S.R.R.andC.V.R.Govt.DegreeCollege(A,Vijayawada
DepartmentofBiochemistry

S.R.R. & C.V.R. Govt. Degree College (A)
Vijayawada
Department of Biochemistry

Student study project in collaboration with
V.G.R. Diabetes Specialties Hospital

This is to certify that the project work entitled

"A Random Study of Clinical Parameters of Faculty members working in SRR&CVR GDC(A) during year 2017-18" submitted by III MBC girl students in supervision of faculty members of department of biochemistry

DEPARTMENT OF BIOCHEMISTRY
SRR & CVR GOVT. COLLEGE
VIJAYAWADA-520 004.

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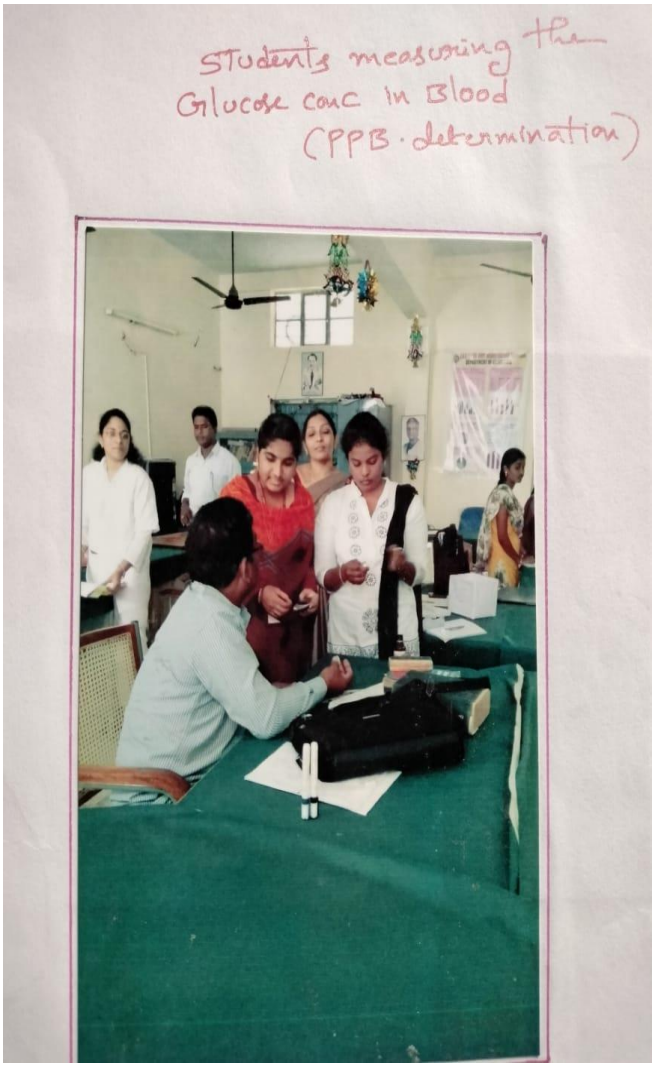
The department of biochemistry had MOU with VGR diabetics on 1. 9. 2016 .In the year 2018 the final MBC students visited the diabetic centre and observed the patients data sheets and spoke with the hospital manager regarding the parameters that are collected for a diabetic patient and carried out the same type of study in the college with the faculty members working in the year 2017



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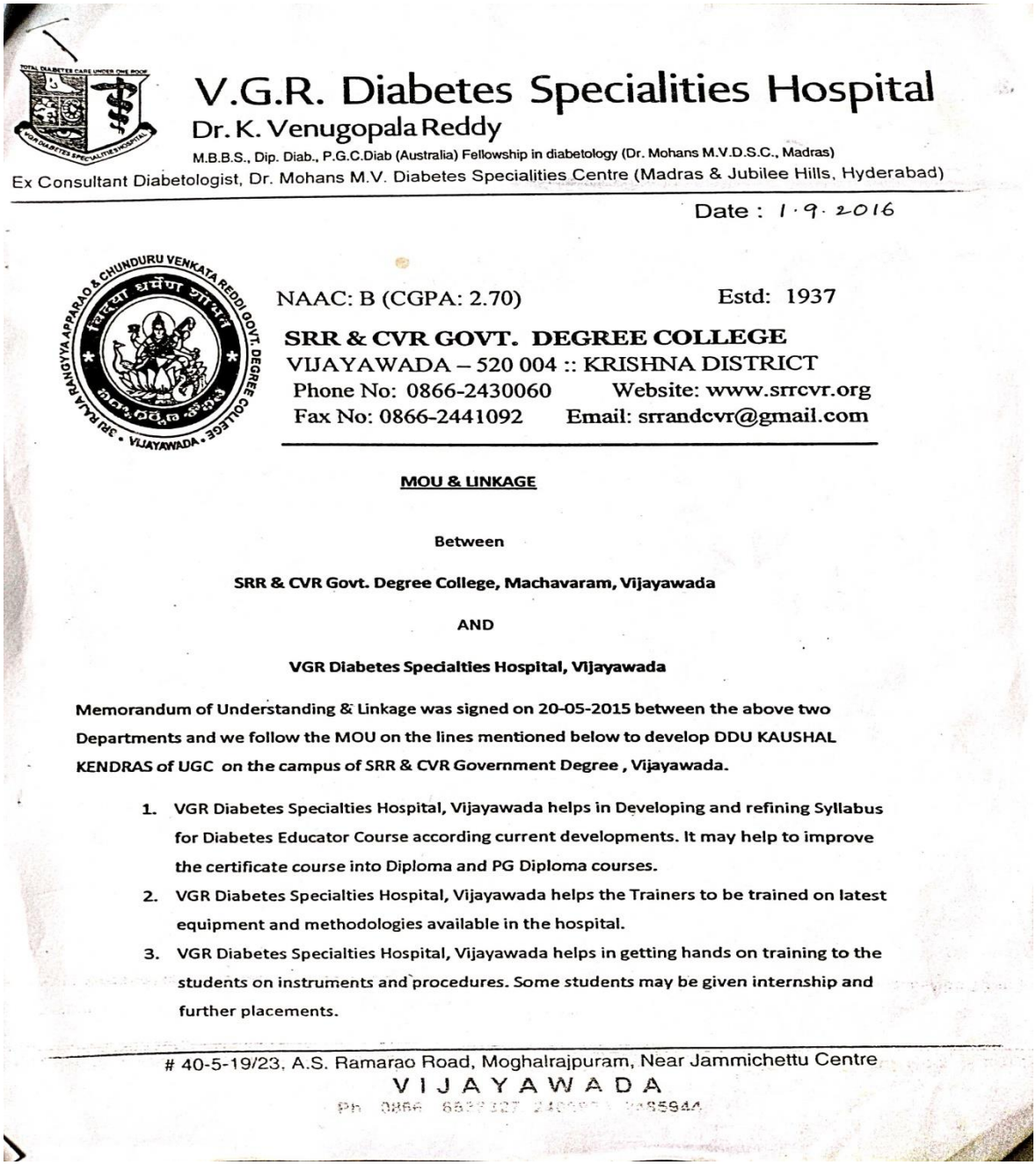

V.G.R. Diabetes Specialities Hospital
Dr. K. Venugopala Reddy
M.B.B.S., Dip. Diab., P.G.C.Diab (Australia) Fellowship in diabetology (Dr. Mohans M.V.D.S.C., Madras)
Ex Consultant Diabetologist, Dr. Mohans M.V. Diabetes Specialities Centre (Madras & Jubilee Hills, Hyderabad)

Date : 1·9·2016

NAAC: B (CGPA: 2.70) Estd: 1937

SRR & CVR GOVT. DEGREE COLLEGE
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MOU & LINKAGE

Between

SRR & CVR Govt. Degree College, Machavaram, Vijayawada

AND

VGR Diabetes Specialties Hospital, Vijayawada

Memorandum of Understanding & Linkage was signed on 20-05-2015 between the above two Departments and we follow the MOU on the lines mentioned below to develop DDU KAUSHAL KENDRAS of UGC on the campus of SRR & CVR Government Degree , Vijayawada.

1. VGR Diabetes Specialties Hospital, Vijayawada helps in Developing and refining Syllabus for Diabetes Educator Course according current developments. It may help to improve the certificate course into Diploma and PG Diploma courses.
2. VGR Diabetes Specialties Hospital, Vijayawada helps the Trainers to be trained on latest equipment and methodologies available in the hospital.
3. VGR Diabetes Specialties Hospital, Vijayawada helps in getting hands on training to the students on instruments and procedures. Some students may be given internship and further placements.

40-5-19/23, A.S. Ramarao Road, Moghalrajpuram, Near Jammichettu Centre
VIJAYAWADA
Ph 0866

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V.G.R. Diabetes Specialities Hospital

Dr. K. Venugopala Reddy

M.B.B.S., Dip. Diab., P.G.C.Diab (Australia) Fellowship in diabetology (Dr. Mohans M.V.D.S.C., Madras)

Consultant Diabetologist, Dr. Mohans M.V. Diabetes Specialities Centre (Madras & Jubilee Hills, Hyderabad)

Date :

4. Experienced staff and Doctors of the Hospital will deliver Guest Lectures to the students.
5. Cooperating in conducting Seminars/ Training Programmes/ Workshops etc.
6. Both departments will work together for the benefit of the students without any financial commitment.

It is understood that the details of these activities/ conditions for utilization of results achieved, arrangements for specific visits, exchange and all other forms of cooperation will be handled on mutually agreeable terms for each specific case.

V.G.R. DIABETES SPECIALITIES HOSPITAL
Dr. K. VENUGOPALA REDDY
M.B.B.S.,Dip.,Diab.,P.G.C.,Diab.(Australia)
Fellowship in Diabetology
(Dr. Mohans M.V.D.S.C.,Madras)
Ex.Consultant Diabetologist,Dr.Mohans M.V.D.S.C.
(Madras & Jubilee Hills, Hyderabad.)
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ACKNOWLEDGMENTS

We express our gratitude to our project supervisors **Sd.V.TAHASEEN** AND

Dr.I.JYOTHSNA KUMARI-department of biochemistry

-SRR & CVR Govt Degree College for Valuable guidance and Encouragement

We are grateful to **RAMPRASAD SIR** for providence of necessary equipment to carry out the project

We are thankful to all the faculty for the cooperation and encouragement

We will convey our special thanks to our beloved principal sir

Dr.V.RAVI GARU for encouragement .

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Introduction

BMI:

The WHO definition for o besity is based on Body Mass Index [BMI] calculated by dividing person's weight in kilogra ms with person's height in meter square. Obesity was defined as BMI>30 kg/m^2. BMI 30.0 to 34.9 kg/m^2 is class1obesity; BMI 35.0 to 39.9 kg/m^2 is class1I obesity BMI >40 kg/m^2 is class1II obesity. Another method that can be used to measure obesity is by assessing the distribution of body fat by waist to hip ratio (WHR).WHR of 0.90 or less is considered healthy for women and a ratio of 0.80 for men .A ratio of 1 or >1 is an indication of risk of developing health problems

Body Mass Index category	kg/m2	Health Risk of Developing Problems
Underweight	18.5	Increased
Normal weight	18.5–24.9	Least
Overweight	25.0--29.9	Increased
Class-I obesity	30.0–34.9	High
Class II obesity	35.0–39.9	Very high
Class III obesity	40.0	Extremely high

Table 1: Health risk classification according body mass index category.

For persons 65 yr. and older, the "normal" range may begin slightly above body mass index 18.5 kg/m2 and extend into the "overweight" range. Table can be used for adults aged 18 yr. and older; not for use in pregnant and lactating women.

CAUSES OF OBESITY:

At an individual level, a combination of excessive food energy intake and a lack of physical activity is thought to explain most cases of obesity. A 2006 review identified ten other possible contributors to the recent increase of obesity: (1) insufficient sleep, (2) endocrine disruptors (environmental pollutants that interfere with lipid metabolism), (3) decreased variability in ambient temperature, (4) decreased rates of smoking, because smoking suppresses appetite, (5) increased use of medications that can cause weight gain (e.g., atypical antipsychotics), (6) proportional increases in ethnic and age groups that tend to be

hea vier, (7) pregnancy at a later age (which may cause susceptibility to obesity in children), (8) epigenetic risk factors passed on generationally, (9) natural selection for higher BMI.

DIET FOR OBESITY:

Most people will need to reduce their daily kilojoule intake in order to lose weight. This means eating and drinking less and making healthier food choices. One way to do this is to swap unhealthy and high energy food choices such as fast food, processed food and sugary drinks (including alcohol) for healthier choice

Enjoy a wide variety of nutritious foods from these five groups every day:

Vegetables, including different types and colours, and legumes/beans

Fruit

Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as bread, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley

Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans (the latter in two food groups as they are rich in protein and carbohydrates)

Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under 2 years)

Drink plenty of water

Limit intake of foods containing saturated fat, added salt, added sugars and alcohol.

Some restaurants, cafes and fast-food outlets provide kilojoule information per portion, but providing this information is not compulsory. Be careful - some foods can quickly take you over the limit, such as burgers and fried chicken.

Avoid fat diets:

Avoid fad diets that recommend unsafe practices such as fasting (going without food for long periods of time) or cutting out entire food groups such as meat, fish, wheat or dairy products.

These are not sustainable, can make you feel ill, and may cause unpleasant side effects such as bad breath, diarrhoea and headaches.

This is not to say that all commercial diet programmes are unsafe. Many are based on sound

Choose a responsible diet programme that:

Educates you about issues such as portion size, making changes to long-term behaviour and healthy eating is not overly restrictive in terms of the type of food you can eat It is based on achieving gradual sustainable weight loss rather short-term rapid weight loss, which is unlikely to last.

Very low calorie diet

A very low calorie diet (VLCD) is a diet that involves consuming less than containing less than 3350 kilojoules (800 calories) per day.

While a VLCD can be an effective method of losing weight for some obese people, is it not a suitable or safe method for everyone. It would usually only be recommended if rapid weight loss was required to reduce the risk of an obesity-related complication such as heart disease, or if you have failed to lose weight despite conventional treatment. You should only ever undertake a VLCD under the supervision of a suitably qualified health professional.

GENETICS:

Like many other medical conditions, obesity is the result of an interplay between genetic and environmental factors. Polymorphisms in various genes controlling appetite and metabolism predispose to obesity when sufficient food energy is present. As of 2006, more than 41 of these sites on the human genome have been linked to the development of obesity when a favourable environment is present. People with two copies of the FTO gene (fat mass and obesity associated gene) have been found on average to weigh 3–4 kg more and have a 1.67-fold greater risk of obesity compared with those without the risk allele. The differences in BMI between people that are due to genetics varies depending on the population examined from 6% to 85%.

Obesity is a major feature in several syndromes, such as Prader–Willi syndrome, Bardet–Biedl syndrome, Cohen syndrome, and MOMO syndrome. (The term "non-syndromic obesity" is sometimes used to exclude these conditions.) In people with early-onset severe obesity (defined by an onset before 10 years of age and body mass index over three standard deviations above normal), 7% harbour a single point DNA mutation.

Studies that have focused on inheritance patterns rather than on specific genes have found that 80% of the offspring of two obese parents were also obese, in contrast to less than 10% of the offspring of two parents who were of normal weight. Different people

exposed to the same environment have different risks of obesity due to their underlying genetics.

The thrifty gene hypothesis postulates that, due to dietary scarcity during human evolution, people are prone to obesity. Their ability to take advantage of rare periods of abundance by storing energy as fat would be advantageous during times of varying food availability, and individuals with greater adipose reserves would be more likely to survive famine. This tendency to store fat, however, would be maladaptive in societies with stable food supplies. This theory has received various criticisms, and other evolutionarily-based theories such as the drifty gene hypothesis and the thrifty phenotype hypothesis have also been proposed.

Other illnesses:

Certain physical and mental illnesses and the pharmaceutical substances used to treat them can increase risk of obesity. Medical illnesses that increase obesity risk include several rare genetic syndromes (listed above) as well as some congenital or acquired conditions: hypothyroidism, Cushing's syndrome, growth hormone deficiency and the eating disorders: binge eating disorder and night eating syndrome.However, obesity is not regarded as a psychiatric disorder, and therefore is not listed in the DSM-IVR as a psychiatric illness. The risk of overweight and obesity is higher in patients with psychiatric disorders than in persons without psychiatric disorders

Certain medications may cause weight gain or changes in body composition; these include insulin, sulfonylureas, thiazolidinediones, atypical antipsychotics, antidepressants, steroids, certain anticonvulsants (phenytoin and valproate), pizotifen, and some forms of hormonal contraception

MANAGEMENT:

The main treatment for obesity consists of dieting and physical exercise. Diet programs may produce weight loss over the short term, but maintaining this weight loss is frequently difficult and often requires making exercise and a lower food energy diet a permanent part of a person's lifestyle.

In the short-term low carbohydrate diets appear better than low fat diets for weight loss In the long term; however, all types of low-carbohydrate and low-fat diets appear equally beneficial. A 2014 review found that the heart disease and diabetes risks associated with different diets appear to be similar. Promotion of the Mediterranean diets among the obese may lower the risk of heart disease. Decreased intake of sweet drinks is also related to weight-loss. Success rates of long-term weight loss maintenance with lifestyle changes are low, ranging from 2--20%. Dietary and lifestyle changes are effective in limiting excessive weight gain in pregnancy and improve outcomes for both the mother and the child. Intensive behavioural

PRINCIPAL,TEACHING STAFF MEMBERS (as on 01.07.2016)

	SL.No.	SUBJECT	Name	WEIGHT IN Kgs	HIGHT IN Cm	BP	BMI	PULSE	PPBS	AGE
1	4		Nazma Begum	67	149	103/68	30.18	79	199	60
2	5		A. Bhagyalakshmi	59	151	157/72	25.87	92	137	59
3	6		T. Nageswara Rao	80	159	99/63	31.74	97	336	59
4	7		G. Tirupathaiah	84	166	111/81	31.1	84	84	49
5	8		D. Rajya Lakshmi	77	154	102/72	32	96	92	40
6	10	Sanskrit	I. Srinivasa Rao	80	166	134/95	29.09	74	159	60
7	11		K. Bala Krishna	74	165	108/79	27.2	89	62	44
8	12	Telugu	KRG Seshu Kumar	77	165	121/95	24.63	81	84	41
9	13		M. Devananda Kumar	88	176	120/99	28.47	87	99	40
10	16		K.V. Nagalakshmi	73	151	120/80	32.01	72	90	40
11	17		Ch. Jagadish	85	173	120/80	28.4	74	98	59
12	18		K.V. Rama Rao	72	169	120/80	25.2	73	96	58
13	20		G. Lalitha	65	160	120/80	25.39	72	86	39
14	24		Sk. M. Subani	71	152	120/80	30.73	73	95	60
15	26		Md. Iqbal Pasha	62	159	124/89	24.6	76	81	50
16	30		G. Venkata Rao	73	169	131/94	25.61	89	141	58
17	34		KVS Prasad	82	164	119/82	30.59	89	112	54
18	35		G. Nagarjuna	77	162	113/71	29.38	81	119	48
19	37	Comp. Science	K.S. Rajesh	97	162	121/98	37	91	96	30
20	38	Bio Chemistry	I. Jyothsna Kumari	-	-	120/80	-	74	98	60
21	39		Syed Vaziha Tahaseen	85	156	103/74	37.7	85	86	39
22	40	Botany	M. Sravanavalli	48	128	106/75	29.44	95	87	59
23	41		J.Nirmala Kumari	54	142	110/70	26.8	74	138	60
24	42	Micro Biology	J.S. Rama Prasad	68	157	124/85	-	80	126	60
25	43		D. Jyothi	64	151	101/78	28.06	73	63	44

26	45		G. Vani	66	169	126/74	23.15	81	101	37
27	48		NJ Sukumar	63	164	119/84	23.95	72	179	43
28	49		G.J. Ramachandra Rao	77	157	173/116	31	60	153	57
29	52		N. Venkateswarlu	-	-	135/95	-	86	112	59
30	53		K. Bhaskara Rao	81	169	120/80	28.36	-	94	69
31	54		PVN Murthy	91	163	120/80	34.33	-	92	49
32	56		M. Srinivasa Rao	63	157	116/78	25	85	159	44
33	57		K. Naveena	70	145	128/70	33.03	88	101	44
34	58		B. Siva Nageswara Rao	86	168	123/83	30.49	79	139	57
35	59		Sd.Abubakar Shahryar	79	166	138/101	28.72	65	72	43
36	60		P. Murali	76	164	133/91	28.35	65	86	42
37	61		B. Prathima	75	149	124/78	33.78	84	98	39
38	62		E. Suneetha	60	141	85/52	30.3	103	89	32
39	63	Pub. Admin.	M. Padmanabham	67	167	129/85	24.63	68	82	48
40.	64	Politics	Ch. Ramu	70	127	112/76	28.45	69	89	59
41.	65	Psychology	P. Srinivas	67	157	131/99	27.23	101	155	52
42.	67		Y. Trivikrama Rao	97	162	119/84	37.02	72	179	60
43	68		M. Nageswara Rao	66	166	113/73	24	67	97	59
44	72	Librarian	U. Sambaiah	75	163	127/84	28.3	84	117	56
45	73		K. Bhanu Prasad	90	172	117/72	30.42	70	98	59
46	74	Re-Dep.(ODB)	A. Subhashini	60	148	117/95	27.39	65	99	46
47	75		K.V. Krishna Mohan	62	167	179/103	22.79	84	144	54
48	76	Contract Faculty	T. Jaya Krishna	72	161	122/71	27	95	113	-
49.	77		B.S.Suneetha	68	153	116/78	29.05	76	87	-

Total number of staff members for which

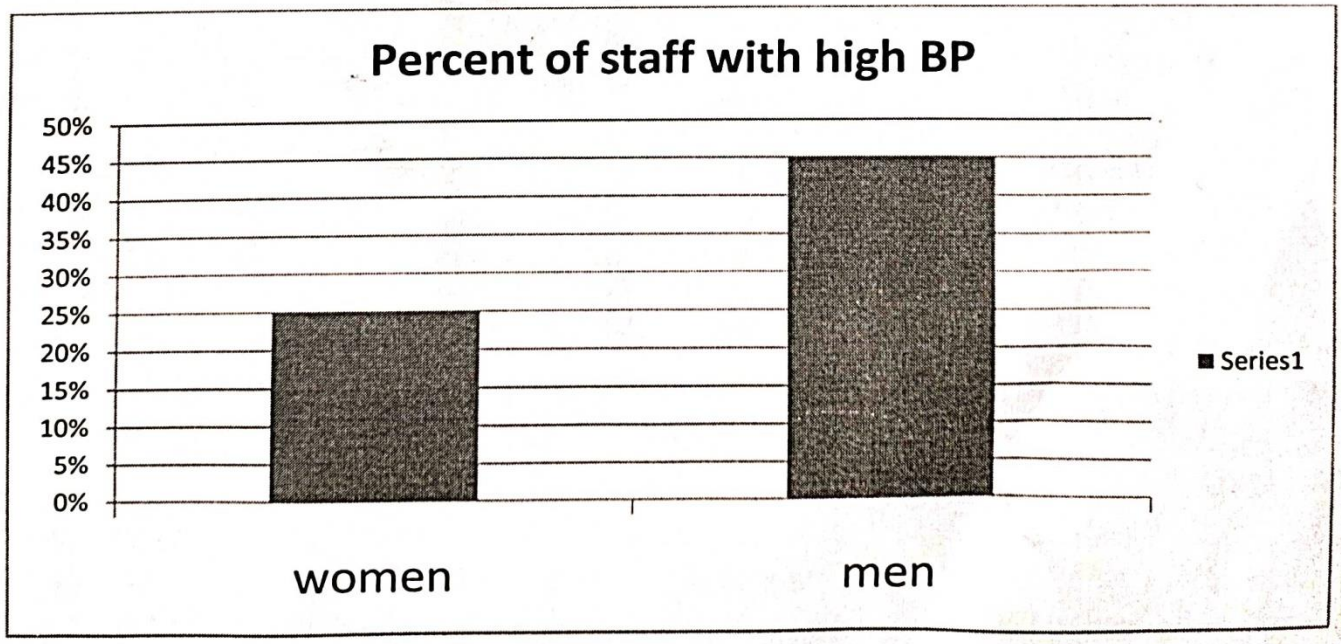
Clinical tests had conducted : 49

Total number of women staff : 16

Total number of men staff : 33

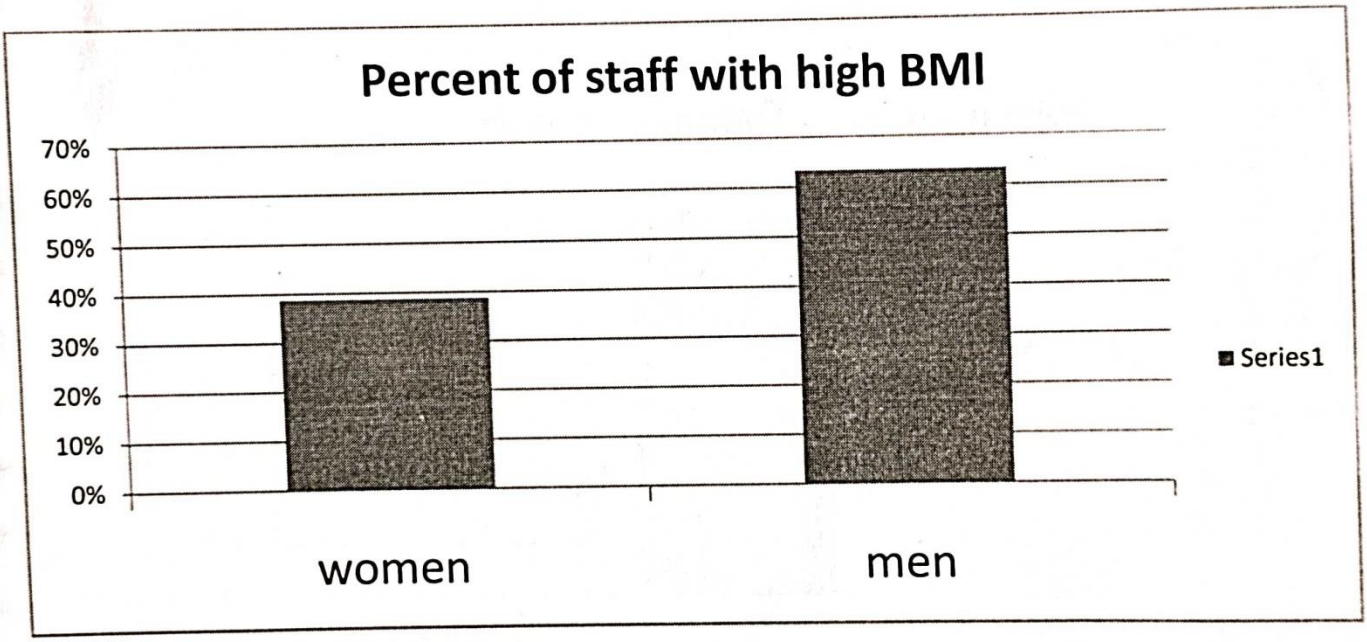
❖ Percentage of staff members with high BP

WOMEN	MEN	TOTAL
25 %	45 %	38.7 %



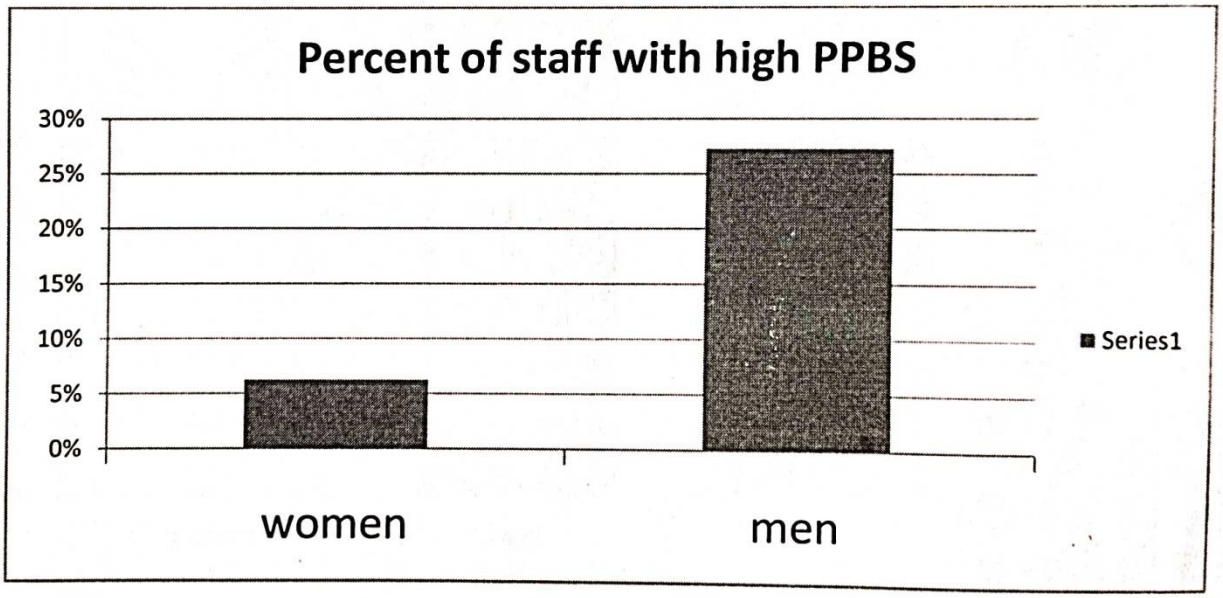
❖ Percentage of staff members with high BMI

WOMEN	MEN
38.75 %	63.6 %



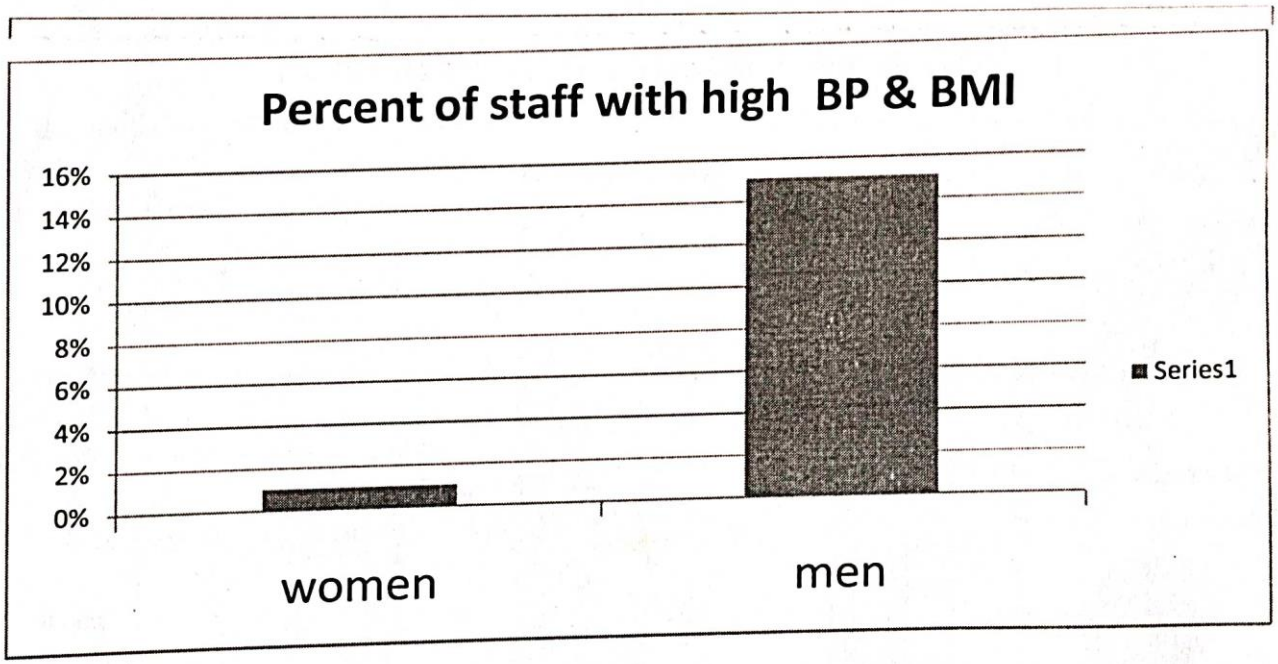
❖ Percentage of staff members with high PPBS

WOMEN	MEN	TOTAL
6.25 %	27.27 %	20.4%



❖ Percentage of staff members with both BP & BMI

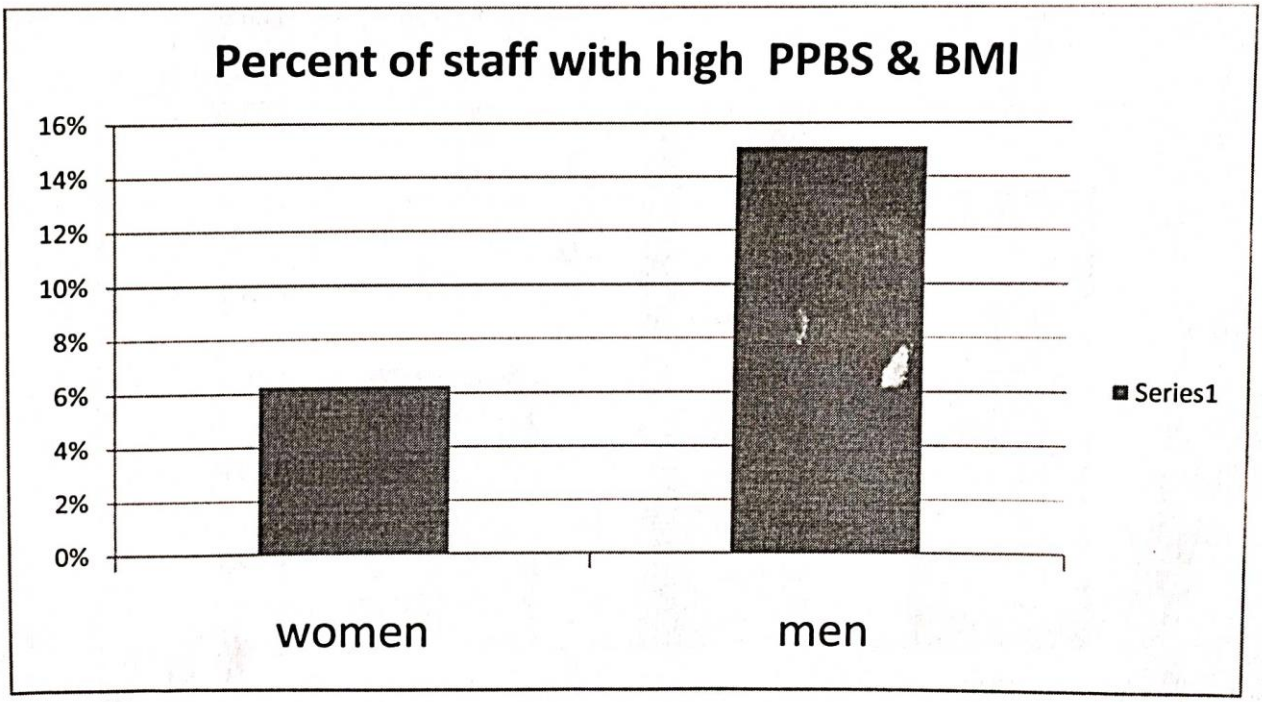
WOMEN	MEN	TOTAL
0 %	15.1 %	10.2%



❖ Percentage of staff with both PPBS & BMI

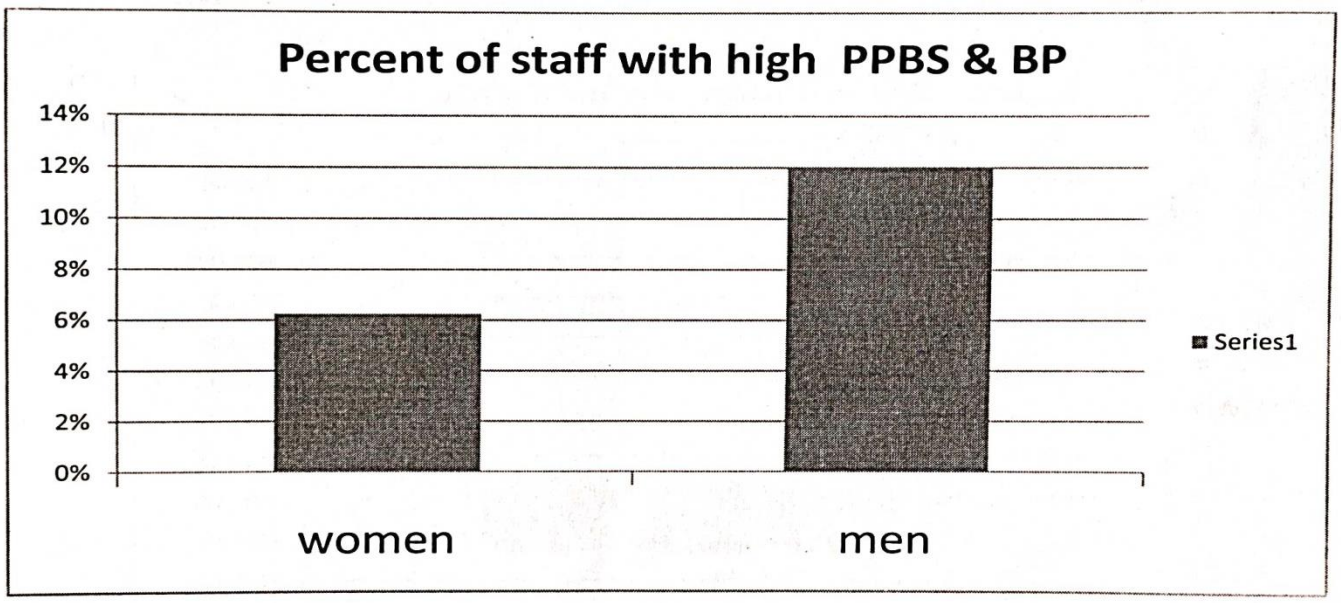
I

WOMEN	MEN	TOTAL
6.25 %	15.1%	10.2%



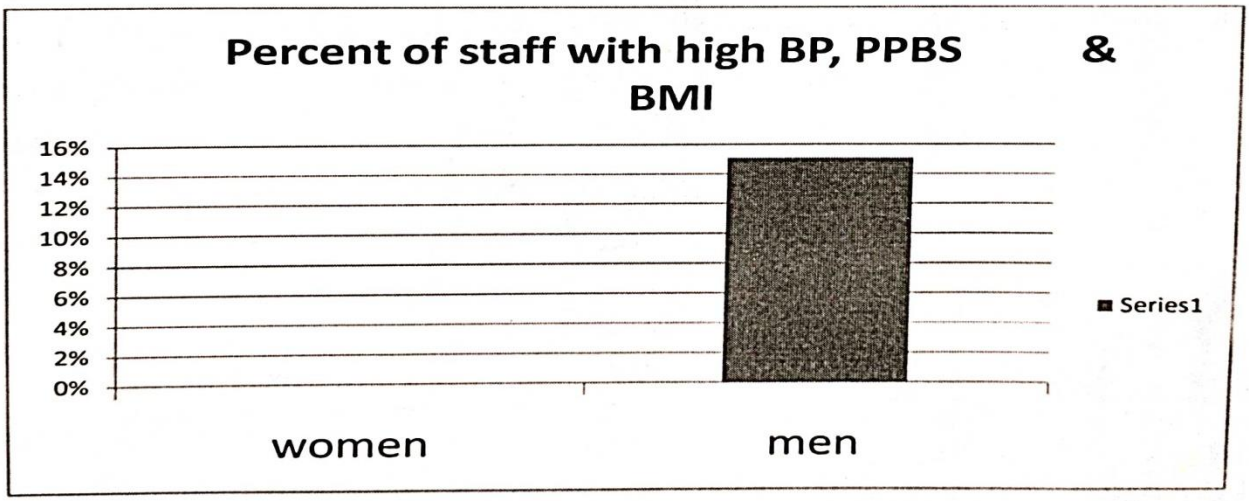
❖ Percentage of staff with both BP & PPBS

WOMEN	MEN	TOTAL
6.25 %	12.1%	10.2%



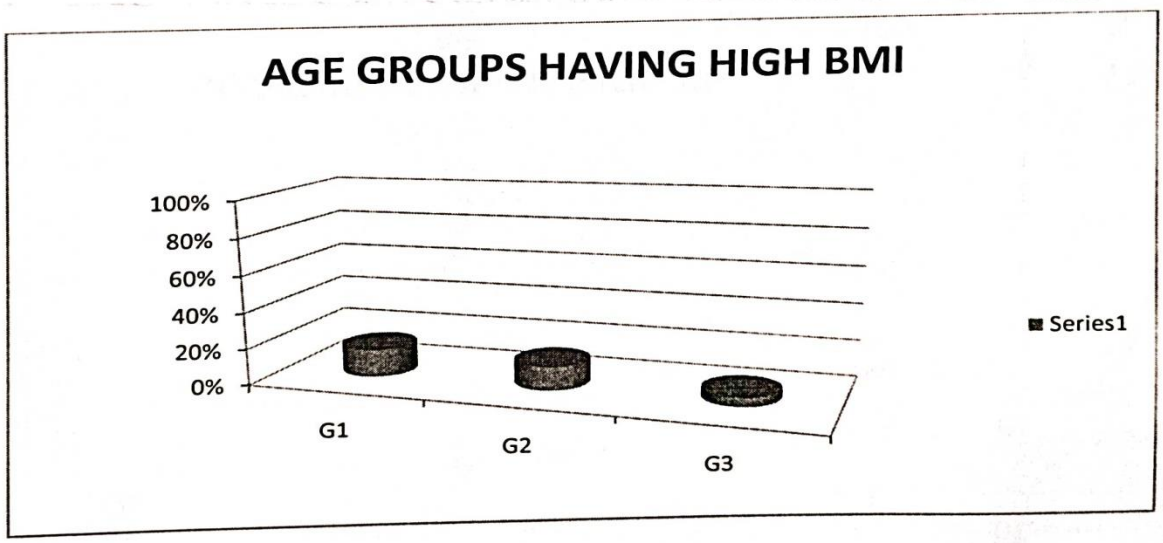
❖ Percentage of staff s with high BP ,PPBS & BMI

WOMEN	MEN	TOTAL
0 %	15.1 %	15.1 %



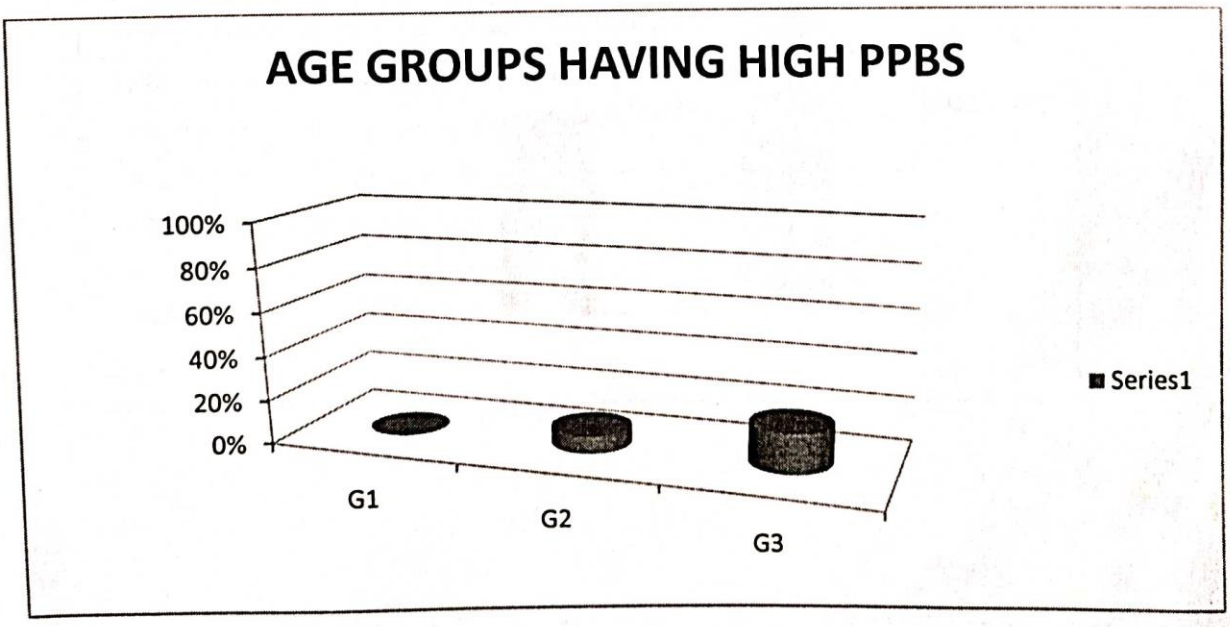
- Percentage of staff between age group having 30-40 high BMI : 15 .3 %
- Percentage of staff between age group having 40-50 high BMI : 13 %
- Percentage of staff between age group having 50-60 high BMI : 5 %

AGE GROUP	PERCNTAGE HAVING HIGH BMI
30-40	15.3 %
40-50	3 %
50-60	5.1 %



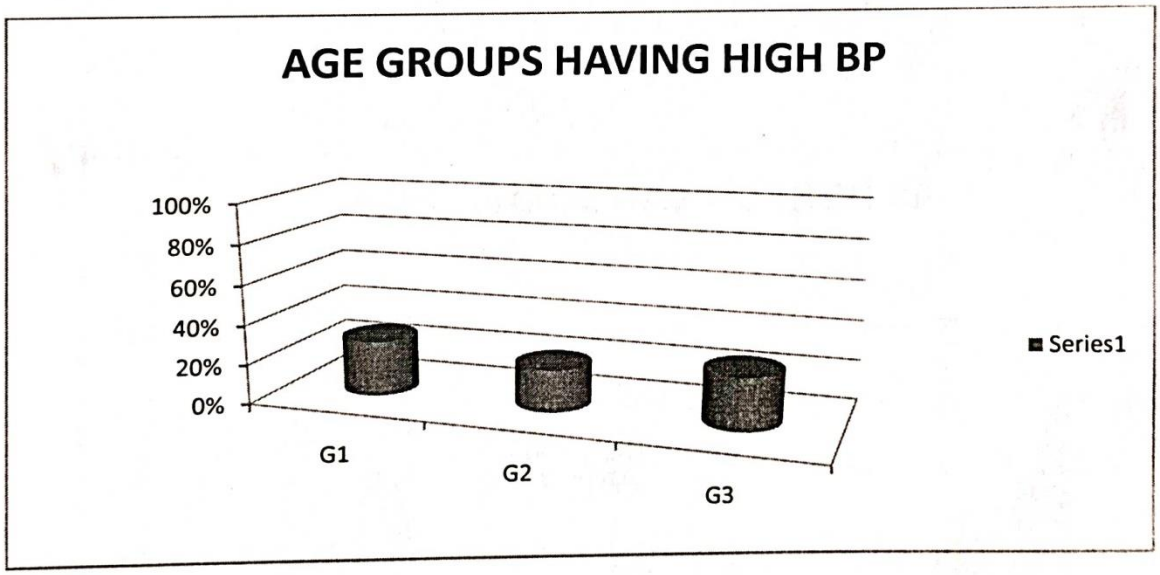
- Percentage of staff between age group having 30-40 high PPBS : 0 %
- Percentage of staff between age group having 40-50 high PPBS : 8.6 %
- Percentage of staff between age group having 50-60 high PPBS : 17.9 %

AGE GROUP	PERCNTAGE HAVING HIGH PPBS
30-40	0 %
40-50	8.6 %
50-60	17.9 %



- Percentage of staff of age group 30-40 with high blood pressure : 28 %
- Percentage of staff of age group 40-50 with high blood pressure : 21.7%
- Percentage of staff of age group 50-60 with high blood pressure : 25.6 %

AGE GROUP	PERCNTAGE HAVING HIGH BP
30-40	28 %
40-50	21.7%
50-60	25.6 %



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Result:

- The total number of faculty members for whom the analysis was carried out were 49, and among them 16 were women and 33 were men.
- The BMI values for men are more than women
- It is found that the average percentage of men suffering with is high BP are more than the average percentage of women
- Average percent of men suffering with high PPBS were more than average percent of women.

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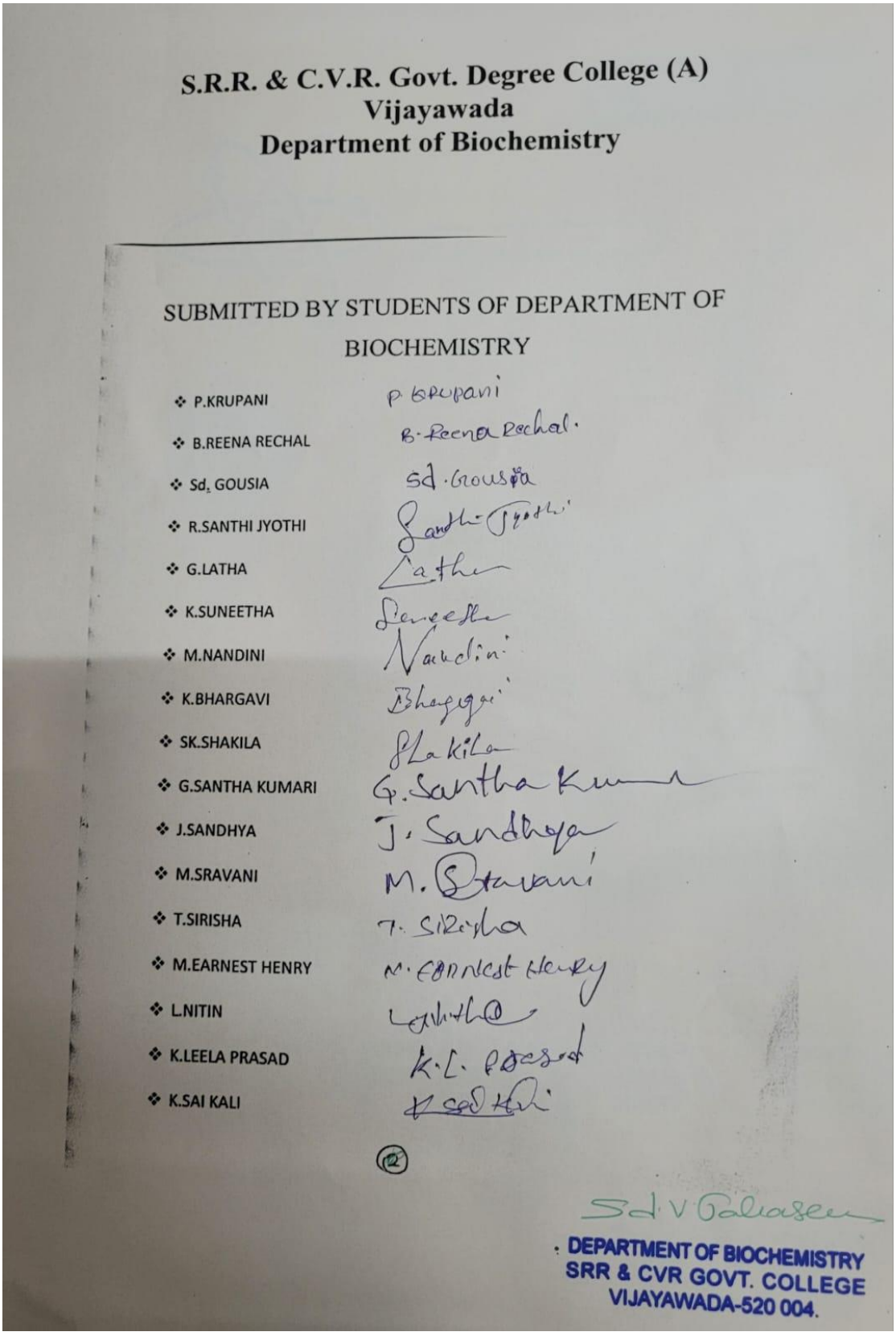

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- SK.SHAKILA
- G.SANTHA KUMARI
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- M.SRAVANI
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- K.SAI KALI

Sd. V Balaseen

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