and must be interpreted as such, but it possibly indicates an important trend towards milder disease. Smaller numbers of affected vaccinated infants can be noted. The 9th WHO Expert Committee on Tuberculosis (1974) recommended the widest possible coverage with BCG vaccine as early in life as feasible where infant tuberculosis is a problem. The author can only support this statement and the statement of Collins, namely that it was the policy of the Department of Health to give BCG until the question of how often florid tuberculosis follows BCG vaccination could be answered. The author suggests that further trials on newborn hypersensitivity be conducted, but that BCG continue to be given at birth because of the well-known susceptibility to tuberculous meningitis observed in the young child.

A second vaccination at school-going age, irrespective of vaccination at birth, and a third at school-leaving age, must be given to ensure the maximum protection possible under high prevalence conditions.

I wish to thank the Medical Superintendent of Boksburg-Benoni Hospital for permission to publish.

REFERENCES

Smoking Habits of Blacks in Industry

M. D. BAKER, J. R. JOHNSTON, D. M. TURNER

SUMMARY

A number of Black workers from a factory near Johannesburg were questioned about their smoking habits. Compared with an earlier study, a significantly greater number of younger workers now smoke — and mainly cigarettes. The roles played by the strong tobacco lobby and that of the Department of Health are considered.

Sales of tobacco generate a steady source of revenue for the Government. However, one should seriously bear in mind the morbidity and mortality due to cigarette smoking and the concomitant economic costs.

Nearly 20 years ago Higginson and Oettlé carried out a survey of the smoking habits of 627 men in Alexandra township near Johannesburg and found that approximately 50% smoked cigarettes and/or a pipe. Men who were less than 45 years of age smoked mainly cigarettes, while men older than 45 years tended to smoke a pipe.

Sluis-Cremer states that Blacks who have never smoked are more commonly found in the older age group, i.e. a greater number of the younger generation are smoking, and probably more heavily than men in the older age group. He also notes that, of the Blacks in non-mining industries who smoke, 84% choose cigarettes and 16% a pipe. There is also a significant difference (P<0.05) in smoking habits between rural and urban Blacks in industry as the latter group tend to smoke more than the former.

The Human Sciences Research Council recently issued a newsletter in which it stated that 70% of Black men outside their homelands smoked and that the daily median consumption was slightly more than 10 cigarettes. The Council is presently involved in comprehensive research into smoking habits in South Africa.

It is the purpose of this study to examine the smoking habits of Blacks in a major industrial concern.
SUBJECTS AND METHODS

Of the total Black work force in a factory near Johannesburg, half the workers (698) were randomly chosen to participate in the study on the basis of their job number. Of this group, 676 men actually took part in the study.

Approximately 75% of the workers were on a renewable one-year contract and originated mainly from the Pietersburg area. They stayed in the factory hostel or at adjacent hostels. The rest lived locally. For purposes of this study the contract workers and those living locally were defined as the rural/hostel and urban groups respectively.

The study was conducted by means of a questionnaire which was administered by qualified Black nursing staff. The questionnaire was divided into 4 sections, viz. never smoked; ex-smokers; cigarette and/or pipe smokers; and number of cigarettes smoked per day.

A pilot study using 20 people was undertaken. From this it emerged that the respondents had great difficulty in answering the question 'How many cigarettes do you smoke per day?' They assumed that the question pertained to daylight hours and not to night-time or the early morning before sunrise. The problem was readily overcome by asking either 'How many days does a packet of 20 cigarettes last?' or 'How many days does a 100-g packet of tobacco last?' (an empty 100-g tobacco packet was shown to the interviewee). By asking the question in a manner more readily understandable to the study group, inaccuracy and time-wasting were minimized.

TABLE I. ANALYSIS OF THE SMOKING HABITS OF URBAN AND RURAL/HOSTEL DWELLERS

<table>
<thead>
<tr>
<th>Rural/hostel</th>
<th>Urban</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smokers</td>
<td>326 (318,59)</td>
<td>93 (100,41)</td>
</tr>
<tr>
<td>Never smoked</td>
<td>188 (195,41)</td>
<td>69 (61,59)</td>
</tr>
<tr>
<td>Total</td>
<td>514</td>
<td>162</td>
</tr>
</tbody>
</table>

Figures in brackets represent expected frequencies.

\[ \chi^2 (1 \text{ df}) = 1.89 \text{ - not significant (5\% level).} \]

RESULTS

As shown in Table I, there was no significant difference \( (P>0,05) \) between the smoking habits of the urban and the rural/hostel dwellers. (For purposes of further analysis, these two groups were subsequently combined.) A highly significant trend \( (P<0,01) \) was shown between age and the number of workers who smoked, i.e. the younger the age group, the greater the number of men who smoked (Table II).

It was also shown (Table III) that the majority of smokers chose cigarettes and, generally, the quantity consumed was less than 11 per day. There was no difference between those men under 40 and those over 40 years of age with regard to consumption in excess of this figure. It was also noted that in the over-40-year age group there were more pipe smokers than in the younger group.

In the total study group of 676, only 5 smoked both a pipe and cigarettes. For purposes of analysis these 'mixed' smokers were included with the cigarette-smoking group.

DISCUSSION

While no significant difference was shown between the smoking habits of the urban and rural/hostel dwellers, care should be exercised in the interpretation of this result. These groups have been loosely defined in this study and, accordingly, may not be fully representative of the general Black population.

In agreement with previous investigators it was shown that people who have never smoked are more commonly found to be over 40 years of age, i.e. more of the younger generation are smokers.

Eighteen years ago Higginson and Oettle stated that there appeared to be a swing away from pipe smoking in both the older and younger age groups — but more so in the latter group (Tables III and IV). There was, however, no trend noticed towards heavier cigarette smoking in either group. This contradicted the findings of the Human Sciences Research Council of a daily median consumption

TABLE II. RELATIONSHIP BETWEEN SMOKING AND AGE

<table>
<thead>
<tr>
<th>Age (yrs)</th>
<th>Under 29</th>
<th>30 - 39</th>
<th>40 - 49</th>
<th>50 - 59</th>
<th>60+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>Yes</td>
<td>179</td>
<td>132</td>
<td>71</td>
<td>35</td>
<td>2</td>
</tr>
<tr>
<td>habit</td>
<td>No</td>
<td>78</td>
<td>78</td>
<td>58</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>257</td>
<td>210</td>
<td>129</td>
<td>60</td>
<td>20</td>
<td>676</td>
</tr>
</tbody>
</table>

Proportion of 'yes' per age group

<table>
<thead>
<tr>
<th></th>
<th>Under 29</th>
<th>30 - 39</th>
<th>40 - 49</th>
<th>50 - 59</th>
<th>60+</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0,70</td>
<td>0,63</td>
<td>0,55</td>
<td>0,58</td>
<td>0,10</td>
</tr>
</tbody>
</table>

\[ \chi^2 \text{ for trend (1 df)} = 22.66 \text{ — significant (1\% level).}\]

TABLE III. DETAILS OF SMOKING HABITS (% BY AGE GROUP) — THIS STUDY

<table>
<thead>
<tr>
<th>Cigarettes</th>
<th>Under 40</th>
<th>40+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 11</td>
<td>11+</td>
<td>Pipe</td>
<td></td>
</tr>
<tr>
<td>Never smoked</td>
<td>467</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Ex-smokers</td>
<td>209</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>8</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>9</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>8</td>
<td>48</td>
</tr>
</tbody>
</table>
TABLE IV. DETAILS OF SMOKING HABITS (% BY AGE GROUP)

<table>
<thead>
<tr>
<th>Age (yrs)</th>
<th>Number</th>
<th>No. tobacco</th>
<th>Cigarettes</th>
<th>Cigarettes and pipe</th>
<th>Pipe</th>
<th>Snuff</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-45</td>
<td>505</td>
<td>42</td>
<td>36</td>
<td>3</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>45+</td>
<td>122</td>
<td>42</td>
<td>19</td>
<td>1</td>
<td>25</td>
<td>15</td>
</tr>
</tbody>
</table>

of slightly more than 10 cigarettes for Blacks living outside their homelands.

In the recent literature,5,6 concern has been expressed regarding the attitude of the Department of Health to the hazards of smoking. One of these articles7 criticized the recent non-committal statement of the Department of Health on points ranging from its defeatist views on legislation to the role that the R200 million revenue accrued by the Government plays in the tempering of official attitudes to smoking. We heartily endorse such criticisms.

Details7 were given of the regrettable last-minute cancellation of a carefully prepared television documentary on the harmful effects of smoking. Representatives of the cigarette manufacturing companies had previously declined to take part in the programme. The influence of the strong tobacco lobby in this country comes across in a clear manner.

At the recent National Conference on Coronary Artery Disease8 it was noted that only 20% of doctors and 10% of medical students now smoke. These figures are no reason for complacency if the medical profession wishes to influence the layman’s attitude to smoking. The Department of Health must be seen to be active in this respect and must not offload its responsibility, partially or totally, onto bodies such as the National Council on Smoking and Health of South Africa which has, until now, been sponsored by donations.

Few data are available in South Africa linking smoking with lung cancer in Blacks, but Bradshaw and Harington9 did analyse the changing pattern of cancer mortality in Whites and Coloureds over a 20-year period commencing in 1949. Lung cancer rates more than doubled in the White population and increased fourfold in Coloureds. These increases were ascribed to the tobacco consumption rate, which ranks among the highest in the world.

Our finding that a greater number of Blacks in the younger age group now smoke is, when coupled with their increasing earning power,10 cause for alarm. Tobacco, relative to other countries, is a fairly cheap commodity in southern Africa and this group is an obvious target for the promotion of cigarette sales by the tobacco companies.

The disturbing smoking trend outlined in this article must be reversed and this can only be achieved by a more responsible and aggressive attitude on the part of the relevant authorities.

ADDENDUM

Since the submission of this article for publication, it has come to the attention of the authors that the National Council on Smoking and Health of South Africa has been invited by the Department of Health to participate in its educational programme.

The authors wish to express their appreciation to Mr B. Bezuidenhout for statistical assistance, and to Dr L. Irwig for his helpful comments. The co-operation of the clinical staff of Haggie Rand Limited is gratefully acknowledged.

REFERENCES