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RESEARCH LETTER

A Comparison of Tanning Habits Among Gym Tanners and Other Tanners

Physical activity has been associated with increased risk of malignant melanoma, as has the use of tanning beds. The presence of tanning beds in gyms is a concerning trend. Two of the largest American gym chains (Planet Fitness and Anytime Fitness) with total combined membership of more than 13 million people, offer indoor tanning. Nearly half of the gyms in Canada offer indoor tanning as well. Little is known about the characteristics of tanners who use gym tanning beds. The present study examined the proportion of indoor tanners who use gym tanning beds and tested whether they have riskier habits than other tanners. We also examined whether physical activity was related to the frequency of indoor tanning among tanners.

Methods | A nationally representative sample of 773 individuals who have ever tanned indoors or who intend to tan was recruited through Survey Sampling International. We used data from the 636 participants who had tanned indoors at least once. Participants were asked whether they had ever used a tanning bed or booth in a gym as well as if they tan primarily in a location other than a tanning salon and, if so, to indicate that location. We report the proportion of indoor tanners who have ever tanned in a gym and those who primarily tan in gyms. We then compared those who had tanned in gyms with those who had never tanned in a gym on demographics, physical activity, indoor tanning frequency in the past year, and criteria for tanning dependence. Finally, we examined the correlation between physical activity frequency and past year indoor tanning. Physical activity was measured via a single item asking, “how many of the past 7 days did you exercise or participate in sports activities for at least 20 minutes that made you sweat and breathe hard.” Tanning dependence was measured using the 7-item Behavioral Addiction Indoor Tanning Screener (BAITS), a screener developed to capture tanning behaviors that correspond to behavioral addictions, such as feelings of diminished control and strong urges to engage in indoor tanning. Participants who indicated 2 or more BAITS items were considered positive for tanning dependence. The institutional review board at the University of Massachusetts Medical School determined that this study was exempt from review. Bivariate comparisons were performed using χ² tests and 2-tailed, independent-samples t tests, as appropriate, with significance determined at P < .05. All analyses were performed in SPSS software, version 23 (SPSS Inc).

Table. Demographic Characteristics (N = 636)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Tanned in Gym, No. (%)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never (n = 482)</td>
<td>Ever (n = 154)</td>
</tr>
<tr>
<td>Age, mean (SD)</td>
<td>37.11 (13.59)</td>
<td>33.40 (9.75)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>322 (76.1)</td>
<td>101 (23.9)</td>
</tr>
<tr>
<td>Men</td>
<td>160 (75.1)</td>
<td>53 (24.9)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>375 (77.8)</td>
<td>111 (72.1)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>49 (10.2)</td>
<td>19 (12.3)</td>
</tr>
<tr>
<td>Other</td>
<td>58 (12.0)</td>
<td>24 (15.6)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school or GED</td>
<td>69 (14.4)</td>
<td>15 (9.9)</td>
</tr>
<tr>
<td>Some college</td>
<td>116 (24.3)</td>
<td>32 (21.1)</td>
</tr>
<tr>
<td>Associate/bachelor degree</td>
<td>217 (45.4)</td>
<td>76 (50.0)</td>
</tr>
<tr>
<td>Postgraduate degree</td>
<td>76 (15.8)</td>
<td>29 (19.1)</td>
</tr>
<tr>
<td>Income per year, $</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 000</td>
<td>81 (16.8)</td>
<td>18 (11.7)</td>
</tr>
<tr>
<td>30 000-59 999</td>
<td>154 (32.0)</td>
<td>48 (31.2)</td>
</tr>
<tr>
<td>60 000-99 999</td>
<td>157 (32.6)</td>
<td>54 (35.1)</td>
</tr>
<tr>
<td>100 000 or greater</td>
<td>90 (18.7)</td>
<td>34 (22.1)</td>
</tr>
<tr>
<td>Indoor tanning frequency in past year, mean (SD)</td>
<td>13.56 (20.22)</td>
<td>18.57 (22.63)</td>
</tr>
<tr>
<td>Days exercised in past 7 d, mean (SD)</td>
<td>2.73 (2.14)</td>
<td>3.85 (2.14)</td>
</tr>
<tr>
<td>Symptoms of tanning addiction</td>
<td>158 (32.8)</td>
<td>72 (46.8)</td>
</tr>
</tbody>
</table>

Abbreviation: GED, general education development.
Indoor tanning frequency (A) and dependence (B).

**Results** | Findings revealed that 154 indoor tanners (24.2%) had tanned at least once in a gym and 44 of them (28.6%) reported tanning primarily at a gym. People who had tanned in a gym were younger than other tanners (mean [SD], 33.40 [9.75] vs 37.11 [13.59] years; \( P < .001 \)) and more physically active (3.85 [2.14] vs 2.73 [2.14] days/wk; \( P < .001 \)), but did not differ by sex (Table). People who had tanned in a gym reported significantly more tanning visits in the past year (18.57 [22.63] vs 13.56 [20.22] visits; \( P = .01 \)) and were more likely to be at risk for tanning dependence than other tanners (72 [46.8%] vs 158 [32.8%]; \( P = .002 \)) (Figure). Physical activity was associated with higher frequency of tanning (\( r = 0.12; P = .003 \)).

**Discussion** | Approximately 25% of tanners have tanned in gyms and they tan 67% more often than other tanners. Nearly half of gym tanners were at risk for tanning dependence. Gym tanners were more physically active than other tanners. Among all tanners, greater physical activity was associated with more tanning visits. The presence of tanning beds in gyms could reinforce the misconception that tanning is healthy. Gym owners’ awareness of the risks of tanning beds should be explored as well as their reasons for including tanning in their businesses. Skin cancer prevention efforts targeting gyms and active adults in general are needed.

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**Author Contributions:** Dr Pagoto and Ms Frisard had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

**Concept and design:** Pagoto, Lemon, Hillhouse.

**Acquisition, analysis, or interpretation of data:** Pagoto, Nahar, Frisard, Conroy, Oleski, Hillhouse.

**Drafting of the manuscript:** Pagoto, Nahar.

**Critical revision of the manuscript for important intellectual content:** All authors.

**Statistical analysis:** Pagoto, Frisard.

**Obtained funding:** Pagoto, Hillhouse.

**Administrative, technical, or material support:** Nahar, Oleski, Hillhouse.

**Supervision:** Pagoto, Oleski.

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**Disclaimer:** The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.


