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Socio –Economic Profile of Pre Obese Employees of UAS, Bengaluru

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ABSTRACT

The socio economic disparities in overweight obesity provide an overview of the association (S). Sample of 120 (n = 120) employees comprising both men and women of UAS, Bengaluru employees were taken for this study. Subjects were divided in two groups Experimental (E) and Control (C). The data was collected by personal interview method by using well structured questionnaire was use to elicit information about socio-economic profile such as age, education, gender, type of family and family income. maximum number of males in the both control (50%) and experimental group (70%) were in the age group of 46-60 years and similar trend was observed among female subjects in both groups. Majority of the subjects, male or females in both groups all are educated and some of them are well educated with good economic status. In that most of the subjects were belongs to nuclear families followed by joint and extended families.

Key words: *Socio-economic profile, Pre-obesity, Employees, Overweight*

INTRODUCTION

The term overweight refers to excess body weight for a particular height, whereas the term obesity is used to define excess body fat. Overweight and obesity primarily happen either due to excess calorie intake or insufficient physical activity or both. Furthermore, various genetic, behavioral, and environmental factors play a role in its pathogenesis. Overweight in adults is categorized based on BMI (25 kg/m^2 to 30 kg/m^2). If more than 30 kg/m^2 indicated medical condition results to found that excess body fat has accumulated and lead to adverse effect health such as cardio vascular disease and diabetes etc[5].

Obesity can be diagnosed using Body Mass Index (BMI) i.e. measurement of height and weight. In the same way the abdominal obesity can be indicated by waist circumference (40 inches for male and 35 inches for female). The number of overweight and obese people globally increased from 857 million in 1980 to 2.1 billion in 2013. This is one-third of the world's population. India is just behind US and China in this global hazard being in the list of top 10 countries with highest number of obese people.

The US topped the list with 13 per cent of the obese people worldwide in 2013, while China and India together accounted for 15 per cent of the world's obese population, with 46 million and 30 million respectively. It is projected worldwide that by 2015, approximately 2.3 billion adults will be overweight and more than 700 million will be obese[5].

The Indian statistics are also glaring-India ranks among the top ten obese nations in the world with 78 million obese adults and this number could triple within next 25 years. According to National Family Health Survey 18.6 per cent males and 20.7 per cent females in India are overweight or obese. Whereas in Karnataka 22.1 per cent males and 23.3 per cent females were suffering from overweight/obesity.

Change in life style and dietary pattern along with improved socio-economic status stemming from rapid modernization has resulted in occurrence of chronic and degenerative diet related diseases in India. Many factors can contribute to obesity and overweight, including lifestyle choices (e.g., lack of physical activity and sleep), medical conditions (e.g.,   hypothyroidism) and genetics (i.e., heredity). Overweight and obesity occur especially in lower incomes, less education and some minority groups

MATERIAL AND METHODS
Selection of subjects
A sample of 120 employees comprising both men and women in the age group of 35 to 55 years working in GKVK Campus of University of Agricultural Sciences, Bengaluru, were selected through purposive sampling method based on the criteria of weighing 20% above the normal weight for height (i.e., Having BMI in the range of 25.1 to 29.9) using the data available at UAS Dispensary, GKVK Bengaluru**.** Willingness to participate in the study was also one of the criteria for selection. The sample was divided into two groups i.e. control and experimental groups 60 respondents were selected under each group.

Socio-economic profile
The respondents who consented to participate in the study were enrolled for the data collection. The respondents were explained about the objectives of the study and the required information was collected from them. The data was collected by personal interview method. A standardized, questionnaire was formulated and pre-test was conducted to determine the feasibility of the study and validity of the questionnaire on 10% of the sample. The pre tested and structured questionnaire was used to elicit the information about the socio-economic profile such as age, education, gender, family size and type, occupation & income.

RESULTS AND DISCUSSION
Age
The data has revealed that majority of the pre obese subjects selected belonged to age group of 46 to 60 years. In that males 36 – 45 years age group among control group. Similarly experimental group contains maximum number of subjects in 46 – 60 years age group. Whitaker *et al.*[4], and Maffeis *et al*., also have observed similar trend in their studies comprising majority of middle aged groups in their sample studied. Popkin and Doak[3] inferred in their review study on obesity epidemic in India and China population mostly in adult population (Table 1).

Table1: Age of pre obese subjects

Age (Year)	Control (N=60)						Experimental (N=60)					
	Male	%	Female	%	Total	%	Male	%	Female	%	Total	%
18 - 35	8	26.6	7	23.33	15	25	4	13.33	3	10	7	11.66
36 - 45	7	23.33	13	43.33	20	33.33	5	16.66	10	33.33	15	25
46 - 60	15	50	10	33.33	25	41.66	21	70	17	56.66	38	63.33
Total	30		30		60	100	30	100	30	100	60	100

Education level

As the respondents selected were from reputed academic institution, the education level in higher among both males and females. It was notable that though both teaching and non teaching staff are involved in more than fifty per cent subjects among control and experimental group were post graduates. Some pre obese agriculture laborers or attenders were also involved in the study. Hence 3.33 per cent were illiterates or studied up to primary/middle school level (Table 2).

Table 2: Education level of pre obese subjects

Education Level	Control (N=60)						Experimental (N=60)					
	Male	%	Female	%	Total	%	Male	%	Female	%	Total	%
Illiterate	0	0	1	3.33	1	3.66	0	0	1	3.33	1	1.66
Primary/Middle	0	0	1	3.33	1	1.66	3	10	0	0	3	5
SSLC	3	10	3	10	6	10	1	3.33	2	6.66	3	5
PUC	2	6.66	1	3.33	3	5	1	3.33	4	13.33	5	8.33
Graduate	9	30	7	23.33	16	26.66	3	10	6	20	9	15
Post Graduate	16	53.33	17	56.66	33	55	17	56.66	17	56.66	34	56.66
Any Other	0	0	0	0	0	0	0	0	0	0	0	0
Total	30		30		60	100	25	83.33	30	100	55	1.66

Type of family

Majority of the male and female subjects belonging to nuclear families in both control and experimental subjects followed by joint family and only few of them have extended type of family. This shows nuclear type of families dominated the study sample(Table 3).

Table 3: Type of family of pre obese subjects

Type of family	Control (N=60)						Experimental (N=60)					
	Male	%	Female	%	Total	%	Male	%	Female	%	Total	%
Joint	12	40	9	30	21	35	8	26.66	9	30	17	28.33
Nuclear	18	60	20	66.66	38	63.33	22	73.33	21	70	43	71.66
extended	0	0	1	3.33	1	1.66	0	0	0	0	0	0
total	30		30		60	100	0	0	0	0	0	0

Marital status

As per demographic characteristics of pre obese subjects revealed that in control group subjects, maximum numbers were married (90%)and only 10% were not married in both male and female subjects. Majority of the subjects selected in the study belonged to middle age group, the observation infers to their marital status. Similar trend was observed in experimental subjects among them also maximum numbers were married (88.33%) and only five per cent were not married (Table 4).

Table 4: Marital status of pre obese subjects

Marital status	control (n=60)						experimental (n=60)					
	male	%	female	%	total	%	male	%	female	%	total	%
married	27	90	27	90	54	90	27	0	26	86.66	53	88.33
unmarried	3	10	3	10	6	10	2	6.66	1	3.33	3	5
Widow	0	0	0	0	0	0	0	0	3	10	3	5
widower	0	0	0	0	0	0	1	3.33	0	0	1	1.66

Monthly income .

Majority of the control subjects (50%)both males and females belonged to families with monthly income of Rs.>40,000., followed by those with monthly income of Rs.20001–30000 (23.33%), and Rs10001 – 20000 (13.33%) respectively. The monthly income of Rs.<10,000was observed among less number of selected subjects(3.33%). Similarly, in experimental subjects, most of the pre obese subjects male and female (50%) had monthly income Rs.>40000 followed by those who had Rs.10001 – 20000 (33.33%). In female subjects less income observed by

6.66 per cent with a range of 30001 – 40000. It shows that less subjects were having monthly income Rs.30001 – 40000 in both experimental and control subjects. The subjects are from an academic institution of good structured salary pattern might be the reason for higher income level of the respondents. Hence, it was concluded from the above findings that all the subjects belonged to upper- middle socio-economic class. Similarly, high incidence of obesity in the wealthier groups had been reported by Hanchate and Dyson[1] (Table 5).

Table 5: Family monthly income of pre obese subjects

Monthly Income	Control (N=60)						Experimental (N=60)					
	Male	%	Female	%	Total	%	Male	%	Female	%	Total	%
<10,000	1	3.33	1	3.33	2	3.33	1	3.33	4	13.33	5	8.33
10001 – 20,000	4	13.33	7	23.33	11	18.33	10	33.33	6	20	16	26.66
20,001 – 30,000	7	23.33	5	16.66	12	20	2	6.66	3	10	5	8.33
30,001 – 40,000	3	10	2	6.66	5	8.33	2	6.66	2	6.66	4	6.66
>40,000	15	50	15	50	30	50	15	50	15	50	30	50
Total	30		30	100	60	100	30	100	30	100	60	100

CONCLUSION

The data from dispensary of University of Agricultural Sciences, Bengaluru revealed that more than 50 per cent of employees are overweight, It was observed that maximum number of males in the both control (50%) and experimental group (70%) were in the age group of 46-60 years. Similar trend was observed among female subjects of both groups (70 and 56.6%, respectively). Majority of the subjects both male or females in both groups had higher education level i. e. post graduation followed by graduation and few had studied up to SSLC And PUC. Primary and middle school education and non-schooling (illiterates) was observed among non-teaching staff. Maximum number of subjects belonged to nuclear families in both control and experimental groups followed by joint and then extended type of families. Majority of subjects in both groups were married and both groups belonged to families with higher range of monthly income.

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