Household food insecurity and its determinants in the adult population in France

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Background

Food insecurity forms a part of a causal chain that begins with economic considerations and ends with nutritional outcomes such as unhealthy diet and increased risk of obesity (Rose, 1999). Although food insecurity has become a matter of increasing concern in Europe, few studies have assessed its prevalence and its determinants in general populations.

Objective

Using an original indicator, easily usable, we evaluated the prevalence of food insecurity and identified the demographic and socioeconomic characteristics of food insecure population in France.

Methodology

1- Design and sampling

This analysis was based on a multistage stratified random sample of adults aged 18-74-years-old from the French Nutrition and Health Survey (ENNS), a cross-sectional national survey carried out in 2006-2007.

Table 1. Classification of categories of food insecurity components to construct food insecurity indicator

	Severe food insecurity	Mild Food insecurity	Food security
Quantity component	Sometimes or often **did not have enough** to eat	**Have enough** food to eat **but not always** the kinds of food they wanted	**Have enough** food to eat
Quality component		**Cannot afford** to eat "fruit and vegetables" and "meat, seafood and eggs" every day	**Can afford** to eat "fruit and vegetables" and "meat, seafood and eggs" every day
Psychosocial acceptability	**Often** anxious about lack of food	**Sometimes or occasionally** anxious about lack of food	**Never** anxious about lack of food

2- Variables

- *Assessment of food insecurity status*: Using multiple correspondence analysis, an indicator reflecting 3 dimensions of food insecurity (psychosocial acceptability quantity and quality) was constructed. The 'quantity' component was measured by household food insufficiency. The 'quality' component was assessed by the household financial insufficiency to consume 'healthy' food groups. The anxiety about lack of food reflected the 'psychosocial acceptability' (**Table 1**).

- *Assessment of explanatory factors*: Gender, age, migration status, marital status, education level, current job status, household status relating to dwelling, household circumstances (financial difficulties).

3- Statistical analysis

Associations of food insecurity with demographic and socioeconomic factors were tested using multivariate logistic regression models, including significant interactions between explanatory variables.

Results

Prevalence of food insecurity

Overall, 1.8% of individuals lived in a household who experienced severe food insecurity but 24.0% were classified in mild level of food insecurity in France. Both categories were combined into one for multivariate analyses.

Determinants of food insecurity (**Table 2**)

Compared to homeowners, subjects who were renting were more likely to experience food insecurity. Individuals who were unemployed, and those who were "homemakers or disabled" were more likely to be food insecure than those who were employed. Difficulties relating to household circumstances were positively associated with food insecurity. Moreover, the higher the age range, the more significant the association between household circumstances and food insecurity.

Table 2. Multivariate logistic analysis of the association between socioeconomic determinants and food insecurity

	OR	95% CI	Global P-value
Main effects			
Age, years			
18-29	1.59	0.93-2.72	0.09
30-54	1.00		
55-74	0.58	0.29-1.12	0.11
Job status			
Unemployed	2.39	1.54-3.70	<0.0001
Homemakers, disabled persons, others	1.79	1.21-2.65	0.004
Retired	0.98	0.57-1.70	0.96
Student	0.69	0.34-1.39	0.30
Employed	1.00		
Status relating to dwelling			
Housed by family or friends	0.99	0.50-1.95	0.97
Tenant	1.34	1.02-1.76	0.03
Home owner	1.00		
Household circumstances			
In debt	16.84	9.55-29.68	<0.0001
Difficulty to make ends meet	5.00	3.49-7.15	<0.0001
No difficulty	1.00		
Interactions			
Age* Household circumstances			0.003

Conclusion

Our food insecurity indicator reflects food poverty but also food precariousness which was identifiable not only in economically deprived but also in middle-income households, particularly elderly persons. Assessing different dynamic aspects of socioeconomic position, our study also highlighted that both recent economic changes and cumulative economic events were strong determinants of food insecurity.

References

Rose D. Economic determinants and dietary consequences of food insecurity in the United States. J Nutr. 1999;129:517S-20S