

TIME MANAGEMENT AND HEALTHY FOOD - ASCERTAINING STUDY

Elena-Simona INDREICA¹

Abstract: *The purpose of this paper is to find out whether there is a relationship between time management and healthy eating. The objectives of the study involve exploring the associations between six variables of the healthy eating dimension and three variables of the time management dimension. The participants are 163 subjects aged between 18 and 62, both from urban areas (72.2%) and from rural areas (27.8%). The participants are females. To test the hypothesis, we developed and used two questionnaires that addressed issues related to healthy eating and time management. The results confirmed that there is an association between the two dimensions, the correlations between the variables being highly significant. The implications and limitations of the research are also presented.*

Key words: *time management, healthy eating, nutrition.*

1. Introduction

Providing the body with food is one of the sine qua non conditions of human existence, which in time has led to numerous concerns for food, both quantitatively and qualitatively. A topic addressed in many areas, from the culinary or artistic to the medical one, nutrition remains in the attention of specialists primarily for aspects related to raising the standard of living. At a global level, only in 1945 the F.A.O. (Food and Agricultural Organization) is founded within the UN system, with the major objective of fighting hunger and poverty (Philips, 1981).

The major implications of nutrition in daily life, with a direct impact on health, have been research topics mainly for the medical field, the specialty literature mentioning a wide range of issues, from severe diets to complex diets. Leaving aside the problematic aspects of food production and security, poor eating habits become an equally important issue for public health (Deshpande et al., 2009). "What?", "How much" and "how?" we eat to improve the quality of life are questions that are tried to be answered not only in the nutrition field (Ditlevsen et al., 2019; Chrysochou et al., 2010; Dickson- Spillmann et al., 2011), but also in the fields of medicine (Burke et al., 2012; Rouf & Allman-Farinelli, 2018; Christakis & Fowler, 2007; Muzaffar et al., 2018), psychology (Koftidou et al., 2011; Vollrath et al., 2012; Conner et al., 2017) or education (Kostanjevec et al., 2011; Wunderlich, 2013).

¹ *Transilvania* University of Braşov, elena.indreica@unitbv.ro

The World Health Organization (WHO) defined healthy eating as the optimal caloric requirement (Prevention Guide, 2016) to ensure an ideal energy intake designed to maintain normal body weight and body composition, to have an optimal long-term health status, as well as to be able to conduct physical and intellectual activities. In the specialty literature, a number of characteristics are mentioned for healthy eating, such as being moderate, controlled (Skerrett & Willett, 2010), balanced, varied (Darmon, 2015) and adequate (Ducrot et al, 2017). Moderate diet means avoiding excess of any kind in any situation. Controlled diet refers to quality and quantity monitoring. We talk about balanced diet when keeping an equal weight of food categories, ensuring optimum proportions for all food groups. Variety addresses the complexity of food combinations and avoids the unilaterality of both nutrients and the ways of preparing food. As concerning an adequate diet, it means adapting the food programme to the individual characteristics such as age, physical effort, rhythm of life, metabolism or diseases.

In terms of time management, the studies refer rather to the organization of professional life (Aeon & Aguinis, 2017) from the perspective of the performance at the workplace (Lualhati, 2019) or in order to optimize learning (Indreica et al., 2011; Indreica & Cazan, 2016). Procrastination is the tendency to postpone an activity until the deadline or until it is not carried out at all (Gafni & Geri, 2010). The phenomenon is also encountered in delaying the time of meals. Time management could be a solution to prevent this phenomenon and diminish bad eating habits.

2. Objectives

The investigation started from the premise that there is an association between time management and healthy eating. The objectives of the study involve exploring the associations between the food schedule, varied diet, controlled diet, moderate diet, balanced diet, adequate diet and planning, monitoring and the efficiency of activities.

3. Materials and Methods

To test our hypothesis, we developed and used two questionnaires that addressed aspects related to healthy eating and time management.

The first questionnaire (Annex 1) covers the healthy eating dimension and comprises 41 items focused on six variables: food schedule, varied diet, controlled diet, moderate diet, balanced diet, and adequate diet. Each variable was measured by means of indicators (minimum 2, maximum 4), and each indicator was represented in the questionnaire by one or more items. The allocation of items according to the indicators related to each variable is shown in tables 1. The choice of answers is made on a scale from 1 (very rarely) to 5 (very often). The Alpha Cronbach coefficient is .91, which means that the test has a very good internal consistency.

The second questionnaire (Annex 2) comprises 25 items focused on three variables of the time management dimension: activity planning, activity monitoring and activity efficiency. Each variable was measured by means of indicators (minimum 3, maximum

4), and each indicator was represented in the questionnaire by one or more items. The item allocation according to the indicators related to each variable is shown in table 1. The choice of answers is made on a scale from 1 (very rarely) to 5 (very often). The Alpha Cronbach coefficient is .88, which means that the test has a good internal consistency.

Item grouping according to variable indicators Table 1

Dimensions	Variables	Indicators	Items
Healthy food	Meal schedule	Food schedule	3, 22, 26, 27
		Meals timetable	10, 11, 12, 19
	Varied diet	Complexity	8, 9, 15
		Categories of foods	7, 32, 33
		Nutritional counselling	18
	Controlled diet	Caloric control	14, 16, 20
		Quantitative planning	4, 13
		Qualitative planning	17, 41
		monitoring (how and when)	30, 38
	Moderate diet	Meal frequency	1, 37
		Observing the quantities	5, 6, 29
	Balanced diet	Proportioned menu	28
		Equal amounts of different categories of food	23, 24
		Succession of foods	25, 34
		Varying foods	2, 35, 40
Adequate diet	Adequate to age	31, 39	
	Adequate to physical effort	38	
	Adequate to the life style	21	
Time management	Planning	Having a work agenda	5, 20
		Organization according to priorities	1, 2, 4, 9
		Time allocation	6, 12
		Clearly defined objectives	10, 11
	Monitoring	Using a work agenda	16, 21
		Complying with the time allotted to each activity	7, 8, 15, 24
		Re-allocation of time	13, 17
	Efficiency	Doing activities	3, 23, 22
		Asking for support	14, 25
		Using free time	18, 19

4. Participants

The participants in this study were 163 subjects, out of which 43 (27.8%) were from rural areas and 120 (72.2%) were from urban areas. The respondents were aged between minimum 18 and maximum 62, the average age being 30.6 years. This study also included height and weight issues. The data on height are between a minimum value of 148 cm and a maximum of 179 cm, the average height being 164.4 centimetres, and the data on weight ranging between a minimum value of 42 kg and a maximum of 98 kg, the average being 62.7 kg.

The questionnaires were applied online. 177 people answered, the questionnaires of 169 people being valid. Also, as there were only 6 male respondents, their answers were eliminated from the data analysis. The 8 people whose questionnaires were not valid

omitted to answer 1 or 2 items. Participation in the study was voluntary, the online environment offering the comfort of responding whenever they wanted, without having a time limit. Data collection was performed over three days, the access to the questionnaires being closed towards the end of the third day after it was found that the intensity of viewing and completing the questionnaires decreased to a frequency of one person in two hours.

5. Results

From the analysis of the data obtained on the tested group, it turned out that the activity planning had a positive correlation with: the meal schedule ($r = .533$, $p < .01$), the varied diet ($r = .441$, $p < .01$), the controlled diet ($r = .420$, $p < .01$), moderate diet ($r = .422$, $p < .01$), balanced diet ($r = .538$, $p < .01$), and adequate diet ($r = .493$, $p < .01$), as shown in table 2. The six variables of the healthy eating dimension increase with the planning of the activities, which means that the elaboration of a working agenda, the organization of activities according to priorities, the distribution of time on activities and the establishment of clearly defined objectives emphasizes the concern for a food schedule and an adaptation of nutrition in order to increase the quality of life.

Associations between MT variables and AS variables (N = 163)

Table 2

	Meal schedule	Varied diet	Controlled diet	Moderate diet	Balanced diet	Adequate diet
Planning	.533**	.441**	.420**	.422**	.538**	.493**
Monitoring	.454**	.420**	.409**	.481**	.503**	.397**
Efficiency	.458**	.486**	.435**	.471**	.490**	.386**

** Correlation is significant at the 0.01 level (2-tailed).

In terms of activity monitoring, the results are similar, correlating with: food schedule ($r = .454$, $p < .01$), varied diet ($r = .420$, $p < .01$), controlled diet ($r = .409$, $p < .01$), moderate diet ($r = .481$, $p < .01$), balanced diet ($r = .503$, $p < .01$) and adequate diet ($r = .397$, $p < .01$), as shown in table 2.

Significant correlations were also obtained between the efficiency of the activities and the six variables related to healthy eating: food schedule ($r = .458$, $p < .01$), varied diet ($r = .486$, $p < .01$), controlled diet ($r = .435$, $p < .01$), moderate diet ($r = .471$, $p < .01$), balanced diet ($r = .490$, $p < .01$) and adequate diet ($r = .386$, $p < .01$), as shown in table 2.

6. Discussion

Based on the results obtained from this study, it can be stated that there is an association between time management and healthy eating. Increasing the planning of activities according to clearly defined objectives and priorities leads to food planning and a meal schedule.

However, allocating time to eat does not, by default, lead to its use in this regard. The monitoring of activities (using the work agenda, complying with the time allocated to activities and redistributing the remaining time as a result of the efficiency of the activities carried out) is an important variable in time management and, as it is obvious from the data processing, it strongly positively correlates with all six variables of the healthy eating dimension. From the analysis of the data it appears that, although 56 (31.5%) of the respondents establish very often and 64 (36%) establish often an order in which to carry out their activities, the percentages decrease when the time consumed per activity is recorded - 3 (1.7%) very often and 3 (1.7%) often, and at the end of the day only 53 (19.8%) know exactly where the time went. This means that respecting the time parameters (allocated, consumed and redistributed) is associated not only with the food schedule, but also influences the quality and complexity of the food.

Planning and monitoring what time are actually consumed on is not enough if the efficiency of the activities is not considered. Making the most of the dead times or calling for support (qualified or not, depending on the situation) most often ensures the success in optimizing time management. The data of the ascertaining study emphasise that the people who practice time management efficiently also have a healthy diet, both in terms of frequency and quantity for the moderate coverage of the daily necessities, and in terms of quality (the nutrition being adequate, balanced, controlled and varied).

The study did not search for the time management modalities related to the people who have such a programme, additional investigations regarding this aspect being necessary in order to reach the proposed purpose, to find solutions for improving the quality of life. Also, in further investigations, we could pay special attention to procrastination.

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Annex 1

Healthy eating questionnaire

Age (year)

Weight (kg)

Height(cm)

Gender – male / female

For each of the following statements select the answer that best describe your situation: 1 – very rare; 2 – rare; 3 – moderate; 4 – often; 5 – very often.

No.	Items	Scale				
		1	2	3	4	5
1	I always have three meals a day.					
2	I prefer homemade food.					
3	When I go to work / school, I pack my own lunch.					
4	I avoid eating fast food.					
5	I get up from the table when I feel my stomach full.					
6	I only eat one serving of food.					
7	I eat foods from different categories every day.					
8	I eat fruit every day.					
9	My diet is based on a variety of foods.					
10	I do not skip meals regardless of the situations that may arise.					
11	I have scheduled my meals.					
12	Even if I'm in a hurry, I prefer to eat.					
13	I avoid overeating.					
14	I always have a big breakfast.					
15	Seeds are part of my regular diet.					
16	I prefer low fat foods.					
17	When I'm in the store, I look for the least processed foods.					
18	I see a nutritionist to establish a diet plan.					
19	I eat at about the same time every day.					
20	I inform myself about foods regarding the calorie requirement for daily consumption.					
21	I eat foods appropriate to my rhythm of life.					
22	In my own diet, I am guided by a plan.					
23	I maintain the balance in food intake, observing the nutritional characteristics of the food groups.					
24	I have no desires in food, I eat everything in moderate quantities.					
25	My lunch consists of soup, second course and dessert.					
26	I plan a day ahead what I will eat at every meal.					
27	I elaborate the structure of the content of the meals one week ahead.					
28	If I'm full, I don't eat up the food from my plate.					
29	I only put on my plate as much food as I can eat.					
30	I write down what and how much I eat.					
31	I eat age-appropriate foods.					
32	Every day, I eat a new category of foods.					
33	Vegetables are part of my daily diet.					
34	I make sure that over a week, I eat as many food categories as possible.					
35	I eat meals cooked alternately (cooked - raw; processed - unprocessed).					
36	If I exercise, I eat more.					
37	I don't eat between the main meals.					
38	If I have consumed too many sweets, I avoid them for a while.					
39	In my diet, I take into account the rates of burning calories.					
40	I regularly eat several categories of meat.					
41	The homemade food dominates my daily menu.					

Annex 2

Time management questionnaire

For each of the following statements select the answer that best describe your situation: 1 – very rare; 2 – rare; 3 – moderate; 4 – often; 5 – very often.

No.	Items	Scale				
		1	2	3	4	5
1	I establish the order in which to carry out my activities, according to priorities.					
2	I make a list with the order in which to carry out my activities, according to priorities.					
3	I group similar tasks together to gain efficiency.					
4	I carry out my tasks according to the order of priorities.					
5	I plan my rest and recreation just as I organize my tasks.					
+6	I set a working time for each activity.					
7	I write down the time spent on each activity.					
8	At the end of the day, I know exactly where my time went to.					
9	Every day I manage to fulfil my most important tasks.					
10	I try not to get distracted from my work.					
11	I focus on all the activities I do, not just on the ones I enjoy.					
12	In my schedule, I set enough time for lunch / coffee / relaxation / conversation breaks.					
13	I don't waste my time with activities that I find to be useless.					
14	I call for collaboration when I have a somewhat difficult goal.					
15	Each time, I manage to finish what I started.					
16	I immediately start my activity and I do not like to postpone it, even if it is something unpleasant.					
17	I exclude from my programme the activities that are only time consuming, without any efficiency.					
18	I avoid prolonged phone conversations.					
19	I answer the phone only if necessary.					
20	I take action once I have established what must be done.					
21	I do not postpone anything that I had set as a priority.					
22	I observe the deadlines for the school assignments received.					
23	I study every day.					
24	I spend time with friends.					
25	I use time management techniques.					