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Impact of the Changed Eating Habits on the Health Risks among the Algerians University Female

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Abstract

Until now, associations between the lifestyle university female and health risk factors have not yet been evaluated in the Algerian community. From that, we choose the body weight as parameter usually expressed as a relative parameter allowing comparisons in similar health risk studies. Whether our background confirms that, the physiological parameters generally vary with body weight according to a power equation expressed. Through that, our sample is consisting of 48 female university students not engaged in any planned physical activity and the only difference between them existed in the behavior eating habits due to the transition to a university, were some of them avoid fast food and others do not. Based on these limitations, our sample was divided into two homogeneous groups (sex-age- Height and eating habits). While our assessments were based on weight, height, BMI as measurements Anthropometric and Upper limb muscle endurance, Endurance of muscles of the lower back and pelvic and muscular endurance of the lower limbs (the test Killy) as physiological parameters.

Based on the Statistical treatment applied we confirm:

- The university life increases the health risks due to changes in the food habits.
- The choice of Snacks increases the Body Fat, which reduces physiological capacity.
- The student must adopt lifestyle habits, such as regular exercise and healthy eating.

Keywords: Body weight; Body mass index; Health risk; Student female

Introduction

In Women and Dieting Culture, sociologist Kandi Stinson [1] asks how these values are transmitted and how the women who join such organizations actually think about their bodies and weight loss. Whereas Flavia Fayet et al. [2] confirm that Dieting is a common practice among young women, irrespective of age, race, ethnicity, and weight. In our case, we choose the female university students, which have two ways of Dieting, due to their transition to university, where some depends on snacks provided within the neighbourly restaurants, while the others avoided. From proposal, where the similar studies reported, the impact of eating disorders [3] according to Flavia Fayet et al. [2]. Our choice for this topic came in the fact, that the transition to a university provides an environment with new pressures and workload, anxiety and stress, increased sense of independence, and a change in routine that can affect diet and exercise patterns [4]. Where the related studies in adolescent girls, confirm that the effects returned to BMI compared to body fat. While Laska et al. confirm that effects are considered to eating habits, [5] as girls who consumed sugar-sweetened beverages more frequently have more likely to a higher BMI and percent body fat compared to females who did not. From the proof, we choose the body weight as parameter usually expressed as relative parameter allowing comparisons in the similar studies [6]. Whereabouts the Biologically Based Methods confirm that the physiological parameters generally vary with body weight [7] and many physical and physiological parameters have been shown to correlate with body weight in animals as well as humans [8]. According to the review of the literature, Where our background confirms that physical and physiological parameters generally vary with body weight our research aims to determine the impact of the Change Eating Habits on the health risk among the Algerians university female [9]. For propose, our sample was consisted of 48 female university students not engaged in any planned physical activity and the only difference between them existed in the behavior eating habits, were some of them avoid fast food and others do not. Based on that limitation, the sample was divided into two identical groups (sex-age- Height). Tested in two parameters, Anthropometric (weight, height, BMI) and physiological (Upper limb muscle endurance, Endurance of muscles of the lower back and pelvic and muscular endurance of the lower limbs (the test Killy)) Tested in two parameters, Anthropometric physiological to discuss the question: How healthy are you? If Dianne Hales [10] confirms that 'the Students' snack choices tend to become less healthy and less physically active than their peers'.

Methods

A total of 48 female students provided written consent for the three months' experience to follow the same mode of nutrition choose at initial survey, their age is between 18-25 years, recruited from the university of Mostaganem, not engaged in any planned physical activity and not taking any medication on a regular basis. They were informed about procedures and all provided their written consent that they respect the protocol which beginning March 1, 2015 and ends on the morning of May 3, 2015 with Programmed tests. The study

protocol was accepted and validated by the professors of nutritious and Physiology of Stress Institute physical education and sport university of Mostaganem.

Procedures

Based on the behaviour eating habits, we have divided the sample in two groups, who do not eat snacks and who eating snacks, to implement the protocol tests planned by a team qualified.

Participant Characteristics

The sample is composed of 48 female university external students, which voluntarily agreed to participate in this experience for three-month. Divided into two homogeneous groups (sex-age- Height and eating habits) 28 who avoid snacks and 20 who eating snacks? (Table 1). Tested under the same conditions by an expert team in the following parameters, were those tests are safe in the sports medical baseline.

Measures

For the assessments we used:

The BMI classification system for adults

The World Health Organization (WHO) has established a weight classification system based on the BMI to evaluate overweight and obesity as well as associated health risks among adults [11] where the Subjects with BMI from 25.0 to 29.9 are further termed "pre-obese." Three classes of obesity are defined based on BMI cutoffs of 30, 35, and 40 kg/m^2 [12]

Formula [13]: Body mass index = Weight/Height^2

Upper limb muscle endurance

Test Purpose: This exercise aims to evaluate the endurance of upper limbs (Figure 1) [14].

Upper limb muscle endurance	Age	Ability to evaluate the doctor	Level to improve	Standard level
	18 à 29	<8	8 à 10	11 et +
	30 à 39	<7	7 à 9	10 et +
	40 à 49	<6	6 à 8	9 et +
	50 à 65	<5	5 à 7	8 et +

Figure 1: Shows the evaluation of the endurance of upper limbs measurement.

Endurance of the lower back and pelvic muscles

Test Purpose: This exercise aims to measure the endurance of the muscles of the lower back and pelvic (Figure 2) [15].

Muscular endurance of the lower limbs (the test Killy)

Test Purpose: This exercise aims to evaluate the muscular endurance of the lower limbs (Figure 3) [16].

Endurance of the lower back and pelvic muscles	Age	Ability to evaluate the doctor	Level to improve	Standard level
	18 à 29	<110"	de 110" à 119"	120" et +
	30 à 39	<99"	de 99" à 109"	110" et +
	40 à 49	<86"	de 86" à 95"	96" et +
	50 à 65	<64"	de 64" à 71"	72" et +

Figure 2: Shows the evaluation of endurance of the lower back and pelvic muscles measurement.

Test KILLY	Age	Ability to evaluate the doctor	Level to improve	Standard level
	18 à 29	<110"	de 110" à 119"	120" et +
	30 à 39	<99"	de 99" à 109"	110" et +
	40 à 49	<86"	de 86" à 95"	96" et +
	50 à 65	<64"	de 64" à 71"	72" et +

Figure 3: Shows the evaluation of the test Killy.

Anthropometric Measurements

Body mass was measured to the nearest 0.1 kg and body height to the nearest 0.5 cm using standard medical equipment in subjects wearing light indoor clothing without shoes, jackets and sweaters [17]. Body mass index (BMI) was calculated as body mass (kg) divided by height (m) squared. The subjects' adiposity was classified according to WHO standards: underweight was defined as BMI < 18.5, normal weight as BMI ≥ 18.5 and < 25, overweight as BMI ≥ 25 to BMI <30 and obesity as a BMI ≥ 30 [18].

Physiological Tests

Participants were asked to Warm-up muscle in order to avoid injuries. They were tested in the morning (8:00-8:30 a.m.) with a specialized team who explained the objectives and procedures of applied testing.

Data Analysis

Statistical analyses were carried out using the Statistical Package for the Social Sciences (SPSS Macintosh v 20; SPSS Inc, Chicago, IL). Based on the data tests and the data analysis procedures used in this study consisted of the computation of the means, standard deviations, Levene's Test for Equality of Variances, independent T-test and Correlation Paired Samples. We have chosen the Descriptive statistics where we have calculated the conditions chosen for this experience with a Statistical significance set at P<0.05.

Results

Through the Table 1, all the variables were checked for normality using the Levene's Test based on the eating behaviour. While Killy test is the only parameter, which reject normal distribution. Whereas the results of the independent T-test show the homogeneity of sample in age and Height, whilst in other hand all the Weight and BMI are significant in the benefit of the group, which eating fast food in the opposite of the physiological variables (upper limbs, pelvis and Killy), which they are in favour of the group which avoid fast food.

Variable		N	Means ± SD	Levene's Test for Equality of Variances		t-test for Equality of Means	
				F	P ≤ 05	T	P ≤ 05
Weight	Avoiding snacks	28	63,06 ± 3,67	32	57	-10,48	00
	Eating snacks	20	73,80 ± 3,23				
BMI	Avoid snacks	28	23,34 ± 1,31	1,26	26	-9,19	00
	Eating snacks	20	26,76 ± 1,20				
Age	Avoid snacks	28	24,21 ± 1,10	1,46	23	726	471
	Eating snacks	20	24,00 ± 85				
Height	Avoid snacks	28	1,64 ± 049	1,43	23	-1,22	226
	Eating snacks	20	1,66 ± 042				
upper limbs	Avoid snacks	28	63,06 ± 3,67	1,53	22	2,54	01
	Eating snacks	20	73,80 ± 3,23				
pelvic	Avoid snacks	28	23,34 ± 1,31	46	49	10,47	00
	Eating snacks	20	26,76 ± 1,20				
Killy	Avoid snacks	28	7,61 ± 1,57	34,93	00	14,02	00
	Eating snacks	20	6,35 ± 1,84				
Eating	Avoid snacks	28	1,00	000[a]	t cann't be computed because the standard deviations of both groups are 0.		
	Eating snacks	20	2,00	000[a]			

Table 1: Shows the characteristics of study participants based on behaviour of eating.

Correlations Of Variables		Weight	BMI	Upper Limbs	Pelvic	Killy
Weight	Pearson Correlation	1	81**	-46**	-80**	-87**
	Sig. (2-tailed) P ≤ 05		00	00	00	00
	means ± SD	67,53 ± 6,37				
	N	48				
Bmi	Pearson Correlation	86**	1	-23	-77**	-86**
	Sig. (2-tailed) P ≤ 05	00		12	00	00
	means ± SD	24,77 ± 2,12				
	N	48				
Upper Limbs	Pearson Correlation	-46**	-23	1	46**	30*
	Sig. (2-tailed) P ≤ 05	00	12		00	036
	means ± SD	7,08 ± 1,78				
	N	48				
Pelvic	Pearson Correlation	-80**	-77**	46**	1	82**
	Sig. (2-tailed) P ≤ 05	00	00	00		00
	means ± SD	77,44 ± 25,37				

	N	48				
Killy	Pearson Correlation	-87**	-88**	30*	82**	1
	Sig. (2-tailed) P ≤ 05	00	00	04	00	
	means ± SD	68,39 ± 20,20				
	N	48				
**Correlation is significant at the 0.01 level (2-tailed).						
*Correlation is significant at the 0.05 level (2-tailed).						

Table 2: Shows the Correlations of variables based on behaviour of eating.

Through the Table 2 all the correlations are significant at the 0.05 level, where Weight and BMI are strongly positive in the opposite of them correlated with parametric physiological, which are strongly negative, while all the parametric physiological chosen to study have a strong positive correlation between them. Based on those results we confirm in the conceptual Anthropometric data that weight, body mass index (BMI) and total body fat have been examined as injury risk factors according to Ben Yates [19]. Where Rod Dishman et al. [20] affirm that weight (BMI ≥ 25) and physical inactivity are the causes of 30%of all premature deaths, 60% of cardiovascular deaths, and 20% of cancer deaths among women who were not smokers [20]. In addition, San Marcos et al. [21] confirm that eating habits improved 16% of the Health Risks. While in the conceptual physiologically the Scientists inform us that people who carry more weight in the middle of the body have a higher risk of disease than people who carry more weight in the lower body [22]. Whilst Summerfield [23] confirms that the Stress of excess weight on joints of lower body accelerate cartilage breakdown, which confirm us, the physical breads observed in this modest experience.

Discussion

The most important finding of our study concerns in body weight relates to body fat. Where the overweight conducted to the less athletic performance and great health risk. From the proof, we agree that most risk is when individual need to lose weight (body fat) [24] due to eating disorder [19,20]. Whereas Natalie Digate Muth [25] confirms that the disorders in the nutrition habits and the decreases in physical activity case the Algerian university according to Zerf Mohammed [26] and Kamel kohli et al. [27] increased the health risk due to the Metabolism according to Q, Ashton Acton [28] and the distribute of fat women primarily on the buttocks and thighs according to Wells [29]. Where our finds support the results of Americans multi-ethnic longitudinal study, that the preponderance of fat in females of all ages, especially in the lower part of the body, could be related to their capacity (Physical and Physiological) according to Christopher Duggan et al. [30].

Whereas on health risk we approved the confirmation of William D et al. [31] that the higher BMI is a relative death risk which equalled 2.58 in men and 2.00 in women. While our results line with the confirmation that Students' snack as eating habits conducted to the less healthy [10]. Where about Dianne Hales confirms that the students who gain the most weight tend to be less physically active than their peers.

Conclusion

Our study evaluated the impact of the change eating habits on the health risks among the Algerians university female based on the behaviour of their eating habits. Where our background confirms that university life provides an environment with new pressures and workload, anxiety and stress [4], increased sense of independence, and a change in routine that can affect diet and exercise patterns due to the lack of sport in the program of the Algerian university [24,25]. Based on these conditions our findings line with the behaviour of Catherine Panter-Brick et al. [32] that healthy dietary habits over the life course can be considered as protective by leading to a stable and desirable body weight. While Touger-Decker et al. [33] confirm that this change is typically associated with a change in eating habits. In addition, we refer to Marotz [34] that the Nutrition education programs case of our community should also encourage physical activity for overall well-being. Where Linda et al. [35] confirm that foods improve health benefits if the added nourishment does not change eating habits or nutrient intake [35].

Recommendations

Since the choice of Snacks increases the Body Fat in the middle and lower body. Where the Stress of excess weight consist on the joints cartilage. We suggest:

- The university life increases the health risks due to changes in the food habits.
- The choice of Snacks increases the Body Fat, which reduces physiological capacity.
- The student must adopt lifestyle habits, such as regular exercise and healthy eating.

References

1. Kandi MS (2001) Women and Dieting Culture: Inside a Commercial Weight Loss Group. US: Rutgers University Press: 1.
2. Flavia F, Peter P, Samir S (2012) Prevalence and correlates of dieting in college women: a cross sectional study. Int J Womens Health 4: 405-411.
3. Hill AJ, Bhatti R (1995) Body shape perception and dieting in preadolescent British Asian girls: links with eating disorders. Int J Eat Dis 17: 175-183.
4. Malinauskas BM, Raedeke TD, Aeby VG, Smith JL, Dallas MB (2006) Dieting practices, weight perceptions, and body composition: a comparison of normal weight, overweight, and obese college females. Nutr J 5: 1-8.

5. Laska MN, Murray DM, Lytle LA, Harnack LJ (2012) Longitudinal associations between key dietary behaviors and weight gain over time: transitions through the adolescent years. Obesity 20: 118-125.
6. Travis C (2013) Biologically Based Methods for Cancer Risk Assessment. Greece: Springer Shop p: 64.
7. Donglu Z, Sekhar S (2012) ADME-Enabling Technologies in Drug Design and Development. Canada: Wiley p: 88.
8. Vincent JC, Georg LE, Giovanni AZ (2012) Perspectives on Biologically Based Cancer Risk Assessment, Nato Committee on modern society: Springer Shop p: 228.
9. Dianne H (2016) An Invitation to Health p: 179.
10. Jim S, Edward C (2011) Functional Food Product Development. BlackWill, US p: 391.
11. Rosalind SG (2005) Principles of Nutritional Assessment. Oxford University Press, UK p: 262.
12. Sareen SG, Jack LS (2012) Advanced Nutrition and Human Metabolism. Cengage Learning, UK p: 276.
13. Michael PR, Robert CM (2009) Functional Testing in Human Performance. Human Kinetics, US p: 305.
14. Robert D (2007) Sports-specific Rehabilitation. Elsevier Health Sciences, US p: 206.
15. William EG, Donald TK (2000) Exercise and Sport Science. Wolters Kluwer Health, US p: 828.
16. Marzena M, Anna K, Joanna T, Grazyna L (2015) Body shape index versus body mass index as correlates of health risk in young healthy sedentary men. J Transl Med 13: 1-5.
17. World Health Organization (WHO) (2008) Waist circumference and waist-to-hip ratio, Geneva: Report of a WHO Expert Consultation WHO.
18. Ben Y (2012) Merriman's Assessment of the Lower Limb. Elsevier Health Sciences, UK p: 429.
19. Rod KD, Gregory WH (2013) Physical Activity Epidemiology-2nd Edtn. Human Kinetics, US p: 211.
20. Jeff H, Mary OA (2015) Essential Concepts for Healthy Living. JONES & BARTLETT Learning US p: 4.
21. Corbin CB, McConnell KL, Masurier GC (2014) Health Opportunities Through Physical Education With Web Resources. Human Kinetics Publishers, US p: 13.
22. Liane MS (2015) Nutrition, Exercise, and Behavior: An Integrated Approach to Weight Management. Cengage Brain US p: 50.
23. Suzanne GE (2013) Endurance Sports Nutrition. 3rd Edtn. Human Kinetics US p: 60.
24. Natalie DM (2014) Sport Nutrition for Health Professionals. F.A. Davis company, US p: 305.
25. Zerf M (2016) The impact of the lack of physical education and sports lesson on fitness health-case female students. Eur J Phy Edu Sport Sci 1: 6-19.
26. Kamel K, Zerf M (2016) Impact of the Inactive Courses on the Health Fitness Case Scholar Girls. IOSR-JSPE 3: 04-08.
27. Ashton AQ (2013) Issues in Anatomy, Physiology, Metabolism, Morphology, and Human Biology. Scholary Editions, US p: 613.
28. Jonathan CKW (2010) The Evolutionary Biology of Human Body Fatness. Cambridge University Press, UK p: 109.
29. Christopher D, John BW, Allan W (2008) Nutrition in Pediatrics: Basic Science, Clinical Applications. PMPH-USA p: 29.
30. William DM, Frank IK, Victor LK (2010) Exercise Physiology: Nutrition, Energy, and Human Performance. Wolters Kluwer Health, US: p 728.
31. Catherine PB, Agustin F (2010) Health, Risk, and Adversity. Berghahn Books, UK p: 141.
32. Riva TD, Connie M, Joel B (2014) Nutrition and Oral Medicine - Page. Springer Shop, UK p: 353.
33. Ynn RM (2014) Health, Safety, and Nutrition for the Young Child. Cengage Brain, US p: 16.
34. Linda ML, Serge PVD (2004) Clinical Exercise Physiology: Application and Physiological Principles. Wolters Kluwer Health, US.
35. Melinda M, Nanna LM, Janice T (2009) Sport Nutrition for Health and Performance. Human Kinetics, US p: 194.