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*Human Relations* 1999 52: 421

DOI: 10.1177/001872679905200401

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## Response Rate in Academic Studies—A Comparative Analysis

Yehuda Baruch<sup>1,2</sup>

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A study was conducted to explore what could and should be a reasonable response rate in academic studies. One hundred and forty-one papers which included 175 different studies were examined. They were published in the *Academy of Management Journal*, *Human Relations*, *Journal of Applied Psychology*, *Organizational Behavior and Human Decision Processes*, and *Journal of International Business Studies* in the years 1975, 1985, and 1995, covering about 200,000 respondents. The average response rate was 55.6 with a standard deviation of 19.7. Variations among the journals such as the year of publication and other variables were discussed. Most notable is the decline through the years (average 48.4, standard deviation of 20.1, in 1995), the lower level found in studies involving top management or organizational representatives (average 36.1, standard deviation of 13.3), and the predominance of North American studies. It is suggested that the average and standard deviation found in this study should be used as a norm for future studies, bearing in mind the specific reference group. It is also recommended that a distinction is made between surveys directed at individual participants and those targeting organizational representatives.

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**KEY WORDS:** response rate; return rate; questionnaires; empirical studies; research methods.

### INTRODUCTION

Many studies in the managerial and behavioral sciences use questionnaires as a means of acquiring information. To conduct research and publish the results, scholars depend on the willingness of people to respond to these questionnaires.

The importance of the questionnaire as an instrument for data collection in the behavioral sciences is widely recognized. But as a grounded

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base for researchers to support or reject their hypotheses, the information needs to be comprehensive and representative. The use of the questionnaire as a research instrument for the acquisition of information can rarely provide a full set of data—only in the case of 100% response rate (RR). It is up to the target population to decide whether or not to respond. This is where the importance of the RR (also termed “return rate”) emerges, since to have dependable, valid, and reliable results, we need a high RR from a wide representation of the whole population under study. It is not clear, however, how high the RR needs to be. Much study has been done on the variables which impact the level (notably Heberlein & Baumgartner, 1978; Kelsall, Poole, & Kuhn, 1972). However, there is no agreed norm as to what is or what may be received as an acceptable, reasonable RR (and subsequently, what is unacceptable).

For academic credibility, integrity, and professionalism, we use norms to establish what is publishable and what is not. For example, when we measure work attitudes using several items, we are expected to report the Cronbach alpha. There are norms as to what is and what is not a reasonable level (e.g., .7 or .8 should raise no objection; .4 will not be acceptable; .9 and above will raise the question of possible similarity among the items) (Nunnally, 1978). It is a matter of academic professionalism to have standard and norm in relation to the characteristics of the data. However, there is no such norm for RR in academic studies.

The primary aim of this paper is to provide the reader with present and past levels of RR as found in the literature in the management and behavioral sciences. A second, and surely more ambitious aim is to suggest a norm as to what is, or what should be, an acceptable level of RR in empirical studies which use questionnaires. The level of RR is an important, sometimes crucial, issue in relation to the validity of a paper's results. It seems that it is time to address the question of what should be a reasonable response rate, what is high and what perhaps, is an unacceptable level. Also, are there certain circumstances under which lower RR will still be acceptable? If so, which ones? The present paper focuses on academic studies in the behavioral sciences in which the typical RR is higher than in commercial surveys (e.g., RR for marketing studies are a different issue—see, for example, Biner & Kidd, 1994; Haggett & Mitchell, 1994; Gendall, Hoek, & Esslemont, 1995; who cited RR in the range of 10–20%).

## REASONS FOR NOT RESPONDING

There are two principal reasons why people do not return questionnaires: At the first instance, they simply did not receive the questionnaire, and in the second, they did not wish to respond. Dealing with the former

is very much, but not entirely, under the control of the researcher(s), and a rigorous initial search for updated addresses and the production of a clear nonambiguous printed list of such addresses may reduce this factor substantially. However, in many cases, there is no real opportunity to approach the potential respondents. They may have moved, a typical situation in any study on university alumni, especially in an international context (cf. Baruch & Leeming, 1996). In studies conducted in organizations, they could be absent from the workplace due to an overseas assignment, a long holiday, or other long-term absence. With careful planning of the research design, this source for possible nonresponse can be reduced significantly.

With regard to the other source of nonresponse—the reluctance of respondents to complete the questionnaire and return it—this again is subject to the approach of the researcher, which can reduce the amount of refusals considerably. Many can and should learn from *The Art of Asking Questions* (Payne, 1951) and Gallup's seminal work (1947), both cited by Singer and Presser (1989). Dillman (1978) suggests further methods to increase RR in mail surveys and, similarly, Marquis (1977, cited in Steeh, 1989) concluded that RR did not suffer from a decline when methodological issues and organizational factors were taken into account (i.e., careful preparation and applying the right methodology can minimize nonresponse cases). Nevertheless, this current generation of workers has been through a period of intensive research in the behavioral sciences, and this, in many cases, has created frequent situations where employees have been flooded with questionnaires. This could be a reason for the trend for employees, especially managers, refusing to respond to questionnaires.

The case is different when questionnaires are submitted to representatives of organizations such as the Chief Executive Officer (CEO), managing director, Human Resource (HR) director, etc. Direct approaches such as this are typically characterized by a lower RR compared to populations of individuals. Denison and Mishra (1995) justified their 21% RR for CEO level response by citing Henderson (1990) who argued that a response rate of 20–30% is fairly typical for a mail-out survey to a large sample of firms. Organizational representatives may decline to respond due to a variety of reasons. Fenton-O'Creevy (1996) examined reasons for nonresponse in a study which had yielded a 33% RR at the organizational level. A random sample of nonrespondents reported various reasons for not responding—too busy (28%), not considered relevant (14%), address unavailable to return the questionnaire (12%), and cases when it was company policy not to complete surveys (22%). This last named approach is most upsetting from an academic point of view. The remaining 24% did not state clear reasons.

The present study is not directed at, nor intended to explore, factors affecting the response rate, nor to what extent each factor has an impact, or how to influence and increase the RR level. Seminal work on increasing RR was done by Heberlein and Baumgartner (1978), which was followed by many (see Roth and BeVier 1998 for a recent one). In addition, most current textbooks on research method would provide good advice on this issue.

## RETURNED VS. USABLE QUESTIONNAIRES

Even in the case of questionnaires returned, there is another issue to be taken into account—the difference between returned and usable questionnaires. In most cases, unusable questionnaires are the result of missing data, but usually the percentage is negligible (e.g., some dozens out of several hundreds). To cite one example of many which can be found in the literature, Watanabe and Yamaguchi (1995) surveyed locally-hired non-Japanese staff employed by a Japanese bank in London. Of 1150 questionnaires distributed, 396 were returned, and the number of valid responses after the exclusion of incomplete questionnaires was 365. The difference, however, can be significant: Chia (1995) had 51 returned questionnaires out of 100, of which nine were unusable (i.e., decline from 51% to 42%). In the present study, we refer to the usable number as the relevant RR as it is considered a matter of academic integrity to state clearly and refer to the numbers and percentages of usable questionnaires: There is no good cause for scholars to camouflage the actual RR.

## INTERPRETING NONRESPONSE

To begin with, it is important to clarify that in the “standard” research process which uses questionnaires, no one should expect a 100% RR. Even when people are ready and willing to participate, we should not anticipate a full response rate. This will be demonstrated by the two following studies: Benton (1975) had 641 male cartographers working for the U.S. army, *all of them volunteered* to participate, but only 80% of them returned their questionnaires. The same happened to Webster and Trevino (1995) when asking 531 academic employees to participate, 248 agreed—nevertheless, the RR for these 248 volunteers was merely 83%.

It is sometimes the case that people are “forced” to respond. In many instances, this is mentioned in the methodology section (e.g., “. . . questionnaires *were administered* to . . .,” i.e., a process not dependent on voluntary response to a mail survey questionnaire). This approach can provide a high response rate, perhaps even full “participation,” but it is forced, and

thus might distort the responses. Obviously, “response” or “return” rate is meaningless, although some people may refuse to be “administrated” the questionnaire. An example of a case of seemingly forced participation that yielded less than a 100% RR is a study by Sylvia and Hutchison (1985) in which 167 questionnaires were distributed to the teachers and professional staff of a medium-sized city in Oklahoma. Even though they were distributed and completed in a group while the researcher waited, only a total of 135 usable questionnaires were returned (81%). We are not told of the reasons for this. In another study based on questionnaires administrated in the workplace, 230 of 1161 were discarded due to incomplete responses (Szilagyí & Sims, 1975). Brass (1985) reports part of a larger study at a newspaper publishing company when 140 full-time, nonsupervisory employees completed questionnaires administered to small groups of volunteered employees in a conference room by the researcher, resulting in a 87.5% RR. The same output—high, but not full RR, appeared in Caplan and Jones (1975) who had 94% RR of volunteers (reducing to 60% in a second round).

This indicates that studies using administration procedures cannot serve as a benchmark for the general case as they have full or close to complete RR. Subsequently, such studies have not been perceived as relevant to the question of RR (and also are not common) and thus have been excluded from the present study.

## REPORTING

What is reported is important and can clarify the validity of a study, even in problematic cases. In a study by Hochner and Granrose (1985), for example, which had 57.6% usable out of 1949 questionnaires sent (1143 were received and 20 deleted because of missing data), 180 questionnaires were destroyed in an apparently random way, due to clerical error which left them with a 49.4% RR (for the purpose of this study, the figure of 57.6 was referred to as the RR). On the other hand, ambiguous wording is sometimes used. For example, Izraeli (1985) studied 57 companies, and stated: “Responses were obtained from 259 part-time local union officers who comprised 80% of the membership of these committees.” This vague expression does not reveal the actual RR, but tries to create the impression of comprehensive cover.

The worst approach is that in which the issue is ignored. In too many cases, scholars just failed to report the RR as was common in the sample of journals in 1975. That year’s volume of the *Journal of Applied Psychology* includes some ten studies in which the author(s) failed to report the RR (e.g., Goodale & Aagaard, 1975; Matsui & Terai, 1975). This failure to

report RR also appeared in Brosnan's (1975) study of workers and managers in two New Zealand woollen mills. To cite from the "method" section: "A multiple stratified random sampling technique was used and a target of one-third of the union membership was aimed for. A 50% sample of foremen and supervisors and a 100% sample of union officers and managers were asked to predict the union members' preferences." The tables then give the number of people actually responding (e.g., 136 employees, six supervisors, etc.) but not the RR (136 out of how many?). Luthans, McCaul, and Dodd (1985) claimed to have a representative sample of employees, indicating numbers of questionnaires received, but failed to state how many questionnaires were distributed.

Lack of reported RR was also found in quite a few other papers (e.g., Hinomoto, 1975; Yuchtman-Yaar & Gottlieb, 1985; Griffeith, Hom, DeNisi, & Kirchner, 1985). Bogg and Cooper (1995) reported the RR for only one of the two studies reported in their paper: 1051 senior British civil servants (representing 53% RR) were compared to 1056 senior executives in private industry, but no information was given of the RR for the second group.

Ignoring the issue would seem to be the least desirable approach, but even when stating RR, it is difficult to evaluate how satisfactory it is. The academic community needs guidelines to establish what a reasonable response rate is. We cannot and should not leave the decision of what is a "proper" or "reasonable" RR to the gut feeling of scholars. Such was the case of Shanks-Meile and Dobratz (1995) who set themselves a RR target of 50–60%, which they considered sufficient. They did not provide, however, strong support for such a level.

To provide an answer we may use two approaches. The first one would be based on benchmarking and the second one on sampling theory. The present paper focuses on the former, though it is acknowledged that sampling theory could provide indications for the needed RR for significant results. For example, the number of responses needed to prove significant differences between two populations will depend on the standard deviation of response, etc. More can be learned through relevant literature on research methods (e.g., Bryman, 1989; Jankowicz, 1991), statistics (e.g., Youngman & Brendon, 1982; Ott, 1988; MacRae, 1994), and psychological testing (see Kline, 1993).

Benchmarking is a method that can provide a simple answer. To create a database for benchmarking for the RR issue, it is necessary to examine whether there is any congruence among leading journals. The RR should be one of the factors to be taken into consideration when referees and editors decide to accept or reject a paper. Thus, it seems reasonable to start by exploring some of the leading behavioral sciences journals in which empirical studies using questionnaires are frequently reported.

## RESPONSE RATE IN ACADEMIC STUDIES—RESEARCH QUESTION

The basic and most important research question is what can be defined as a reasonable and acceptable RR, based on past experience from the academic literature. Trends along time and across journals should also be examined and taken into account.

One such a possible trend is a reduction in the level of RR as the years go by. An earlier study on U.S. national surveys (Steeh, 1989) found an increasing refusal level of response between the 1950s and the 1970s for a specific population survey. It would be of interest to see if the same trend still exists in the following decades, or if the levels are different for a variety of academic studies, or specific populations. Possible explanations could focus, first and foremost, on saturating the “market”—people and organizations are continuously bombarded with questionnaires by researchers, academic scholars, research students, internal surveys, market research, and so on. The result is that people then become more selective in the effort they dedicate and the type of questionnaire they respond to. In addition, under the present stressful and competitive working life, people have less time and energy to spend on completing questionnaires (see Cooper & Payne, 1988; Herriot & Pemberton, 1995; Peiperl & Baruch, 1997). Lastly, the trend may be due to a disbelief in the value of social sciences—so what if I fill in a questionnaire? How will I benefit from it? Some studies can be quite sophisticated, using, for example, contingency theories, which the laymen will not easily understand. The enthusiasm which characterized the first years of research in social sciences has passed away.

Another aspect to be examined is possible differences among journals. These could be due to two key factors: editor’s views, and type of statistical analysis or method used. In the first case, the differences will change over time, as editors were replaced within the 20-year period of the present study. If the reason for possible differences among the journals is due to the different concepts and statistical analyses required by different scholarships, the pattern of differences will stay stable over the years. An additional factor may be the quality and standing of the journal under scrutiny. However, in the present study, only top management journals have been examined, in order to provide a high-quality benchmark.

Additionally, there could be differences due to culture or type of population. This hypothesis can be tested only if there are sufficient numbers of studies conducted in different populations (e.g., a large number of studies from the Far East, from the “Third World,” Europe, etc. to compare with U.S. studies). A difference between the journals’ typical type of target population (i.e., different level of hierarchy) could also be a factor which may provide another explanation for differences among the journals.

## METHOD

The data was obtained by exploring five of the leading journals in the management and behavioral sciences: *Academy of Management Journal*, *Human Relations*, *Journal of Applied Psychology*, *Organizational Behavior and Human Decision Processes*, and *Journal of International Business Studies*. These were chosen for their reputation as leading journals, among others (see JIMS, 1994; Pierce & Garven, 1995; Brown & Wright, 1995 for quality ranking of journals in management). The distributions of the RR were analyzed as well as other characteristics of the studies (size and type of population at the individual, organizational, and national level).

For each of these journals, three volumes were examined—1975, 1985, and 1995 (providing a wide time gap for comparison). Each individual paper was investigated for its “method” part. Papers which indicated use of questionnaires were looked at to discover whether the study used the questionnaires as a research method. Then a check was made as to whether the questionnaires were “administered” (i.e., people were “forced” to fill them in), or whether these were questionnaires which the respondents were given to send back to the scholars, usually by mail. All in all, 141 out of the total 961 papers published fit with these criteria. The following information, which was presented in most cases, was gathered: actual response rate, type of population (e.g., rank and file/clerical, professionals, managers, top managers, or variations), size and sector of the relevant organization (not presented for quite a few), and country of study. In some papers, more than one study was reported, with different RR—and were thus treated separately. In some cases, where there were two rounds (longitudinal studies), the first round was referred to.

The method consists of quantitative analysis of the output emerging from the comprehensive database gathered from several journals. Is it a meta-analysis? Glass, McGaw and Smith (1981) defined it as follows: “Meta-analysis of research is the analysis of analyses (p. 12) . . . or an attitude of data analysis applied to quantitative summaries of individual experiments” (p. 21). According to Glass et al., meta-analysis is the analytical analysis of many studies. There are three prominent elements in the definition of meta-analysis suggested by Lord, De-Vader, and Alliger (1986): (a) it is quantitative analysis, (b) there is no element of examining the quality of the studies examined, and (c) the search is for general conclusions.

Though the approach presented in this paper fits with these criteria, it is still not “pure” meta-analysis, as it examines specific nominal numbers rather than associations. It may be termed, then, as a “metacontent-analysis,” as it is a large-scale quantitative analysis, with no evaluation of the studies’ quality, and reaching general conclusions (see Baruch, 1998 for a similar use of this method).

Table I. The Number of Papers Reporting RR for Each Case Under Investigation<sup>a</sup>

|       | AMJ         | HR          | JAP         | OB & HP     | JIBS       | Total        |
|-------|-------------|-------------|-------------|-------------|------------|--------------|
| 1975  | 18/84 (21)  | 3/46 (3)    | 14/151 (19) | 9/57 (9)    | 2/16 (2)   | 51/354 (54)  |
| 1985  | 10/64 (10)  | 9/63 (10)   | 9/86 (10)   | 3/42 (3)    | 3/27 (9)   | 34/282 (42)  |
| 1995  | 16/72 (21)  | 22/60 (26)  | 9/59 (13)   | 3/98 (4)    | 11/36 (15) | 61/325 (79)  |
| Total | 44/220 (52) | 34/169 (39) | 32/296 (42) | 15/197 (16) | 16/79 (16) | 141/961(175) |

<sup>a</sup>In parentheses—number of studies, as in some cases more than one study was reported in certain papers.

RESULTS

The findings presented in Table I are a summary of 16 detailed tables, covering the specific years and journals. The full set of tables containing the information is too long for inclusion here. It was, however, subject to the scrutiny of the review process and can be mailed together with the full list of 141 references to any interested scholar who contacts the author by e-mail (y.baruch@uea.ac.uk).

A total of 141 papers which used questionnaires and reported the RR appeared in these journals (in these years of publications). Thirty-two cases were of papers which included more than one study with different RRs, bringing the total number to 175 studies under analysis. A comparison of the number of studies reported in the journals through the years reveals a decreasing level of such studies in OB&HP (change of focus in the journal agenda, accompanied with a change to the title from *Human Performance* to *Human Decision Processes*), an increasing level in HR and JIBS, and stable level in JAP and AMJ.

Overall RR Level

For the 175 cases, the average RR was 55.6%, with standard deviation of 19.7 (without JIBS, which has more studies with top management, the average is 57.4%, SD of 19.5). The median was 60% and the mode 45%. The lower extreme cases were 10% and 15% (with no strong reason indicated for the lower RR), less than 10% in a study of business ethics, and zero response in a study that offered minor financial incentive for respondents in the Far East (HK). Two upper extreme cases were 95% and 96% (which might be a case of administrating questionnaires without reporting it—no specific reason for the extremely high RR was given for these cases).

The figures in Table II indicate a decline in RR through the years, whereas the number of participants is quite stable. The decline in the RR is manifested in the average and the median. All but 18 studies indicated the number of responding people and the total reported number was

Table II. RR and Respondents Number Through the Years

|             | 1975 | 1985 | 1995                   |
|-------------|------|------|------------------------|
| RR          |      |      |                        |
| Average     | 64.4 | 55.7 | 48.4/52.2 <sup>a</sup> |
| SD          | 16.8 | 19.4 | 22.5/20.1 <sup>a</sup> |
| Median      | 66   | 54   | 52                     |
| Respondents |      |      |                        |
| Average     | 1070 | 1024 | 1142 <sup>b</sup>      |
| SD          | 1670 | 1202 | 1473                   |
| Median      | 500  | 480  | 483                    |

<sup>a</sup>Without JIBS, which consist more studies with top managers.

<sup>b</sup>Without the two large-scale studies and JIBS.

Table III. RR Across the Journal

|                     | AMJ   | HR    | JAP   | OB & HP | JIBS  |
|---------------------|-------|-------|-------|---------|-------|
| RR                  | 57.98 | 54.05 | 56.74 | 63.94   | 32.19 |
| SD                  | 20.32 | 18.5  | 18.8  | 20.0    | 21.9  |
| Median              | 60.5  | 52    | 60    | 64.5    | 30.5  |
| Respondents—average | 971   | 1148  | 1138  | 630     | 438   |
| Number of studies   | 52    | 41    | 41    | 16      | 26    |

188,331. The average, excluding two very large scale studies with about 20,000 in each, was 1040 per study. Assuming such an average for the 18 studies which failed to mention the number of responses, it is likely that the present study covers more than 200,000 people.

The first three journals have similar figures, with OB&HP having a slightly higher RR and a lower number of participants and JIBS having a lower level for both, since most of the studies reported targeted top management or organizational representatives. There is no significant difference in the standard deviation (Table III).

The most striking finding which emerges from Table IV is the massive phenomenon of missing data. It seem that in a large proportion of the cases, scholars failed to report elementary characteristics of the population. This might hinder the prospects of specification or generalization of findings.

Other Findings

Individual characteristics of the populations: It seem that professional people are more studied than their share in the population, and it is even more so for the top management group. Top managers were under a special focus in the JIBS and AMJ, but never studied (in this time period) in the JAP and OB&HP. Papers in AMJ and HR tended to fail in reporting this important aspect of study—type of population—in a considerable number of studies. For the cases where the type of individual population was re-

**Table IV.** Distribution (%) for Other Characteristics

| Level      | Category                     | All             | AMJ  | HR              | JAP | OB & HP | HBS  | Average RR (SD)          |
|------------|------------------------------|-----------------|------|-----------------|-----|---------|------|--------------------------|
| Individual | employees                    | 15              | 8    | 20              | 17  | 25      | 4    | 61.4 (18.4)              |
|            | professionals                | 26              | 15   | 24              | 34  | 44      | 0    | 59.2 (18.2)              |
|            | managers                     | 19              | 15   | 24              | 17  | 19      | 31   | 61.8 (21.9)              |
|            | top managers                 | 9               | 25   | 2               | 0   | 0       | 65   | 35.5/36.1<br>(13.3/18.2) |
|            | vary                         | 20              | 15   | 17              | 32  | 13      | 0    |                          |
|            | missing                      | 11              | 21   | 12              | 0   | 0       | 0    |                          |
| Sector     | education<br>(students etc.) | 15              | 10   | 5               | 22  | 38      | 8    | 57.6 (15.9)              |
|            | manufacture                  | 18              | 25   | 12              | 12  | 25      | 8    | 62.4 (14.0)              |
|            | private services             | 9               | 10   | 10              | 7   | 6       | 15   | 60.1 (19.8)              |
|            | public services              | 21              | 15   | 32              | 20  | 13      | 4    | 58.2 (13.4)              |
|            | vary                         | 15              | 0    | 17              | 32  | 13      | 65   |                          |
|            | missing                      | 23              | 40   | 24              | 7   | 6       | 0    |                          |
| Nation     | USA                          | 74              | 84.5 | 39              | 88  | 87.5    | 40.5 | 57.5 (19.1)              |
|            | other West                   | 21 <sup>a</sup> | 13.5 | 46 <sup>b</sup> | 7   | 12.5    | 21   | 49.4 (21.5)              |
|            | other                        | 6               | 2    | 15              | 5   | 0       | 38.5 | 37.8 (26.9)              |

<sup>a</sup>14 of these 21 studies were conducted in Canada.

<sup>b</sup>Only four were conducted in the U.K.

ported, the average RRs were as follows (SD in brackets): employees (e.g., rank and file)—61.35 (18.4); professionals—59.23 (18.2); managers—61.79 (21.9); and top managers or representatives of the organizations—36.1 (18.2). However, it would be more advisable to look here at the numbers excluding JIBS data which had a very high variety. This is suggested since several studies used ABI members with exceptionally high RR, and at the same time, some other international studies were included, which had exceptionally low RR. Coupled together, this might distort the RR which actually reflects the average and SD. Dropping these studies, the recalculated RR turned out to be 35.5 (13.3). A *t*-test comparison between this last category and others found a significant lower RR for the top managers (*t*-value 6.06, *p* < .001). Such studies, directed at top managers, also tended to be mailed surveys whereas in cases of employees or students the questionnaire is usually distributed by the scholar or the personnel manager.

## Sector

Some sectors such as education (i.e., mostly students) are overrepresented (more so in JAP and OB&HP), possibly due to convenience or researcher ease of access. Lack of easy approach and small size of organizations might be the reason for the low representation of the private services sector. The differences in RR though are minor.

## Nation

Most of the studies were conducted in the U.S. Together with Canada, the figure rises to 82.6% in North America, excluding JIBS. Only 6% were carried out in non-Western countries. The JIBS had 40.5% of studies in the U.S., 21% in other Western nations, and 38.5% in others, mostly in the Far East. As presented in the table, the RR in U.S. was higher than elsewhere, and the SD in studies in non-Western nations was exceptionally high. Bearing in mind that all these journals wish to be considered international, the emerging picture, however, is much of an American one, even in JIBS. The author is not sure whether it is the general picture for all the research referred to in the journals or whether it is mainly for empirical research using questionnaires. As mentioned, the JIBS and also HR were the exception in providing a more balanced national distribution.

Organization size was looked at, but there was almost no variance. Most studies citing the organizational size were carried out in large organizations, with the exception of two studies conducted in "small" organizations, and none in the medium size range (500–1000 employees). A negative factor was the absence of reported size in some 70% of the studies. For many of the missing cases, there were indications (e.g., stating the study was conducted in a hospital or a university), providing some idea of the probable size of the organization. In other cases, it was either a mixture of organizations or irrelevant, such as when the study consisted of a random sample from the general population. Thus, no analysis was conducted in relation to size.

## DISCUSSION

Altogether, 141 papers, which included 175 different studies using questionnaires, for which the RR was reported, were examined. They were published in *Academy of Management Journal*, *Human Relations*, *Journal of Applied Psychology*, *Organizational Behavior and Human Decision Processes*, and *Journal of International Business Studies* in the years 1975, 1985, and 1995, covering some 200,000 respondents. The average response rate was 55.6 (the median was 60) with a standard deviation of 19.7. The reader should bear in mind that it is not merely the number of papers using questionnaires but papers doing so *and* indicating the RR. However, the phenomenon of publishing questionnaire-based research without indicating RR was practiced mainly in the 1970s and somewhat in the 1980s, and is quite rare in the 1990s (based on the 961 papers surveyed in this study).

Some of the findings which relate to the research questions consider the possible decline in RR across time. Based on the present sample, it was found that the level of RR has decreased steadily through the years.

A sample of one additional volume in the 1990s (*Human Relations*, 1994) found similar levels of RR (average RR 53% in 14 studies).

Another question referred to possible differences among the journals under exploration. Two main differences were identified: number of studies (decline in number in OB&HP, and rise in JIBS and HR), and variation in the RR: higher level in OB&HP, and lower in JIBS. This may be associated with the type of population under study in these journals which had more studies involving students and fewer mailed surveys or managerial subjects for studies for the former, vs. mostly top management or representatives of organizations in the latter.

The interesting question concerning possible differences due to culture or type of population could not be fully tested here. Excluding JIBS, only 6% of the studies were conducted in countries other than North American (83%) or Western countries (11%). The number in JIBS should not be compared with the rest as they represent different populations, and subsequently the lower RR may be due to population rather than to the cultural background.

Additional findings were, firstly, differences among the populations at the individual level (lower RR in studies conducted with top management people), and secondly, the scarcity of basic information in a large proportion of the studies.

### **Mail Surveys vs. Questionnaire Distributed**

The information as to whether the questionnaires were mailed or distributed by managers, personnel departments, or the researcher was missing in most cases. In a few cases with lower RR, it was indicated that the questionnaires were mailed (including most of studies when representatives or CEO of the organization were the target population). This fits with the findings of a special "Feature Section" of the *Journal of Applied Psychology*, 1975. The four papers published in this section included one reporting ten mail-based studies with an average RR of 19.7 (Anderson & Berdie, 1975) whereas the other papers found an average RR of 64.3 in 12 studies (Hinrichs, 1975), average RR of 67.3 in eight studies (Sheth & Roscoe, 1975), and one study with 45.6 RR (Macek & Miles, 1975).

### **Recommendations to Scholars**

The following is offered as a guideline for any scholar conducting a study which uses questionnaires, and may be useful for editors in considering manuscripts submitted:

### *Norm for RR*

The first guideline resulting from the study is an indication of a norm for RR in academic studies in the behavioral sciences. As suggested, it seems that the norm should be within 1 SD from the average. But what average? It seems that there should be a distinction between studies directed toward top management (CEO/MD etc.) or representatives of organizations, and others such as rank and file, mid-level managers, or conventional population. For the former the norm may then be 36 +/- 13 whereas for most other populations it may be about 60 +/- 20 (no significant differences were found among populations of employees, managers, or professionals). Any deviation from this norm, especially downward, must be explained. Moreover, scholars should try to indicate or discover whether the respondents are different from the nonrespondents.

### *Other Recommendations*

In addition, it should be clear to the reader whether or not the questionnaire was “administered” (i.e., recipients filled it in as part of their job, role, studies, etc.). In this case, the proportion of usable questionnaires and of possible refusals should be indicated, but not titled “Response Rate.”

In cases where it was up to the respondent to decide whether or not to respond, the following information should be available to the reader:

- type of target population (also why such a population is fit for the specific research, for example, its relevance to the research hypotheses);
- number of people given the forms, and under what procedure (e.g., distributed during a class, supplied by the personnel manager, mailed by the researcher). When questionnaires are only sent to people who volunteered for the study, this should be indicated;
- how many were returned, and of those, how many were usable (typical reason for unusable questionnaires could be provided);
- if several populations are involved (e.g., rank and file and managers)—was there a difference in the RR across the population?;
- did the researcher(s) use any kind of “promotion” to increase the RR—follow up letter, phone call, a prize draw, etc., and if so—what was the subsequent increase in the level of the RR.

And lastly, considering the present paper:

- if the RR is an extreme case, either below or above the “conventional” or expected, the researcher(s) should try to explain the reason for such a deviation. It was suggested here that an RR exceeding

one standard deviation should be accounted for and justified. If it is above—was it really voluntary for the respondents to reply, what could be the possible explanation (e.g., use of specific approach in design). If below—why is it still justified to use the sample (e.g., people difficult to access, very busy people—CEOs, strong evidence that many questionnaires have not reached the target population). As an example, when Tsui, Ashford, St. Clair, and Xin (1995) had 90% and 95% RR they indicated it is an excellent RR, but did not try to explain the unique circumstances or possible reasons for such a phenomenon.

The argument here is that any extreme RR should be specifically explained and scholars need to explain either why a study with a very low RR is still worth publishing, or what the reasons for an exceptionally high RR are. Also, if response was compulsory, are there any implications of the procedure on the findings.

### *Limitations and Recommended Future Research*

Having established a base level for what is a reasonable and acceptable response rate, there are two important questions to be examined further. The first is how to gain a better understanding of the reasons for poor RR and how to increase it. The second, with more theoretical importance, is to compare the characteristics and properties of respondents as opposed to nonrespondent populations.

As for the first issue, a further and more studies could provide some answers for best methods to increase RR. These vary in success rate and in cost, from follow up (e.g., Hinrichs 1975) to the type of mailing system used (from 18% to 47% in Thistlethwaite & Finlay 1993 study, also cf. Kallis & Gilierano 1992). In a recent comprehensive study, Roth and BeVier (1998) focused on a variety of antecedents.

The second issue can have a severe impact on the validity of results from any study if the researcher(s) claim that their results are representative of the entire (relevant) population. In many cases, there could be significant difference(s) between populations. One easy 'solution' used frequently is to look at the demographic characteristics of both populations. If they do not vary the author(s) tend to claim that the results of the analysis hold true for all (see also Roth and BeVier, 1998). However, this does not imply that the respondents were compared with the nonrespondents on other important qualities such as attitudes, behaviors, etc. More comprehensive studies should address this issue, to find possible differences between responding and nonresponding people. One such earlier study

(Macek & Miles, 1975) found that respondents had a higher IQ level than nonrespondents. Future research may examine a wider set of variables. Such studies will supplement the present one by combining type of populations, expected levels of RR, and validity of research findings.

## ACKNOWLEDGMENTS

The author wishes to thank Bette Laing for her help in the data collection and editing, and Professors Keith Fletcher, Al Goldberg, and two anonymous reviewers for their helpful comments on earlier drafts of the paper.

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