

**"ASSESSMENT OF NUTRITIONAL STATUS AND DIETARY PATTERNS AMONG
HOTEL EMPLOYEES: IMPLICATIONS FOR WORKPLACE HEALTH INITIATIVES"****¹Srinithi K., ^{2*}Lally Hanna Luke and ³Deepa C. Philip**¹Post Graduate Student, MMM College of Health Sciences, Mogappair, Chennai, India.^{2*}Associate Professor, Department of Clinical Nutrition, MMM College of Health Sciences, Mogappair, Chennai, India.³Principal, MMM College of Health Sciences, Mogappair, Chennai, India.

Article Received on: 27/09/2024

Article Revised on: 17/10/2024

Article Accepted on: 07/11/2024

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College of Health Sciences,
Mogappair, Chennai, India.**ABSTRACT**

The hotel industry plays a significant role in the global economy, employing a diverse workforce. This study aimed to evaluate the nutritional status of hotel employees, focusing on a sample of 31 individuals above the age of 30, selected using a convenient sampling method. Health parameters included body dimensions (body mass index, mid-upper arm circumference, waist circumference) and metabolic values (hemoglobin levels, random blood glucose levels, triglyceride levels). Dietary patterns were assessed using a 24-hour recall. The biochemical assessment indicated low hemoglobin levels among hotel employees. The study also revealed that energy intake was lower than recommended allowances, with excessive consumption of fat and carbohydrates, though protein intake met recommended levels. In conclusion, assessing the nutritional status of hotel employees is essential. Employers should implement strategies to provide nutritious food options, promote a health-conscious work environment, and offer nutritional education. Encouraging balanced lifestyles, exercise, stress management, and community support could significantly improve employees' energy levels, concentration, and overall quality of life. Prioritizing employee health benefits both individuals and the hotel industry as a whole.

KEYWORDS: Hotel Employees, Nutritional Assessment, Dietary pattern.**INTRODUCTION**

The nutritional status of employees is a critical factor influencing their overall health, well-being, and productivity, particularly in industries such as hospitality, where physical and mental demands are high. The hotel industry, a key player in the global economy, employs a diverse workforce responsible for providing services ranging from lodging to food and beverage.^[1] These employees often work long hours in shifts, face physical labor, and are exposed to environmental factors such as smoking and alcohol consumption, all of which can negatively impact their health. Additionally, low-income levels in certain positions within the industry may limit access to nutritious food, further exacerbating the risks of poor nutritional status.^[2,3]

Adequate nutrition is essential for sustaining energy, concentration, and overall job performance. Malnutrition or an imbalance in nutrient intake can lead to a variety of health problems, including obesity, diabetes, hypertension, and cardiovascular diseases.^[4,5] Understanding the nutritional health of hotel employees is not only important for the individuals themselves but also for the overall service quality provided by the industry. Poor health can lead to increased absenteeism, reduced productivity, and a higher risk of chronic

diseases, all of which can affect the operational efficiency of hotels.

Moreover, food hygiene and safety are of paramount importance in the hotel industry, given the high volume of meals prepared and served daily.^[6] Food handlers play a crucial role in ensuring food safety, and their personal health and hygiene practices directly affect the safety of the food they serve. Foodborne illness outbreaks are a significant concern, with improper food handling being a primary cause. Ensuring that hotel staffs are educated on proper nutrition and hygiene practices is vital for maintaining a safe and healthy working environment.^[7]

This study aims to evaluate the nutritional status, dietary patterns, and hygiene practices of hotel employees, highlighting the importance of addressing these factors to improve employee well-being and, ultimately, the quality of service within the hotel industry. By identifying the nutritional challenges faced by hotel staff, this research provides insights that could inform the development of strategies to enhance their health and work environment.^[8,9]

To prepare a methodology for your study on the nutritional status, knowledge, and hygiene practices

among hotel employees for journal submission, here's a structured format.

METHODOLOGY

This study employed a ****cross-sectional descriptive research design**** to evaluate the nutritional status of employees working at Hotel Pushpa, located in Mayiladuthurai District, Tamil Nadu, India. A quantitative research approach was utilized, incorporating anthropometric measurements, biochemical assessments, and dietary intake evaluations to gather comprehensive data on the participants' health and nutrition levels. The study focused on hotel employees aged 30 years and above as the target population and participants were selected using a convenient sampling method. A total of 31 male and female employees who met the inclusion criteria were recruited for the study based on their availability and willingness to participate. Employees below the age of 30 or those unwilling to take part were excluded from the study.

Data collection was carried out over a period of one month, providing ample time to gather all necessary measurements and information from the selected participants. Anthropometric measurements were taken to assess body composition, including height, weight, Body Mass Index (BMI), waist circumference, and mid-upper arm circumference (MUAC). These measurements

provided an overview of the participants' physical health in relation to their body structure and fat distribution.

In addition to anthropometric data, biochemical assessments were performed, which included tests such as Random Blood Glucose Levels to screen for diabetes risk, Hemoglobin tests to evaluate iron levels and check for signs of anemia, and Triglyceride measurements to assess lipid levels in the blood, providing insight into cardiovascular health.

To evaluate dietary intake, the 24-hour dietary recall method was employed. Each participant was asked to provide a detailed account of all the food and beverages they had consumed in the previous 24 hours. The nutritional content of the reported intake was then calculated, including energy, protein, fat, and carbohydrate levels, and these values were compared with the Recommended Dietary Allowances (RDA) to assess whether the participants' diets were meeting the standard nutritional requirements.

Prior to data collection, all participants were informed about the purpose and procedures of the study, and informed consent was obtained. Ethical approval for the study was granted by the relevant ethics committee to ensure that the research adhered to appropriate standards of conduct and participant welfare.

ANTHROPOMETRIC MEASUREMENTS

Table 1

ANTHROPOMETRIC MEASUREMENTS	GENDER						t –value	p –value
	MALE			FEMALE				
	N	Mean	SD	N	Mean	SD		
Waist Circumference	23	90.39	10.53	8	86.88	11.31	0.798	0.431
Mid Upper Arm Circumference	23	31.57	6.31	8	32.00	4.07	-0.181	0.858
BMI	23	23.99	3.71	8	26.34	5.89	-1.320	0.197

Table 1 illustrates the relationship between gender and anthropometric measurements. Analysis of the mean scores for waist circumference, mid-upper arm circumference, and BMI among male and female employees revealed that the average values were similar across genders, showing no statistically significant

differences. This suggests that male and female employees have comparable levels in these anthropometric measurements. Consequently, it was concluded that there is no statistically significant difference in anthropometric measurements between male and female employees.

BIOCHEMICAL ASSESSMENT

Table 2

BIOCHEMISTRY ASSESSMENT	GENDER						t –value	p –value
	MALE			FEMALE				
	N	Mean	SD	N	Mean	SD		
Random Blood Glucose	23	143.22	71.93	8	131.50	52.95	0.421	0.677
Hemoglobin	23	12.23	0.734	8	10.93	1.484	3.279	0.003**
Triglyceride l	23	126.17	37.88	8	146.50	27.30	1.390	0.045*

Table 2 presents a gender-based comparison of biochemical parameters among the selected hotel employees. Analysis of hemoglobin levels indicated that the mean hemoglobin score for male employees was 12.23, while for female employees, it was lower at 10.93.

This difference was statistically significant with a p-value of 0.003, suggesting a notable variance in hemoglobin levels between genders. Despite this difference, both male and female employees were found to have moderate anemia. These findings align with a

study by A.T. Pawar et al. (2007), which reported anemia as the most common health issue among hotel workers, with a prevalence rate of 40.3%. Thus, the current study supports previous research on the high incidence of anemia within this occupational group.

In terms of triglyceride levels, female employees showed a higher mean value (M = 146.50) compared to male employees (M = 126.17), indicating that female employees may be at a slightly higher risk for elevated triglycerides. However, when examining random blood

glucose levels, the mean score for male employees was 143.22, marginally higher than that of female employees at 131.50. This difference, however, did not reach statistical significance, suggesting that blood glucose levels were relatively comparable across genders.

These results highlight gender-based variances in hemoglobin and triglyceride levels among hotel employees, with females showing lower hemoglobin and higher triglycerides, while random blood glucose levels were similar across both groups.

DIETARY INTAKE (24HOURS RECALL)

Table 3

DIETARY INTAKE	GENDER						T -value	p -value
	MALE			FEMALE				
	N	Mean	SD	N	Mean	SD		
24HourRecall-Energy	23	1937.94	548.62	8	1539.81	506.49	1952	0.041*
24HourRecall -Protein	23	53.01	21.43	8	45.26	10.89	1.972	0.036*
24HourRecall - Fat	23	48.24	18.25	8	42.06	14.15	0.868	0.393
24HourRecall-CHO	23	320.93	93.34	8	244.16	94.12	2.526	0.029*

Table 3 provides a detailed comparison of the mean dietary intake between male and female employees, measured against the Recommended Dietary Allowance (RDA).

The analysis revealed that the mean dietary intake for male employees was as follows: energy intake was 1937.94 kcal, protein intake was 53.01 g, and carbohydrate intake was 320.93 g. For female employees, the mean scores for energy, protein, and carbohydrate intake were 1539.81 kcal, 45.26 g, and 244.16 g, respectively. In terms of fat intake, the mean score for male employees was 48.24 g, while for female employees, it was 42.06 g.

When these values were compared with the RDA, which suggests an energy requirement of 2710 kcal/day for males and 2130 kcal/day for females, it was evident that both male and female employees had lower energy intake than recommended. Male employees' average energy consumption was 772 kcal below the RDA, while female employees consumed 590 kcal less than their daily requirement. This significant energy deficit indicates that both male and female employees may not be meeting their caloric needs, which could potentially impact their energy levels and overall health, particularly given the physically demanding nature of hotel work.

For protein intake, the RDA recommends 54 g/day for males and 45.7 g/day for females. The male employees' mean protein intake (53.01 g) was nearly aligned with the RDA, showing only a slight deficit. Female employees, on the other hand, had a mean protein intake of 45.26 g, which closely matched the RDA for females. This suggests that, in terms of protein consumption, both male and female employees are largely meeting their dietary requirements, which is crucial for maintaining muscle mass and supporting overall health.

However, in the case of carbohydrates, both male and female employees had significantly higher intakes compared to the RDA. The RDA recommends a carbohydrate intake of 130 g/day for both males and females, but the male employees had a mean intake of 320.93 g, while female employees had a mean intake of 244.16 g. This overconsumption of carbohydrates, more than double the recommended amount, might increase the risk of developing conditions such as insulin resistance or weight gain over time.

Regarding fat intake, the RDA suggests 30 g/day for males and 25 g/day for females. The study found that both male (48.24 g) and female (42.06 g) employees had higher fat intakes than recommended, with male employees consuming approximately 18 g more and female employees consuming 17 g more than the RDA. Excessive fat consumption, particularly if it includes unhealthy fats, can increase the risk of cardiovascular diseases and other metabolic disorders.

In summary, the results indicate that both male and female employees are not meeting the recommended energy intake, with significant deficits in caloric consumption. Protein intake was generally in line with the RDA for both genders, while carbohydrate and fat intake exceeded the recommended levels. These findings suggest potential dietary imbalances that may affect the long-term health and well-being of hotel employees, highlighting the need for targeted interventions to promote more balanced eating habits.^[10]

CONCLUSION

The study provides a comprehensive assessment of the nutritional status, biochemical parameters, and dietary intake of hotel employees, highlighting key findings that underscore the health and dietary challenges within this occupational group. Anthropometric measurements

showed no statistically significant differences between male and female employees, indicating similar body composition across genders. However, notable gender-based differences were observed in biochemical parameters, with females displaying lower hemoglobin levels, suggesting a higher prevalence of anemia, and higher triglyceride levels than their male counterparts. These findings align with previous research on the prevalence of anemia and elevated triglycerides among hotel workers, likely due to occupational stress and limited access to balanced nutrition.

The dietary intake assessment revealed that both male and female employees consumed significantly less energy than recommended by the RDA, with male employees consuming an average of 772 kcal below the RDA and female employees consuming 590 kcal less. Although protein intake was generally adequate and close to RDA guidelines, both genders significantly exceeded carbohydrate and fat intake levels. This imbalance, with elevated carbohydrate and fat intake relative to energy needs, may pose long-term health risks such as weight gain, insulin resistance, and cardiovascular issues.

In conclusion, the study highlights the need for nutritional interventions targeted at improving balanced dietary intake among hotel employees. Addressing the observed energy deficits, reducing excess carbohydrate and fat consumption, and ensuring adequate protein intake could help mitigate health risks. Additionally, promoting awareness about anemia and cardiovascular health and facilitating access to nutritious food options could support better health outcomes for employees in the hospitality industry.

ACKNOWLEDGMENTS: We sincerely appreciate all research participants' effort and unflinching patience.

Disclosure of conflict to interest: No conflict to interest was declared by the authors.

Statement of ethical approval: Compliance with ethical standards.

Statement of informed consent: Informed consent was obtained from all individual participants included in the study.

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