Fidgeting in Hong Kong adolescents and its associations with physical activity and weight status

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Introduction

What is fidgeting?
- Fidgeting is the engagement of physical movements which are not vital to the current focal tasks
- Examples: tapping feet, twirling hair
- Energy expended may accrue to have a significant impact on total daily energy expenditure
- Potential implications on obesity
- Studies on fidgeting are few and none have been conducted in Hong Kong adolescents

Objective: To investigate the prevalence of fidgeting in Hong Kong adolescents and its associations with physical activity and weight status.

Methods

Study design
- Hong Kong Obesity Surveillance (HKSOS) Project 2006-07
- 42 randomly selected schools
- 34678 students (mean age 14.6, SD 2.0, boys 44.1%)

Measurements (Questionnaire)
- Fidgeting ("Has anyone described you as can’t sit still/never stopping/always fidgeting?")
  - "Always"/"Sometimes" ➔ Fidget
  - "Rarely"/"Never" ➔ Non-fidget
- Weight and height
- Exercise
- Non-exercise physical activity (NEPA)
- Sedentary screen time (TV and computer use)

Analysis
- Logistic regressions
- Adjusted for potential confounders and school clustering

Results

Key Message 1: Prevalence of fidgeting was 38.2% (95% CI 37.7%-38.7%)
Key Message 2: Fidgeting was associated with increased levels of daily exercise, non-exercise physical activity (NEPA) and screen time

Key Message 3: Fidgeting was not significantly associated with weight status
- Adjusted odds ratios (AOR, 95% CI) below:

<table>
<thead>
<tr>
<th></th>
<th>Underweight vs. normal</th>
<th>Overweight/obese vs. normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fidgeting</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Fidgeting</td>
<td>0.93 (0.82 – 1.05)</td>
<td>0.96 (0.88 – 1.04)</td>
</tr>
</tbody>
</table>

Conclusions

- Fidgeting is prevalent in Hong Kong adolescents
- Fidgeting is associated with exercise, NEPA and screen time
- Our results do not support an independent association between fidgeting and weight status
- Implications: Future studies should investigate whether discouraging fidgeting is harmful and encouraging fidgeting is beneficial to exercise and NEPA levels

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