

The impact of counseling about food pattern of single living male and female in Bhopal town

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■ **ABSTRACT** : The present study was carried out with the objections : to provide the counseling with diet chart and to evaluate the impact of counseling on improving the nutrition level in their food. The data were collected with the help of "Questionnaire-cum-interview technique." The questionnaire having all relevant information was pre-tested and pre-designed the data were collected at two phases. The baseline study was conducted on 300 single living male and female (widow/widower, divorcee, unmarried and separated) aged 25-45 years, purposely selected from 8 areas of the city. In counseling phase, 50 subjects were selected randomly in total selected subject and 50 subjects were also selected matching age and sex with experimental group who were residing with the family as the control group. The inferences were drawn with the help of suitable statistical tools.

■ **KEY WORDS**: Counseling, Food pattern, Living male, Female

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The food pattern of single living male and female is dependent upon the psychological as well as sociological conditions. So, it is needed to note down how and why psychological as well as sociological conditions are responsible for the intake of food by single living male and female and the change in their food pattern. Knowledge regarding the food habits of man is provided by many disciplines. The social scientists, anthropologists, sociologists, psychologists and cultural geographers have been concerned with person's cultural, social activities and food habits. A number of factors influence the food habits which include, among others, educational and economical level of the community, availability and cost of foods and social and cultural practices. Once the food habits are established, they are handed down from general to general. This study is focused upon only single living male and female. The single living male and female come under these categories *i.e.* unmarried, divorcee, widowed and separated.

The food pattern of single living male and female may change in comparison to the male and female who live with their family. The cause of change of food pattern of single

living persons may be work load, no interest in taking food and mainly tension with some other causes in life etc. Due to their improper food pattern, the health may be affected. Such people are not taking balanced diet, they may face the deficiency of nutrients and this may cause many diseases. The personality of single living person is entirely different from others. Depending on conditions, single living persons either take food more than normal or in a least quantity.

A married woman and man become single living persons due to death of partner, divorce and desertion. A woman and man, who had lost their husband and wife, respectively by death and not remarried, called widow.

Since 1990's, the number of marriages that end in divorce in the Netherlands as well as in other western societies has strongly increased. In the period between 1990 and 1995, the number of divorces in the Netherlands rose from 6,000 to 34000 a year. Recent estimates indicate that one in four of today's marriages will end in divorce. To cope with the insecurity and stress involved in a divorce, people usually seek support in relationships. The presence of a network of relationships and the support exchanged therein

are thereby important for adjusting successfully to the psychosocial effects of a divorce (Amato, 2000), after a divorce the personal network becomes smaller and undergoes fluctuations, consolidating in a different composition, with different patterns of connections and interactions.

Different patterns of food habits were noted for widows across the institutions. There was not most drastic change in food habits among those stayed with their families. Most of the widows (75%) staying with families did not receive any kind of support from relatives. Of those who received help, maintenance, 50 per cent from their in-laws and 25 per cent each from their brothers and sister.

The importance of social support and intimate attachment for mental and physical health has been well described (House *et al.*, 1998). Major life event such as widowhood is also associated with disturbance in one's normal routine (including anticipation in health behaviours) and an increase interest. A recent meta analysis found that total life event as well as the death of significant others were associated with higher level of depressive symptoms in adults (Kraji *et al.*, 2002).

The present study was formulated to accomplish the following objects:

- The provide the counseling with diet chart.
- To evaluate impact of counseling on improving nutritional level in their food.

Consequently the hypothesis:

The counseling has significant impact on improving nutritional level (nutrient) by the single living male and female.

RESEARCH METHODS

The data were collected with the help of questionnaire-cum-interview technique. A pre-tested questionnaire having all relevant information was used for this purpose. The information was collected at before and after counseling. For counseling, 50 subjects from 300 single living male and female aged 25-45 years were collected. These subjects were selected from 8 representative areas of Bhopal city. Purposive multistage stratified sampling technique was employed for the selection of single living persons and 50

subjects were also selected matching age and sex with experimental group who were residing with the family as the control group. The present study highlighted that the single living persons were ignored about the need of nutritious diet for themselves.

Implementation of the counseling:

The counseling was designed on the basis of the information collected during baseline survey. A pamphlet, leaflet and diet chart was developed for counseling. After one month, contacted with respondents.

Statistical analysis of the data:

The inferences were drawn with the help of suitable statistical tools where over felt necessary.

RESEARCH FINDINGS AND DISCUSSION

The findings obtained from the present study have been presented and discussed under the following subheads:

General information regarding the respondents:

Table 1 reveals the age wise distribution of control and experimental groups. In age group 25-30 years, 10.00-10.00 per cent males were found in each experimental and control groups and 10.00 per cent females were noted in experimental group and 6.67 per cent females were noted in control group.

In age group 30-35 years, 15.00 per cent males were noted in experimental group and 10.00 per cent males were noted in control group. 26.66 per cent females were noted in experimental group and 10.00 per cent females were noted in control group.

In age group 35-40 years, 25.00 per cent males were noted in experimental group and 30.00 per cent males were noted in control group. 40.00 per cent females were noted in experimental group and 46.67 per cent females were noted in control group.

In age group 40-45 years, 50.00-50.00 per cent males were in each experimental and control groups. 23.34 per cent females were noted in experimental group and 36.67 per cent females were noted in control group.

The results of this study (Table 2) revealed average

Table 1: Age group wise distribution of control and experimental group respondents

Age group (years)	Control				Experimental			
	Male		Female		Male		Female	
	No.	%	No.	%	No.	%	No.	%
25-30	2	10.00	2	6.67	2	10.00	3	10.00
30-35	2	10.00	3	10.00	3	15.00	8	26.66
35-40	6	30.00	14	46.67	5	25.00	12	40.00
40-45	10	50.00	11	36.67	10	50.00	7	23.34
Total	20	100.0	30	100.0	20	100.0	30	100.0

Table 2: Average nutrient intake in control and experimental groups before and after counseling

Age group (years)	Nutrient RDA	Energy (Kcal)		Protein (g)		Calcium (g)		Vit. B ₁ (mg)		Iron (mg)		Fat (g)		Carbohydrate (g)	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
25-30	Control	2425	1875	60	50	400	400	1.20	0.9	28	30	20	20	497	375
		2431.20	2066.45	61.80	54.27	732.40	618.57	1.33	0.83	26.22	22.55	28.01	23.70	502.33	377.65
25-30	Ex*	2350.15	1760.13	50.71	46.51	898.70	750.72	1.26	1.02	25.15	20.15	24.45	17.32	431.20	437.55
		2380.25	1850.20	55.26	51.30	998.10	910.95	1.09	0.92	30.12	23.35	24.50	18.89	450.41	490.50
30-35	Control	2440.25	2173.30	61.80	53.12	734.60	548.23	1.28	1.02	34.82	24.85	23.23	24.60	504.21	416.14
		2371.93	1797.96	50.63	46.17	910.22	769.34	1.31	1.03	27.11	20.26	27.57	19.48	463.95	439.87
30-35	Ex	2455.28	1889.20	60.47	52.03	1099.48	904.96	1.11	0.93	34.78	25.12	25.93	19.32	440.95	434.82
		2416.48	2006.02	60.59	50.68	758.10	696.46	1.22	0.90	27.74	29.00	26.91	22.75	475.82	416.41
35-40	Control	2369.10	1900.05	49.35	46.56	898.90	820.72	1.22	1.10	24.70	20.20	25.38	18.85	385.92	439.59
		2498.14	1935.20	57.76	51.22	1050.08	906.96	1.08	1.00	34.00	24.26	25.52	18.90	424.20	442.55
35-40	Ex	2435.95	2037.87	59.81	50.13	740.45	680.44	1.24	0.92	28.05	30.73	24.46	22.91	473.25	444.26
		2343.74	1860.12	50.20	45.96	1035.41	818.35	1.26	1.06	25.10	20.40	24.88	18.60	435.40	426.32
40-45	Control	2440.95	1907.61	59.25	51.37	1146.29	912.34	1.07	0.99	33.63	26.04	25.50	18.77	464.67	420.67
		2440.95	1907.61	59.25	51.37	1146.29	912.34	1.07	0.99	33.63	26.04	25.50	18.77	464.67	420.67

*Ex - Experimental *Be - Before counseling *Af - After counseling

nutrients intake by respondents of experimental group before and after counseling and control group according to age group. These results showed the intake of nutrients by experimental group respondents before and after counseling and its comparison with RDA.

The average nutrients intake of experimental group respondents was also compared with intake of nutrients by control group respondents. In age group 25-30 years, mean nutrient intake among respondents of experimental group before counseling was found to be higher in calcium and vitamin B₁, than RDA. In this age group, the mean nutrient intake in experimental group respondents was found to be increased in energy, protein, calcium, iron, fat and carbohydrate after counseling and reached near by RDA range. In age group 30-35 years, mean nutrient intake among respondents of experimental group before counseling were found to be higher in calcium, vitamin B₁, fat, than RDA. In this age group, the mean nutrient intake in experimental group respondents were found to be increase in energy, protein, calcium, iron, and carbohydrate after counseling and reached near by RDA range. It was noted that the mean nutrient intake among control group respondents as compared with experimental group males and females before counseling and RDA was always higher for this age group. The intake of all nutrients by control group persons was higher than RDA. In age group 35-40 years, experimental group respondents took nutrients as energy, protein, iron and carbohydrate before counseling lesser than RDA. But after counseling these experimental group respondents increased the intake of nutrients as near by RDA except calcium. The intake of all nutrients by control group persons of 35-40 years age group was higher than RDA.

In experimental group males and females of age group 40-45 years, mean nutrient intake was lower than RDA before counseling except few. After counseling in respondents of experimental group, mean nutrient intake was found to be increased in energy, protein, vitamin B₁, iron and carbohydrate. This increase of mean nutrients intake was well within the RDA range. In case of control group respondents of this age group, the mean nutrients intake was found to be higher than RDA except protein, iron and carbohydrate. It was also noted that mean nutrients intake by females of experimental group was found to be lesser than males before counseling. It was noted that mean nutrients intake of males of control group was found to be higher than females of this group. The effect of counseling was noted on experimental group respondents. As a result of this, mean nutrient intake by respondents of experimental group after counseling was well within the RDA range either by increasing or decreasing the intake of nutrients.

Table 3 reveals the changes in mean nutrient intake among the male single living male of experimental group before and after counseling. The changes in mean nutrient

intake of energy, protein, calcium, iron, fat and carbohydrate were found to increase in male respondents of experimental group after counseling while the changes in mean nutrient intake of vitamin B₁ was found to be decreased in male respondents of experimental group.

Statistically, significant changes regarding mean intake of all nutrients except fat were observed before and after counseling among male of experimental group (p< 0.05).

Table 4 shows the changes in nutrient intake before and after counseling among single living female in experimental group. After counseling, the mean nutrient intake of energy, protein, calcium, iron, fat and carbohydrate was found to be increased in female of experimental group, while mean intake of vitamin B₁ was found to be decreased.

Statistically, significant differences regarding mean

nutrient of all except fat and carbohydrates were observed before and after counseling among female respondents of experimental group (p< 0.05).

Table 5 indicates the comparison in mean nutrient intake after counseling between male and female of experimental group with RDA.

Mean nutrient intake of energy, calcium, iron, fat was found to be more among single male of experimental group as compared to RDA by ICMR after counseling while mean nutrient intake of protein, vitamin B₁, carbohydrate was found to be less among male as compared to RDA by ICMR. Mean nutrient intake of energy, protein, calcium and carbohydrate was found to be more among single females of experimental group as compared to RDA by ICMR after counseling, while nutrient intake of fat, iron was found to be less among single

Table 3: Changes of mean nutrient intake among male respondents of experimental group before and after counseling (n=20)

Nutrient intake	Counseling						Statistical values	
	Before		After		Changes		t	P
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
Energy /kcal	2354.31	66.98	2457.40	77.45	103.09	37.61	12.258	<0.05
Protein /g	50.05	1.31	59.06	2.72	9.01	2.29	17.596	<0.05
Calcium /g	982.50	131.33	1115.22	128.50	132.71	65.89	9.007	<0.05
Vitamin B ₁ /mg	1.25	0.09	1.08	0.06	-0.18	0.07	11.500	<0.05
Iron /mg	25.30	1.66	34.12	1.79	8.82	1.66	23.762	<0.05
Fat /g	25.41	1.52	25.57	1.62	0.16	1.45	0.493	>0.05
Carbohydrate/g	427.31	73.80	451.00	58.43	23.69	42.19	2.511	<0.05

Table 4: Changes of mean nutrient intake among female respondents of experimental group before and after counseling (n=30)

Nutrient intake	Counseling						Statistical values	
	Before		After		Changes		t	p
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
Energy /kcal	1861.92	140.70	1900.15	134.58	38.13	91.68	2.278	<0.05
Protein /g	46.26	2.08	51.49	1.08	5.23	2.39	11.986	<0.05
Calcium /g	806.23	134.89	908.22	125.60	101.98	49.82	11.212	<0.05
Vitamin B ₁ /mg	1.07	0.09	0.98	0.16	-0.09	0.16	3.081	<0.05
Iron /mg	20.28	1.15	28.75	2.18	8.46	2.45	18.913	<0.05
Fat /g	18.94	0.96	18.97	1.05	0.03	0.58	0.283	>0.05
Carbohydrate/g	435.24	45.75	433.20	44.30	2.05	36.09	0.311	<0.05

Table 5: Mean nutrient intake after counseling among single living male and female in experimental group and comparison with RDA

Nutrient intake	Male (n=20)			Female (n=30)			Statistical values	
	Mean	S.D.	RDA	Mean	S.D.	RDA	T	P
Energy /kcal	2457.40	77.45	2425	1900.15	134.58	1875	16.728	<0.05
Protein /g	59.06	2.72	60	51.49	1.08	50	13.758	<0.05
Calcium /g	1115.22	128.50	400	908.22	125.60	400	5.657	<0.05
Vitamin B ₁ /mg	1.08	0.06	1.20	0.98	0.16	0.90	0.728	>0.05
Iron /mg	34.12	1.79	28	28.75	2.18	30	9.143	<0.05
Fat /g	25.57	1.62	20	18.97	1.05	20	17.150	<0.05
Carbohydrate/g	451.00	58.43	497	433.20	44.30	375	1.224	>0.05

Table 6: Mean nutrient intake before counseling among males in experimental and control groups

Nutrient intake	Groups				Statistical values	
	Experimental (n=20)		Control (n=20)		t	P
	Mean	S.D.	Mean	S.D.		
Energy /kcal	2354.31	66.98	2423.07	81.54	2.914	<0.05
Protein /g	50.05	1.31	60.25	2.01	19.013	<0.05
Calcium /g	982.50	131.33	744.36	77.20	6.991	<0.05
Vitamin B ₁ /mg	1.25	0.09	1.25	0.06	0.000	>0.05
Iron /mg	25.30	1.66	30.45	6.64	3.365	<0.05
Fat /g	25.41	1.52	25.43	2.18	0.034	>0.05
Carbohydrate/g	427.31	73.80	480.03	23.97	0.038	<0.05

Table 7: Mean nutrient intake before counseling among females in experimental and control groups

Nutrient intake	Groups				Statistical values	
	Experimental (n=30)		Control (n=30)		t	P
	Mean	S.D.	Mean	S.D.		
Energy /kcal	1861.92	140.70	2038.52	109.49	6.777	<0.05
Protein /g	46.26	2.08	50.96	2.98	7.084	<0.05
Calcium /g	806.23	134.89	670.60	94.67	4.508	<0.05
Vitamin B ₁ /mg	1.07	0.09	0.91	0.08	7.278	<0.05
Iron /mg	20.28	1.15	30.81	11.31	5.055	<0.05
Fat /g	18.94	0.96	23.06	1.68	11.662	<0.05
Carbohydrate/g	435.24	45.75	424.01	97.28	0.935	>0.05

Table 8: Mean nutrient intake after counseling among males in experimental and control groups

Nutrient intake	Groups				Statistical values	
	Experimental (n=20)		Control (n=20)		t	P
	Mean	S.D.	Mean	S.D.		
Energy /kcal	2457.40	77.45	2423.07	81.54	1.365	> 0.05
Protein /g	59.06	2.72	60.25	2.01	1.574	> 0.05
Calcium /g	1115.22	128.50	744.36	77.20	11.064	< 0.05
Vitamin B ₁ /mg	1.08	0.06	1.25	0.06	8.960	< 0.05
Iron /mg	34.12	1.79	30.45	6.64	2.387	< 0.05
Fat /g	25.57	1.62	25.43	2.18	0.231	> 0.05
Carbohydrate/g	451.00	58.43	480.03	23.97	2.056	< 0.05

Table 9: Mean nutrient intake after counseling among females in experimental and control groups

Nutrient intake	Groups				Statistical values	
	Experimental (n=30)		Control (n=30)		T	P
	Mean	S.D.	Mean	S.D.		
Energy /kcal	1900.15	134.58	2038.52	109.49	4.053	> 0.05
Protein /g	51.49	1.08	50.96	2.98	0.824	> 0.05
Calcium /g	908.22	125.60	670.60	94.67	8.277	< 0.05
Vitamin B ₁ /mg	0.98	0.16	0.91	0.08	2.143	< 0.05
Iron /mg	28.75	2.18	30.81	11.31	0.980	< 0.05
Fat /g	18.97	1.05	23.06	1.68	11.308	> 0.05
Carbohydrate/g	433.20	44.30	424.01	47.28	0.777	< 0.05

females as compared to RDA by ICMR. Table 5 also reveals that male respondents showed positive response towards counseling rather than female respondents. Statistically, significant differences regarding mean intake of all nutrients except vitamin B₁ and carbohydrate were observed between single living male and female in experimental group ($p < 0.05$).

Table 6 reveals the mean nutrient intake before counseling among single males in experimental and control groups. Mean nutrient intake of energy, protein, iron, fat, carbohydrate was found to be more among males of control group as compared to males of experimental group while the mean nutrient intake of calcium was found to be more among males of experimental group as compared to males of control group. Interestingly the mean intake of vitamin B₁ was found to be equal in males of experimental and control groups.

Statistically, significant differences regarding mean intake of all nutrients except vitamin B₁ and fat were observed between males of experimental and control groups ($p < 0.05$).

Table 7 reveals the mean nutrient intake before counseling among females in experimental and control groups. Mean nutrient intake of energy, protein, iron and fat was found to be more among females of control group as compared to females of experimental group while the mean nutrient intake of calcium, vitamin B₁ and carbohydrate was found to be more among females of experimental group as compared to females of control group.

Statistically, significant differences regarding mean intake of all nutrient except carbohydrate were observed between females of experimental and control groups ($p < 0.05$).

Table 8 reveals that mean nutrient intake after counseling among males in experimental and control groups. Mean nutrient intake of protein, vitamin B₁ and carbohydrate was found to be more among males of control group as compared to males of experimental group while the mean nutrient intake of energy, calcium iron and fat was found to be more among males of experimental group as compared to males of control group.

Statistically, significant differences regarding mean

intake of all nutrient except energy, protein and fat were observed between males of experimental and control groups ($p < 0.05$).

Table 9 reveals the mean nutrient intake after counseling among females in experimental and control groups. Mean nutrient intake of energy, iron and fat was found to be more among females of control group as compared to females of experimental group while the mean nutrient intake of protein, calcium, vitamin B₁ and carbohydrate was found to be more among females of experimental group as compared to females of control group.

Statistically, significant differences regarding mean intake of all nutrient except energy, protein, iron and carbohydrate were observed between females of experimental and control groups ($p < 0.05$).

Conclusion:

Mean intake of energy, protein, fat and carbohydrate was found higher in respondents of control group as compared to respondents of experimental group before and after counseling. Mean nutrient intake by respondents of experimental group before counseling was noted lesser than RDA, except calcium. The comparison of mean nutrients intake (energy, protein, fat carbohydrate, vitamin B₁, iron) after counseling by respondents of experimental group was noted up to RDA except calcium.

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