Profiling eating trajectories of students using university canteens during their master courses

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Objective

The present study aims at identifying trajectories related to eating habits of students using university canteens applying regression models and latent class analysis to data about food consumed automatically recorded by cashiers when accessing the canteens all over the duration of their courses (3-years).

Methods

Study population

The population under study is composed of students enrolled in courses at Pisa University who access the canteens serving the university of interest in the academic years from 2010-11 to 2013-14. In order to observe the behaviour over a sufficient period of time only students enrolled in first-degree courses and accessing the canteen at least once over three years were considered. Although limiting the size of the population and its representativeness, these criteria allow for the evaluation of eating behaviour trajectories and prevent the inclusion in the analysis of subjects with diverse observation period and/or right censored for diverse and unknown reasons that could lead to biases.

Data sources and variables

Analyses were performed merging two different sources of data: the administrative archives of the University of Pisa and the database of Azienda Regionale per il Diritto allo Studio Universitario (DSU). The two source of data were merged by the anonymous patient identification number. Each meal was coded with a unique identifier that allows for the linkage of the food consumption data with student’s personal data collected through the DSU database, containing, for each student, data on age, sex, place of birth, and year of registration in the university career from the university administrative archive.

In the present analysis departments were grouped on the basis of the main subject of study, distinguishing from Department of Humanistic/Social sciences and Data Science/Medical. The DSU database, contains, for each students enrolled in each year, the number of access over 5% of the distribution in all the three consecutive years after the enrolment.

Food-group consumption by enrolment cohort and year of enrolment

The table below shows the frequency of food-groups consumption by enrolment cohort and year of enrolment.

<table>
<thead>
<tr>
<th>Food-group</th>
<th>CL1</th>
<th>CL2</th>
<th>CL3</th>
<th>CL4</th>
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<tbody>
<tr>
<td>Year 1</td>
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<td>Year 2</td>
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<td>Year 3</td>
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</tbody>
</table>

In general, compared to the year of registration, in the following years there was an increase in the frequency of choice of fruit, vegetables, soups, fish and grasses and choose, in line with the median frequency, potatoes, fries, meat, legumes and sweets.

Conclusions

The evolution of eating habits seems to suggest a tendency, over the years after enrollment, to favor starchy foods / grasses and vegetables / "selective eaters". This can also be explained in the light of acquiring starchy foods / grasses and vegetables / "selective eaters".

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