RESPONSE TO TYPED AND MIMEOGRAPHED LETTERS
IN A SURVEY USING POSTAL QUESTIONNAIRES

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In epidemiological studies using postal questionnaires, a decision must be made as to whether the covering letter should be mimeographed or typed by hand. Considerable time and money are saved when mimeographed letters are used, yet it is generally assumed that hand typed and signed covering letters bring about a higher response rate. During the course of an epidemiological study of slipped capital femoral epiphysis a comparison was made of response rates obtained when typed and mimeographed covering letters were sent with a short questionnaire to orthopaedic surgeons in the United States. The results of that comparison are reported here.

METHODS

Before undertaking detailed studies of the epidemiology of slipped epiphysis (Kelsey, 1969; Kelsey, 1971; and Kelsey, Keggi, and Southwick, 1970), a preliminary survey was made of the frequency with which slipped epiphysis and Legg-Calvé-Perthes disease are diagnosed in various areas of the United States. In this survey, letters were sent to random samples of orthopaedic surgeons in each of the 50 states and the District of Columbia, asking them to fill in and return the postcard shown in the Figure. In the first 24 states to which letters were sent*, half were typed and half were mimeographed; this was also done for second letters sent to orthopaedists in eight states† in which response to the first letter was less than 50%. In addition, in six states‡, half of the mimeographed first letters were signed individually and half were signed on the stencil.

The types of letters were in general alternated on lists of orthopaedists arranged alphabetically by state, except when this would have necessitated sending different kinds of letters to orthopaedists at the same address. If the surgeon returned the postcard, the letter was considered to have elicited a reply; if all three questions on the card were answered, the letter was considered to have elicited a useful reply.

RESULTS

Table I shows that a mimeographed first letter was as likely to be answered as a typed first letter. The percentage of useful replies was 57.1% for mimeographed letters and 57.3% for typed letters.

Among non-respondents to the first letter (Table II), it appeared that a typed second letter might be somewhat more likely to elicit some sort of response, but that it was no more likely to elicit a useful response than a mimeographed letter, as useful response rates were 39.1% for mimeographed letters and 38.6% for typed letters. Because of the

<table>
<thead>
<tr>
<th>Type of Letter</th>
<th>No. Sent*</th>
<th>All Replies</th>
<th>Useful Replies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mimeographed</td>
<td>189</td>
<td>117</td>
<td>108</td>
</tr>
<tr>
<td>Typed</td>
<td>192</td>
<td>117</td>
<td>110</td>
</tr>
<tr>
<td>Total</td>
<td>381</td>
<td>229</td>
<td>218</td>
</tr>
</tbody>
</table>

*Excludes postcards returned unopened by the Post Office.
TABLE II
RESPONSE RATE FOR TYPED AND MIMEOGRAPHED SECOND LETTERS

<table>
<thead>
<tr>
<th>Type of Letter</th>
<th>No. Sent</th>
<th>All Replies</th>
<th>Useful Replies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mimeographed</td>
<td>46</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Typed</td>
<td>44</td>
<td>24</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>44</td>
<td>35</td>
</tr>
</tbody>
</table>

TABLE III
RESPONSE RATE FOR FIRST LETTERS PERSONALLY SIGNED AND FIRST LETTERS SIGNED ON A STENCIL

<table>
<thead>
<tr>
<th>Type of Letter</th>
<th>No. Sent</th>
<th>All Replies</th>
<th>Useful Replies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mimeographed</td>
<td>50</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Personally signed</td>
<td>51</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td>56</td>
<td>55</td>
</tr>
</tbody>
</table>

relatively small numbers of surgeons included, no significance can be attached to the difference in total response.

Finally, in Table III it can be seen that a personally signed letter was no more likely to elicit a useful response than one with a mimeographed signature, the response rates being 49% and 60%, respectively. Again, letters were sent to relatively small numbers of surgeons, so that the difference in rates may be attributed to chance.

**DISCUSSION**

Increasing attention has recently been given to the use of postal questionnaires in epidemiological surveys in which information must be obtained directly from members of a study population (Krueger, Rogot, Blackwelder, and Reid, 1970; Kaplan and Cole, 1970; Lambert and Reid, 1970; Mork, 1970); this may be in part because personal interviews of large numbers of people are expensive and time-consuming, especially when undertaken over a wide geographical area. It is thus important to know what factors will affect the response rate in mailed questionnaires.

This study indicates that when short questionnaires are sent to surgeons in the United States, mimeographed covering letters are just as likely to elicit useful replies as individually typed letters; it thus seems unnecessary to spend the additional time and money to type each letter (whether this is done by a secretary or a computer), since this probably will not increase the response rate. Of course, it cannot be determined from this study alone whether these results would obtain with a longer questionnaire or one which is sent to the general public.

However, the findings reported here together with those of Kaplan and Cole (1970) strongly suggest that, in the United States at least, personalization of the covering letter does not increase the response rate whether the target population is professional or lay. Kaplan and Cole found that, among women in the general population of the Boston, Massachusetts, area, the response rates were not affected by whether the covering letter was personally addressed, by the apparent nationality of the signer of the letter, or by the title of the signer of the letter.

The question also arises as to whether these results are applicable to cultures other than that in North America. It is unlikely that the postal service in any other country is more heavily burdened with advertising material and circulars. Indeed, in recent years, the extent to which the flood of 'junk mail' may have compromised the efficiency of the United States postal service has become a political issue. Nevertheless, the mimeographed letters were evidently read.

**SUMMARY**

In a survey of the frequency with which slipped capital femoral epiphysis and Legg-Calvé-Perthes disease are diagnosed by orthopaedic surgeons in the United States, it was found that hand-typed letters and mimeographed letters were equally likely to elicit a usable reply.

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**REFERENCES**


Response to typed and mimeographed letters in a survey using postal questionnaires.

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