



## A Comparative Study of Breakfast Habits of Romanian and Spanish Adolescents Enrolled in Southern Spain Schools<sup>1</sup>

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**Abstract:** **Introduction:** Globalization has favored intra-European Commission (EC) and extra-EC migration to Spain. One of the most numerous cultural groups that have settled in the southern Spain is from Romania. Coexistence, especially in schools, has made us become interested in knowing the eating habits at breakfast of Romanian and Spanish populations. Numerous studies show that the food intake at breakfast, mostly made before leaving home, has an incidence on the physic wellbeing of adolescent throughout the day. The processes of acculturation are also inseparable from the eating habits, health and life, that maintain the migrant teenagers. Breakfast is analyzed as one of the habits more associated with diet quality; paradoxically, one of the findings of our study, many adolescents do not take a proper breakfast every day. **Objectives:** The study analyzes the characteristics and the main cultural and gender differences in the implementation of breakfast: its maintenance or omission in young autochthonous and immigrants of Romanian origin in the southeast Spanish schools. **Design.** This is a cross-sectional study with a cluster sampling in two Primary schools and seven Secondary schools. The instrument applied was an adaptation of the KIDSCREEN-27 questionnaire. **Sample.** It has been formed by 1472 students between 11 and 18 years old; nationality: 1315 were Spanish and 157 were Romanians. **Data analysis.** Descriptive and differential analyses using the chi-square and U of Mann-Whitney statistics. **Results:** In the study we identified 1.2% of Spaniards and 3.3% of Romanians who either skip breakfast or do not eat foods throughout the morning. The main breakfast foods of the Spanish students are dairy, bread and cereals, cookies, juice and olive oil; for the Romanian students the basic

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*foods at breakfast are cereals, dairy products, juices, biscuits and jams. We have found significant differences between the two compared cultural groups. We also found significant differences between the food eaten by men of the two cultural groups (Spanish and Romanian) and by the food eaten by women (Spanish and Romanian) in the breakfast food.*

**Conclusions:** *The results show the need to further promote and implement educational programs that encourage students to make breakfast before leaving home. Also, it is necessary, they take care of the intake of the right foods to start the day and contemplate this habit from a transcultural and gender approach. Significant differences were identified in the breakfast practice food by both genders and cultural groups.*

**Keywords:** adolescents, immigrants, Spanish and Romanian, practice breakfast

*Introduction.* One of the main problems of public health and health education is the gradual disintegration of eating habits (Lytle et al., 2000). This is particularly evident among adolescents through practices such as skipping or eating less for breakfast. The impact of skipping breakfast is not insignificant. Several investigations argue that such behaviour increases the risk of obesity among young people (Thompson-McCormick et al., 2010) and is linked, among other things, to an increased consumption of energy-dense snacks and higher cholesterol levels (Renzaho, Swinburn & Burns, 2008; Resnicow, 1991). Some studies with adolescent women have shown that it is a symptom of eating disorders and nutritional behaviour problems (Quiles-Marcos et al., 2011).

Despite the major immigration changes that have occurred the health situation of the immigrant population and the differences in relation to the native population is another aspect rarely considered by the Spanish public health. In this regard, we have identified, in some contexts, conflicting phenomena that explain the maintenance of positive habits among immigrant populations such as: the "immigrant Elath paradox" (Singh & Siahpush, 2002) and the "cultural buffering" by which their sociocultural and axiological heritage allows them to follow healthier behaviours than the native population (Taylor & Sarathchandra, 2015). Meanwhile, in other contexts, an aggravation of the behaviour patterns that entail increased health risks have been observed. This deterioration is due to social factors associated with the lower socioeconomic status of migrants (Magnusson et al., 2011) and also a westernisation of behaviours because of food acculturation (Neuhouser et al., 2004). The adoption of Western habits has led to a quantitative and qualitative deterioration of diets: a reduction of vegetable intake, increase of the consumption of high-calorie foods and refined sugars and skipping meals such as breakfast.

At the same time, other factors in relation to the environment, school, and family or at a personal level have been observed which could have a positive or negative impact on eating breakfast. Dubuisson and colleagues (2012) established an association between using the school canteen and lower levels of skipping breakfast. In regard to environmental factors living in urban areas has been linked to skipping breakfast more often (Maddah et al., 2007).

The aim of this study is to find out how Romanian adolescents living in the Southeast of Spain have breakfast and their situation in relation to the native population.

## *Method*

### *Sample*

The sample consisted of 1472 children and adolescents, 1315 were Spanish and 157 of Romanian origin living in the southeast of Spain. The students were aged between 10 and 19 in both groups, with an average age of 14.29 years among the Spaniards and an average of 14.52 for the Romanians. Regarding gender, 50.1% were Spanish women and 58.6% were Romanian women; and 49.9% were Spanish men and 41.4% were Romanians.

85.4% of the sample of the Spanish children and adolescents did not suffer from any disease, 7.1% reported to suffer from asthma and allergies, 0.8 had thyroid problems and a very low percentage suffered up to 57 additional diseases. 91.7%, of Romanian students claimed to be completely healthy, allergy and asthma suffered by 5.1% and there was a percentage of 0.6% for epilepsy, diabetes, heart problems, etc.

Most of them, both Spanish and Romanian perceive their health as good or very good, 93.7% of Romanians and 93.2% of Spaniards.

### *Instrument*

The KIDSCREEN-27 questionnaire that assesses 10 dimensions of health and quality of life (Ravens-Sieberer et al., 2007:8) was used. The pattern of response is formulated according to the Likert scale in order to assess the frequency or intensity of each of the aspects addressed. Numerous studies have validated the questionnaire cross-culturally (Ravens-Sieberer et al., 2008). Specifically, this research focuses on the section related to breakfast.

### *Procedure*

It is a cross-sectional randomised study by clusters and by schools. With the support of the Department of Education the schools with the highest proportion of immigrant students were selected. The schools where the questionnaire would be applied were selected from the centres list.

## Data Analysis

The data were analysed with the statistical analysis program SPSS version 21. Given the data characteristics percentage calculations were made. Differential calculations are performed using the statistical chi-square ( $\chi^2$ ) and the Mann–Whitney U test.

## Results

### *Breakfast consumption among Spanish and Romanian adolescents*

71.6% of Spanish pupils eat breakfast every day before leaving home, whilst only 43.8% of Romanian students leave home having had breakfast. In addition, 47.9% of Spanish adolescents and 28.1% of Romanian adolescents eat breakfast every day before leaving home and do so once again at midmorning. Breakfast is an important meal for everyone but especially for young adults given the high levels of energy consumed daily, particularly during the school years. Of students who leave home without having eaten food, and then have breakfast at midmorning, 5.2% are Spanish and 7.2% are Romanian. The percentage of Romanian students who do not have breakfast before leaving home nor at midmorning is also higher, 3.2%, compared to Spaniards 1.2%.

Table 1. Breakfast consumption before leaving home among Spanish and Romanian pupils

|              | Romanian pupils |          |   |          |                       |          |         |          |
|--------------|-----------------|----------|---|----------|-----------------------|----------|---------|----------|
|              | Every day       |          | Midmorning breakfast<br>4 to 6 times per week |          | 1 to 3 times per week |          | Never   |          |
|              | Spanish         | Romanian | Spanish                                       | Romanian | Spanish               | Romanian | Spanish | Romanian |
| Every day    | 47,9%           | 28,1%    | 11,9%   | 7,8%     | 6,6%                  | 4,6%     | 5,2%    | 3,3%     |
| 4 to 6 times | 4,0%            | 4,6%     | 2,0%  | 4,6%     | 1,2%                  | 4,6%     | 0,2%    | 0,7%     |
| 1 to 3 times | 6,6%            | 8,5%     | 2,6%  | 5,2%     | 1,6%                  | 6,5%     | 1,4%    | 2%       |
| Never        | 5,2%            | 7,2%     | 1,1%  | 5,2%     | 1,4%                  | 3,9%     | 1,2%    | 3,2%     |

Spanish  $\chi^2 = 34,132$ ;  $p = 0.000$   
Romanian  $\chi^2 = 16,749$ ;  $p = 0.053$

### *Foods eaten at breakfast*

The types of foods consumed by teenagers are varied but differ in the proportion in which they are ingested. Spanish students eat more dairy products for breakfast than Romanians ( $U=84246,5$ ,  $p = 0.000$ ), however, Romanian pupils consume more caffeine-containing products such as coffee and tea than their Spanish classmates ( $U = 88261,00$ ;  $p = 0.000$ ). Fruit, which is considered to be an important food in diets is consumed in larger amounts by Romanian students than Spanish ( $U = 90760,5$ ;  $p = 0.004$ ). In Spain there is a great tradition of eating toast with olive oil at

breakfast, which can be observed in the percentage of Spanish students and less so among Romanian students with statistically significant differences ( $p=0.000$ ). Furthermore, marmalade is consumed less by Spaniards ( $U = 92502,5$ ;  $p = 0.002$ ). Moreover, there are foods that are transnational and ingested by the two cultural groups in the study such as bread, cereals and sweets. There are no differences either in the intake of ham and/or cheese at breakfast between the two cultural groups nor of cocoa or chocolate.

Table 2. Type of food eaten at breakfast by Spanish and Romanian pupils

|                          | Type of food eaten at breakfast |          |           | <i>p</i> |
|--------------------------|---------------------------------|----------|-----------|----------|
|                          | Spanish                         | Romanian | U         |          |
| Milk and/or yogurt       | 76,2%                           | 58,3%    | 84246,50  | 0.000    |
| Coffee or Tea            | 10,3%                           | 24,8%    | 88261,00  | 0.000    |
| Fruit and/or juice       | 37,7%                           | 49,7%    | 90760,50  | 0.004    |
| Bread, toast or cereals  | 63,7%                           | 64,3%    | 102496,50 | 0.876    |
| Biscuits and/or Pastries | 41,7%                           | 40,8%    | 102179,00 | 0.821    |
| Cheese and/or ham        | 15,1%                           | 18,5%    | 99703,00  | 0.263    |
| Butter or oil            | 29,5%                           | 15,9%    | 89116,00  | 0.000    |
| Marmalade                | 18,3%                           | 28,7%    | 92502,50  | 0.002    |
| Cocoa or Chocolate       | 30,8%                           | 29,9%    | 102337,50 | 0.825    |

\* $p < .05$ ; \*\* $p < .000$

### *Breakfast according to gender*

Differences have been observed in relation to gender and the amount of food that the students of both cultural groups studied eat for breakfast. We also considered interesting to see how the cultural group of origin influences female and male students.

### *Differences in breakfast intake among women in the two cultures studied*

When comparing the food adolescent women in our study eat at breakfast, it appears that there are differences in the intake of three types of food. The Spanish group consume more dairy and oil and/or butter than Romanian women ( $U = 25434$ ;  $p = 0.002$  y  $U = 27305$ ;  $p = 0.048$ ) however the Romanian adolescents drink more tea and coffee at breakfast than the Spanish ( $U = 24987$ ;  $p = 0.000$ ). Nevertheless, although the Romanians eat more fruits and juices, and marmalades, the differences are not statistically significant. It is worth highlighting that what goes beyond borders and are equally consumed by both are bread and cereals, pastries and biscuits, ham and cheese and cocoa.

Table 3. Foods eaten at breakfast by Spanish and Romanian women

|                          | Foods eaten at breakfast |          |       | <i>p</i> |
|--------------------------|--------------------------|----------|-------|----------|
|                          | Spanish                  | Romanian | U     |          |
| Milk and/or yogurt       | 72,5%                    | 56,5%    | 25434 | 0.002    |
| Coffee or Tea            | 9,7%                     | 27,2%    | 24987 | 0.000    |
| Fruit and/or juice       | 37,4%                    | 45,7%    | 27741 | 0.130    |
| Bread, toast or cereals  | 60,3%                    | 60,9%    | 30042 | 0.913    |
| Biscuits and/or Pastries | 40,4%                    | 42,4%    | 29673 | 0.719    |
| Cheese and/or ham        | 14,1%                    | 13%      | 29938 | 0.778    |
| Butter or oil            | 28,3%                    | 18,5%    | 27305 | 0.048    |
| Marmalade                | 19,3%                    | 27,2%    | 27851 | 0.08     |
| Cocoa or Chocolate       | 31%                      | 26,1%    | 28780 | 0.337    |

\**p* < .05; \*\* *p* < .000

### *Differences in breakfast intake among men in the two cultures studied*

Spanish male students consume more milk and butter and oil than their classmates from Romanian origin ( $U=16996,5$ ;  $p = 0.000$  y  $U=17306$ ;  $p = 0.002$  respectively). However, Romanian students consume more coffee and/or tea, fruits and juices, ham and cheese ( $U=19042,5$ ,  $p = 0.000$ ;  $U=17590$ ,  $p=0.006$  y  $U=19132,5$ ,  $p= 0.038$  respectively). There are other foods such as cereals, bread, pastries, biscuits and cocoa or chocolate that are transnational and transcultural and show no differences in relation to the diets of the two cultural groups.

Table 4. Food eaten at breakfast by Spanish men and Romanian men

|                          | Food eaten at breakfast |          |         | <i>p</i> |
|--------------------------|-------------------------|----------|---------|----------|
|                          | Spanish                 | Romanian | U       |          |
| Milk and/or yogurt       | 79,8%                   | 60,9%    | 16996,5 | 0.000    |
| Coffee or Tea            | 11%                     | 21,5%    | 19042,5 | 0.012    |
| Fruit and/or juice       | 38%                     | 55,4%    | 17590   | 0.006    |
| Bread, toast or cereals  | 67,3%                   | 69,2%    | 20882,5 | 0.755    |
| Biscuits and/or Pastries | 43%                     | 38,5%    | 20297,5 | 0.484    |
| Cheese and/or ham        | 16%                     | 26,2%    | 19132,5 | 0.038    |
| Butter or oil            | 30,9%                   | 12,3%    | 17306   | 0.002    |
| Marmalade                | 17,4%                   | 30,8%    | 18442,5 | 0.008    |
| Cocoa or Chocolate       | 30,7%                   | 35,4%    | 20287,5 | 0.436    |

\**p* < .05; \*\* *p* < .000

## *Discussion*

We believe that this study has provided interesting findings and the proposed objectives have been achieved. In the sample there is a small but worrying percentage of 3.2% of Romanians and 1.2% of Spaniards who attend school skipping breakfast, they do not have breakfast before leaving home nor at mid-morning at school. We are unsure as to whether this is due to a bad habit acquired by haste or the thin ideal, or may be the result of poverty situations in our society. The percentage of students who leave home without eating breakfast may be because they have bad habits with regard to sleep and stay up late and therefore are in a hurry in the morning and do not have time for breakfast. As Merino-Godoy (2008) suggests, it may also be due to the fact that students do not eat breakfast or have very little for breakfast because they are in a hurry, reflecting a fast-paced family life in which bad habits arise such as not having breakfast together as a family. As shown in the results, the most alarming behaviour is observed among Romanian students.

If we compare the food consumed by both cultural groups we see that the Spanish group have a higher intake of dairy products and oil than Romanians whilst the latter eat more fruit and drink more caffeine-containing products than Spaniards. The main types of food the Spanish consume in order of quantity are: dairy products, bread and cereals, biscuits, fruit, cocoa and oil. However, Romanians consume more quantities (in order) of bread and cereals, dairy products, juice and fruit, biscuits, cocoa and marmalade. This confirms that although there are universal foods that go beyond borders there are customs observed that are maintained in both the host population and the immigrant group.

As for the size of meals by gender, we can state that the women of the two cultures consume smaller amounts than men. We agree with Quiles-Marcos and his colleagues (2011) that this is due to the concern that adolescents manifest regarding their body and the desire to be thin, which can lead to eating disorders if educational programs on food and nutrition are not put in place.

The Spanish women follow the same diet, although in smaller amounts, as their male Spanish classmates in order of quantity: dairy products, bread and cereals, biscuits, fruit juice and oil. Romanian women also coincide with their peers of the same nationality in the food eaten for breakfast (following the order of quantity): bread and cereals, dairy products, juice and fruit, biscuits and in relation to beverages, women tend to drink tea and coffee and men cocoa.

## Conclusions

1. There are many students who enter the classroom every day having skipped breakfast.
2. Adolescent girls, regardless of the cultural group of origin, eat less food and less quantity than men.
3. We suggest making time for breakfast, parents should, regardless of their nationality, lead by example and educate families to begin the day calmly, together as a family seated around the table enjoying breakfast.

## References

- Dubuisson, C., Lioret, S., Dufour, A., Volatier, J. L., Lafay, L., & Turck, D. (2012). Associations between usual school lunch attendance and eating habits and sedentary behaviour in French children and adolescents. *European Journal of Clinical Nutrition*, 66 (12), 1335-1341.
- Lytle, L. A., Seifert, G. J., & McGovern, P. (2000). How do children's eating patterns and food choices change over time? Results from a cohort study. *American Journal of Health Promotion*, 14 (4), 222-228.
- Maddah, M., Rashidi, A., Mohammadpour, B., Vafa, R., & Karandish, M. (2007). In-school Snacking, Breakfast Consumption, and Sleeping Patterns of Normal and Overweight Iranian High School Girls: A Study in Urban and Rural Areas in Guilan, Iran. *Journal of Nutrition Education and Behavior*, 41 (1), 27-31.
- Magnusson, M. B., Sjöberg, A., Kjellgren, K. I., & Lissner, L. (2011). Childhood obesity and prevention in different socio-economic contexts. *Preventive Medicine*, 53 (6), 402-407.
- Merino-Godoy, M. A. (2008). Descubriendo los hábitos alimenticios en la escuela multicultural a través de los debates infantiles. *Index de Enfermería*, 17 (3), 183-187.
- Neuhouser, M. L., Thompson, B., Coronado, G. D., & Solomon, C. C. (2004). Higher fat intake and lower fruit and vegetables intakes are associated with greater acculturation among Mexicans living in Washington State. *American Dieting Association*, 104 (1), 51-57.
- Quiles-Marcos, Y., Balaguer-Solá, I., Pamies-Aubalat, L., Quiles-Sebastián, M. J., Marzo-Campos, J. C., & Rodríguez-Marín, J. (2011). Eating Habits, Physical Activity, Consumption of Substances and Eating Disorders in Adolescents. *The Spanish Journal of Psychology*, 14 (2), 712-723.
- Ravens-Sieberer, U., Gosch, A., Rajmil, L., Erhart, M., Bruil, J., Power, M., & KIDSCREEN Group. (2008). The KIDSCREEN-52 Quality of Life Measure for Children and Adolescents: Psychometric Results from a Cross-Cultural Survey in 13 European Countries. *Value in health*, 11 (4), 645-658.
- Ravens-Sieberer, U., Auquier, P., Erhart, M., Gosch, A., Ramjil, L., Bruil, J., Power, M., Duer, W., Cloetta, B., Czemy, L., Mazur, J., Czimbalmos, A., Tountas, Y., Hagquist, C., Kilroe, J., & European KIDSCREEN Group. (2007). The KIDSCREEN-27 quality of life measure for children and adolescents: psychometric results from a cross-cultural survey in 13 European countries. *Quality of Life Research*, 16 (8), 1347-1356.
- Renzaho, A., Swinburn, B., & Burns, C. (2008). Maintenance of traditional cultural orientation is associated with lower rates of obesity and sedentary behaviours among African migrant children to Australia. *International Journal of Obesity*, 32 (4), 594-600.
- Resnicow, K. (1991). The relationship between breakfast habits and plasma cholesterol levels in school children. *Journal of School Health*, 61 (2), 81-95.



- Singh, G. K., & Siahpush, M. (2002). Ethnic-immigrant differentials in health behaviors, morbidity, and cause-specific mortality in the United States: an analysis of two national data bases. *Human Biology*, 74 (1), 83-109.
- Taylor, C. A., & Sarathchandra, D. (2015). Migrant Selectivity or Cultural Buffering? Investigating the Black Immigrant Health Advantage in Low Birth Weight. *Journal of Immigrant Minority Health*, 19 Mar.
- Thompson-McCormick, J. J., Thomas, J. J., Bainivualiku, A., Khan, A. N., & Becker, A. E. (2010). Breakfast skipping as a risk correlate of overweight and obesity in school-going ethnic Fijian adolescent girls. *Asia Pacific Journal of Clinical Nutrition*, 19 (3), 372-382.