Abstract

Background The aim of this study was to swiftly gain insight into anecdotal evidence that primary school children in local schools were using sunbeds.

Methods A seven-question questionnaire was conducted by school nurses in 23 primary schools in the Wishaw Local Health Care Co-operative catchment area. Children in primary classes 4 (aged 8–9) and 6/7 (aged 10–11) took part in the classroom surveys. Positive responses were counted by a show of hands by the children.

Results A total of 1405 children took part in the survey. Of these, 48 per cent expressed a desire to use a sunbed and 7 per cent (96 children) had actually used a sunbed in the last 6 months. Of the 96 who professed to using a sunbed, 16 used one regularly, 61 gained access to a sunbed in someone’s house, and 21 had used a sunbed in a shop or salon. Twenty-nine (30 per cent) admitted that they had suffered sore skin or sore eyes after sunbed use.

Conclusion This preliminary survey suggests that a significant number of primary school children may be using tanning devices either in the home or on commercial premises. More rigorous research is urgently required to test these findings. The precautionary principle suggests that public action is justified on present evidence.

Keywords: primary school children, tanning, sunbeds, skin cancer

Introduction

In recent years there has been increasing concern regarding the adverse health effects of artificial tanning units.1–3 Studies have reported an increased risk of skin cancer (odds ratios between 1.3 and 7.7) in the form of melanomas in association with sunbed users.4–9 In a population-based case-control study any use of tanning devices was associated with a 2.5 times increased risk of developing squamous cell skin cancer and a 1.5 times increased risk of developing basal cell skin cancer.10 A report from HEBS in 1999 concluded that ‘There is no safe level of use for artificial tanning devices’.11 More recently, a report from the National Radiological Protection Board similarly highlighted sunbed use as a potential health risk.12

There are no sources of data on trends in access to or use of commercial sunbeds.13 However, it is believed that there has been considerable expansion in the commercial market in recent years with the appearance of both manned and unmanned ‘booth-style’ tanning parlours. Studies have shown that the guidelines for sunbed use set out by the Health and Safety Executive are not being followed by either providers or clients.14,15 There is also increasing anecdotal comment in the media around the inappropriate use of sunbeds (commercial and domestic) by school children in the United Kingdom and Ireland.16–20

There was an impression among school nurses in the Wishaw Local Health Care Co-operative (LHCC) area in Lanarkshire, Scotland, that a number of primary aged schoolchildren were using sunbeds and some were claiming to be regular users. This was considered a potentially serious public health risk, and a reconnaissance study was organized to investigate the situation and assess the scope of any potential problem.

Methods

A questionnaire was prepared consisting of school name, class, class attendance on day of study and seven questions. Once permission from the school headteacher had been given, the school nurse conducted the survey by asking children to raise their hands if in agreement with each question. The number of children raising hands was recorded. The survey was conducted in the 3 weeks before schools breaking up for the summer holidays at the end of June 2003. Completed questionnaires were analysed in SPSSv10.
The survey was targeted at primary school children in class 4 (8–9-year-olds) and mostly composite classes 6 and 7 (10–11-year-olds). In Ireland the suggestion has been raised that children receive tanning sessions before their first communion celebrations. The authors were therefore interested in the 8–9-year-olds as well as the older primary school age group, as it is often in the class 4 school year that children may receive their first communion in the Catholic tradition.

Results

The LHCC is a health care defined administrative area comprising the catchment area of a group of general practitioners. The Wishaw LHCC comprises a population of around 63,500 with 5300 children registered on the primary school roll. There are 23 primary schools in the area and all agreed to take part in the survey. A total of 1405 pupils took part in the survey. One primary 7 class could not be visited because of local circumstances on the day.

Just under half (48 per cent) the children raised their hands to the question, ‘Hands up if you would like to use a sunbed?’ Nearly 7 per cent thought that using a sunbed was good for their skin and the same percentage (6.8 per cent) had actually used a sunbed in 2003 (i.e. in the 5½ months January to mid-June).

Of these 96 children who professed to using a sunbed this year, 61 (64 per cent) admitted to using a sunbed in someone’s house, and 23 (24 per cent) had used a sunbed in a shop or salon. Sixteen (17 per cent) agreed that they used a sunbed regularly. ‘Regularly’ was defined as once every fortnight or more often. Of particular concern was that 29 (30 per cent) of the 96 who admitted to using a sunbed said they had suffered sore skin or sore eyes after using the sunbed.

When the data were analysed by year groupings a picture emerged suggesting that the older children were less likely to use or want to use a sunbed. They were also less likely to think that using a sunbed was good for their skin (Table). A higher proportion of the younger children reported using a sunbed regularly than older children and fewer older children reported sore skin or eyes after sunbed use. Whether domestic or commercial facilities were used was similar for both age groups.

Table

Sunbed use by year group (numbers, with percentages given in parentheses)

<table>
<thead>
<tr>
<th></th>
<th>Primary class 4</th>
<th>Primary class 6/7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would like to use a sunbed</td>
<td>258 (60.8)</td>
<td>411 (42.5)</td>
</tr>
<tr>
<td>Using a sunbed is good for your skin</td>
<td>79 (18.6)</td>
<td>17 (1.8)</td>
</tr>
<tr>
<td>Have used a sunbed (in 5½ months)</td>
<td>42 (9.9)</td>
<td>53 (5.5)</td>
</tr>
<tr>
<td>Use a sunbed regularly</td>
<td>10 (2.3)</td>
<td>6 (0.6)</td>
</tr>
<tr>
<td>Used in someone’s house</td>
<td>27 (6.4)</td>
<td>33 (3.4)</td>
</tr>
<tr>
<td>Used in a shop or salon</td>
<td>11 (2.6)</td>
<td>12 (1.2)</td>
</tr>
<tr>
<td>Sore skin or eyes after use</td>
<td>16 (3.8)</td>
<td>13 (1.3)</td>
</tr>
<tr>
<td>Base number (= 100%)</td>
<td>424 (100)</td>
<td>968 (100)</td>
</tr>
</tbody>
</table>

The dataset was also examined by school. For the initial question relating to desire to use a sunbed the range of affirmative responses varied from 17 per cent to 83 per cent. The proportion that had actually used a sunbed in the past year ranged from zero in two schools to between 17 and 20 per cent in three schools. There was no apparent link between characteristics of the schools or their catchment areas and the proportion of pupils endorsing or using sunbeds.

Discussion

This survey was conducted as a swift response to an expressed concern by school nurses. As such it lacks the rigour of more formally conducted research. However, it achieved the purpose of its design, namely to identify if the anecdotal concerns are worthy of public health investigation and response.

According to well-established regulations no child under 16 should be using a sunbed, domestic or commercial. This small survey suggests that almost 7 per cent of children aged 8–11 in Wishaw have used a sunbed in the previous 5–6 months and 1.3 per cent may be using one as regularly as every fortnight. Approaching one-third of users have possibly experienced side effects such as sore skin or eyes.

The survey can be criticized for using the ‘hands up if …’ approach. There is the definite risk of children copying their friends’ actions to raise or not raise their hands. When the school nurses who conducted the survey were asked about this potential bias they were unanimous that they did not detect any obvious ‘copycat’ activity when administering the survey. None the less, this potential bias might explain the higher responses in the younger classes and the variability across schools.

Conclusions

This survey suggests that a significant number of primary school children in the Wishaw area might be using tanning devices either in the home or on commercial premises. Further research using more rigorous methods appropriate to young children is required to further explore the results of this reconnaissance survey. However, pending such research, the application of the ‘precautionary principle’ towards the use of sunbeds requires a concerted public health response at national and local level. Monitoring of the availability and use of commercial sunbeds and provision of a more stringent regulatory process for commercial artificial tanning is required. This approach should be pursued alongside enhanced awareness-raising of the risks, targeting parents, schoolteachers and children of primary school age.

Acknowledgements

We thank the teachers and pupils of primary schools classes who took part in the study, the school nurses who conducted the data collection, the Information Services Unit, which analysed the data, and Dr David Gordon for advice in the preparation of the paper.
SUNBED USE BY PRIMARY SCHOOL CHILDREN

References


8 Autier P, Dore JF, Lejeune F. Cutaneous malignant melanoma and exposure to sunlamps or sunbeds: an EORTC multicentre case-control study in Belgium, France and Germany. *Int J Cancer* 1994; 58: 809–813.


*Accepted on 4 November 2003*