Trends in dietary supplement use among US adults between 2009 and 2018

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Introduction

- A previous study reported overall use of dietary supplements among United States (U.S.) adults remained stable from 1999 to 2012 [1].
- Little is known about trends among U.S. adults over the last ten years [2-3].
- We reported trends in dietary supplement use in recent cycles of the National Health and Nutrition Examination Survey (NHANES) [4].

Methods

Population

- The NHANES is a serial cross-sectional study of noninstitutionalized adults and children residing in the U.S.
- We included adults aged over 19 y from 2009 to 2018 (five continuous 2-year cycles).

Dietary supplements assessments

Information about dietary supplement use was collected in an in-home interview by asking the participants whether they used any dietary supplements in the preceding 30 days.

Statistical analyses

- Survey-weighted prevalence was calculated to be nationally representative of the U.S. population.
- Survey-weighted logistic regression was used to calculate a P value for trend across cycles.
- Subgroup analyses were conducted by age, sex, race/ethnicity, education status, body mass index, and self-reported health status.

Results

The overall use of any dietary supplements among U.S. adults increased during the last ten years. The trend was robust among different population groups.

Table 1. Overall Supplement Use in Prior 30 Days Among US Adults (≥ 19 years) by Population Characteristics, 2009-2018

<table>
<thead>
<tr>
<th>Age group, y</th>
<th>Overall</th>
<th>19-39</th>
<th>40-59</th>
<th>≥ 60</th>
<th>Sex</th>
<th>Male</th>
<th>Female</th>
<th>Race</th>
<th>Other/mixed</th>
<th>Education</th>
<th>Body Mass Index</th>
<th>Self-reported health status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total No. of participants, n</td>
<td>28415</td>
<td>14298</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Weighted Percentage, % (95%CI)</td>
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</tr>
</tbody>
</table>

Table 2. Trends in Overall Supplement Use Among US Adults (≥19 years), 2009-2018

<table>
<thead>
<tr>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Any supplement</td>
<td></td>
<td>49.5</td>
<td>51.4</td>
<td>53.5</td>
<td>55.8</td>
<td>57.4</td>
<td>57.4</td>
<td>7.9 (57.4/49.5)</td>
</tr>
<tr>
<td>≥ 4 supplements</td>
<td></td>
<td>(47.1, 51.8)</td>
<td>(48.9, 53.9)</td>
<td>(50.8, 56.3)</td>
<td>(52.7, 58.9)</td>
<td>(54.4, 60.4)</td>
<td>(54.4, 60.4)</td>
<td>7.9 (54.4/57.4)</td>
</tr>
<tr>
<td>≥ 4 supplements</td>
<td></td>
<td>7.8</td>
<td>9.7</td>
<td>10.7</td>
<td>14.2</td>
<td>14.1</td>
<td>14.1</td>
<td>6.3 (14.1/7.8)</td>
</tr>
</tbody>
</table>

Discussion

Summarized results

- The overall use of any dietary supplements increased between 2009 and 2018.
- Use of four or more supplement products also increased from 7.8% to 14.1% between 2009-2010 and 2017-2018 cycles.
- The increasing trend was consistent across different age and sex groups, and more pronounced among participants with higher education, higher body mass index, and fair or poor self-reported health status (data not shown).

Reference