

Nonresponse

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What is a nonresponse?

It depends on the time and the resources you have available. A nonresponse could be not answering the phone after one, two, three, or infinite calls. It could mean nonreturn of the mail survey after single or repeated mailings. It could be nonreturn of mail and non-answer of the phone on a follow-up. In fact, Dillman notes that, "This uneven use [definition] of criteria for excluding potential respondents from rate calculations adds to the confusion of comparing response rates reported in the literature that "A n0), Daniel (1975) notes that a nonresponse could mean that the person being called (mailed) might be classified as: not at home, refusal, unable to respond, unlocated (i.e., moved).

The way to calculate this number differs depending on the resources (time, effort, money) of the researcher (i.e., extent of follow up). If the assumption is that a nonresponse is a refusal than the calculation is simply the number of responses divided by the number in the sample times 100 (Dillman, 1978, p. 49).

If the researcher has the means and time to explore this more carefully this can be broken down even further to define nonrespondents so that respondents are the number of responses divided by the total sample - (noneligible + nonreachable) times 100.

Some nonrespondents do not receive the mailing due to address or mail delivery errors. Sometimes random digit-dialing yields ringing phones at uninhabited housing. Sometimes the nonrespondent receives the mailing at the proper address but it is lost or misplaced by others at that address. Also sometimes nonrespondents throw out the survey unknowingly (see reasons chart). People who get the survey are sometime not eligible, or feel that they are not eligible for the study (Dillman, 1978). For instance a study about family sport participation sent to a single residence without children.

Defining a nonresponder differs from study to study and from researcher to researcher. Dillman explains that in some work, "death, senility, poor health, inability to communicate in English, and temporary absence are considered acceptable reasons for not counting them in the response rate calculation.

(Dillman, 1978, p. 50).

Why does nonresponse matter?

Nonresponse is an important issue that comes up frequently for several reasons, at least one of which is that surveys are such a popular method of doing research. In fact Johnson (1991) found that survey research was the research method of choice from between 43 and 69 percent of research according to her sources (Hartman, Fuqua, & Jenkins, 1985; Jarell, Johnson, Chissom, & Hughes, 1989)

The problem is that those who do not respond to a survey, phone call, or who refuse an interview may be different from those who do agree to the study. This becomes a problem if nonresponders (or refusers, not-at-homers etc.) are different on the variable being studied (i.e., a survey on work hours in which all the nonresponders work two minimum wage jobs). An important part of the sample is being missed by the study, and that will hinder the researchers' ability to make accurate generalizations to the population.

"It is difficult to determine the representativeness of the respondents . . . whether those who do reply are representative of those who do not answer the request for information" (Stanton, 1939, p. 441, as cited in Johnson).

There are several researchers who suggest that an adequate response rate is a reasonable surrogate for understanding those who do not response, (Babble, 1973; Houseman, 1953; Kerlinger, 1973; Shannon, 1948; The Questionnaire, 1930) --as cited in Johnson (1991), but others feel that a follow-up is the only way to see if there really is a bias. (Aiken, 1988; Armstrong & Overton, 1977; Boser, 1988; Donald, 1960; Ford & Zeisel, 1949; Reid, 1942; Suchman & McCandless, 1940--all as cited in Johnson, 1991).

Different ideas of adequate response rates.

- 1--50% (The Questionnaire, 1930)
- 2.--60% (Babble, 1973)
- 3.--70% (Shannon, 1948)
- 4--80% (Kerlinger, 1973)
- 5--90% Houseman, 1953)

Who is a nonrespondent?

First, there are general trends of increasing nonresponse that Johnson (1991) says seems to indicate that, "fewer people are willing to respond to surveys, possibly due to greater demands on their time" (American Statistical Association, 1974; Daniel, Shott, Atkins, & Davis, 1982, as cited in Johnson).

Dillman (1978) notes that social trends where both spouses work may lead to more situations where no one is at home--also "continued urbanization of lifestyles that results in people being away from homes more of the time, either at work or in pursuit of leisure activities. Still, another reason is geographic mobility; nearly one-fifth of the United States' population moves each year" (p.4).

Aside from these general trends Steeh (1981) notes a particular trend where the largest increases in nonresponse are in metropolitan centers. Small towns have the lowest nonresponse rate. This finding seems to lend credence to the "too busy" hypothesis of modern life. Further scrutiny of the "average nonrespondents from a number of studies seem to indicate that nonrespondents are, DeMaio (1980) notes that refusers tend to be white and middle-aged to older individuals from urban areas.

Dillman corroborates this finding by saying that nonrespondents generally have less education (see also Suchman & McCandless, 1940), and are older (which is correlated with educational attainment). Beyond the connection of age and education Dillman points out that the elderly may have, "more difficulties with their seeing and writing capabilities" (Dillman, 1978, p. 53).

Those who do not respond are also more likely to have less experience or interest in the subject of the study (Clausen & Ford, 1947; Pace, 1939; Stinchomb, Jones and Sheatsly, 1981, as cited in Johnson, 1991). Distrust of interviewers or the survey questions may also play a part in nonresponse (Johnson, 1991).

According to Karen Seibel (1993) personality factors such lower levels of gregariousness, reading habits, cooperativeness, and conformity are also characteristics of nonresponders.

What do you do to deal with the problem? (Johnson, 1991)

Elimination

Minimize nonresponse by maximizing respondents

Patterns which maximize response include:

Making more contacts--(Clausen & Ford, 1947; Deming, 1953; Fuqua, Hartman, & Brown, 1982; Kanuk & Berenson, 1975).

Altering the length and the form of the survey--(Berty, 1979; Deming, 1944; Norman, 1948)

Using different types of postage (Brown & Hartman, 1980; Champion & Sear, 1969; Clausen & Ford, 1947; Heberline &

Baumgartner, 1978)

Using incentives-- (Fuqua et al, 1982; Goodstadt, Chung, Kronitz, & Cook, 1977, Kanuk & Berenson, 1975).

Maximizing the perceived authority of the researcher--(Baur, 1947; Norman, 1948, Reus, 1943)

Including a personalized cover letter. (Bachrack & Scobel, 1967; Fuqua et al., 1982).

But as Johnson (1991) notes, "It may not be possible to create the ideal instrument or to complete enough follow-ups to obtain a perfect return rate" (p. 6).

Use different sampling techniques

The first three are flawed methods:

Quota sampling where you call or mail until you get the number of respondents in a category you want, which simply hides the underlying nonresponse.

Substitution sampling, like above, if someone does not respond you substitute in someone who will or does. Both Dillman and Johnson caution against this method. Johnson (1991) notes that the tradeoff with eliminating nonresponse is that the sample is no longer random--thus reducing the, "inferences based upon them" (P. 6). Dillman cites Deming (1953) in saying that substitution is not a good method for reducing nonresponse, "Substitution does not help; it is only equivalent to building up the size of the initial sample, leaving the bias of nonresponse undiminished."

Give Surveys to Populations Who Are Likely to Have a High Response Rate.

Is not random, and shows only the way that more likely participants think.

- More educated (Suchman & McCandless, 1940).
- Those with more experience and/or stronger interest with the subject of the study (Clausen & Ford, 1947; Pace, 1939; Stinchomb, Jones and Sheatsly, 1981)

Johnson says it is tough to define these characters ahead of time--and I say that it probably limits the range of whatever it is you want to study.

Final Method Examine the Nonrespondents Directly

See if there is a difference between respondents and nonrespondents and then report it. This, as Johnson notes, helps to determine if there is a bias--but does not adjust for it.

Methods of Compensation

The nonrespondent estimates are used to adjust the respondent figures to reduce the bias

Analysis of Waves

Uses the number of times that respondents are contacted as a method of estimating the tendency to respond (Armstrong & Overton, 1977; Daniel, 1975; Dunkelberg & Day, 1973; Houseman, 1953; Ognibene, 1971; Zimmer, 1956 as cited in Johnson, 1991). This method uses a regression so that the percent response for each wave is regressed on the value of the variable at each percent rate. Then a line is fitted to the data that would predict the score of the variable if the percent response were 100%.--as cited in Johnson

Double Sampling

(Clausen & Ford, 1947; El-Badry, 1956; Fuller, 1974; Rao, 1968, as cited in Johnson, 1991)--whereby the nonrespondents are sampled and the score they get on the variables of interest are considered, "to estimate the responses of all nonrespondents," (Johnson, 1991, p. 8) and are weighted, "in proportion to the total nonrespondents and combined with the responses from the original respondents to estimate the total sample." Weighting (Fuller, 1974; Hartman et al, 1985; Little, 1986; Mandell, 1974; Mayer & Pratt, 1966, as cited in Johnson, 1991) Did not totally understand--the mean of groups it seems to me--are weighted by the, "inverse of the return rate," (Johnson, 1991, P. 12-13) and the means of the groups are then combined for an estimate.