Seasonality in onset of youth smoking parallels seasonality in cigarette sales

Cigarette sales in the USA peak in the summer months, June through August. This finding prompted examination of data on the onset of youth smoking to determine whether a similar pattern could be discerned. In this letter we report data from the Development and Assessment of Nicotine Dependence in Youth (DANDY) study. The sample of 679 seventh grade students from the USA had a mean initial age of 13.1 years (range 12–15 years). They were interviewed every three to four months over two and a half years. Subjects were asked to provide dates for their first use of any tobacco product, and their first puff and first inhalation on a cigarette. Additionally they provided dates for the first time they smoked twice within a 60 day period (monthly smoking) and the onset of daily smoking.

All measures of smoking onset peaked during the summer months of June through August with the modal month being July (table 1). Thus, the onset of youth smoking parallels seasonality in cigarette sales. One might speculate that summer peaks in youth smoking reflect an increase in unstructured time and a decrease in adult supervision. Adults may also have a decreased structured time during the summer. It is interesting to note also that alcohol advertising expenditures are greatest in the late spring and early summer. This corresponds to a pronounced peak during July in self reported heavy episodic drinking among adults. Further research might explore the factors underlying these seasonal phenomena. Additionally, we would be curious to see if similar phenomena occur in the southern hemisphere.

Just as campaigns against underage drinking and drunk driving focus on periods when these activities may be greater, tobacco use prevention efforts might optimally be focused on the summer period of maximum vulnerability.

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Table 1  Frequencies of youth smoking behaviour by month

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earliest tobacco use</td>
<td>15</td>
<td>1</td>
<td>10</td>
<td>16</td>
<td>14</td>
<td>40</td>
<td>103</td>
<td>55</td>
<td>24</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td>(n=344)</td>
<td>%</td>
<td>4.4</td>
<td>4.9</td>
<td>2.9</td>
<td>4.7</td>
<td>4.1</td>
<td>11.6</td>
<td>29.9</td>
<td>16.0</td>
<td>7.0</td>
<td>5.5</td>
</tr>
<tr>
<td>First puffed</td>
<td>16</td>
<td>17</td>
<td>10</td>
<td>18</td>
<td>13</td>
<td>42</td>
<td>90</td>
<td>48</td>
<td>26</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>(n=331)</td>
<td>%</td>
<td>4.8</td>
<td>5.1</td>
<td>3.0</td>
<td>5.4</td>
<td>3.9</td>
<td>12.7</td>
<td>27.2</td>
<td>14.5</td>
<td>7.9</td>
<td>5.4</td>
</tr>
<tr>
<td>First inhaled</td>
<td>13</td>
<td>14</td>
<td>14</td>
<td>15</td>
<td>11</td>
<td>42</td>
<td>65</td>
<td>25</td>
<td>24</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>(n=257)</td>
<td>%</td>
<td>5.1</td>
<td>5.4</td>
<td>5.4</td>
<td>5.8</td>
<td>4.3</td>
<td>16.3</td>
<td>25.3</td>
<td>9.7</td>
<td>9.3</td>
<td>4.7</td>
</tr>
<tr>
<td>First smoked monthly</td>
<td>11</td>
<td>14</td>
<td>12</td>
<td>7</td>
<td>7</td>
<td>28</td>
<td>29</td>
<td>17</td>
<td>14</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>(n=165)</td>
<td>%</td>
<td>7.1</td>
<td>9.0</td>
<td>7.7</td>
<td>4.5</td>
<td>4.5</td>
<td>18.1</td>
<td>18.7</td>
<td>11.0</td>
<td>9.0</td>
<td>4.5</td>
</tr>
<tr>
<td>First smoked daily</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>13</td>
<td>18</td>
<td>16</td>
<td>13</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>(n=101)</td>
<td>%</td>
<td>5.0</td>
<td>5.9</td>
<td>6.9</td>
<td>3.0</td>
<td>2.0</td>
<td>12.9</td>
<td>17.8</td>
<td>15.8</td>
<td>12.9</td>
<td>6.9</td>
</tr>
</tbody>
</table>

9.9% were ex-smokers, 8% sometimes smoked, 3.7% reported smoking between 1–6 cigarettes a week, and 3.3% reported smoking > 6 cigarettes a week. A total of 75% of the sample owned a mobile phone, of whom 65% paid for their own calls. Mobile phone ownership was positively associated with the extent of smoking experience (χ2(1) = 130.6, p < 0.001). This relation was found in both boys (χ2(1) = 44.7, p < 0.001) and girls (χ2(1) = 91.5, p < 0.001). Among self reported never smokers 68% owned a mobile phone, rising in a graded fashion with increasing smoking experience to 95.3% in those smoking > 6 cigarettes per week (fig 1).

Among those who owned a mobile phone, there was no significant association between paying for phone calls and smoking status (χ2(5) = 7.8, p = 0.16). Additionally, among those who smoked and owned a mobile phone there was no association between paying for phone calls and socioeconomic background as indicated by housing tenure and household car ownership.

Our findings go against the hypothesised protective effect of mobile phone ownership on smoking uptake. We found a positive association between the extent of smoking experience and the likelihood of owning a mobile. This relation was similar among boys and girls. Rather than competing, mobile phone ownership appears to be a complementary behaviour to smoking, possibly reinforcing a young person’s image of himself or herself as an aspiring adult.

Additionally, children who pay for their own calls are less likely to smoke. This indicates that paying for mobile phone calls does not prevent children from also smoking. Since at this age only 3.3% of the sample reported smoking > 6 cigarettes a week, it may be that, at the observed level of cigarette consumption, mobile phone expenses do not compete with smoking in a significant way.

Our study has some limitations. We did not look at the amount of time spent using a mobile phone, or the amount of money spent on call costs. The cross sectional nature of our data precludes an examination of whether mobile phone ownership might in some children have prevented or delayed uptake of smoking. Since we studied only 13 and 14 year olds, we cannot be sure that similar findings would emerge at other ages. Nevertheless, it seems clear that in general mobile phone ownership is associated with an increased rather
than a decreased likelihood of smoking in teenagers.

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The first two thirds of the book are occupied with a brief history of smoking from European contact with America onwards. This narrative serves as the vehicle for Hughes’ central argument, which is that changes in tobacco use can be read through the lens of Norbert Elias’ theory of the “civilising process”, the trend in western societies towards self restraint as a means of government. Hughes describes how tobacco, once an intoxicant used to lose control, over the centuries has been consumed in increasingly milder forms and in “more highly controlled, formal, differentiated, private and individualized ways” (p 77, emphasis in original). Where native American men ritualistically smoked to the point of fits and unconsciousness, among Europeans the practice soon became a means of exercising self control by modifying mood, supplementing other activities (such as work), and expressing individual identity.

Civilised smoking
The cigarette was the ultimate expression of this trend. Made possible by increasingly mild tobacco, it could be adapted to fulfil ever more specialised emotional, psychological, and social functions, while the identity functions of smoking were commodified through branding and marketing. Its rise coincided with that of a new medical understanding of smoking (part, says Hughes, of the “clinical gaze” theorised by Michel Foucault) that produced the cigarette and is reinforced by the tobacco control movement of the late 20th century. In the final third of the book, Hughes uses a series of interviews to argue each person’s “smoking career” follows a similar trajectory to the historical development of smoking. As “beginners”, smokers are most concerned with loss of control, intoxication, and with smoking as a marker to others (“I’m a grown up!”); as “continuing” and “regular”, smokers use tobacco as a highly particularised means of self expression and self control (to mark mood, aid work, feel sexy, etc); as “addicts” and “stopping smokers”, tobacco users experience smoking in terms of the “dominant medicalised paradigm” of addiction.

I found Hughes’ devotion to what was essentially a linear master narrative throughout the book intriguing, but in the end unsatisfying. It was nifty to see how tobacco smoking could be used to support Elias’ theory, but this (highly reductionist) view often seemed forced on the data. For example, I was not necessarily convinced that the Kuru native Americans were significantly different to Europeans three centuries of the “civilising process” later, for while practice of smoking had altered, the three major categories of function that smoking fulfilled, and which Hughes nominates as products of the civilising process—controlling feeling states, expressing social cues, and facilitating socialisation—(according to my reading of his evidence), had not.

Under researched
The problem of oversimplification is worsened because the book is severely under researched. The historical sections are drawn almost entirely from Jordan Goodman’s excellent Tobacco in history: cultures of dependence plus one or two other works, and lack a convincing depth of analysis. The more interesting interview based chapter about smokers’ own beliefs about their habit—a topic that has received less attention than it might among tobacco control advocates—was limited by its friends-of-friends methodology. I suggest that additional interesting questions—for example, about ethnicity, smoking, and the construction of (a “civilised”) identity—might have been raised with a more considered (not necessarily narrowly “positivist”/randomised) approach.

Finally, although I would agree that addiction is a dominant discourse through which smoking is currently understood, it is not the only one. Hughes seems inexcusably oblivious that for decades Quit campaigns have offered far more than substitute nicotine delivery methods precisely because countless feminists, sociologists of class, psychologists, behavioural therapists, and health advocates have recognised that nicotine addiction is not something that operates simplistically or in isolation from social and emotional circumstances. Anyone professionally involved in tobacco control and familiar with the long-standing debates about the use of scare tactics, etc, will find the policy suggestions with which Learning to smoke concludes merely facile. So in the end Hughes raises many more questions than he solves; and I hope his book will encourage him and other sociologists to continue their endeavours of “making strange”, only with an increasing engagement with the world under critique.

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Do mobile phones replace cigarette smoking among teenagers?

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