

# Lifestyle and health-related behaviours of the Czech and Ukraine university students: How do social and culture patterns influence their lifestyles?

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## Abstract

Lifestyle and health-related behaviours play an important role in the development of healthy lifestyles such as disease prevention during the school-age of university students. Empirical studies focused on healthy lifestyle acknowledge the importance of differences among nation and health related behavior. The question of this study is: How different are lifestyle and health-related behaviours of Czech and Ukraine university students? This cross-national study examined differences in the health behaviours, cultural, social context and lifestyle characteristics among university students. Data from a self-completed anonymous questionnaire from 160 students was analyzed with emphasis on differences by nation. We concluded that the Assessment of social relationships (as a consequence of food and eating) as cultural-social patterns has an important impact on lifestyle and health behaviour among university students.

**Keywords:** Consumer behaviour, Food related lifestyle, Culture differences, Eating attitudes.

## Introduction

Lifestyle and health-related behaviours play an important role in the development of healthy lifestyles such as disease prevention during the school-age of university students. Typically developing youth acquire new patterns of eating associated with social and culture factors resulting in a new direction of the food market i.e. vegetarian, farmers market, etc. One factor indicates unhealthy behaviours, such as personal standard, specifically the social-culture factor (Thomas et al., 2010).

Empirical studies focused on healthy lifestyles acknowledge the importance of differences among nation and health related behavior (Tirodimos et al., 2009; Thomas et al., 2010; Vermeier and Verbeke 2006; Nie & Zepeda, 2011). Ajzen and Manstead (2007) indicated that empirical studies used conceptual framework the theory of planned behaviour (Ajzen, 1991) to find the determinants of health-behaviours and according research's the environmental, demographic, and personal factors cannot provide successful explanation of lifestyle behaviours.

The theory of planned behaviours have been studied in detail. This theory consists of three determinants – attitudes towards the behaviour, subjective norms, and perception of behavioural approach. The theory is schematically represented below.

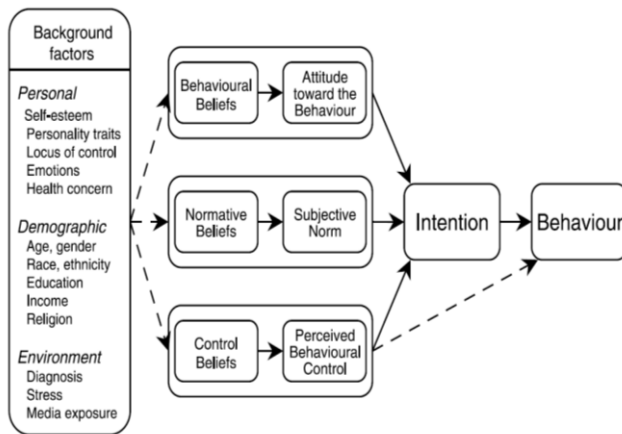


Fig 1. The theory of planned behavior (Ajzen, 1985)

To understand the attitudes and motivation of specific consumer groups, the food related lifestyle concept (FRL) (Brunsø & Gruneret, 1995) is used. Similarly, the social relation aspect is included. Numerous studies tested, innovated and used this concept, both in the food sector and for the purpose of the international comparison of consumer behaviour. This paper is focused on the implication of part of the food related lifestyle concept and on health behaviour lifestyle for each of the national groups to explain differences among university students.

#### *Aim of the study*

This study has investigated a wide range of reported health behaviours and lifestyle characteristics of students from universities in Czech Republic and Ukraine. The question of this study is: How different are lifestyle and health-related behaviours of Czech and Ukraine university students? The specific objectives of the study are (in this study has been published part of the results):

- Assess the information of health behavior variables, social relationships and lifestyle characteristics of the students by national context, and
- Compare the students as regards to the health behaviours, cultural, social context and lifestyle characteristics.

## **Methods**

#### *Respondents and data*

These data findings were conducted between May and June in 2019 at five participating universities. Participating students were informed that participation was voluntary and anonymous. All data was to be entered into a questionnaire online. The current analysis got data from 89 undergraduate students from the Czech Republic at four universities in our Republic (University of Economics in Prague, Czech agriculture university in Prague, Mendel University in Brno, the University of South Bohemia) and data from almost 71 undergraduate students from Ukraine (Kherson State Agrarian University in Kherson). Not at all students answered on each of the questions and this is reason why the sample size for some answers differ. The survey will continues because this was the pilot study of university students. Collected data was analyzed with the statistical software package Stata, version 11.1.

#### *Health Behaviours and Lifestyle Characteristics of Students*

The questionnaire was developed as a general student food related lifestyle to study to analyze the lifestyle implemented in several countries. It included demographics information, food-related lifestyle patterns, as well as the importance of seven health practices conducted by Stroebe (2007)

Assessment of importance of product information and self assessment of health behavior (4 items): participants rated the items “I am interested in information on the food labeling” and “I have to know the composition of product”. Students also responded to the question that measure the self-assessment of their intention to search information of nutrition value of food products “I check nutrient value of food every time”; and “I like to buy a product including health composition (i.e. vitamin)”. The response scales for each of the items were rated on a 4-point scale: “Yes”/“rather yes”/“rather no”/“no”, (adopted from Food related lifestyle concept ).

Assessment of social relationships as a consequence of food and eating (5 items): participants rated the items “When I am eating with my friends, the most important thing is that we are together.”; “When I eat with my family, the most important thing is that we are together.”; “I find that eating is an important part of my social life.” and “I enjoy cooking together with friends.” on a 4-point scale (“Yes”/“rather yes”/“rather no”/“no”). (adopted from Food related lifestyle concept).

Restful Sleep (1 item): Students answered the question: “Regularly sleeping six to eight hours daily”, with four categories: “Yes”, “Sometimes”, “Rarely”, “Never” (adopted from Stroebel, 2007 ).

Tobacco Smoking (1 items): Students answered to the question: “Smoking cigarettes”, with four categories: “Yes”, “Sometimes, Occasionally”, “Never” (adopted from Stroebe, 2007).

Self-assessment of figure and their intention to lose weight(2 items): Participants completed an item about caring about self-assessment of their body weight “Currently being at or near prescribed height-adjusted weight”, with three categories: “Yes”, “I do not know”, “No”; and: “I’m interest in my weight” on a 5 answer categories “I’m concerned that I’m underweight”, “I m a little bit concerned that I’m underweight”, I am not interest in it”, I’m a little bit concerned that I’ m obese, I’ m concerned that I am obese (adopted from Stroebe, 2007).

### *Statistical Analysis*

We calculated frequencies and proportions while computing differences in frequencies between students from both countries. To test the strength of the association, a Cramer’s V was conducted, in this statistical test, a value of zero corresponds to no association. Variables were analyzed using the Student t-test. P-value <0.05 was considered statistically significant. All analysis was performed using the statistical package Stata, version 11.1.

Table 1: variables used

<b>Variable</b>	
I am interested in information on the food labeling. I have to know composition of product . I check the nutrient value of food every time. I like to buy a product included health composition (e.g. vitamin).	Importance of product information – part of shopping scripts
Regularly sleeping six to eight hours daily. Smoking cigarettes. Currently being at or near prescribed height-suitable weight. I am interested in my weight: - I’m concerned that I’m underweight, - I am a little bit concerned that I am underweight, - I am not interest in that,	Health behavior

- I am a little bit concerned that I am obese, - I'm concerned that I am obese.	
When I eat with my friends, the most important thing is that we are together. When I eat with my family, the most important thing is that we are together. I find that eating is an important part of my social life. I enjoy cooking with friends together.	Social relationships and social events

## Results

Given the importance of health behaviour to the development of healthy lifestyles in the school-age of university students, this study was conducted to investigate a sample of self-reported health behavior variables, social relationships and lifestyle characteristics of the students by nationality or nation. The participants are in the highly educated segments of young adults. The study adds to our understanding of these determinants among students from both countries.

Table 2 shows the number of students participating in the survey according to their national identity. The results show the students' nutritional and health habits according to their nationality. The students from Ukraine indicated the positive (57.7%) concern to the importance of information about food as well as their contents (55.6%). This agrees with their behaviour related to the interest of the nutrient value of products (44% certainly agree; 32% rather agree). Furthermore 50.7% of participants from Ukraine added that the most important thing is to be together with friend (25.35% rather agree) and 56% with family during eating. But only a few of them see more positive value to preparing food with friends (37% disagree; 11% rather disagree). For more than half (52% certainly agree; 28% rather agree) eating is an important part of their social life. The majority of Ukraine students (30% sometimes, 37.5% rather) sleep almost 6-8 hour and 29% smoke cigarette. Slightly more see assessment of their weight, as 33.3% rated it as normal (13.8 is not normal), but 6.94% noted the underweight (15.28% rather underweight) and 5.56% overweight (16.67% rather overweight). Nearly half a percentage distribution of student from Ukraine are not interested in their shape (55.6%) and have no knowledge about characteristics of their physical development (52.38%).

Table 2: frequencies of health behaviours, social relationship and lifestyle characteristics for the sample by nation

Variable	Czech Republic (n=89)	Ukraine (n=71)	P-valued T-test <sup>a</sup> Cramér's V <sup>b</sup>
I m interested in information on the food labeling.			
I certainly agree	38	41	0.8823 <sup>a</sup> 0.2613 <sup>b</sup>
I rather agree	45	19	
I rather disagree	5	7	
I disagree	1	4	
I have to know composition of product.			
I certainly agree	19	40	0.0023 <sup>a</sup> 0.37 <sup>b</sup>
I rather agree	48	20	
I rather disagree	19	8	
I disagree	3	4	
I check the nutrient value of food every time.			
I certainly agree	8	32	0.000 <sup>a</sup> 0.434 <sup>b</sup>
I rather agree	31	23	
I rather disagree	37	12	
I disagree	13	5	
I like to buy a product included health composition (e.g. vitamin).			
I certainly agree	30	35	

I rather agree	41	20	0.000 <sup>a</sup>
I rather disagree	17	4	0.389 <sup>b</sup>
I disagree	1	13	
Regularly sleeping six to eight hours daily.			
Yes	36	16	0.000 <sup>a</sup>
Sometimes	45	22	0.454 <sup>b</sup>
Rarely	7	27	
Never	0	7	
Smoking cigarettes			
Yes	7	21	0.000 <sup>a</sup>
Sometimes/Occasionally	17	10	0.288 <sup>b</sup>
Never	64	40	
Currently being at or near prescribed height-adjusted weight.			
Yes	52	24	0.1641 <sup>a</sup>
I do not know	16	38	0.364 <sup>b</sup>
No	20	10	
I am interest in my weight.			
I am concerned that I am underweight	3	5	0.002 <sup>a</sup>
I am a little bit concerned that I am underweight	4	11	0.323 <sup>b</sup>
I am not interest in	35	40	
I am a little bit concerned that I am obese	34	12	
I am concerned that I am obese	11	4	
When I eat with my friend, the most important thing is that we are together.			
I certainty agree	47	36	0.024 <sup>a</sup>
I rather agree	33	18	0.299 <sup>b</sup>
I rather disagree	8	7	
I disagree	0	10	
When I eating with my family, the most important thing is that we are together.			
I certainty agree	57	40	0.05 <sup>a</sup>
I rather agree	24	16	0.19 <sup>b</sup>
I rather disagree	7	10	
I disagree	1	5	
I find that eating is an important part of my social life.			
I certainty agree	37	37	0.457 <sup>a</sup>
I rather agree	31	20	0.145 <sup>b</sup>
I rather disagree	15	7	
I disagree	6	7	
I enjoy to-cook with friends together.			
I certainly agree	29	27	0.0011 <sup>a</sup>
I rather agree	38	25	0.3410 <sup>b</sup>
I rather disagree	14	11	
I disagree	8	37	

<sup>a</sup>P-value refers to T-test over all answering categories; <sup>b</sup>p-value refers to *Cramér's V over all answering categories*. Cramer's V coefficient: between 0 to 0,1 negligible measure of association, between 0,1 to 0,3 fairly low measure of association, between 0,3 to 0,7 medium association, between 0,7 to 1 strong association.

Table 2, indicates significant relationships in the all characteristics related to composition of product between students from Ukraine and the Czech Republic. Although it must be noted that it could be influenced due to the preference of marking the score rather than to agree or rather disagree from Czech students.

For table 2, the value of Cramer's V is 0.145, indicating a fairly low measure of association with attitude towards eating as an important part of their social life. It was also determined that for Czech students is important that are with their family (Cramer's V is 0.2) or friend (Cramer's V is 0.3) during eating compare to the students from Ukraine.

## Discussion

Today there are a lot of published papers related to the problematic issue of eating habits and health behaviours of university students in the Czech Republic (89) and Ukraine (71). However, there is a little difference among the lifestyle and health-related behaviours of the Czech and Ukraine university students. This paper is focused on this context from the perspective of social relationships as a consequence of food and eating.

Cramer's V is 0.3, indicating that Ukraine students smoke significantly more than Czech students, whereas Czech Students sleep more regularly (Cramer's V 0.5), but they are feeling more obese Cramer's V (0.3). Table 3 provide summary of the results.

Table 3: Summary of health behaviours, social relationship and lifestyle characteristics for the sample by nation

Variable	Results
Importance of product information – part of shopping scripts	
I am interested in information on the food labeling.	Non significance
I have to know composition of product.	Significance (preference by Ukrainian students)
I check the nutrient value of food every time.	Significance (preference by Ukrainian students)
I like to buy a product included health composition (e.g. vitamin).	Significance (preference by Czech students)
Health behaviour	
Regularly sleeping six to eight hours daily.	Significance (preference by Czech students)
Smoking cigarettes.	Significance (preference by Ukrainian students)
Currently being at or near prescribed height-suitable weight.	Significance (preference by Czech students)
I am interested in my weight: - I'm concerned that I'm underweight, - I am a little bit concerned that I am underweight, - I am not interest in that, - I am a little bit concerned that I am obese, - I'm concerned that I am obese.	Significance (higher rate by Czech students)
Social relationships and social events	
When I eat with my friends, the most important thing is that we are together.	Significance (preference by Czech students)
When I eat with my family, the most important thing is that we are together.	Significance (preference by Czech students)
I find that eating is an important part of my social life.	Non significance
I enjoy cooking with friends together.	Significance (preference by Czech students)

With respect to the health related behaviours Tirodimus et al. (2009) also demonstrated a strong relationship with sex and the faculty of study of students at Aristotle University at Thesalonity, Greece. He found that medical students were reported drinking and smoking more than other students. It was also determined that higher sources for healthy eating were significantly related to lower rate of overweight/obesity. This is not disagreeing that smoking depends on national – cultural differences among students.

The trend of smoking adults is documented by the epidemiological survey of Cardiology of the Academy of Medical Science of Ukraine for 25 years, they argued that the proportion of women who smoke in the city tripled. Several years later in 2009, smoking prevalence among men in Ukraine reached 67%, including occasional smokers and was the highest in the World Health Organization European Union's region and smoking among women 20% (including occasional smokers) was the highest in Russian and Ukraine (Churpiy K. and Churpiy I., 2011).

Table 2 also highlights some of the self-assessment of the physical characteristics. The characteristics of the physical development involves neutral self-assessment of body weight, which in case of 59% of Czech students thought their body weight at a normal level, with only 23% of Czech student who noted overweight. At the same time, the study indicates that reading of information are preferred similar difference such as knowledge about composition (21% Czech, 56% Ukrainian); check nutrient value (9% Czech; 44% Ukrainian); prefer product included health composition (30% Czech students; 33% Ukrainian).

In a study about healthy eating across EU it was confirmed that it is very important for 70% of students of universities in England, Wales and North Ireland (Ansari et al., 2011). Because information plays a critical role in healthy food, more than 75% of participant reported that they often seek information on healthy eating (Biloukha and Utermohlen, 2001), a value much higher than the EU average (47%) (De Almeida MDV et al. 1997). Lennernas et al. (1997) compare with the relation to the five major influences on food choice were quality/freshness (mentioned by 80% Ukrainian subjects and by 75% of subjects in the EU); price (mentioned by 58% and 43%); taste (47% and 38%); trying to eat healthily (34% and 32%) and family preferences (24% and 29%)

As part of these general trends in Ukraine country, this study has highlighted the self-assessment of physique of Ukraine students, as 33% of Ukraine students though it as normal, but 19% noted overweight. This compared low with the study provided by Tsos, et al. (2014), where 69% rated self-assessment of their physique in Ukraine as normal, but 13% noted the overweight and 48% of student from Ukraine wants to lose weight, the rest of students did not see the need for it. This study was conducted in 2013 among 2,125 students from 12 faculties of the National University in Luts. Conversely in our sample only 24% from Ukraine want to lose weight (52% of Czech students) a higher number of students are not interested in (55% Ukraine, 40% Czech) and 16% of Ukraine student have a problem with being underweight (8% of Czech student).

Results of social relations as consequence of food and eating is consistent with the dimension Interdependence (Hofstede, 1997). The fundamental issue addressed by this dimension is the degree of interdependence a society maintains among its members. It has to do with whether people self-image is defined in terms of "I" or "We". He described that individualist societies people are supposed to look after themselves and their direct family only. In Collectivist societies people belong to 'groups' that take care of them in exchange for loyalty. The Ukrainian, which a score of 25 is a Collectives society. It means that family, friends and frequently the neighborhood are extremely important to get ahead of everyday life's challenges. Relationships are crucial in obtaining information, getting introduced or successful negotiations, published by Hofstede (1997).

## **Conclusion remarks**

The results emphasized the importance of the Assessment of social relationships as a consequence of food and eating as cultural-social patterns which have an impact on lifestyle and health behaviour among university students.

In summary what is new about these results empirically is that it is the first application of part of the FRL model into the theory of planned behaviour. According the Hofstede dimension we could see that the result are consistent with the Hofstede dimension.

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