Segmenting students based on their levels of dietary balance and culinary preparation skills for a more successful mentoring experience on university campuses

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Abstract

• *Objective*

Students' diets are often portrayed as unstructured, unbalanced, with a frequent reliance on fast food. However, the status of student hides different realities. This research aims to highlight the heterogeneity of students *via* a typology based on their levels of dietary balance and culinary preparation in order to propose targeted actions.

• *Methodology*

After the analysis of 36 semi-structured interviews with students, a quantitative study by self-administered questionnaire was conducted online with students of various profiles (n= 804). The cluster analysis was carried out on SPSS (CAH - Ward's method, then non-hierarchical classification) by preserving as many nuances as possible between the levels of dietary balance and cooking.

• *Results*

The cluster analysis reveals five segments: the *First of the class*, the *Uninvolved*, the *Challengers*, the *Clever ones*, and the *Cooks' apprentices*. These profiles differ in terms of culinary practices, dietary balance, socio-demographic and behavioral variables.

• *Managerial implications*

This typology can be used for targeted actions by the actors concerned (CROUS, associations, etc.) particularly in the context of University Social Responsibility (USR). Indeed, interest in support services varies according to profile. The *Uninvolved*, who would need it most, appear difficult to reach. The *First of the class* could be mobilized to guide them towards better practices.

• *Originality*

The originality of this research relies on the one hand on the explicit measurement of the levels of food balance and cooking, studied jointly and on the other hand on the segmentation of the students.

• *Keywords:* cluster analysis, cooking, food balance, food diet, students.

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Student nutrition, which has recently been the center of media attention, is generally associated with fast food, alcohol and highly processed food[1]. Students are presented as a homogeneous group with its own shared dietary behavior. With the pandemic, this cliché has lost ground in the media in favor of questions regarding students' dietary precariousness and surges of popular solidarity[2]. Students are still being simplistically betrayed, however, as a homogeneous population. Stereotypical sentences such as 'students eat poorly' have turned into 'students are not eating enough' because they cannot afford to eat more.

Until recently, publications have rarely focused on students' diets, since students were not considered to be at risk. Articles in health and nutrition reviews of late have globally reversed this trend. Students' diets are now being examined under the angle of food insecurity, or "the lack of regular access to healthy food" (Bruening *et al.*, 2017). According to Freudenber, Goldrick-Rab and Poppendieck (2019), growing interest in this subject is linked to two factors. The first is global student paucity, forcing them to consume cheap products of often questionable nutritional quality. The second is the evolution of nutritional research highlighting the link between food insecurity and obesity, stress and even poor scholastic performance. Following a systematic review of international publications (Bruening *et al.*, 2017), between 20 and 50% of all students suffer from food insecurity. They are thus an at-risk population in this regard (Comoretto *et al.*, 2020).

The ascension to higher education is seen as an important step in one's life leading in turn to an identity transformation which is often accompanied by leaving the family nest (Blichfeldt and Gram, 2013). The further students move away from home either intermittently or permanently and distance themselves from their families, the greater is their tendency to stray from family feeding habits (Grignon, 2003). This identity transformation occurs *via* habit forming, or the acting out of various and notably food related behavior patterns as part of the autonomy acquiring process (Garabuau-Moussaoui, 2002; Ladwein *et al.*, 2009), such as shopping, planning a budget, cooking, feeding oneself autonomously, etc. One result of acquiring autonomy is characterized in the United States as the 'Freshman 15 Syndrome' meaning that during their first year in university, students typically gain 15 pounds, or nearly seven kilograms (Doherty, Cawood and Dooris, 2011).

As was remarked by Blichfeldt and Gram (2013), student stereotypes lead one to think of students as forming a homogeneous group sharing identical unhealthy eating habits and entering into higher education with neither previous nutritional knowledge nor skills. Student diversity (Insert 1) in terms of age, living conditions, family and financial situations, not to mention cultural differences, does not seem to be taken into account. This does not facilitate the work of such organizations as CROUS (Centre régional des œuvres universitaires et scolaires: Regional Center for university and scholastic endevours) or associations seeking to help students in their autonomous transitional phase to adulthood. This present research seeks to fill that gap by proposing a typology of French students, undertaken by taking into consideration two factors: their dietary balance and their level of culinary practice. The object is to propose adapted solutions for identified targets. By thus doing, this research is an act of social marketing and opts for a dietary health approach rather than one of well-being (Sadoun, 2020). One of the goals of this article is to thus offer indications of RSU (Responsabilité

1/ Ex: https://www.ladepeche.fr/article/2018/10/01/2879370-le-fleau-de-la-malbouffe-chez-les-etudiants.html

2/ Ex: https://www.bfmtv.com/societe/face-a-la-crise-l-aide-alimentaire-est-devenue-indispensable-pour-les-etudiants_AV-202102090262.html