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The influence of body mass index on health care costs in Brazilian workers

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This study aimed to analyse the relationship among body mass index and health care costs in Brazilian workers. In this longitudinal study with one year follow-up among 2201 employees of a Brazilian airline company, health care costs was the primary outcomes of interest. Body mass index was calculated by dividing self-reported body weight (in kilograms) by self-reported height squared (in meters) and it was categorized with “normal weight” individuals with BMI between 18.5 to 24.9 kg/m², “overweight” with a BMI between 25 and 29.9 kg/m² and “obese” with a BMI greater than or equal to 30 kg/m². Other independent variables included socio-demographics (age, gender and educational level), and type of work (administrative, blue collar, call center and air crew sector - involving pilots and flight attendants). Information about health care costs was obtained from the health care insurance and consisted of the sum of total expenditure with health care, per worker, during the follow-up year, as well the amount and costs for each type of procedure (medical appointments, diagnostic tests and hospitalizations). Descriptive analysis was used for the characteristics of the study population and multivariate linear regression analysis was performed to study the association of health care costs and body mass index. All data collected were anonymous. This project was approved by the Ethics Committed in Research of the Medical School of Universidade de São Paulo, Brazil. The mean age of the employees was 32.2 years (SD=8.4) and most of the subjects was male (58%). Almost half the subjects were overweight or obese (48%). Men were more likely to be overweight (OR=4.02; CI=3.28-4.92) or obese (OR=4.65; CI=3.41-6.34). On the 12 months follow-up, the average expenditures per worker was \$505 with health care utilization. Women had, on average, \$180 higher health care costs than men ($p<0.005$) in the follow-up year. Compared to employees in the administrative sector, workers in blue-collar jobs tended to have \$177 lower health care costs ($p<0.005$). Each increased unit of BMI increased direct costs on average \$17 in the 12 months studied ($p<0.005$). Body mass index was determinant for health care costs. These results suggest that healthy diet and physical active actions are important targets for health promotion in this study population.

Biography

Fabiana Rabacow is PhD student at University of São Paulo, Department of Preventive Medicine, Brazil; with internship period at Erasmus University, Erasmus Medical Center, in Rotterdam, Netherland. She has published 9 papers in reputed journals in Public Health topics.

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