

Consumption of energy drinks by healthcare workers during the night shifts

Alberto Farinetti¹, Anna Vittoria Mattioli²

¹Department of Medical and Surgical Sciences for Children and Adults, University of Modena and Reggio Emilia, Modena, Italy; ²Department of Quality of Life Sciences University of Bologna, Bologna, Italy

To the editor,

Healthcare personnel play a crucial role in providing continuous patient care, often working around the clock. The demanding nature of their work, especially during rotating shifts or overnight hours, can challenge staying awake, given the body's natural circadian rhythms. Many nurses turn to caffeine, found in coffee, tea, and high-energy drinks (EDs), as a widely available stimulant (1,2).

Recent literature on energy drinks highlights healthcare personnel as the category with the highest consumption after young people and athletes, suggesting the setting up of specific information campaigns dedicated to these professionals (1,2).

Most of the manuscripts analyze the consumption of energy drinks in young people and athletes, however in recent times some reports have been published relating to the consumption of caffeine-rich drinks in health workers.

Phillips explored nurses' use and knowledge of caffeine and high-energy drinks in Italy, South Korea and the United States. Nurses in each country completed a survey on caffeine and EDs use and knowledge. In a population of 182 nurses, caffeine use was high with 92% of nurses in Korea, 90.8% in Italy and 88.1% in the United States (1).

Interestingly, most nurses in all three countries were female (Italy 73.8%, Korea 98%, and US 89.6%). The US had the most significant percentage of nurses who were married (50.7%), compared to Italy (41.3%) and Korea (18%). The mean age of nurses in Italy was

30.03 + 8.67 years; in Korea, it was 29.08 + 5.36; and in the USA, it was 36.68 + 13.68 years. In Korea, the majority of nurses consumed EDs at work (48%) compared to Italy (27.7%) and US (6%). Nurses in Italy and the US reported high levels of caffeine usage with low levels of EDs consumption. Meanwhile, in Korea 64% of nurses reported consuming 1 or more cans of EDs per day, mostly (48%) while at work (1). Some factors could explain this different distribution in the 3 nations: in Korea, the population examined was younger, and only a small number of them were married and had children. These characteristics identify a population at greater risk for taking energy drinks. Furthermore, what emerges from this study is the need for greater education regarding the potential damage to health caused by the intake of energy drinks (1).

A Canadian study evaluated the lifestyle behaviors (prevalence of nicotine, caffeine, cannabis, sleep-promoting medication, and alcohol use) and the association between job stress, sleep quality, anxiety, and depression among registered nurses working night shifts in the COVID-19 era. In total, 22 nurses completed the survey. These respondents were primarily white (86%) and women (91%) while their ages were diverse (25-29=36%; 30-34=23%; 35-39=18%; 40 and above=23%). The authors concluded that Canadian nurses working night showed a significant positive relationship among sleep disturbance, anxiety, and depression. Furthermore, most nurses reported using at least one or more of the following substances: sleep-promoting medication, nicotine, alcohol, and cannabis (3).

Another research examines clinical nurses' caffeine and energy drink habits (4). The study group consisted of 476 nurses; 428 female (89.9) and 46 male (9.7%). Consumption of energy drinks was reported in 107 subjects (22.5%), while 299 nurses reported caffeine-only consumption (62.8%). A significant relationship was found between energy drink consumption and sleep quality, sleep quantity, and perceived stress levels. Furthermore, this study highlighted the impact of stress on lifestyle habits. Night shifts introduce a unique set of challenges and stressors that can affect both the physical and mental well-being of nurses (5,6). We also found an increase in the consumption of caffeinated drinks in a survey conducted on 500 university medical students: the consumption of energy drinks increased in 24% of the subjects (7).

The feature that emerges from these studies is that most of the subjects who responded to the questionnaire are women. It is true that the population of nurses includes a higher number of women than men, but we also know that women are more likely to respond to questionnaires and participate in studies administered via the web and social media (8). It would be important to carry out gender-balanced evaluations to obtain more transferable results in clinical practice. Furthermore, it would be important to evaluate age-balanced groups because the habit of introducing EDs is very widespread among young people.

In conclusion, the consumption of energizing drinks and especially energy drinks are increasing among healthcare personnel working night shifts. Such drinks increase the level of alertness and wakefulness; however, they can cause both acute and chronic health damage. In the pandemic, both the increase in stress and the increase in work shifts contributed to promoting the development of an unhealthy lifestyle, favoring habits perceived as compensatory to stress or to counteract stress. (5,6) Furthermore, during the pandemic, healthcare personnel were subjected to very frequent and prolonged shifts, facilitating the intake of drinks with a high caffeine content to support these rhythms.

We believe it is essential to acquire precise information on the impact of night shifts on unhealthy behaviors, especially on the healthcare population. Adequate teaching during training on the damage to health caused by the intake of certain foods would help to increase awareness. In a holistic vision of the health

of healthcare personnel subjected to night shifts, the use of relaxation and stress-reducing techniques could be effective.

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Correspondence:

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Prof Anna Vittoria Mattioli,

University of Bologna-Alma Mater Studiorum

Department of Quality of life Sciences

Via Irnerio 48 Bologna (Italy)

E-mail: annavittoria.mattioli@unibo.it