

A Test of the Effectiveness of Two Modes for Following Up Non-Responders to Radio Diary Research

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Due to ever decreasing response and return rates, finding a cost-effective method for following up media research panels is an increasingly important issue, especially for radio listening research (Gendall and Davis 1993). This paper reports the findings of an experimental study that examined the effectiveness of two different modes for following up members of a radio diary panel. The modes tested were telephone contact and a mailed letter. The combined follow-up strategies increased the return rate of completed diaries by 23 percent. However, there was no real difference in either the return rates or the cost effectiveness of the two modes. The telephone treatment eliciting just three more returned diaries than the mail treatment, and cost \$1.17 per return compared with \$1.22 for the mail treatment. These results suggest that, for improving the return rate in radio research, it makes no difference whether non-respondents are followed up by mail or telephone.

Keywords: Radio diary; Telephone; Mail;

Introduction

Radio diaries are the most frequently used method for researching radio listening, primarily due to lower administration costs and the ease of implementation (Webster, Phalen and Lichty 2006, Gunter 2000). The diary method also has the major advantage that it minimises reliance upon memory and helps reduce confusion over station identification (Starkey 2004). However, obtaining reasonable agreement and return rates has long been a problem. Agreement rates, that is respondents who agree to complete a radio diary, vary according to various sources from between 20% to 30%, while diary return rates (that is the number of people who agree to complete a diary and send it back) vary between 50% to 70% (Arbitron 2002; Research International 2001).

Low agreement and return rates are of concern since these expose the research to possible non-response error (McDonald and Adam 2003; Dilman 1991; Lyberg and Kasprzyk 1991), and radio research, along with research in general, has demonstrated that low response rates typically introduce some biases in favour of the sample population most interested in the topic (Fowler, Gallagher, Stringfellow, Zaslavsky, Thompson and Cleary 2002) – in radio's case – heavy listeners. Since this may introduce non-response bias and thus jeopardise the validity of the data collected from the respondents (Westrick and Mount 2007; Gendall and Davis 1993; Day 1975), the issue of low agreement and return rates warrants attention.

The question addressed in this paper is how to improve radio diary return rates? Based on well established survey research practice, the obvious way to improve return rates is to make follow-up contact with non-respondents who had previously agreed to take part in the diary panel (Dilman, 1991), with the practical options being telephone or mail. Westrick and Mount (2007) found that these were the two preferred options with pharmaceutical research, with mail less expensive than telephone, but producing lower return rates.

The present study evaluates and compares the efficacy of two follow-up strategies to increase radio diary return rates - a telephone and mail follow-up of respondents who had agreed to

complete a radio diary. Efficacy is evaluated in terms of radio diary completion and administration costs. The study's specific objectives were to:

- Compare the radio diary return rates of respondents who were contacted by the two follow up methods – telephone and mail, and
- Compare the cost per unit or cost per returned radio diary of the two follow up methods – telephone and mail.

Method

The radio research was undertaken over a four week period from Monday 17th October to Sunday 13th November 2005 as diary based quantitative research. A sample of 4980 people aged 15 years or older were randomly selected from the Manawatu telephone directory, and invited to take part in the diary panel.

After the study and the task were explained to them, potential respondents were invited to complete a diary of their radio listening over a one week period. If the respondent agreed they were posted a radio diary package containing the following items:

- A seven day radio listening diary, with instruction and information sheets.
- A thank you letter designed to encourage completion of the diary
- A small bar of chocolate as a thank you gift
- A reply paid envelope enabling the respondent to return the diary upon completion.

The 1399 respondents who agreed were assigned to one of four groups. Each group was required to complete their diary every day for one week (7 days) during a four week period. Each group was assigned to a different week of listening (Group 1= week 1, Group 2 = week 2, Group 3 = week 3 and Group 4 = week 4).

The region surveyed has a population of approximately 95,000 people fifteen years or older, and is served by 20 radio stations (17 commercial or semi-commercial and three non commercial stations). These stations range from nationally syndicated commercial and non commercial networks to totally locally produced programmes. The range also includes stations that have, for example, a local component in the breakfast shows (6am to 10am) before syndicating for the remainder of the day. Fifteen stations broadcast on an FM frequency, five on an AM frequency with one non commercial station simulcasting on both FM and AM.

Each diary was pre-printed with all the known radio stations in the region being listed. During that week respondents were required to record in the diary the radio station(s) they listened to for each period of 8 minutes or more. The definition of radio listening was the same as that used in the official New Zealand radio research being; 'that respondents are able to hear the spoken announcements being broadcast and so identify the station broadcasting'.

Those respondents who had not returned their diary by the Thursday of the week following the recording of their radio listening were followed up. The follow-up was by either the telephone or mail treatment. Respondents in each group were randomly assignment to either

the mail or telephone treatments. Those respondents assigned to the mail follow-up treatment were sent a letter thanking them for agreeing to complete a radio diary and reminding them to please return it. Those respondents assigned to the telephone treatment were phoned on the Thursday night and asked if they would please return their completed diary. Telephone respondents who could not be contacted on the Thursday night were called back on Friday – during both the day and the evening. No more than three call backs were made.

Of the 1,399 respondents who agreed to complete a radio diary 817 (58.4%) returned their diaries by the end of their respective first week leaving 582 (41.6%) respondents who would require following-up. Table 1 shows the breakdown of the respondents by treatment for each of the four weeks.

Table 1. Returned Diaries and Allocation of Diaries by Treatment

	Group One	Group Two	Group Three	Group Four	Total
	n	n	n	n	n
No. of Radio Diaries	360	371	382	286	1399
Dairies returned end of first week	206 (57.2%)	212 (57.1%)	229 (60.0%)	170 (59.4%)	817 (58.4%)
Dairies not returned	154	159	153	116	582
No. of Respondents selected for Telephone treatment	77	79	77	58	291
No. of Respondents selected for Mail treatment	77	80	76	58	291

Results and Discussion

Table 2 shows the radio diary return rates for four groups following the initial mail-out of diaries (Response to First Mail-out), and for the week following the follow up treatments (Response to Follow-up). Any diaries that were returned later than 10 days after the finish of the allocated recording period were not included in the analysis.

The majority of respondents (58% on average) returned their diaries during the week following the week for which they recorded their listening. The follow-ups increased the response rate a further 23%, from an initial 58% to 81% (see Table 2).

Table 2. Return Rates

	Group One	Group Two	Group Three	Group Four	Total
Response to:	%	%	%	%	%
First Mail-out	57	57	60	59	58
Telephone Treatment	67	54	48	45	54
Mail Treatment	64	46	50	53	53
Overall	85	79	81	79	81

As can be seen from Table 2, there is effectively no difference between follow-up mode for any of the four groups with regards to the number of diaries returned ($\chi^2=1.41$, $df = 3$, $p>.05$). Indeed, by the cut-off for the follow-up phase, the telephone treatment had produced just three more diaries than the mail treatment.

What is also clear from Table 2 is that irrespective of the follow up mode being used, the fact that non-responders had been followed up increased to overall return rate from 58% to 81% - an increase of 23%. This finding, whilst not part of the actual study, strongly supports Gendall and Davis's (1993) assertion that a structured follow up program is important to maximise return rates.

An interesting observation is that the response rates were the same across both treatments, and for both males and females (see Table 3).

Table 3. Effect of Mode by Gender

	Males		Females	
	Telephone %	Mail %	Telephone %	Mail %
Response to follow-up	54.9	54.9	54.7	52.4

The second objective was to compare the cost-effectiveness of the two follow-up modes. The cost for the mail follow-up was \$1.22 per diary while the cost for the telephone follow-up was \$1.17 per diary. (Note: In determining the cost effectiveness of each form of follow-up the following costs and charges were used in the calculations: labour at \$15/hr; letter postage at 0.50c per letter. In terms of telephoning a call rate of 25 attempts/hr was used. The administration costs of mail processing were based on 100 envelopes/hr.)

Conclusions

This study on follow-ups examined whether a telephone follow-up produced different results from a mail follow-up in terms of the overall radio diary return rate. It also looked at the cost-effectiveness of the two different modes in terms of the cost per radio diary returned.

The study supports prior research (Dillman 2000; Gendall and Davis 1993; Brennan 1992; Chiu and Brennan 1990; Day 1975) showing that following-up non-respondents is an effective way to increase response rates. This is especially important with media research as it improves the overall sample size, and thereby reduces potential non-response bias. However, the main aim of the experiment was to compare the efficacy of two different follow-up methods for achieving an increased return rate from radio diary panel members. Did one follow-up treatment achieve a better return rate? And was one method more cost effective?

There was no real difference in the effectiveness of the two methods: The return rates were 54% for the telephone follow-up and 53% for the mail, and almost identical response rates were obtained in each mode for both males and female respondents. Thus either follow-up method could be used successfully to increase the overall return rate. However, it is intuitive

to suspect that if the initial contact with the respondents was by telephone then a telephone follow-up may be preferable, and telephone has the advantage of being faster to implement.

In terms of cost-effectiveness, the two methods were again very similar, with the cost per return for the telephone method \$1.17, compared with \$1.22 per return for the mail follow-up. However, while such a small difference is probably not important in small scale research projects, even this 4% difference in cost could be important with large projects.

Thus, while both methods produce similar results for about the same cost, telephone would probably be the method of choice because it can be implemented more quickly.

References

Arbitron (2002). *Arbitron Radio Ratings*.

<http://internet.arbitron.com/home/content.stm> accessed June 2006.

Brennan, M. (1992) Techniques for improving mail survey response rates. *Marketing Bulletin*, 3, 24 – 37.

Chiu, I., and Brennan, M. (1990). The effectiveness of some techniques for improving mail survey response rates: A Meta-analysis. *Marketing Bulletin*, 1, 13 – 18.

Day, G. S. (1975). The threats to marketing research. *Journal of Marketing*, 12, 462 – 467.

Dilman, D.A. (2000). *Mail and Internet Surveys: The Tailored Design Method*, (2nd ed.), John Wiley & Sons, Inc, New York.

Dilman, D. A. (1991). The design and administration of mail surveys. *Annual Review of Sociology*, 17, 225 – 249.

Fowler, F.J., Gallagher, P.M., Stringfellow, V.L., Zaslavsky, A.M., Thompson, J.W., and Cleary, P.D. (2002). Using telephone interviews to reduce nonresponse bias to mail surveys of health plan members. *Medical Care*, 40, 190 – 200.

Gendall, P., and Davis, P. (1993). Are callbacks a waste of time? *Marketing Bulletin*. 4, Research Note 1, 53 – 57.

Gunter, B. (2000). *Media Research Methods: Measuring Audiences, Reactions and Impact*. Sage Publications, London.

Lyberg, L., and Kasprzyk, D. (1991). *Data Collection Methods and Measurement Error: An Overview*. In: Biemer, P. P., Groves, R. M., Lyberg, L. E., Mathiowetz, N. A., and Sudman, S., eds. *Measurement Errors in Surveys*. John Wiley & Sons, New York.

McDonald, H., and Adam, S. (2003). A comparison of online and postal data collection methods in marketing research. *Marketing Intelligence & Planning*, 21, 85-96.

Research International (2001). *Radio Audience Surveys: How is the Information Collected?* http://www.radios.co.nz/radio_research/aboutradios.htm accessed June 2006.

Starkey, G. (2004). Estimating audience: Sampling in television and radio audience research. *Cultural Trends*, 13(1), 3-25.

Webster, J.G., Phalen, P.F., and Lichty, L.W. (2006). *Rating Analysis: The Theory and Practice of Audience Research*. Lawrence Erlbaum Associates Inc, Mahwah, NJ.

Westrick, S.C., and Mount, J.K. (2007). Evaluating telephone follow-up of a mail survey of community pharmacies. *Research in Social & Administrative Pharmacy*, 3, 160-182.

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