

## **Nutritional status of Single Living Male and Female in Bhopal**

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**ABSTRACT:** The present study was carried out (1) to assess the dietary pattern of single living male and female in Bhopal by using 24 hours recall method, and (2) to find out the nutrient intake of single living male and female and compared with recommended dietary allowances (RDA). The data were collected with the help of “Questionnaire cum Interview Technique.” The questionnaire having all relevant information was pretested and predesigned the data was collected. The base line study was conducted on 300 single living male (Widow/Widower, Divorcee, Unmarried and Separated) aged 25-45 years were purposely selected from eight areas of the city. The inferences were drawn with the help of suitable tools. The result of the study showed that nutrient intake by male and female of all age group in this study was lesser than recommended dietary allowances (RDA).

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### **INTRODUCTION**

There are so many single living persons in our society due to their own cause. Single hood of any person create positive and negative effects on his life style. Single hood character of male and female in urban society is comparatively more than rural, due to their economic self dependency and higher educational status. Everyone is free to live alone without any interference. The behaviour of society to the single living persons is not up to the mark, because society does not like the freeness and life style of single living persons. As a result of this the

relationship of single living persons and society becomes bitter. In recent days, the trend of single living male and female is gradually increasing which may be classified as unmarried, divorcee, widowed or separated. In above four types only widow is a natural phenomenon which all other depends on nature and behavioural pattern of person. Unmarried and divorcee are result of free life style, free from boundation, while separated is also a subtype of this style in which mutual understanding is in concern of both man and women. Sarasa Kumari (2001) found in her study, that 30% of the population was currently married. Widows constituted 65% of the total women studied and remarried/divorced/never married women were very few and constituted about 5%. Widowhood is disproportionately high among females compared to the male. According to the 1991 census, there were 33 million widows in India. According to Park (2005), A diet may be defined as the kinds of food on which a person or group lives. A balanced diet is defined as one which contains a variety of foods in such quantities and proportions that the need for energy, amino acids, vitamins, minerals, fats, carbohydrate and other nutrients is adequately met for maintaining health, vitality and general well being and also makes a small provision for extra nutrients to withstand short duration of leanness. A balanced diet has become an accepted means to safeguard a population from nutritional deficiencies. The dietary pattern varies widely in different parts of the world. It is generally developed around the kinds of food produced depending upon

the climate conditions of the region, economic capacity, religion, customs, taboos, tastes and habits of the people. Balanced diets are formulated by the ICMR in India. According to Swaminathan(2008). Alka Ranjan (2001) reported in her study about widow in Varansi district, that most of the widows of ashrams had taken to vegetarianism after the death of their spouse. It is believed that non-vegetarian meal is tamasik food which will initiate the sexual urges of widow, which is considered immoral. Different patterns of food habits were noted across the institutions. There was not much drastic change in food habits among those staying with their families of the total respondents, 50% were vegetarian and the remaining 50% were non-vegetarians. After widowhood, 56.25% were vegetarians and 43.75% remained non-vegetarians. However, there was a complete change in the food habits of those inmates staying in the ashrams. Among the inmates staying in the government ashrams, 72.5% were non-vegetarian prior to becoming widow. However, after widowhood all of them took to vegetarianism. Similarly, of the inmates staying in the oldest ashrams, 40% were non-vegetarians prior to becoming widows. However, 90% become vegetarian. Only 10% remained non-vegetarians. Apart from influencing their food habits, restrictions are placed on the number of times they could take food. Most of widows (55.8%) took food only twice a day. Seventy five percent of the widows staying with their families took food twice a day. They took tea in the morning and simple meals which consisted

of rice, roti, dal, vegetable or sometimes, just salt and roti. Again, 87.5% of the inmates staying in the government ashrams took meals twice in a day. They had to cook their own meals. For this purpose they were provided with a chulha (stove) and were given ration. Usually they took rice, roti, dal, vegetables and sometimes Kheer. The food habits of the inmates staying in the oldest ashrams were efficiently regulated. They took meals four times a day. The quality of provided food was also satisfactory. A typical diet of an inmates consisted of bread and tea in the morning lunch consisting of vegetables, dal, rice, chapati, soup, evening tea and dinner consisting of vegetables roti and milk.

The present study was formulated to accomplish following objects:

- To assess the dietary pattern of single living male and female by using 24 Hours recall method.
- To find out the nutrient intake of single living male and female.

**MATERIALS AND METHODS:** The data were collected with the help of questionnaire cum interview technique. A pretested and predesigned questionnaire having all relevant information were collected from 300 single living male and female aged 25-45 years. These respondents were selected from 8 representative areas of Bhopal town. Purposive multistage stratified sampling technique was employed for selection of single living male and female respondents. The present

study highlighted that the single living male and female were intake nutrient in different age group and compared with recommended dietary allowance. An interview schedule to elicit the information of the respondents was requested to fill the Performa with full assurance about his confidentially and anonymity of his information. The respondents were assured that the data would be used only research purpose of the study.

**RESEARCH FINDING AND DISCUSSION:** The findings obtained from the present study have been discussed under the following subheads:

**Table 1: Age group wise distribution of single living male and female.**

Age group (years)	Male		Female		Total	
	No.	%	No.	%	No.	%
25-30	10	8.20	6	3.37	16	5.33
30-35	35	28.69	46	25.84	81	27.00
35-40	29	23.77	50	28.09	79	26.33
40-45	48	39.34	76	42.70	124	41.34
<b>Total</b>	<b>122</b>	<b>40.67</b>	<b>178</b>	<b>59.33</b>	<b>300</b>	<b>100.00</b>

$$\chi^2 = 4.083, df = 3, p > 0.05$$

It was noted from table 1 that all 300 single living males and females participated in this study. It was noted that out of all 300 respondents of this study, 122 single living male and 178 single living female were interviewed.

Out of 122 single living male respondents, 8.20% male were of age group 25 - 30 years, 28.69% male were noted in age group 30 -35 years, 23.77% male of age group and 39.34% male of age group 40-45 years participated in this present study. Out of 178 single living female respondents, 3.37 female were of age group 25 - 30 years, 25.84% female of age group 30 -35 years, 28.09% female of age group 35- 40 years and 42.70% female were of age group 40-45 years in this study. It was noted that 40.67% single living male respondents and 59.33% single living female respondents from all four age group participated in this study. Statistically, no significant difference was observed regarding the age groups between single living male and female. ( $\chi^2 = 4.083$ ,  $df = 3$ ,  $p > 0.05$ ).

The marital status of male and female respondents and their percentile participation is presented in table 2.

**Table 2: Status and marital category of single living male and female.**

Category	Male		Female		Total	
	No.	%	No.	%	No.	%
Unmarried	70	57.38	69	38.76	139	46.33
Widow	14	11.47	45	25.29	59	19.67
Divorcee	32	26.23	62	34.83	94	31.33
Separated	6	4.92	2	1.12	8	2.67
<b>Total</b>	<b>122</b>	<b>40.67</b>	<b>178</b>	<b>59.33</b>	<b>300</b>	<b>100.00</b>

$\chi^2 = 18.851$ ,  $df = 3$ ,  $p < 0.05$

Table 2 shows the distribution of all three hundred single living male and female respondents according to their status and marital category. All male and female respondents were divided into two category i.e. unmarried and married. The married category was further divided into widowed, divorcee and separated sub categories. Out of 122 single living male respondents 57.38% were unmarried. In married category of male respondents, 11.47% were widow, 26.23% were divorcee and 4.92% were separated. In 178 single living female respondents of this study, 38.76% were of unmarried category. 25.29% widowed, 34.83% divorcee and 1.12% separated female respondents were of married class. 46.33% unmarried male and female respondents participated in this study while 19.67% widowed, 31.33% divorcee and 2.67% separated male and female of married class were included for study. Statistically, significant difference was observed regarding the marital status between single living male and female ( $\chi^2 = 18.851$ ,  $df = 3$ ,  $p < 0.05$ ).

**Nutrient intake of single living person: Average nutrient intake in different age group of single living male and female.** The results are presented in table 3 indicates the average nutrients intake in different age group of single living male and female. The results show the twenty four hour recall of nutrient intake by single living male female as compared with RDA. The respondents of all four age group took energy lesser than RDA. The highest energy intake was noted by 40-45 years age group male and 30-35 years age group female respondents. The protein

nutrient intake by male and female respondents of all age group in this study was lesser than RDA.

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**Table 3 (24 Hour Recall) Average nutrient intake in different age group of single living male and female.**

Age group	Nutrient	Energy/ Kcal		Protein/g		Calcium /g		Vit. B <sub>1</sub> / mg		Iron/mg		Fat/g		Carbohydrate/g	
	RDA	2425	1875	60	50	400	400	1.20	0.9	28	30	20	20	497	375
	Sex	M	F	M	F	M	F	M	F	M	F	M	F	M	F
25-30	Mean	2273.00	1845.87	51.57	45.11	819.88	848.22	1.17	1.24	24.41	19.05	24.22	16.23	38.25	527.75
	SD	52.36	77.77	2.15	1.51	221.09	143.68	0.12	0.11	0.32	1.72	1.54	0.42	159.09	53.45
30-35	Mean	2309.03	1855.33	51.68	45.56	958.13	871.49	1.20	1.07	24.83	20.12	22.55	17.58	425.72	421.52
	SD	181.73	71.72	1.54	2.87	170.07	238.74	0.15	0.08	1.16	2.60	2.13	2.42	95.26	111.55
35-40	Mean	2349.03	1846.86	51.02	44.87	870.38	930.38	1.20	1.05	24.49	20.49	23.67	17.75	356.92	426.62
	SD	165.23	62.24	3.76	3.18	187.89	231.80	0.1	0.15	1.47	2.90	1.50	2.80	96.08	106.04
40-45	Mean	2409.55	1851.19	50.64	45.04	1053.24	887.13	1.19	1.07	24.03	20.90	23.90	17.73	425.69	411.58
	SD	154.99	73.27	3.81	3.90	16.83	234.04	0.14	0.11	1.70	2.22	1.75	2.10	91.46	127.22

Highest mean intake of protein nutrient among single living male and female was noted for 30-35 years age group male and female both. The mean intake of calcium by single living male and female of all age group was higher than RDA. Mean intake of vitamin B<sub>1</sub> nutrient among single living male of all age group was nearly equal to RDA while in case of single living female respondents it was greater than RDA. The highest intake of vitamin B<sub>1</sub> was noted for 30-35 years age group male and 25-30 years' age group female. The intake of iron among male and female respondents of all age groups was lesser than RDA. The more deficiency of iron was noted among female of all age group than male. As regard the fat intake by single living male and female of all age groups, male took more fat than RDA. Female respondents consumed lesser amount of fat than RDA. The mean intake of carbohydrate nutrient for male respondents was lesser than RDA for all age groups respondents. In the case of female respondents of all age groups the mean intake of carbohydrate was higher than RDA. The highest intake of carbohydrate was noted for female of 25-30 years age group.

**Comparison with RDA by I C M R:** Comparison between nutrient intakes by single living male and female and recommended dietary allowances. The results are presented in table 4 and 5.

**Table 4: Average mean nutrient intake of single living male and comparison with RDA by I C M R.**

Nutrients intake	Male (n=122)		RDA	Excess /Deficit	% of Excess /Deficit
	Mean	SD	Mean		
Energy , Kcal	2355.14	167.26	2425	-69.86	-2.88
Protein, g.	51.11	3.22	60	-8.89	-14.81
Calcium , g.	963.36	194.28	400	+563.36	+140.84
Vitamin B1. mg.	1.20	0.14	1.20	0	0.00
Iron .g.	24.40	1.47	28	-3.60	-12.80
Fat .g.	23.49	1.90	20	+3.49	+17.45
Carbohydrate. g.	406.20	105.20	497	-90.80	-18.26

**Source: RDA by ICMR, 2004**

Above table indicates the comparison between nutrient intakes by single living male and recommended dietary allowances. Nutrient intake of energy, protein, iron, carbohydrate were found to be less among single living male as compared to the RDA by ICMR while nutrient intake of calcium and fat were found to be more among single living male as compared to RDA. Only nutrient intake of vitamin B<sub>1</sub> was found to be equal to RDA.

Maximum excess of nutrient intake was found to be in calcium and maximum deficient was found in nutrient intake of carbohydrates of among single living male.

**Table 5: Average mean nutrient intake of single living female and comparison with RDA by I C M R.**

Nutrients intake	Female (n=178)		RDA	Excess /Deficit	% of Excess /Deficit
	Mean	SD	Mean		
Energy , Kcal	1850.87	70.93	1875	-24.13	-1.28
Protein, g.	45.13	3.41	50	-4.87	-9.74
Calcium , g.	893.92	233.45	400	+493.92	+123.48
Vitamin B <sub>1</sub> . mg.	1.07	0.12	0.9	+0.17	+18.89
Iron .mg.	20.52	2.55	30	-9.48	-31.60
Fat .g.	17.65	2.38	20	-2.35	-11.75
Carbohydrate. g.	422.29	117.52	375	+47.29	+12.60

Source: RDA by ICMR, 2004

Above table indicates the comparison between nutrient intakes by single living female and recommended dietary allowances. Nutrient intake of energy, protein, and iron, fat were found to be less among single living female as compared to RDA by ICMR. While nutrient intake of calcium, vitamin B<sub>1</sub>, carbohydrate were found to be more among single living female as compared to RDA by ICMR. Maximum excess of nutrient intake was found in calcium and maximum deficient was found in nutrient intake of energy among single living female.

Regarding average nutrients intake in different age group by single living male and female the results indicated that intake of energy, iron, proteins, nutrients by both males and females of all age groups were noted lesser than RDA. Intake of calcium was higher than RDA by single living male and female of all age groups.

It may be due to their habit to take milk and milk products. Highest mean intake of protein among single living male and female of all age group was noted in age group 30-35 years. Mean intake of vitamin B<sub>1</sub> nutrient among single living persons of all age groups was nearly equal to RDA. In case of female, the intake of vitamin B<sub>1</sub> was greater than RDA. Males of age group 30-35 years and female of age group 25-30 years consumed highest amount of vitamin B<sub>1</sub>. The intake of iron nutrient among male and female respondents was lesser than RDA. More deficiency of iron was noted in females than males of all age groups. It may be due to the females' characteristics. The higher intake of fat by males than females of all age group was due to the carelessness of male respondents regarding the harmful effects of high fat consumption. The females were more vigilant about the use of fat in their diet. The mean intake of carbohydrate was higher than RDA. The highest intake of carbohydrate was noted for females of 25-30 years age group.

A review of basic diet principles may help to improve nutrition. Explaining to people the importance of good nutrition in the life may motivate them to make a greater effort to select nutritious food. The food level was to help people select a good diet. The food level given the nutritional content of most foods and enables consumers to see how a food fits in with daily dietary recommendations. According to Martin Root, people do not eat isolated foods or individual nutrients. We tend to eat out food in meals and our meals tend to come from dietary pattern

that we grew up with. In this present study, it was noted that the single living males and females were taking balanced diet or not. A balanced diet shows the amount of all nutrients in the food as prescribed by RDA (ICMR). As regard mean nutrient intake by single living males and females, the results showed that mean intake of energy, protein, iron and carbohydrate were found to be lesser among single male as compared to RDA by ICMR, while intake of calcium and fat were found to be more among single living male as compared to RDA. Maximum excess of calcium nutrient intake in single living male may be due to their habits to take milk and milk products. Higher intake of fat by males than RDA showed that males were interested to take more fat due to more mental and physical work. The lesser use of carbohydrate nutrient than RDA by male respondents was due to their prevention from diabetic conditions.

Regarding to the comparison of mean nutrient intake of single living females with RDA by ICMR the results indicated that maximum excess of calcium taken was due to regular use of milk and milk products. Mean nutrient intake of energy, protein, iron and fat in lesser amount than RDA showed that female respondents were careless about their nutrient rich food and balanced diet. Vitamin B<sub>1</sub> and carbohydrate was found to be more than RDA among single living females. The comparison of mean intake of nutrients among single living male and female showed that except carbohydrate all the nutrients taken by male respondents were

higher than females. This shows the awareness of male respondents about their balanced diet. Statistically significant differences regarding mean intake of energy, protein, calcium, vitamin B<sub>1</sub>, iron and fat were observed between single living male and female respondents. Insignificant difference regarding mean intake of carbohydrate was observed between single living male and female. An interesting comparison was noted about intake of carbohydrate that (12.60%) excess of carbohydrates was taken by females than RDA, while male respondents took (18.28%) lesser carbohydrate than RDA. This is due to the fact that female respondents consumed more milk products including sweets. Mean intake of fat nutrient in the case of male respondent was higher than mean intake by female because female respondents restricted themselves to take fried and highly oiled food. Female respondents were seen more vigilant about their increase of weight.

### **CONCLUSION:**

Nutrient intake of energy, protein, fat, iron, vitamin B<sub>1</sub> among male and female respondents were found to be lesser as compared to RDA. Only calcium was found to be more as compared to RDA.

### **REFERANCE:**

2001: R.S. Kumari Sarasa, "Socio-economic conditions, morbidity patterns and social support among the elderly women in a rural area", Report submitted to Medical College, Thriuvananthapuram.

2001: Alka Rajan, "Determinants of well being among widows An exploratory

study in Varansi", Journal Economic and Political Weekly, p-4088-4094.

2003: Shubhangini A. Joshi, "Nutrition and Dietetics", Tata McGraw Hill Publishing Company Limited, New Delhi, p-143-146.

2004: C. Gopal, B.V.Rama Sastri. and S.C. Bala Subramanian, "Nutritive value of Indian Foods", NIN ICMR Hyderabad, p-47-94.

2008: M. Swaminathan, "Essential of Food and Nutrition", vol. 2, The Bangalore Printing and Publishing Co. Ltd., p-16-22.

Dietary Pattern Research (Martin Root, 2000) :

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