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Influence of socio-demographic issues in body mass index (BMI) and dietary habits of heroin addicts in methadone maintenance treatment

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Introduction

To study the interaction between dietary habits and nutritional status of heroin addicts in methadone maintenance treatment appears to be an important field of research in Dietetics as the drug addicts are a risk group for undernutrition, and little is known about diet and nutrition in this population 1.

Studies report that this group presents nutritional deficiencies, including low body weight, and even drug-induced anorexia and changes in dietary patterns 2,3,4,5 The most plausible explanation for these nutritional deficits is an insufficient diet. However, studies related to dietary intake of drug abusers have failed to present evidence that insufficient intake is responsible for these deficits 1,5. Although the drug does not directly affect energy intake, may affect the frequency and nutritional quality of meals. Drug use itself affects the nutritional status for several reasons.

The short-term heroin use causes dry mouth, nausea, vomiting, shortness of breath, drowsiness, apathy and loss of concentration and spontaneous abortion, all these symptoms can affect the individual nutritionally. In the long term, beyond the addiction, heroin causes weight loss, malnutrition, pulmonary complications (colds, pneumonia and tuberculosis), sedation, among others, effects that influence food intake and / or nutritional status 6,7.

The aim of this research was to study anthropometric, nutritional and socio-demographic characteristics in heroin addicts in methadone maintenance treatment.

Methodology

During the period January to March 2010 were evaluated 47 heroin addicts in methadone maintenance treatment in the Center for Integrated Responses (CRI) of Braganza, Northeast of Portugal. Patients that had associated diseases were excluded. Nutritional assessment was performed by measurement of body weight with the analyzer Tanita BC-418 ®, and a height stadiometer of heroin addicts, and then calculated the body mass index. The socio-demographic and dietary data were collected through a questionnaire devised for this purpose, and previously tested.

Statistical analysis was carried out using SPSS 17.0 for Windows. Were performed descriptive statistics (means, standard deviations) and relations between variables using nonparametric statistics student-t and Mann-Whitney test. Statistical significance was considered for p values <0.05.

Results

Of the 47 individuals, 89,4% (n = 42) were male and 10.6% (n = 5) females, with a mean age of 35,17 ± 8,45 years. The mean body mass index was 22,40 ± 3,52 kg/m2.

In table 1 are described the social characteristics and anthropometric sample. For the BMI the majority of the sample has normal weight (70,2%), followed by the overweight (17,0%), then the low weight (10,6%) and finally 2,1% of heroin addicts obese. 36,2% of the sample lived with their parents, representing the largest share. A live alone are 31,9% of heroin addicts and 21,3% with their spouse. It was observed that 44,7% of heroin addicts are unemployed and 34,0% employees.

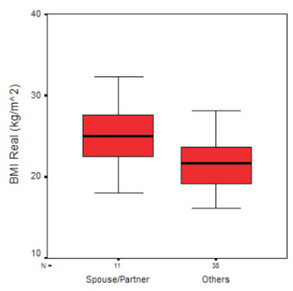
The body mass index was significantly higher in heroin addicts who live with a spouse (n = 10; 21,3%) compared to other residential settings (n = 37; 78,7%) (p = 0,005), although the energy consumed (kcal) presents no significant differences in the two groups (Graph 1).

Unemployed consumed more fat relative to total energy (p = 0.044) and lower amount of carbohydrate in relation to the total energy (p = 0,008), for other work situations (Graph2).

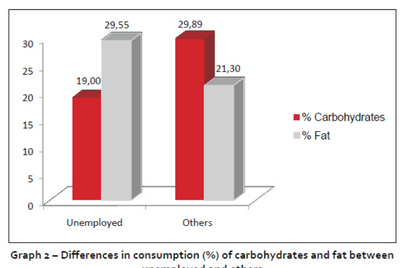
The consumption in grams of carbohydrates rapid absorption is significantly lower (p= 0,042) in unemployed heroin addicts in relation to other work situations (Graph3).

Table 1 - Social and anthropometric characteristics of heroin addicts study participants

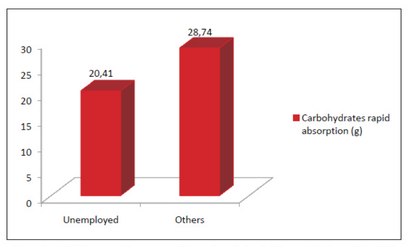
	Heroin addicts (n=47)
Gender (%)	
Male	89,4
Female	10,6
Age (mean years ± sd)	35,17±8,45
BMI (mean Kg/m^2 ± sd)	22,40±3,52
Underweight (%)	10,6
Normal weight (%)	70,2
Overweight (%)	17,0
Obesity (%)	2,1
Housing situation (%)	
Alone	31,9
Spouse/Partner	21,3
Parents	36,2
Other	10,6
Employment situation (%)	
Student	19,1
Employee	34,0
Unemployed	44,7
Retired	2,1



Graph 1 – Relationship between BMI and Housing Situation



Graph 2 – Differences in consumption (%) of carbohydrates and fat between unemployed and others



Graph 3 – Differences in consumption of carbohydrates rapid absorption (g) between unemployed and others

Discussion

This study suggests that there is a relationship between nutritional status and food consumption profile of heroin addicts in methadone maintenance treatment with socio-demographic factors such as employment and housing situation.

BMI was significantly higher in heroin addicts who live with a spouse, what may be attributable to the presence of a caretaker figure who instills fractionated habits and prepares meals. The presence of another person seems to be a factor influencing the nutritional status, not only because the addict has someone who prepares meals, but also because the fact of being together helps one to feel motivated to eat.

The other housing situations (living alone or with parents) had a lower BMI. The average age of respondents is 35.17 years, so it is assumed that the parents of these ages would have around 60 years old. This helps to understand the lower BMI of heroin addicts from other housing situations for living with their spouse. Usually parents with advanced age have more difficulty in performing household chores including cooking meals, leading to reduced intake on the part of their sons.

The unemployed heroin addicts consume a higher percentage of fat and lower carbohydrate possibly due to greater intake of foods like potato chips, fast food, snacks, cakes, etc. that are easy to access in cafes and at reduced prices.

These findings agree to the study performed by Santolaria-Fernández et al 8 concluded that the social and family aspects affect food consumption due to an irregular lifestyle and loss of interest in meals.

Contrary to what one would expect the unemployed heroin addicts consume less carbohydrates rapid absorption relatively heroin addicts from other work situations. The craving for sweets that some studies refer is not supported by these results, even more because it is unemployed people seeking cheap food with high calorie intake.

Conclusion

The BMI of heroin addicts who live with a spouse is higher than in the other housing situations.

The percentage of fat in the diet of heroin addicts unemployed is higher in relation to other work situations, while the percentage of carbohydrates is lower.

The socio-demographic conditions must be taken into consideration in the process of intervention with this population.

More studies must be performed in other to clarify other food behavior variables in drug users populations.

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