

Assessment of Nutritional Status and Perceived Stress Level among the Female Health Care Professionals

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ABSTRACT

Healthcare professionals have several occupational risks compared to the rest of the population because of the specificity of their working conditions. Since the health of healthcare professionals affects their performances, self-care may be examined closely to improve the healthcare system. It has become common to feel stressed in modern times. Therefore, this study aimed to assess healthcare professionals' nutritional status and perceived stress levels, perform a survey that included dietary intake patterns, and assess stress levels using the Kohun PSS scale. This cross-sectional study was performed among healthcare professionals working at hospitals in Varanasi City. A total of 100 healthcare professionals were interviewed face to face by questionnaire and responded to on the online platform. The mean age of respondents was 26 years, and the mean BMI value of respondents was 22.3 kg/m². It was stated that fifty per cent of participants (50.0%) regularly took two meals daily. Among them, only 36% regularly ate three meals a day. Sixty-six per cent of respondents take cereals in their daily diet. Percentage of regular green leafy vegetables: 27 respondents took green leafy vegetables regularly, 32% consumed fruits,

80% consumed sugar, and 45% consumed milk. 25% of respondents were enlightened that they were anemic, 20% were diagnosed with diabetes, and 7 % were dealing with other health problems like UTI, low appetite, regular back pain, migraine and heartburn condition. 57% were working more than 8 hours. 40 % of respondents were recognized as having high perceived stress levels. The irregular working conditions of health care professionals may affect their nutritional and health status.

Keywords: Female Healthcare professionals, stress, perceived stress level

INTRODUCTION

A healthcare professional (HCP) is a person hired to offer healthcare services to patients. HCPs include medical and dental staff (each with specific specialties), health visitors, midwives, nurses, and allied health professionals (AHPs) such as clinical psychologists, dietitians, and physiotherapists. Other professionals with direct patient interaction include emergency personnel (paramedics), pharmacists, and medical records staff (World Health Organization [WHO], 2019).

Healthcare professionals (HCPs) are exposed to numerous occupational risks due to the nature of their work environment,

health system constraints, financial pressures, and lifestyle-related factors. While stress, burnout, mental health disorders, and substance abuse are among the most frequently studied occupational hazards, other critical aspects such as daily lifestyle habits, nutrition, sleep, and self-care often receive insufficient attention (Kumar, 2016; Yaribeygi et al., 2017). Women, traditionally perceived as nurturing and compassionate, have increasingly joined the global healthcare workforce over recent decades. They now hold diverse roles across clinical, institutional, and academic settings. According to the World Health Organization (2019), women represent approximately 70% of the global healthcare workforce. In India, they contribute to 70–80% of all healthcare services, comprising about 30% of doctors and over 80% of nurses and midwives (George Institute for Global Health, 2017). Despite their growing participation, female healthcare professionals continue to face significant workplace challenges, including familial responsibilities, inadequate human resource policies, and gender-based disparities, which limit professional advancement. Work–life imbalance remains a major barrier to career progression in many regions (George Institute for Global Health, 2017). A report published in *Times of India* (2017) highlighted that doctors in Kerala, who are tasked with promoting public health, often experience reduced life expectancy due to neglect of their own health—a finding echoed by several studies (Sharma, 2015). High levels of workplace stress, burnout, and mental health issues are widely reported among healthcare providers (Kuehn, 2020; Kumar, 2016). Nurses, in particular, are disproportionately affected, with studies indicating elevated levels of work-related mental illnesses in this group (Pompili et al., 2013). Contributing factors include increased workload, prolonged working hours, high patient expectations, understaffing, and various occupational hazards. Consequently, morbidity rates among healthcare professionals are higher

than those in the general population (Kuehn, 2020). Rotational shifts and irregular schedules significantly impact the health of HCPs. For instance, 70% of nurses were found to be overweight or obese, largely attributed to rotating shift patterns (Chung et al., 2018). Poor dietary habits further exacerbate health risks, increasing susceptibility to non-communicable diseases such as cardiovascular disease, stroke, type 2 diabetes, and certain cancers (ICMR, 2020). One survey revealed that nearly 50% of HCPs did not consume three regular meals per day, more than 50% had a BMI over 25.0, and 26% reported chronic health conditions (ICMR, 2020). Mental health concerns, including depression and suicidal ideation, have also been reported at higher rates among healthcare workers (Pompili et al., 2013). A prevalence rate of 64.6% for work-related stress has been observed in Indian HCPs (Kumar, 2016). According to the American Heart Association (2020), maintaining a healthy body weight, engaging in physical activity, and following a nutritious diet are essential for overall well-being. However, Yaribeygi et al. (2017) noted that high workplace stress among healthcare professionals is associated with poor eating habits, sedentary behavior, substance use, and increased risk of anxiety, depression, and weight gain. Therefore, the present study was performed to explore the nutritional status and perceived stress levels of Female Healthcare Professionals in selected districts of Uttar Pradesh, India.

MATERIALS & METHODS

A cross-sectional study was performed among healthcare professionals. 100 Female Health care professionals aged 25-45 years was selected randomly working in different health care sectors in Varanasi, Meerut, Ghazipur, and Mau district of India. Both private and government hospitals were selected for the study. A self-structured questionnaire was used to assess the nutritional status of healthcare professionals. Using Kohun Perceived stress scale (PSS) that have 10 questions, every question has a

numbering of 0, 1,2,3,4,5,6; this scale was used to determine the perceived stress level in health care professionals. A questionnaire schedule and online survey method were used to collect data from respondents. Stratified random sampling was used for data collection. Collected data were entered in Microsoft excel sheet and after that analysis was done through using SPSS software version 16. Standard mean was used for calculating age and BMI of the respondent's percentage are calculated through SPSS version 16.

RESULTS

A total of 100 Female Health care Professionals aged 25-45 years were included in the study. The present study show that the Mean age of respondents was 26 years and the mean BMI value of the respondents was 22.3kg/m² (Table 1). Among the participants, 75% were unmarried and 25% were married (Table 1). The daily working hours for the most respondent was more than 8 hours per day (57.1%) (Table 1). Regarding dietary preferences, 53.6 % of respondents were vegetarian, while 46.4% were non-vegetarian (Table 1). In terms of meal frequency, 50% of the healthcare professionals were consuming two meals per day, 36% reported consuming three meals daily, 11% consumed more than three meals per day, and 4% consumed only one meal daily (Table 2). In terms of food group consumption, 64% of respondents reported eating cereals daily, followed by pulses

48%of their daily meals, fruits 32%, poultry, fish, and meat 8%, root and tubers 21%, 63% consume fats and oils, and 80% of people consume sugar daily. 48% consumed milk and milk products, and only 27% consumed green leafy vegetables regularly. The consumption of green leafy vegetables and fruits should be encouraged because they are excellent sources of vitamins, minerals, and antioxidants. Regular sugar consumption should be limited to reduce the risk of developing type-2 diabetes and other health issues, as well as the probability of blood glucose levels rising later in life.

Health status of the female health care professionals

Among the participants, 20% were diagnosed with diabetes, 25% with anaemia, 11% with Hypothyroidism disorders, and 7% with hypertension. Additionally, 25% reported other health concerns, including urinary tract infections, reduced appetite, chronic back pain, migraine headaches, and heartburn.

Perceived Stress Levels

Perceived stress levels among female healthcare professionals were reported as high in 40% of respondents, moderate in 45%, and low in 15%. These findings are consistent with previous research conducted in India involving 345 female healthcare practitioners, where 64.6% reported experiencing work-related stress.

TABLE 1. Showing the age, BMI marital status, Daily working hours and food habits

	Percentage (%)	Mean
Age (mean)		26 years
BMI (kg/m ²)		22.3
Married	25	
Unmarried	75	
Daily working hours	57.1 (more than 8 hours)	
Food habits	53.6 (vegetarian)	
	46.4 (non – vegetarian)	

TABLE 2. Meal pattern and consumption frequency of the health care professionals

Meal pattern	Percentage (%)
Meal pattern (two meals in a day)	50
Consumption of cereals (Daily)	64

Consumption of pulses (Daily)	48
Consumption of fruits (Daily)	32
Consumption of poultry, fish and meat (Daily)	8
Consumption of root and tubers (Daily)	21
Consumption of fats and oils (Daily)	63
Consumption of sugar (Daily)	80
Consumption of milk and milk products (Daily)	48
Consumption of green leafy vegetables (Daily)	27

TABLE.3 Health status of the female health care professionals

Disease	%
Diabetes	20
Hypertension	7
Anaemia	25
Hypothyroidism	11
Other	25
Not applicable	12

TABLE.4 Perceived Stress Levels

Stress level	%
Low level	15
Moderate level	45
High level	40

DISCUSSION

Despite the fact that their personal health practices and challenges are sometimes disregarded, healthcare personnel are very important in enhancing patient well-being. This study assessed the health state, food patterns, lifestyle behaviors, and reported stress levels of 100 female healthcare professionals (aged 25–45). Despite having a normal BMI (22.3 kg/m²), this young group had a high rate of diabetes (20%), anemia (25%), thyroid problems (11%), and hypertension (7%), indicating potential health risks. In addition, perceived stress was high (40%), moderate (45%), and low (15%) across the group. Previous studies found that healthcare workers face similar nutrition and lifestyle difficulties. Sharma et al. (2018) found that over 70% of female nurses in Delhi were overweight or obese, despite receiving enough nutrition; these nurses also reported rotating shifts, skipping meals, and snacking frequently. Shift employment in healthcare has been associated to metabolic disruption and higher BMI due to irregular eating patterns, late-night meals, and circadian rhythm disturbance (Kisakye et al., 2023; Öztürk et al., 2024). According to the current study,

just 27% of participants ate green leafy vegetables on a regular basis, while cereals (64%) and sugar (66%) were consumed in large quantities. These patterns are consistent with the findings of Kisakye et al. (2023), who discovered that higher snacking frequency and inconsistent meal routines were substantially associated with increased body fat, anxiety, and poor metabolic health. Similarly, Perkins et al. (2019) found that shift-working healthcare personnel had lower diet quality during night shifts, consuming more sweets and less vegetables and fruits. Diabetes prevalence (20%) in our sample is higher than the national norm for similar age groups in India (Geldsetzer et al., 2018), although hypertension was lower. This disparity may reflect healthier lifestyle choices or a younger age, but it emphasizes the importance of targeted health promotion efforts. Anemia prevalence (25%) is also consistent with dietary patterns; research by Jadhav et al. (2025) and Premarathna et al. (2024) underline the strong association between poor intake of leafy greens and heightened anemia risk, even in younger professional populations. The significant reported stress among participants (85% reporting moderate to severe stress) is

consistent with previous findings. Kisakye et al. (2023) discovered that stress was positively connected with both snacking and BMI. Vasquez-Purí et al. (2023) found a link between burnout and emotional eating, namely "comfort" foods high in fat and sugar.

CONCLUSION

This study examined the nutritional status and perceived stress levels of female healthcare professionals aged 25 to 45 years. Although the mean BMI (22.3 kg/m²) was within the normal range, 25% of individuals were anaemic and 20% had diabetes, indicating early symptoms of non-communicable disease risk even in a relatively youthful and active group. Furthermore, 57% worked more than eight hours every day, and 40% experienced significant levels of perceived stress. These findings highlight the significance of workplace-based interventions in improving health outcomes among healthcare practitioners. Efforts should be directed on promoting balanced meals rich in fruits, vegetables, whole grains, lean proteins, and fiber, while limiting consumption of sugary foods and beverages, particularly during long or irregular shifts. Access to safe drinking water and nutritious snacks at work can help lessen reliance on energy-dense "junk" foods. In addition, stress-reduction practices such as regular yoga, mindfulness-based relaxation techniques, and peer support groups should be promoted to battle occupational stress, insomnia, and burnout. Institutional measures such as planned lunch breaks, workplace hygiene, and flexible work arrangements are critical, especially for female professionals with family obligations. Strengthening family and social support networks may also help to enhance mental and physical health outcomes. To summarize, maintaining the well-being of healthcare professionals necessitates a comprehensive approach that combines dietary advice, mental health support, and organizational reform to promote a better and more sustainable work environment.

Declaration by Authors

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