
ORIGINAL ARTICLE

A Comparative Study of Nutritional Status among Government and Private Working Women

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ABSTRACT

Working women nutritional status is totally disturbed due to their job professional work load and household work. The aim of the current study is to compare the nutritional status of the government and private working women. The study was performed among 200 subjects in which 100 were government working women and 100 were private working women from the age group of (29-45 years). The data were collected through purposive sampling. A qualitative questionnaire was formulated to collect the health status, socio-demographic profile and work profile. Anthropometric measurements were done which include height, weight, waist circumference, body composition analysis - %fat, %muscle mass and BMI was calculated. Biochemical assessment were assessed – cholesterol LDL, HDL and hemoglobin. Global physical activity questionnaire, (GPAQ) World health organization (WHO) was used to collect the data on physical activity levels of individuals. The data was analyzed by using SPSS Version 22. The result revealed that the BMI, waist circumference of the private working women was higher 30.23kg/m² than the government working women. But the differences were not statistically significant. The fat%, water% and muscle mass of the government working women has recorded higher 33.43% ,61.9%,49.4% as compared to private working women. Higher levels of cholesterol, LDL, HDL was recorded in government working women 52.4%, 139.4%, 196.2% as compared to private working women. The improved quality of sleep was more in private working women. The study concluded that BMI and waist circumference was more in private working women but on the other hand in regard with body composition, cholesterol level, LDL was higher in government working women. Sleep quality was also low in government working women. A special Nutrition and health programme should be initiated for working women to address the stress of office and home to lead a better healthy life.

Key words: BMI, Waist Circumference, LDL, HDL, Sleep, Nutrition.

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INTRODUCTION

Nutrition is the main of determinants of life. The main nutritional issues concern with the country is the consumption of low quality and quantity of nutrients, thus leading towards the nutritional health disorders [1] Nutritional health has maintained by a state of equilibrium in which nutrient intake and requirements are balanced. Malnutrition is now the major problem people are facing it mainly occurs when the net nutrient intakes is less than requirements. Malnutrition leads to a succession of metabolic abnormalities, reduced organs, physiologic changes, tissue function and loss of body mass [2]. Women plays an essential role at home as well as in society, they are the integral part in any of the field, their contribution towards the society as housewives, mothers and income earners, home managers and community worker often go unrecognized and undervalued. A woman's health is her total well-being which is not only determined by her biological factors and reproduction, but also affected by the work load, nutrition, stress, migration and war, among others [3].

Nutrition plays a major role in humans' life. In India most the individuals are facing consumption of quantity and quality of nutrients due to improper diet and lifestyle which leads to various of health disorders in people. The Women are the one who plays an essential role in our society as well as at

home. They are the integral part of our society and their contribution towards our society is not only managing their families, house-hold work but also in professional world. Due to a lot of work pressure and stress their mental and physical health has also been disturbed. [4] The professional life of the women working outside from home for the long duration have less time and unable to take proper care of enable them to take proper care of their health. This leads to the lack of dietary intake and further causes occurrence of many nutritional deficiency disorders. The Nutritional deficiency disorder effect the health of an individual by causing many of the problems like lack of physical stamina, tiredness, fatigueless, anemia deficiency, weight gain and many more. [5]

Indian working women revealed that due to their job profession and household works the women were not able to perform exercise or any kind of physical activity. This leads to weight gain and also increase the risk of many of non-communicable diseases like Diabetes, Cardiovascular diseases, Thyroid and liver cirrhosis and many more. [6]

MATERIAL AND METHEDS

The study was conducted in Noida. A sample of 200 participants were selected equally from the 4 zones of Noida South, East, North, West. The Sample consist of 100 government working women and 100 private working women from the age group of (29-45 years). Purposive sampling was done for the data collection of the study. Different tools and techniques were used for the data collection. A qualitative questionnaire was formulated to collect the health status, socio-demographic profile and work profile. Anthropometric measurements were done which include height, weight, waist circumference, body composition analysis - %fat, % muscle mass, % water and BMI was calculated. Biochemical assessment were assessed - cholesterol LDL, HDL and hemoglobin. Global physical activity questionnaire (GPAQ) (WHO) was used to collect the data on physical activity levels of individuals. The data was analyzed by using SPSS Version 22.

RESULT AND DISCUSSION

Tables 1: Distribution of participants based on demographic profile

DEMOGRAPHIC PROFILE	WORKING WOMEN (GOVERNMENT) (N%)	WORKING WOMEN (PRIVATE) (N%)
TYPE OF FAMILY		
NUCLEAR	72(72%)	61(61%)
JOINT	23(23%)	29(29%)
SEPERATELY	5(5%)	10(10%)
MARITAL STATUS		
MARRIED	53(53%)	50(50%)
UNMARRIED	37 (37%)	37 (37%)
WIDOW	5(5%)	7 (7%)
DIVORCE	5 (5%)	6(6%)
MONTHLY INCOME		
25000-50,000	70(70%)	77(77%)
10,000-20,000	28 (28%)	23(23%)
LESS THAN 10,000	2(2%)	0 (0.0%)
EDUCATION		
GRADUATE	99(99.0%)	99(99.0%)
POST GRADUATE	1 (1%)	1(1%)

Table 1 represents the distribution of subjects based on demographic profile. In both the groups (72%) of participants belongs to nuclear family. 53% of participants were married, 70% of them were having a monthly income of 25000-50,000 and 90% of individuals were graduate. The data represent that both the group were having similar demographic profile.

Table 2: Anthropometric measurements of the participants

ANTHROPOMETRIC MEASUREMENTS	WORKING WOMEN (GOVERNMENT) M±SD	WORKING WOMEN (PRIVATE) M±SD	T-VALUE	P-VALUE
HEIGHT (cm)	159.88±5.53	157.41±6.08	3.004	0.003
WEIGHT (Kg)	76.74±16.02	72.73±17.14	1.709	0.089
WAIST CIRCUMFERENCE (Cm)	34.55±3.13	33.645±3.89	1.810	0.072
BMI (kg/m ²)	30.23±6.74	29.6514±7.53	0.580	0.562

Anthropometric measurements of the participants were represented in table 2. The data revealed that the average height of the government working women was 159.88cm and private working women were 157.4cm. The average weight of the government working women was 76.74kg and private working women were 72.73kg. The average waist circumference was recorded higher in government working women (34.55cm) as compared to private working women. The average BMI of the government working women was 30.23kg/m² and private working women were 29.65kg/m² but the differences between government and private working women regarding weight, waist circumference, BMI except height were not statistically significant.

Table 3: Distribution of participants based on BMI (WHO classification)

CLASSIFICATION	WORKING WOMEN (GOVERNMENT) (N%)	WORKING WOMEN (PRIVATE) (N%)	P -VALUE
<18.5	2(2%)	6(6%)	0.180
18.5-24.9	14(14%)	14(14%)	
25.0-29.9	6(6%)	13(13%)	
>30	78(78%)	67(67%)	

Table-3 represents the distribution of the participants based on BMI (WHO classification). The data revealed that more of the private working women were underweight (6%) as compared to government working women. More of private working women (13%) were overweight. On the other hand, more of government working women (78%) were recorded obese as compared to private working women but the data was not statistically significant.

Table 4: Body composition analysis of the participants

BODY COMPOSITION	WORKING WOMEN (GOVERNMENT) M±SD	WORKING WOMEN (PRIVATE) M±SD	T-VALUE	P-VALUE
%FAT	33.84±30.575	28.253±9.3636	1.747	0.082
%MUSCLE MASS	49.40.100±564.97	48.82.50±846.384	1.097	0.274
%WATER	61.982±81.156	48.196±8.85184	1.689	0.093

Body compositions of the participants were represented in Table 4. The data revealed that the average fat% of the government working women was 33.84% and private working women was 28.25%. The average muscle mass% of the government working women was 49.40% and private working women were 48.82%. More water% was recorded in government working women (61.98%) as compared to private working women but the data was not statistically significant.

Table 5: Biochemical parameters of the participants

BIOCHEMICAL PARAMETERS	WORKING WOMEN (GOVERNMENT) M±SD	WORKING WOMEN (PRIVATE) M±SD	T-VALUE	P-VALUE
CHOLESTEROL (mg/dl)	196.4±77.11	176.2±50.11	2.200	0.029
LDL (mg/dl)	138.8±51.56	139.7±60.36	-0.112	0.911
HDL (mg/dl)	52.47±19.17	46.94±18.72	2.063	0.40
HAEMOGLOBIN (g/dl)	11.35±1.83	11.35±1.80	0.018	0.986

Table 5 represents the biochemical parameter of the participants. The data revealed that the average cholesterol levels of the government working women was 196.4mg/dl and the private working women was 176.2mg/dl. The average LDL levels of the private working women was 139.7mg/dl and government working women was 138.8mg/dl. More HDL levels were recorded in government working women (52.47mg/dl) as compared to private working women but the data was not statistically significant.

Table 6: Sleep pattern of the participants.

SLEEP PATTERN	WORKING WOMEN (GOVERNMENT) M±SD	WORKING WOMEN (PRIVATE) M±SD	T-VALUE	P-VALUE
PSQI SCORE	12.58±7.14	13.45±5.82	0.947	0.345

Sleep pattern of the participants is represented in table 6. The data revealed that the more quality of sleep was recorded in private working women as compared to government working women but the data were not statistically significantly.

Table 7: Distribution of subjects based on consumption of breakfast

	WORKING WOMEN (GOVERNMENT) (N%)	WORKING WOMEN (PRIVATE) (N%)	0.016
SOMETIMES	53(53%)	58(58%)	
RARELY	33(33%)	35(35%)	
ALWAYS	13 (13%)	2(2%)	
NEVER	1(1%)	5(5%)	

Consumption of breakfast of the participants is presented in table 7. The data revealed that more of private working women (58%) were taking their breakfast sometimes as compared to government working women. 13% of government women were taking their breakfast always as compared to private working women but the data was not statistically significant.

Table 8: Distribution of subjects based on consumption of Junk food

	WORKING WOMEN (GOVERNMENT) (N%)	WORKING WOMEN (PRIVATE) (N%)	CHI-SQUARE 0.059
ALWAYS	67(67%)	51(51%)	
SOMETIMES	29(29%)	39(39%)	
RARELY	4(4%)	7(7%)	
NEVER	0(0%)	3 (3%)	

Consumption of junk food of the participants is presented in table 8. The data stated that 67% of government working women always including junk food in their diet as compared to private working women (51%).3% of private working women sometimes include junk foods in their diet as as compared to government working women (29%) but the data was not statistically significant.

Table 9: Distribution of Subjects based on meal pattern

MEAL	WORKING WOMEN (GOVERNMENT) (N%)	WORKING WOMEN (PRIVATE) (N%)	CHI-SQUARE 0.946
3 MEALS	82(82%)	82(82%)	
6 MEALS	13(13%)	12(12%)	
2 MEALS	4(4%)	4(4%)	
1 MEALS	1(1%)	2(2%)	

Table 9 represents distribution of subjects based on meal pattern. Both government and private working women takes 3 meals in a whole day on daily basis (82%). On the other hand, 13% of government workingwomen takes 6 meals in a whole day as compared to private working women (12 %)but the data was not statistically significant.

Table 10 Distribution of Subjects based on skipping of meals

MEAL	WORKING WOMEN (GOVERNMENT) (N%)	WORKING WOMEN (PRIVATE) (N%)	CHI-SQUARE 0.121
LUNCH	91(91%)	81(81%)	
DINNER	5(5%)	10(10%)	
BREAKFAST	1(1%)	6(6%)	
NONE OF THE ABOVE	3(3%)	3(3%)	

Table 10 represents distribution of subjects based on skipping of meals.The data revealed that 91% of government working women usually skipped their lunch meal as compared to private working women (81%). More of private working women mostly skipped their dinner meal (10%) as compared to government working women (5%) but the data was not statistically significant.

CONCLUSION

The study concluded that BMI and waist circumference was more in private working women but on the other hand in regard with body composition, cholesterol level, LDL was higher in government working women. Sleep quality was also low in government working women. A special Nutrition and health programme should be initiated for working women to address the stress of office and home to lead a better healthy life.

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