Research paper

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# Lifestyle Determinants and Dietary Habits among Nurses in **South India**

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# **ABSTRACT:**

A hectic schedule and demanding tasks challenge nurses to adjust their lifestyle and dietary habits. The objective of this study is to assess the lifestyle pattern, dietary habits they followed and to ascertain the nutritional status of nurses. *Methods*: This is a cross sectional, comparative study, using purposive sampling technique. The sample consisted of registered female nurses (N=500) aged 25-45 years working in government and private hospitals selected from rural and urban areas of Thiruvananthapuram city. The lifestyle pattern of the nurses was elicited through a schedule by eliciting the details on physical activities, sleep patterns, quality of social and family relationships. Anthropometry, biochemical, dietary and clinical assessment methods were used to elicit their nutritional status. Results: Nurses in both sectors were following unhealthy lifestyles. They had no physical exercise, no sufficient sleep, no adequate work breaks, and most of them found it difficult to keep a balance with work and home due to their busy schedules. There was prevalence of underweight and overweight among nurses along with their poor dietary habits. Biochemical analysis of blood samples indicated the prevalence of anaemia, diabetes, and hypercholesterolemia. Conclusion: This present study has identified there is a large lacuna in lifestyle and health profile of nurses. There is an urgent need by hospital managements and policy makers to ensure quality nursing service through staff development and training programs.

Keywords: nurses, shift work, lifestyle, dietary profile, nutritional status government hospital, private hospital

### **INTRODUCTION:**

A hectic schedule and demanding tasks challenge nurses to adjust their lifestyle and dietary habits.

One of the most crucial elements influencing health is a lifestyle. Nurses, as health promoters, are at the forefront of the fight against various diseases; thus, they are at risk of the disease and its subsequent problems. The present study aimed to determine the lifestyle and influential factors among nurses doing shift works in hospitals of Kerala.



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Relevant studies have shown that a healthy lifestyle is continuously associated with a reduction in mortality and an increase in life expectancy and well-being (Balanzá-Martínez et al., 2020; Larsson et al., 2017). Lifestyle is the term used to describe how people live.. This lifestyle is often reflected in their activities, beliefs, interests, opinions, and values, which is also influenced by certain factors such as family, culture, and social status (Kaakinen et al., 2018).

Vijayalaxmi et.al (2019) points out that, life style disorders like insufficient sleep, erratic eating habits, missing meals and lack of exercise had substantial relationship with shift work which added to their deteriorating health. Working atmosphere and nature of patient calls, make nurses to confront various work-related risks. These hazards make their health even worse in their future lives.

The treatment team, especially nurses, is regarded as one of the most important groups of the society, directly involved in the Covid-19 pandemics, the current pandemic situation still facing by people in our world. Since nurses are at the frontline of the fight against Covid-19 sickness, they are susceptible to the illness, and both the illness itself and its aftereffects have an impact on their health. (Al Thobaity & Alshammari, 2020).

Due to the increased Covid-19 pandemic among worldwide and its increased incidence among nurses, advanced search in existing studies indicates that there has been no study on the lifestyle of nurses; therefore, considering the importance of nurses' health, the aim of the present study was to "determine lifestyle pattern, dietary habits they followed and to ascertain the nutritional status of nurses in Kerala".

### **METHODOLOGY:**

This is a cross sectional, comparative study, using purposive sampling technique. The sample consisted of registered female nurses (N=500) aged 25-45 years working in government and private hospitals selected from rural and urban areas of Thiruvananthapuram city, Kerala in India.

Data collection was carried out for a period of more than one and half years in government hospitals of rural and urban areas as well as from private hospitals of rural and urban areas of Thiruvananthapuram, Kerala in India.

After obtaining the permission from the concerned authorities, the investigator directly contacted the participants after fixing a convenient time of them with the cooperation of Nursing Superintendent of the concerned hospitals. The investigator explained the purpose of the study to the respondents. If the respondents were comfortable at the work place, interview was conducted at the work place without disturbing their routine work schedule, preferably towards the end of their shift.



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The lifestyle pattern of the nurses was elicited through a schedule by eliciting the details on physical activities, sleep patterns, quality of social and family relationships. Regarding the physical activity of samples, an interview schedule elicited information on habit of exercise, type of exercise and time duration of physical activities were used. The schedule finalised for sleep assessment included information on sleep duration, duration taken to fall sleep, nature of sleep, level of sleep satisfaction and methods followed to fall asleep. Studies proved that the shift work has a great impact on the social and family life than the regular time schedule (Mauno *et.al*, 2015; Tuttle and Garr, 2012; Costa and Silva, 2019). Eleven statements were selected from related studies (Vitale *et.al*, 2015; Devadarshini, 2010; Handy, 2010) and edited with the help of experts. This schedule was administered to collect responses in this regard. The responses were recorded on a 3 point scale.

Anthropometry, biochemical, dietary and clinical assessment methods were used to elicit their nutritional status. In the present study, the anthropometric measurements- heights, weights, waist and hip circumference were recorded. From the above values, the Body Mass Index (BMI) and Waist Hip Ratio (WHR) were computed. The investigator fixed the biochemical parameters: haemoglobin, total cholesterol and glycated haemoglobin (HbA1c) levels to ascertain the nutritional status of the subjects. The dietary intake pattern of meals were assessed by 24 hour recall method, using a set of standardized vessels using an oral questionnaire. This helped to estimate the nutrient intake of the subject.

List of clinical symptoms for the shift workers were taken from related literature (Makateb and Torabifard,2017; Parna *et.al*,2015; Belczak *et.al*, 2018; Attarchi *et.al*, 2014; Jelliffe, 1966; American journal of public health supplement,1973 ) which was validated with the help of medical experts. This schedule consists of various measurement parameters/variables which is organised as a checklist. To evaluate the health status of subjects the blood pressure of respondents were estimated with the help of an automated digital blood pressure monitor.

# **RESULT AND DISCUSSION:**

A total number of 500 nurses from both government and private hospitals of Kerala, India were included in the present study. Some demographic characteristics of nurses are given in Table 1.

Govt. hospitals **Private hospitals** (n=250)(n=250)**Particulars Total Total** Rural Urban Rural Urban n=125n=125n=125n=125Age(yrs) 25-30 26(10.4) 16(6.4) 42(16.8) 38(15.2) 45(18.0) 83(33.2)

Table 1 Demographic profile of respondents



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30-35	27(10.8)	58(23.2)	85(34.0)	64(25.6)	61(24.4)	125(50.0)
35-40	20(8.0)	16(6.4)	36(14.4)	17(6.8)	14(5.6)	31(12.4)
40-45	52(20.8)	35(14.0)	87(34.8)	6(2.4)	5(2.0)	11(4.4)
Religion Hinduism Christianity Islam	79(31.6) 26(10.4) 20(8.0)	94(37.6) 17(6.8) 14(5.6)	173(69.2) 43(17.2) 34(13.6)	97(38.8) 25(10.0) 3(1.2)	94(37.6) 31(12.4) 0(.0)	191(76.4) 56(22.4) 3(1.2)
Year of Experience						
Up to 5yrs	36(14.4)	47(18.8)	83(33.2)	19(7.6)	24(9.6)	43(17.2)
>5-10years	34(13.6)	47(18.8)	81(32.4)	71(28.4)	85(34.0)	156(62.4)
>10-15 years	18(7.2)	14(5.6)	32(12.8)	26(10.4)	16(6.4)	42(16.8)
>15 years	37(14.8)	17(6.8)	54(21.6)	9(3.6)	0(0.0)	9(3.6)
Occupational status						
Head Nurse						
Staff nurse grade	20(8.0)	11(4.4)	31(12.4)	16(6.4)	36(14.4)	52(20.8)
1/Senior SN	25(10.0)	12(4.8)	37(14.8)	13(5.2)	0(0.0)	13(5.2)
Staff nurse grade 2/Junior SN	80(32.0)	102(40.8)	182(72.8)	96(38.4)	89(35.6)	185(74.0)
Marital status						
Married	114(45.6)	94(37.6)	208(83.2)	115(46.0)	106(42.4)	221(88.4)
Unmarried	9(3.6)	31(12.4)	40(16.0)	8(3.2)	19(7.6)	27(10.8)
Widowed	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Divorced	2(0.8)	0(0.0)	2(0.8)	0(0.0)	0(0.0)	0(0.0)
Separated	-	-	-	2(0.8)	0(.0)	2(0.8)
Bonded agreement in job Yes No	35(14.0) 90(36.0)	33(13.2) 92(36.8)	68(27.2) 182(72.8)	1(0.4) 124(49.6)	15(6.0) 110(44.0)	16(6.4) 234(93.6)
Type of residence						
House	118(47.2)	91(36.4)	209(83.6)	105(42.0)	98(39.2)	203(81.2)
Apartment/Flat	0(0.0)	2(0.8)	2(0.8)	0(0.0)	3(1.2)	3(1.2)
Hostel	6(2.4)	26(10.4)	32(12.8)	5(2.0)	4(1.6)	9(3.6)
Rented	1(0.4)	6(2.4)	7(2.8)	15(6.0)	20(8.0)	35(14.0)

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Type of family Nuclear Joint Extended	105(42.0) 20(8.0)	115(46.0) 10(4.0)	220(88.0) 30(12.0)	110(44.0) 13(5.2) 2(0.8)	109(43.6) 15(6.0) (0.4)	219(87.6) 28(11.2) 3(1.2)
Monthly Salary						
5000-10000	3(1.2)	6(2.4)	9(3.6)			
10000-15000	25(10.0)	8(3.2)	33(13.3)	3(1.2)	4(1.6)	7(2.8)
150001-20000	3(1.2)	13(5.2)	16(6.4)	29(11.6)	17(6.8)	46(18.4)
20001-30000	29(11.6)	19(7.6)	48(19.3)	93(37.2)	104(41.6)	197(78.8)
30001-40000	30(11.6)	52(20.9)	82(32.5)			
Above 40000	35(14.1)	27(10.8)	62(24.9)			

Number in parenthesis indicates percentage

Demographic profile help us to understand the various characteristics of a specific population. Demographic data give a generalization about the population taken for the study.

As revealed in the table 1, in government hospitals 34.8 percent of respondents belonged to the age group between 40-45 years. In the private sector, nearly half of the respondents (50%) belonged to the age group 30-35 years. Most of the respondents in both government hospitals (69.2%) and private hospitals (76.4%) belonged to Hindu religion. In both government (72.8%) and private sector (74%) most of the respondents belonged to 'Staff nurse grade 2 category 'and 'Junior staff nurse' respectively. It was seen that majority of the respondents in both government hospitals (83.2%) and private hospitals (88.4%) were married. Majority of the respondents in both government (72.8%) and private hospitals (93.6%) were not having bonded agreement to work with their employer. It was seen that majority of respondents in both government (88%) and private sector (87.6%) belonged to nuclear families. Amongst the respondents of government hospitals, 32.5 percent belonged to the salary package of Rs 30001-40000/- while in private sector , majority of the respondents (78.8%) belonged to the category Rs 20001-30001/-.

Table 2 Physical activities of the respondents

Particulars		Govt. hospitals n=250		Total	Private he n=250	Total	
		Rural	Urban		Rural	Urban	
Emaguamay	Regularly	43(17.2)	24(9.6)	67(26.8)	18(7.2)	27(10.8)	45(18.0)
Frequency of Exercise	Never	82(32.8)	98(39.2)	180(72.0)	100(40.0	95(38.0)	195(78.0)
Excicise	Sometime	-	3(1.2)	3(1.2)	7(2.8)	3(1.2)	10(4.0)



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	S						
	Total	125(50.0	125(50.0	250(100. 0)	125(50.0	125(50.0	250(100. 0)
	Aerobic	-	5(2.0)	5(2.0)	1(0.4)	1(0.4)	2(0.8)
	Dancing	-	2(0.8)	2(0.8)	-	-	-
Type of exercise	Physical exercise	6(2.4)	3(1.2)	9(3.6)	8(3.2)	7(2.8)	15(6.0)
exercise	Walking	35(14.0)	10(4.0)	45(18.0)	14(5.6)	19(7.6)	33(13.2)
	Yoga	2(0.8)	7(2.8)	9(3.6)	2(0.8)	3(1.2)	5(2.0)
	Total	43(17.2)	27(10.8)	70(28.0)	25(10.0)	30(12.0)	55(22.0)
Duration	<1hr	27(10.8)	13(5.2)	40(16.0)	22(8.8)	23(9.2)	45(18.0)
of	1-2hrs	10(4.0)	11(4.4)	21(8.4)	3(1.2)	7(2.8)	10(4.0)
involveme	2-3 hrs	6(2.4)	3(1.2)	9(3.6)	-	-	-
nt per day	Total	43(17.2)	27(10.8)	70(28.0)	25(10.0)	30(12.0)	55(22.0)

Number in parenthesis indicates percentage

It was found that majority of nurses in private (78%) hospitals and government (72%) hospitals were not doing any kind of exercise. In both government (18%) and private hospitals majority of nurses (13%) opted for walking as a physical activity. These results are supported by another study conducted by Loef *et.al* (2016) which reports that shift workers spent more time walking than non-shift workers but shift workers were not associated with other physical activities and any sports activities. Most of the respondents in government (16%) and private (18%) hospitals were doing exercise for less than 1hr.The present study indicates that, the physical activity is generally low among nurses.

Table 3 Sleeping pattern of the respondents

		Govt. hospitals n=250		Total	Private ho	Total	
Particu	lars	Rural	Urban	1000	Rural Urban		1000
	<5hrs	35(14.0)	16(6.4)	51(20.4)	21(8.4)	35(14.0)	56(22.4)
	5 to 7 hrs	88(35.2)	94(37.6)	182(72.8)	95(38.0)	74(29.6)	169(67.6)
Sleep	Irregular sleep duration	2(0.8)	15(6.0)	17(6.8)	9(3.6)	16(6.4)	25(10.0)
	Total	125(50.0)	125(50.0)	250(100.0)	125(50.0)	125(50.0)	250(100.0)



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	Sudden sleep	67(26.8)	87(34.8)	154(61.6)	101(40.4)	65(26.0)	166(66.4)
Time	1/2 an hr	41(16.4)	23(9.2)	64(25.6)	21(8.4)	31(12.4)	52(20.8)
taken	1hr	12(4.8)	15(6.0)	27(10.8)	3(1.2)	22(8.8)	25(10.0)
to fall	2hrs	-	-	-	-	7(2.8)	7(2.8)
asleep	3 or more hrs	5(2.0)	-	5(2.0)	-	-	-
	Total	125(50.0)	125(50.0)	250(100.0)	125(50.0)	125(50.0)	250(100.0)
	Yes	64(25.6)	82(32.8)	146(58.4)	68(27.2)	58(23.2)	126(50.4)
Sound	No	58(23.2)	31(12.4)	89(35.6)	38(15.2)	42(16.8)	80(32.0)
sleep	Sometimes	3(1.2)	12(4.8)	15(6.0)	19(7.6)	25(10.0)	44(17.6)
	Total	125(50.0)	125(50.0)	250(100.0)	125(50.0)	125(50.0)	250(100.0)

Number in parenthesis indicates percentage

In the present study, twenty percent from government and 22 percent from private hospitals ie, one-third population of both sectors were sleeping for less than 5 hours which affects their health. Sleep loss and related fatigue was common among these health care professionals. Sleep loss will affects their decision making capability, planning and alertness. Few nurses in government (6.8%) and private (10%) hospitals slept in irregular duration. According to the study report of Rogers (2008), insufficient sleep has been associated with cognitive problems, mood alterations, reduced job performance, reduced motivation, increased safety risks and physiological changes .Doing consecutive night shifts among nurses doubled their fatigue. Sleep disturbance and effects of aging are also common among shift workers (Li *et.al*, 2017 and Nene *et.al*, 2018).

Majority of nurses from government (62%) and private hospitals (66%) slept instantly when they lay on bed, due to the long hours of duty and lack of energy at the end of the day. Fifty eight percent of nurses from government and fifty percent from private hospitals reported that they had sound sleep. However, this result is contradictory to many other studies. Menon *et. al* (2015) conducted a study among nursing students on sleep deprivation and health complaints and concluded that a significant proportion of nursing students suffered from sleep abnormalities. Verma *et.al* (2018) conducted a study among female nurses in Delhi and the study reported that, female nurses had more sleep disturbances. The present study indicates that the influence of shift work on sleep among nurses in Thiruvananthapuram in both sectors, was not realised as a problem by many respondents.

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# Table 4 Status on social relationship of respondents

Statements	Govt. hospitals n=250			Total	Private ho n=250	Private hospitals n=250		
Statements	Yes	No	Sometim es		Yes	No	Sometim es	
Decline in social interactions and connectednes s	115(46)	47(18.8	88(35.2	250(10 0)	42(16.8	65(26)	143(57. 2)	250(10 0)
Recreational and leisure activities is impaired	76(30.4	67(26.8	108(43. 2)	250(10 0)	27(10.8	67(26.8	156(62. 4)	250(10 0)
Decline in the maintenance of close relationship with family members and friends	100(40)	63(25.2	87(34.8	250(10 0)	42(16.8	74(29.6	134(53. 6)	250(10 0)
Withdrawal and isolation from social gathering	71(28.4	89(0)	90(36)	250(10 0)	27(10.8	93(37.2	130(52)	250(10 0)
Work pattern affected the child rearing and caring practices	27(10.8	62(24.8	113(45. 2)	202(80. 8)	18(7.2)	53(21.2	118(47. 2)	189(75. 6)
Missing child's/childr en's development	24(9.6)	54(21.6	119(47. 6)	197(78. 8)	14(5.6)	41(16.4	133(53. 2)	188(75. 2)
Difficult to maintain balance between childcare and work	24(9.6)	61(24.4	115(46)	200(80)	15(6)	75(30)	103(41. 2)	193(77. 2)
Unable to eat together with family	128(51. 2)	67(0)	55(22)	250(10 0)	144(57. 6)	63(25.2	43(17.2	250(10 0)

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Forced to give up social gatherings even if invited or expected to attend	49(19.6	144(57. 6)	57(22.8	250(10 0)	28(11.2	146(58. 4)	76(30.4 )	250(10 0)
The stress inherent in nursing job is understood by spouse	12(4.8)	36(14.4	201(80. 4)	249(99. 6)	11(4.4)	30(12)	208(83. 2)	249(99. 6)
Able to keep contact with old friends /distant relatives	22(8.8)	116(0)	112(44. 8)	250(10 0)	28(11.2	134(53. 6)	88(35.2	250(10 0)

Number in parenthesis indicates percentage

From table 4, looks at the quality of social and family relationships of the nurses in both sectors. Nurses from government (51.2%) and private (57.6%) hospitals were unable to share family meals together in most of the time. Due to nature of shift work many respondents admitted that their social relationships were impaired. Some of them found a social isolation from friends, and their only relief was to be able to stay connected through social media. In the present study 46 percent of respondents from government hospitals and 16.8 percent of respondents from private hospitals reported that their social relationships were impaired. It was found that majority of nurses in government sector showed a decline in the interaction with the family members, relatives and friends.

Other problems commonly faced by nurses in both sectors were that they were not able to take care of their children's studies, health problem, house repairs and other domestic activities. A major problem they pointed was lack of time to be with children and family. Majority of nurses were married and so were more concerned about their husbands and children at home when they were attending their duty especially during nights. In the present study, few percentage of nurses from both government and private hospitals reported that their husbands did not understand their stress due to present nature of duty. Some of them expressed that they were lucky enough to be supported by relatives to manage some of their family responsibilities. The shift work was found to be greatly difficult for those respondents whose family members employed in shift jobs. The quality of social relationships affected the mental and physical wellbeing of a person. This was difficult for individuals who were not having a regular routines.

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# Association of shift variables and life style variable

To ascertain if shift work had any association with life style activity of nurses, physical activity score, sleep score and quality of social and family relationship score were considered. Using the mean score of sleep and social relationship score, the nurses in both sectors were divided in to 3 groups: low scores (less than mean-SD), medium scores (less than mean-SD to mean+ S.D) and high scores (greater than mean+ S.D). The shift variables assessed were number of shift change per month, number of night shift change per month and total experience against life style variables. The results are given in the table 5.

Table 5: Association of lifestyle variables and shift work

Sl no	Lifestyle variables	Statistical Results
1	Physical activity score x shift work	Majority of nurses in both sector having low physical activity score
		• In govt. sector, those who have more shift change had lower physical activity level
		<ul> <li>In private sector, night shift interfered with their physical activity</li> </ul>
2	Sleep score x shift work	Majority of nurses in both sector having average sleep score regardless of number of shift change per month
		• Sleep scores was not affected by their night shift rotation
		The younger nurses have better sleep score in both govt. and private sector
3	Quality of social and family relation score	Majority of nurses in both sector had moderately impaired family relation score
	X shift work	Number of night shift rotation affected family relationship score in private sector
		<ul> <li>Number of years does not effect family relation score in both sector</li> </ul>
		The younger nurses in both sector had moderately impaired family relation score

The weight, height, waist and hip circumference of respondents were measured and tabulated for analysis. The BMI were calculated from the measurement of heights and weights of the respondents which is depicted below, based on BMI according to ICMR (2010).



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Govt. Hospitals- Rural

Under weight (<18.4)

Normal (18.5-22.9)

Over weight(23-24.9)

Private Hospitals - Rural

Private Hospitals - Rural

Private Hospitals - Urban

Private Hospitals - Urban

Under weight (<18.4)

Over weight(23-24.9)

Under weight (<18.4)

Under weight (<18.4)

Under weight (<18.4)

Figure 1: Distribution of the respondents based on BMI

Mormal (18.5-22.9)

Over weight 23-24.9

Nomal (18.5-22.9)

Over weight 23-24.9)

Majority of respondents from both government (82%) and private hospitals (94%) were under weight. There were respondents with normal weight in government (16%) and private (6%) hospitals. Anthropometric profile of nurses indicate that underweight was widespread in both sectors. Only two overweight respondent was found in government urban hospital.

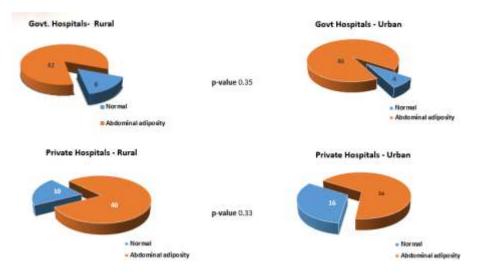


Figure 2 Distribution of respondents according to WHR

Majority of nurses from government (88%) and private (74%) had abdominal obesity as their waist hip ratio was equal or more than 0.85. Only few numbers of nurses were found to be have normal waist hip ratio in both sectors. The above data revealed that majority of them exhibited abdominal obesity in spite of the underweight.



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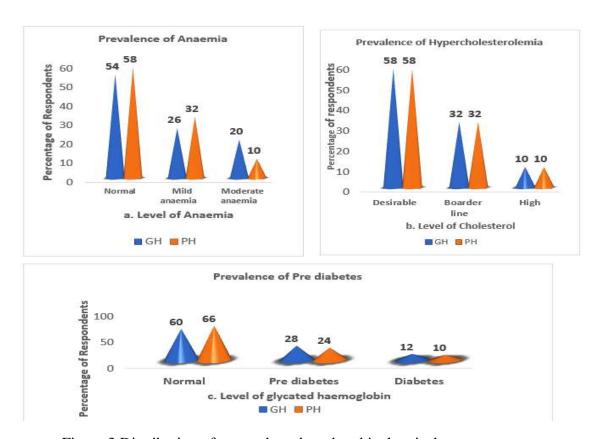


Figure 3:Distribution of respondents based on biochemical parameters

Biochemical parameters shows that, half of the nurses from both sectors had anaemic ranging from mild to moderate which shows in figure 3. With regard to cholesterol level (fig 3 (b))42% of nurses in both sectors have borderline to high cholesterol level. The HbA1C, which is an indicator of diabetes shows that one third of the nurses in government and one-fourth of nurses in private sector exhibited prediabetes. Nearly 10% of nurses had diabetes in both sector (fig3 (c)).

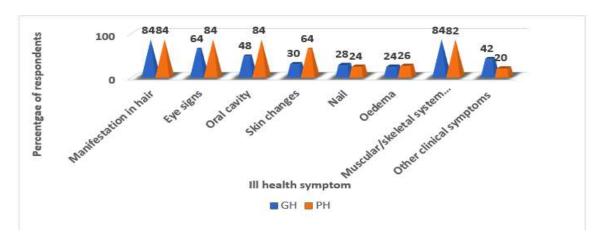


Figure 4: Distribution Of Respondents Based On The Clinical Examination



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The above figure 4 shows the results of clinical examination which revealed that three-fourth of them have hair problems like hair loss, thin sparse hair, dandruff. Eye signs disorders such as dark circles, photophobia, pale conjunctivitis even nigh blindness and oral cavity disorders such as stomatitis, fluorosis, oral ulcers bleeding gum was more evident among nurses in both sectors.

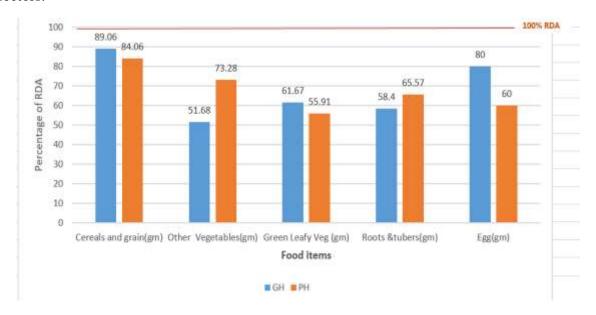


Figure 5:Details of food consumption below 100% RDA

The figure 5 shows the details of food items below 100% of RDA which includes cereal and grains, other vegetables, green leafy vegetables, roots and tubers and egg.

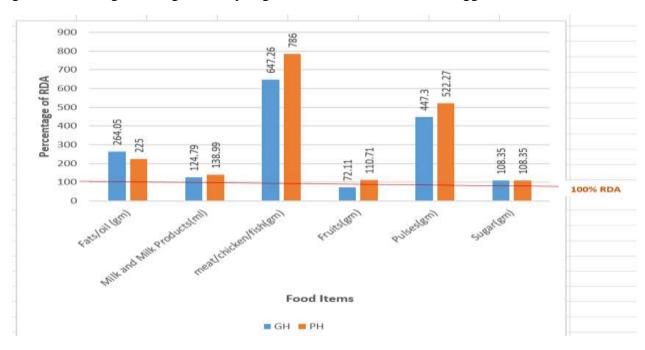


Figure 6:Details of food consumption above 100% RDA



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The figure 6 shows the list of food items which found above the 100% RDA ie, fats/oil, milk and milk products, meat/chicken/fish, fruits, pulses and sugar. This revealed that there is a gross deficit in the intake of food items from all the major food group.

Nutritional intake was elicited by 24 hour recall method. The results shows in figure 7

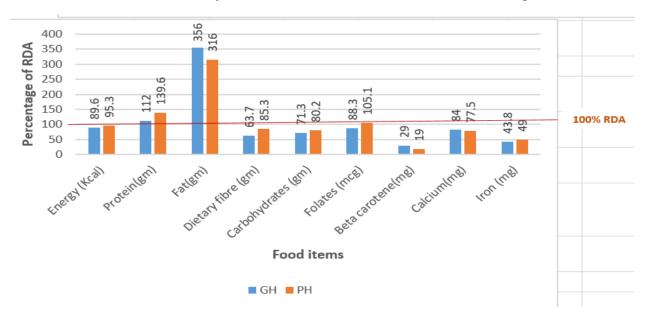


Figure 7: Percentage distribution of RDA with respect to the nutrient intake

The figure 7 revealed that there is a gross deficit of macro and micro nutrients in the diet of nurses in both sectors. It was found that the intake of calories, fibre, carbohydrates, folate, beta carotene, calcium and iron was less than RDA in both sectors. Intake of fat in both the group was higher than the RDA, this would explain their dyslipidaemia. The low intake of iron and folate is responsible for the anaemic condition among them. Anaemia is a major nutritional problem in India, high levels of anaemia is reported among women in India (53% of all women have anaemia as per the National Family Health Survey 2015–2016) which is of great concern. The National Health Policy (2017) tabled by the Ministry of Health and Family Welfare, Government of India, acknowledges this high burden. Low calcium intake can lead to condition like osteoporosis in their later life. However, the protein intake is adequate among them.

It was interesting to note that the intake of total calories was inadequate in both the sectors. The inadequate calorie intake can be explained by the low intake of carbohydrates. However, this population had a very high intake of fat (more than 276-300% of RDA). Most of the nurses ate fried snacks as this was the only available item in the hospital canteens. This eating habit of skipping breakfast and munching on fried snacks is very popular amongst this population. Similar findings were observed among the adolescent girls in the study conducted by Gopinathan *et.al* (2018), which reported that their energy intake was below RDA, where the level of fat and protein intake found higher than the RDA.



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### **CONCLUSION:**

This current study contributed to highlight the the lifestyle pattern, dietary habits they followed and to ascertain the nutritional status of nurses working on shift in hospitals during corona pandemic in Kerala.

Nurses in both sectors were following unhealthy lifestyles. They had no physical exercise, no sufficient sleep, no adequate work breaks and most of them found it difficult to keep a balance with work and home due to their busy schedules.

The current study indicated that nurses had poor dietary practices and deficits in their nutrient intake along with high prevalence of underweight and abdominal obesity. Biochemical analysis of blood samples indicated the prevalence of anaemia, diabetes hypercholesterolemia along with clinical deficiencies amongst younger nurses.

This present study has identified there is a large lacuna in lifestyle and health profile of nurses. There is an urgent need by hospital managements and policy makers to ensure quality nursing service through staff development and training programs.

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