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ASSESSMENT OF NUTRITIONAL STATUS OF 40-65 YEARS MALES AND THEIR DIETARY ANTIOXIDANTS CONSUMPTION



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Old age is best defined as the age of retirement 60+ but nutritionally a person becomes old from 39 onwards. Ageing begins at conception and ends only with death.

Heredity and good nutrition may slow down the aging process. Aged males and females are more prone to physiological as well as psychological stress.

Sir James Ross commented – ‘you do not heal old age’, ‘you protect it’ ‘you promote it’, ‘you extend it’.

The better way to protect and promote the old age is to overcome the low or imbalanced consumption of various nutrients specially the protective antioxidants micro-nutrients, deficiency of which increases the risk of degenerative diseases.

Antioxidants can be conceptualized in a number of different ways as insurance of the more visible of aging, as a weapon in our fight to make our average life expectancy more, closely resemble our ultimate life span and as a line of defense against the risk of developing certain illnesses and diseases.

However very limited information/data is available on antioxidant consumption of elderly in India. Hence, the present study is undertaken (a) to find out the dietary antioxidants consumption of 40-65 years aged males and females of Indore city. (b) to assess their nutritional status. (c) To know the knowledge of participants about essential antioxidants.

Materials and Methods :- 50 males and 50 females in the age group of 40-60 of age were selected from Urban Indore city. For this very purpose random sampling technique was used.

A pre tested questionnaire containing questions of respondents, family income, helped to collect the related information. Data on the sufficiency of the dietary intake and Dietary antioxidants intake was collected through twenty four hour recall method. Nutrient intake was calculated in terms of calories, protein, carbohydrates and fats and antioxidants in terms of β (Beta) Carotene, Vitamin C, Vitamin E, Selenium, Copper and Zinc. All these nutrients were compared with the ICMR standards. The data thus collected was analyzed statistically by using Mean, S.D. percentage & ‘t’ test as statistical tools.

Table 1

**Demographic profile of studied subjects
 [A] Age wise distribution of studied subjects**

S. No.	Age (years)	Males (n = 50)	(%)	Females (n = 50)	(%)
1	40-45	10	(20)	18	(36)
2	46-50	14	(28)	07	(14)
3	50-55	06	(12)	13	(26)
4	56-60	14	(28)	02	(04)
5	60-65	06	(12)	10	(20)
	Total	50	(100)	50	(100)
	Mean S.D.	52 ± 7.45		50 ± 8.21	

Results and Discussion :- Demographic profile of subjects is given in Table 1. In this table subjects are categorized on the basis of age, literacy status, socio-economic status and family type.

[B] Literacy status of Participants

[C] Table Income Status of Participants

S. No.	Income / Month	Males (n=50)	(%)	Females (n=50)	(%)	Total	(%)
1	Rs. 2500-5000 (Low Income Group)	11	(22)	22	(44)	33	(33)
2	Rs. 5000-10000 (Middle Income Group)	18	(36)	17	(34)	35	(35)
3	Rs. 10000-50000 (Higher Middle Income Group)	21	(42)	11	(22)	32	(32)
4	Above 50000 Rs. (Higher Income Group)	00	(0)	00	(0)	00	(0)
Total		50	(100)	50	(100)	100	(100)

Table No. 2
Population Distribution on the basis of Anthropometry

Status	Males (n=50)	(%)	Females (n=50)	(%)	Total	(%)
Reference wt. (67 kg.)			(56 kg.)			
Normal	20	(40)	13	(26)	33	(33)
< Normal	14	(28)	19	(38)	33	(33)
> Normal	16	(32)	18	(36)	34	(34)
Total	50	(100)	50	(100)	100	(100)
Mean ; S.D.	66.94 ± 12.04		61.38 ± 11.38			
Reference ht. (176 cm)		%	(163 cm)	%		
Normal	18	(36)	14	(28)	32	(32)
< Normal	15	(30)	19	(38)	34	(34)
> Normal	17	(34)	17	(34)	34	(34)
Total	50	(100)	50	(100)	100	(100)
Mean ; - S.D.	168 ± 2.57		156 ± 5.42			
B M I						
Normal	12	(24)	09	(18)	21	(21)
< Normal	28	(56)	28	(56)	56	(56)
> Normal	10	(20)	13	(26)	23	(23)
Total	50	(100)	50	(100)	100	(100)
Mean ; - S.D.	25.18 ± 4.44		23.66 ± 3.89			

Table 1 A shows mean age of males as 52+7.45 yrs. and 50+8.21yrs of females. Literacy position of

the respondents as depicted in table 1 B reveals 10% illiterate females where as no illiteracy in males is found but the picture turns completely with the educational level upto 8th & 12th where ball is in the court of females. Striking change is again observed with the increment in educational level i.e., 70% males are graduates in contrast to 22% females.

Part C of table 1 deals with the income status of participants & reveals that females are in poor economical status in comparison to males.

Table indicates that mean wt. of males is 66.94 + 12.02 kg and of females 61.38 + 11.38 kg. Males mean wt. is quite close to the reference wt. but females mean wt. is more than the reference wt. Mean Ht. in males and females is found less than the reference Ht. Mean Ht. in males 168 + 5.96 cm and females is 156 + 5.42 cm. respectively.

BMI status in both the categories is found within normal range BMI in males is 25.18 + 4.44 and females is 23.66 + 3.89 which shows that the whole population is in optimum BMI Status.

Table 3

Distribution of samples on the basis of their food habits

S. No.	Food belief	Males (n=50)	(%)	Females (n=50)	(%)	Total	(%)
1	Vegetarian	34	(68)	45	(90)	79	(79)
2	Non-Vegetarian	10	(20)	03	(06)	13	(13)
3	Ova-Vegetarian	06	(12)	02	(04)	08	(08)
Total		50	(100)	50	(100)	100	(100)

Normal trend of more vegetarian population is also observed here. 79% population is vegetarian against which only 13% population is non-vegetarian. Gender as the base for vegetarian, non-vegetarian & ova-vegetarian is also evident here.

Table 4

Knowledge of participants about essentiality of Antioxidants

S. No.	Knowledge	Males (n=50)	(%)	Females (n=50)	(%)	Total (n=100)	(%)
1	Yes	15	(30)	06	(12)	21	(21)
2	No	35	(70)	06	(12)	79	(79)
Total		50	(100)	50	(100)	100	(100)

Only 30% male and 12% female, population is knowing that antioxidants are essential for our life rest are unaware of this very fact. Though they are

consuming the foods rich in antioxidants inspite of their unawareness ; it is just a matter of food practice.

Statistical analysis shows that calculated 't' value is less than the table value which confirms that there is no significant difference in dietary antioxi

intake of males and females. Likewise 't' value for proximate principles intake confirms no significant difference. So it may be concluded that gender is not a factor as far as antioxidant intake is concerned.

Table 5
Mean SD & 't' values of Nutrients intakes
by Males & Females

Nutrients		Males (n = 50)	Females (n = 50)	't' values
Calorie (K . Cal)	Mean	1334.26	1238.03	0.3174
	SD	576.38	342.20	
Carbohydrates (gm)	Mean	216.30	241.09	0.2043
	SD	100.60	97.04	
Fats (gm)	Mean	23.95	13.65	0.00293
	SD	21.00	8.61	
Protein (gm)	Mean	54.95	57.34	0.684
	SD	20.14	36.87	
β Carotene (µg)	Mean	2941.02	2667.11	0.563
	SD	2996.30	2490.16	
Vitamin C (mg)	Mean	27.93	42.48	0.191
	SD	35.001	64.14	
Vitamin E (mg)	Mean	5.13	3.13	0.276
	SD	3.05	11.78	
Selenium (mg)	Mean	293.18	382.08	0.005
	SD	170.15	125.11	
Copper (mg)	Mean	1.732	1.732	0.0654
	SD	1.697	1.69	
Zinc (mg)	Mean	4.10	6.63	0.1191
	SD	2.13	11.09	

5% level of significance

R E F E R E N C E

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