Anthropometric Profile of Workers of different Workplaces

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1.INTRODUCTION

The potentially significant impact of obesity in occupation has evidenced the necessity of developing effective intervention in the prevention and treatment of this disease [1; 2]. Frequently, there is the need of studying for evaluating the nutritional status of workers in order to verify the existence of nutrition associated diseases [3] because although the eating habits are formed in childhood, factors such as work place, meal times, reduced physical activity, prolonged sitting at work, type of activity and the possibility of free food consumption may influence eating habits and consequently change in the nutritional status of people [4; 5].

The pattern of obesity among different types of jobs or activities differs in gender, and the prevalence of this pattern is higher in people whose work involves driving a car because a sedentary activity and a person's BMI may differ depending on the type of job [4; 6].

2. OBJECTIVES

To characterize the nutritional status of workers;

To verify the influence of different workplaces in anthropometric measurements.

3. METHODS

The data was collected in two parts:

1st. Questionnaire characterization of the participant.

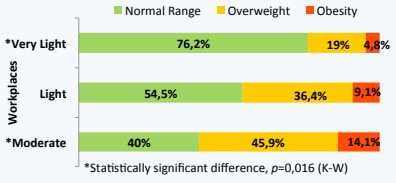
2nd. Anthropometric Profile: weight, height, BMI, percentage of body fat (BF) obtained by bioimpedance, percentage of fat mass (FM) obtained by skinfolds (triceps, bicipital, sub scapular and above the iliac), waist circumference (WC), circumference of the hip, ratio waist hip (RWH). It used scale TANITA model BC-545, stadiometer model 213 and Harpenden, skinfold caliper.

This study includes 128 workers from a transport and logistics company in the metropolitan area of Porto with 276 workers. The individual have no pathology and there are working in the company for at least 6 months. The jobs were grouped according to physical effort classified as: very light, light and moderate.

For data analysis it was utilized SPSS version 17.0. Statistical tests have been applied, in this case ANOVA one way and alternative nonparametric *Kruskal – Wallis* .

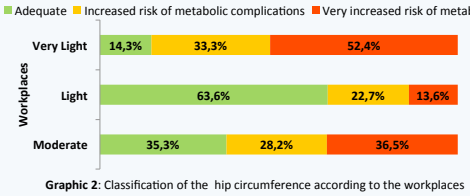
4.RESULTS

The sample comprised 50% of the participants of males and 50% females with an average age of 32,7 ± 7,99 years. It was observed that 16,4% of the subjects had a very light, 17,2% light and 64,4% moderate workplace. The percentages of inadequate anthropometric measures for workers are: BMI-51,5%; WC-63,3%; RWH-55,5%; FM-65,6% and BF-43,8%.

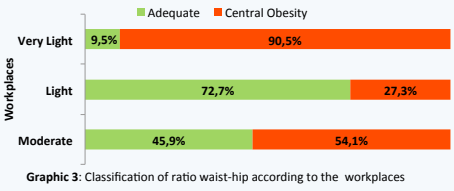


*Statistically significant difference, p=0,016 (K-W)

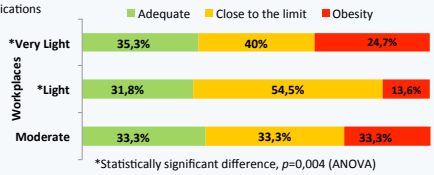
Graphic 1: BMI classification according to the workplace



Graphic 2: Classification of the hip circumference according to the workplaces

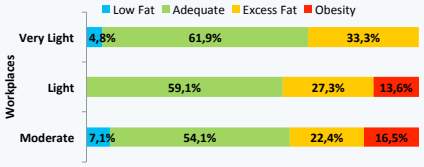


Graphic 3: Classification of ratio waist-hip according to the workplaces



*Statistically significant difference, p=0,004 (ANOVA)

Graphic 4: Classification of the fat mass obtained by the measurement of skinfolds according to the workplaces



Graphic 5: Classification of the body fat obtained by bioimpedance according to the workplaces

5. DISCUSION

It was found that the prevalence of overweight among the individuals who have workplaces that require more physical effort, differs from such studies that pointed out that increasing the physical strength leads to a reduction in body weight [7; 8] . The variables reflecting the distribution of body fat indicated that individuals containing a job with very little physical demand had greater accumulation of fat in the abdominal area have a higher percentage of inadequate amounts of WC and RWH, which indicates that more sedentary activities are at higher risk for develop cardiovascular disease [9]. This fact can be explained by the prevalence of females (81%) in this job. The individuals at a workplace with light physical effort has a higher amount of body fat corroborating with other studies that relate the sedentary activities with the highest percentage of body fat [10]. The increase in body fat can be explained by several factors: hormonal changes, sedentary activities, increase in energy intake, low physical effort, decreased lean body mass, among others [10].

6. CONCLUSION

There is a statistically significant difference in BMI and body fat in view of the workplace, observing the differences between workers of jobs very light and moderate and in the very light and light, respectively;

The workers of the very light workplace showed a greater accumulation of abdominal fat.

7. REFERENCES

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