

Impact of work and lifestyle on nutritional status of rubber tappers and factory workers living on an extractive reserve in the Amazon

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Background

The effect of lifestyle on the nutritional status of the population is well known, however, whether job characteristics influence nutritional status is still unclear.

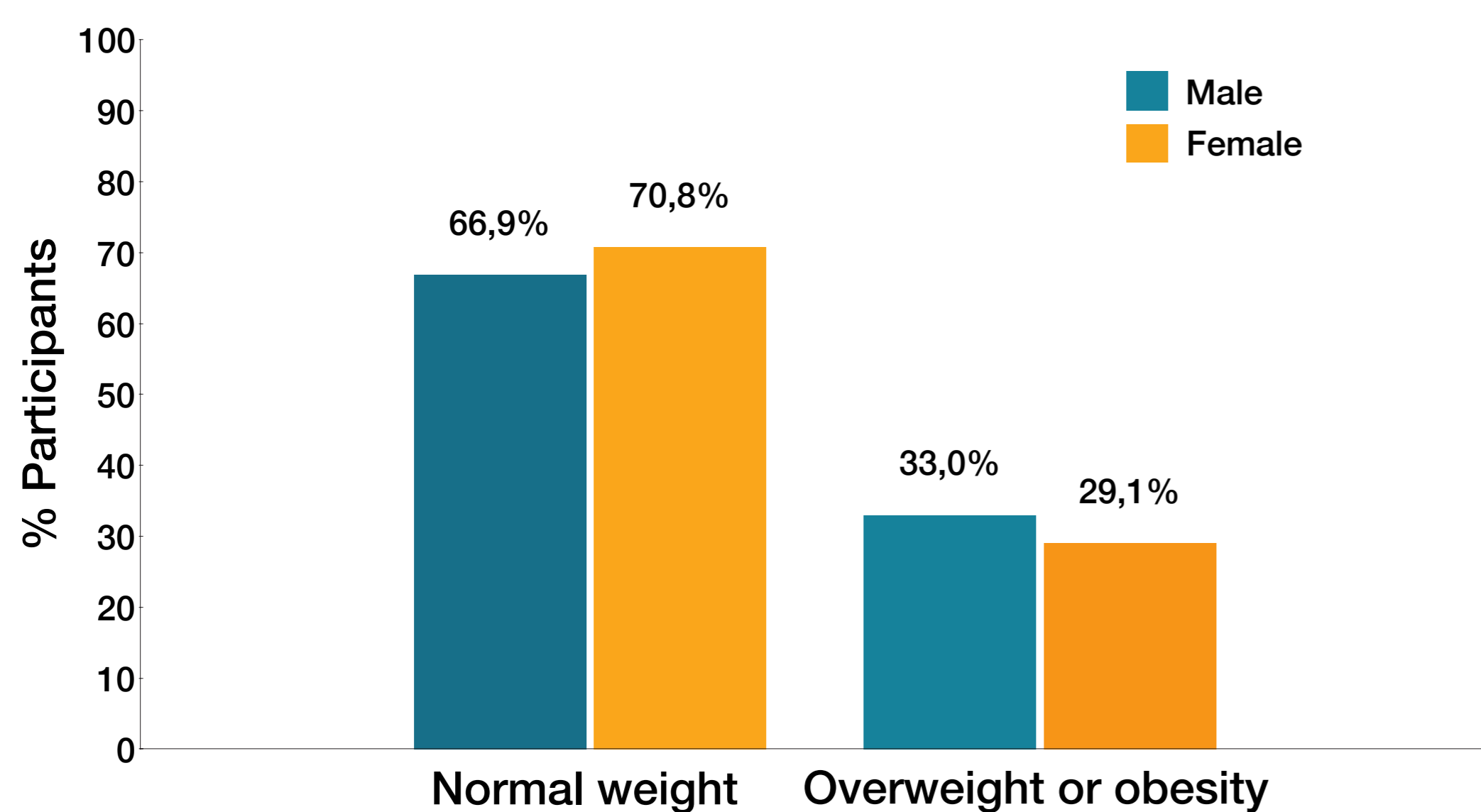
Objectives

The objective of this study is to evaluate the impact of work and lifestyle on nutritional status of rubber tappers and factory workers living on an extractive reserve in the Amazon.

Methods

Cross-sectional study with 340 rubber tappers and 148 factory workers (day and shift workers), both groups living on an extractive reserve in the Amazon. Workers filled out questionnaires on demographic data (gender, age, marital status, and children), working conditions (type of job, work hours, and physical posture at work), health (morbidity, fatigue, sleep and sleepiness, musculoskeletal pain, and nutritional status) and lifestyle (smoking, drinking, and physical activity). Logistic regression models were applied, considering overweight and obesity as outcome variables.

Figure 1
Nutritional status by gender.



Results

Most of the rubber tappers were male (91.5%), mean age of 42 years (SE=0.76). Factory workers had a mean age of 27.1 years (SE=0.5); 52% males and 48% females. No differences were found between males and females regarding nutritional status (Figure 1). However, factory workers were more likely to develop overweight and obesity than rubber tappers ($p<0.001$) (Figure 2).

Independent variables were selected from the univariate model ($p<0.20$) which were: gender, age, marital status, type of job, shiftwork, smoking, presence of morbidity and musculoskeletal pain. Working in the factory and being male were found to be predictors for the development of overweight or obesity. Moreover, age between 31 to 40 years and older were also predictors for overweight and obesity. Smoking was revealed as a protection factor for overweight and obesity (Table 1).

Figure 2
Nutritional status by type of job (rubber tapper and factory worker).

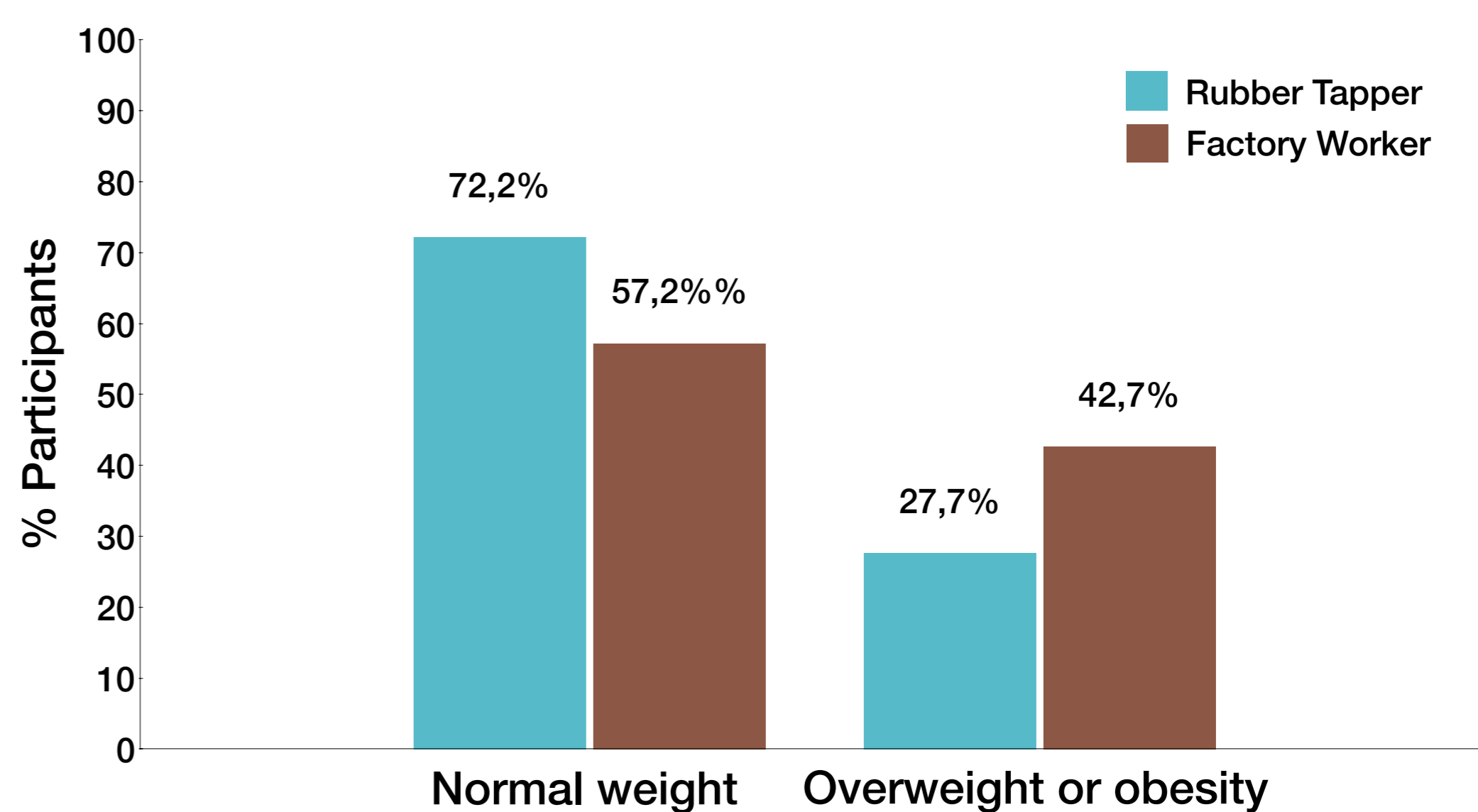


Table 1
Final logistic regression model by nutritional status (Normal Weight and Overweight or Obesity).

Variables	Categories	Normal Weight n (%)	Overweight or Obesity n (%)	Odds Ratio [CI 95%]
Gender	Male	255 (66.9)	126 (33.0)	1
	Female	68 (70.8)	28 (29.1)	0.44 [0.24; 0.78]
Age	18 - 30 years	138 (71.1)	56 (28.8)	1
	31 - 40 years	68 (61.8)	42 (38.1)	2.97 [1.65; 5.38]
	Older than 40 years	115 (67.6)	55 (32.3)	2.98 [1.62; 5.48]
Type of job	Rubber tappers	240 (72.2)	92 (27.7)	1
	Factory workers	83 (57.2)	62 (42.7)	4.28 [2.32; 7.89]
Tabagism	No	189 (63.8)	107 (36.1)	1
	Yes	134 (74.0)	47 (25.9)	0.61 [0.39; 0.97]

Hosmer-Lemeshow goodness of fit test: $p=0,224$.

Conclusion

The workers were submitted to different work conditions, even while inhabiting the same community. Factory workers performed a static activity on the assembly line, which may explain their higher risk of becoming overweight and obese. Rubber tappers had a work activity that involves dynamic physical activity, expressed in rural activities.

Although the study population is distant from a large urban center, the phenomenon of intense changes in lifestyle and new forms of work organization also influences nutritional status, as seen among factory workers. Thus, our findings indicate that obesity is not in a public health problem inherent in large cities and metropolises. It is a broader issue, reaching areas previously recognized by nutritional deficiencies problems. A new problem requires a new approach, which become urgent countermeasures to prevent health risks due to the excess weight. The economic development model proposed for remote areas must be thought in all its facets, since the benefits of developing an industry in a community should not be accompanied by negative impacts on the health of workers and the illness.

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