity in the field. As hourly pay increased so did the number of interviews produced and the total hours worked. Pay rate was also associated with retention. Among those who were retained, the average pay rate was \$13.66 compared with \$12.55 among those who were not retained, a statistically significant difference. Pay rate is correlated with experience and this finding confirms the earlier finding that experienced interviewers are more likely to be retained than not experienced interviewers.

3.4 Interviewer Retention

Table 5 shows the interviewer characteristics that are associated with retention. The columns show the mean or percentage of interviewers who were retained and not retained by selected characteristics.

Interviewers who were retained were more likely to

- be older,
- have a graduate degree,
- be better paid, and
- have previous experience as an interviewer.

This finding is consistent with Williams and colleagues (1999) who also found that retention rates were higher among older interviewers. However, the present analyses do not support Williams' finding that retention was higher among female interviewers.

There is a difference, although not statistically significant, among those retained and not retained in terms of living in the study area. Of those who were retained, 16 percent lived in the study area whereas of those not retained, 29 percent lived in the study area. This finding supports the earlier observation that interviewers who live in the low-income areas where they work are somewhat less likely to be retained.

Table 5: Interviewer Characteristics Associated With Retention
 (* $p < 0.05$ using a two-sided t test)

Interviewer Characteristics	Retained	Not Retained	Difference
Age	51	44	7*
Female	77%	94%	17%
Graduate degree	30%	6%	24%*
Pay rate	\$13.66	\$12.25	\$1.41*
Previous experience as field interviewer	41%	12%	29%*
Live in the study area	16%	29%	13%

4. Summary

This analysis can be summarized as follows:

- Experienced interviewers are not necessarily more productive or cost efficient, but they are more likely to be retained, a feature that can save costs by minimizing the need to hire and train replacement interviewers.
- Interviewers who live in the low-income area where they work are more productive and cost efficient compared with those who live outside the area. There is some evidence (although not statistically significant) that they are less likely to be retained.
- Interviewers who are paid higher rates are more productive and more likely to be retained. They do not necessarily work more cost efficiently, however.
- Retained interviewers are more likely to be older, better educated, better paid, and have previous interviewing experience.

5. Limitations of This Research

There are limitations to this research. First, the case assignments were not random. Interviewers may have had case loads that were not equivalent in terms of response propensities and costs to interview. In this study, the best performing interviewers were sometimes assigned the most difficult cases. To the extent the “best” interviewers were also the most experienced and better paid, their productivity may be understated. Second, the sample size of interviewers, 87, is somewhat small. This analysis should be replicated in a study with a larger number of interviewers. Third, these results were observed in low-income communities with small, homogeneous sampling areas. The differences observed may not be generalizable to different study populations.

6. Conclusions

This research provides new evidence of the interviewer characteristics that are associated with successful job performance. Findings from this study may be used to inform interviewer recruitment and training. Because training interviewers is expensive, it is desirable to hire interviewers who will work productively and efficiently to maximize the return on the training investment. It is also desirable to hire interviewers who will stay

with the study until completion to minimize the number of trainings. If study features or experience suggest that interviewer retention is a likely problem, recruitment should be targeted at interviewers with characteristics associated with retention (older, experienced, better educated, and better paid interviewers).

Moreover, interviewers who command higher pay are probably worth the investment. This analysis shows that higher paid interviewers are not only more likely to be retained, but are also more likely to work productively, delivering a greater number of completed interviews.

Experienced interviewers offer advantages and disadvantages. This study suggests they are more likely to be retained, although they do not necessarily work more productively or efficiently, perhaps because they are assigned more difficult cases. Because all studies have different underlying cost structures, it is impossible to say whether the benefits of retention outweigh the increased interview costs. If caseloads are small and training costs high, saving a few dollars on 40 interviews may be less important than saving thousands of dollars to hire and train a replacement interviewer.

Finally, this study suggests that interviewers who live in the area where they work are more productive and have fewer expenses. In low-income communities, however, there is some evidence to suggest they may have higher rates of attrition. This finding is closely tied to the state of the local economy, however, and retention may vary along with attitudes toward work and the availability of alternative employment.

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