

## The effect of health staff working the night shift on nutrition, anthropometric measurements, and the risk of cardiovascular disease: A sample from Samsun Province in Turkey

Uzdil Z.<sup>1, A,B,C,D,F\*</sup>, Kaya S.<sup>2, A,B,C,D,F</sup>, Kayacan A.G.<sup>2,A,C,F</sup>, Özyıldırım C.<sup>2,A,F</sup>, Sökülmez Kaya P.<sup>1,A,E,F</sup>, Asal Ulus C.<sup>1,A,E,F</sup>

1. Department of Nutrition and Dietetics, Faculty of Health Sciences, Ondokuz Mayıs University, Samsun, Turkey
2. Department of Nutrition and Dietetics, Faculty of Health Sciences, Ankara University, Ankara, Turkey

---

A- Conception and study design; B - Collection of data; C - Data analysis; D - Writing the paper; E- Review article; F - Approval of the final version of the article; G - Other (please specify)

---

### ABSTRACT

---

**Purpose:** To determine effect of working in the night shift system on nutritional status, anthropometric measurements, and risk of cardiovascular disease of health staff.

**Materials and Methods:** This cross-sectional study was conducted between August-November 2017 at Samsun Ondokuz Mayıs University among 111 health staff. Data was collected with a questionnaire form including questions about demographic characteristics, nutritional status and anthropometric measurements. SPSS 21.0 statistical package program was used for statistical analysis and  $p < 0.05$  was considered statistically significant.

**Results:** Based on waist circumference, 14.3% of men and 31.1% of women were at high risk, and based on waist/hip ratio, 4.8% of men and 33.3% of women were at risk of cardiovascular diseases. It has been shown that eating patterns are disrupted during shifts (89.2%), and 73.9% of participants cannot eat because

their meals cool down during shifts. The difference in the numbers of main and snack meals consumed by health staff during the night shift was statistically significant ( $p < 0.05$ ). Body mass index, waist circumference, and hip circumference measurements decreased with increasing shift time. However, body mass index, waist circumference, and hip circumference increased as time spent in the profession increased.

**Conclusion:** It was seen that night shift health staff are at risk of cardiovascular disease due to insufficient and unhealthy nutrition. It is clear that nutrition education programs are required for health staff working night shifts to reduce excess weight and obesity in this population.

**Keywords:** Anthropometric measurements, cardiovascular disease, health staff, nutrition, shift work

---