"A STUDY TO EVALUATE THE EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING PREVENTION OF ANXIETY AND DEPRESSION AMONG BODYBUILDERS IN SELECTED BODYBUILDING TRAINING CENTERS IN BENGALURU"

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Abstract: Background: Bodybuilding is a challenging and demanding sport. Bodybuilding can provide a lot of excitement and a real sense of achievement. Bodybuilders can experience euphoria if they achieve a personal record for a particular lift or if they reach a milestone in their training. Overtraining can leave bodybuilders exhausted and feeling low in energy. If this continues for too long they will start to feel depressed. This can happen to any bodybuilder when you do not get in enough rest and sleep. Hence the focus of this study was to evaluate the effectiveness of self instructional module on Prevention of anxiety and depression among bodybuilders at selected bodybuilding training centers, Bengaluru, Karnataka.**objectives:1.**To assess the existing level of knowledge on prevention of anxiety and depression among body builders at selected body building training centers.2.To assess the post test level of knowledge on prevention of anxiety and depression among body builders at selected body building training centers.3.To evaluate the effectiveness of Self Instructional Module on knowledge regarding prevention of anxiety and depression among bodybuilders by comparing the pre and post-test knowledge score.4.To determine the association between pre-test knowledge scores of bodybuilders regarding prevention of anxiety and depression with their selected demographic variables.**Research Design:**Research design is an overall plan for addressing research questions including specification for enhancing the study integrity [31].

In the present study the Quasi experimental design with one group pre test post test was adapted to assess the knowledge of bodybuilders at selected bodybuilding training centers, Bengaluru regarding the Prevention of anxiety and depression.**Major findings of the study:**Majority 90% of the bodybuilders had inadequate knowledge and 10% had moderate knowledge in the pretest. After administration of self instructional module 26.7% of the subjects had adequate knowledge, 63.3% had moderate knowledge and only 10% had inadequate knowledge regarding Prevention of anxiety and depression in the post test.The overall analysis of level of knowledge of bodybuilders regarding Prevention of anxiety and depression showed that mean knowledge scores

of the subjects at pre-test were 11.93 (45.88%) found to be inadequate knowledge regarding Prevention of anxiety and depression. After administration of self instructional module mean knowledge scores of the subjects was 17.85 (68.65%) found to be improvement in the level of knowledge among bodybuilders.**Conclusion:**Findings of the study show that there was a significant difference in pre test and post test level of knowledge of bodybuilders. From this it is concluded that the self instructional module is effective in improving the level of knowledge of bodybuilders. And there was a significant association between level of knowledge of bodybuilders and selected demographic variables such as age and source of information.

KEY WORDS: Knowledge; bodybuilders; Prevention of anxiety and depression.

I.   RESEARCH METHODOLOGY

The methodology includes research approach, research design, setting of the study, sample, sampling technique, development and description of the tool, pilot study, data collection and plan for data analysis.

3.1 Population and Sample

The term population is the entire set of individuals or objects having common characteristics that meet certain criteria for inclusion in the study [32]. The target population for the present study comprised of bodybuilders at selected bodybuilding training centers, Bengaluru. **Sample:**Sample refers to the portion of the population which represents the entire population [32]. In this study the sample consisted of bodybuilders at selected bodybuilding training centers, Bengaluru.**Sample size:** refers to the number of subjects needed for the study. The total sample size of this study is 60 bodybuilders at selected bodybuilding training centers, Bengaluru.

3.2 Data and Sources of Data

Research setting is the physical location and conditions in which data collection takes place. The present study was undertaken in selected bodybuilding training centers, Bengaluru. This setting was selected because of the geographical proximity, availability of the samples and permission to conduct the study.

3.3 Theoretical framework

Conceptual framework refers to interrelated concepts or abstractions that are assembled together in some rational scheme by virtue of their relevance to common theme. They serve as a springboard for the generation of hypothesis to be tested [12].

A conceptual model provides a certain frame of reference for clinical practice, research and education. The utility of conceptual model comes from the organization of elements used for the study. It gives a direction to the research for relevant questions on the phenomena and points out a solution to practical problem. A conceptual framework is a theoretical approach to study problems that are scientifically based and emphasize the selection, management and classification of its concepts [12].

A conceptual Frame work is the battle plan of attack that is developed to research a topic that demands an answer. The present study is aimed at evaluating the effectiveness of Self Instructional Module on knowledge of bodybuilders regarding Prevention of anxiety and depression. The modified conceptual frame work for the study is based on Imogene Kings Goal Attainment theory. This conceptual framework focuses on inter-personal relationship, communication between investigator and bodybuilders.

3.4 Statistical tools and econometric models

Tool selected in the research should be the vehicle as for as possible that would provide data for drawing conclusions pertinent to the study, and at the same time add to the body of knowledge in the discipline [33]. Based on the research problem and objectives of the study, the following steps were undertaken to select and develop the data collection tool.

3.4.1 Descriptive Statistics
Part - I: Demographic Data

This section consisted of 7 items seeking personal information such as Age, education status, occupation, religion, type of diet, duration of bodybuilding and source of information.

Part - II: Knowledge questionnaires

The knowledge questionnaires consisted of 26 items on knowledge such as Causes and risk factors of anxiety and depression, strategies to prevention and management of anxiety and depression.

Each question had 4 responses with which one correct response and 3 distractor. Score '1' was given for correct response in a single question and score '0' was given for wrong response. The total numbers of items were 26 giving rise to maximum score of 26.The resulting score were ranged as follows.Adequate knowledge: more than 75 % (21-26 marks), Moderately adequate   : 50 – 75 % (14-20 marks), Inadequate adequate: less than 50 % (less than 13 marks)

IV. RESULTS AND DISCUSSION

4.1 Results of Descriptive Statics of Study Variables

Section I : Description of demographic characteristics of bodybuilders.

Section II : Knowledge level of bodybuilders regarding the Prevention of anxiety and depression

Section III : Comparison of the pre-test and post-test knowledge score of bodybuilders.

Section IV : Association between knowledge scores and selected demographic variables.

Figures and Tables

SECTION – I: DEMOGRAPHIC CHARACTERISTICS OF BODYBUILDERS
Table 1: Distribution of bodybuilders according to age
N = 60

1. Age	Frequency	Percentage
a. 21-25 years	11	18.3
b. 26-30 years	17	28.3
c. 31-35 years	26	43.3
d. 36-40 years	6	10.0
Total	**60**	**100**

The above table depicts that majority 43.3% of subjects were in the age group of 31-35 years, 28.3% of subjects were in the age group of 26-30 years, 18.3% of the subjects were aged 21-25 years and remaining 10% of them were aged 36-40 years.
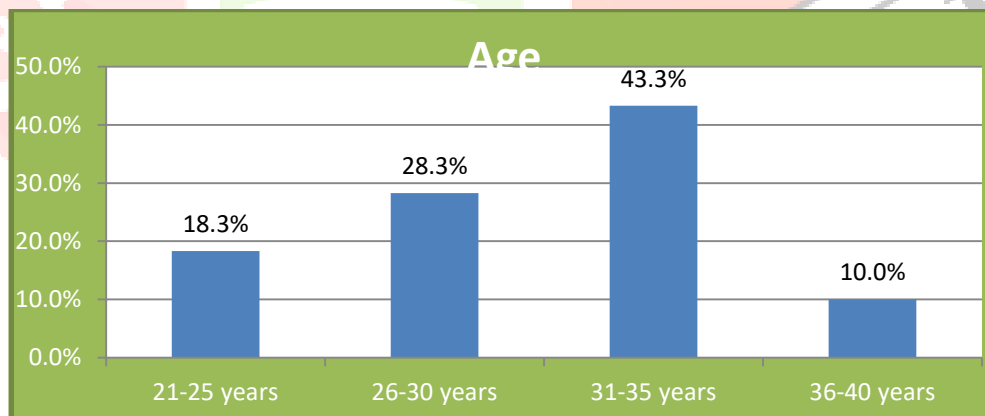

Fig 1: Distribution of subjects by age

Table 2: Distribution of bodybuilders according to education

N = 60

2. Education	Frequency	Percentage
a. Illiterate	2	3.3
b. Primary education	16	26.7
c. Secondary education	11	18.3
d. PUC	21	35.0
e. Degree and above	10	16.7
Total	**60**	**100**

The above table shows that the 35% of the subjects had pre - university education, 26.7% had primary education, 18.3% of the subjects had secondary education, 3.3% are illiterates and 16.7% were graduates.
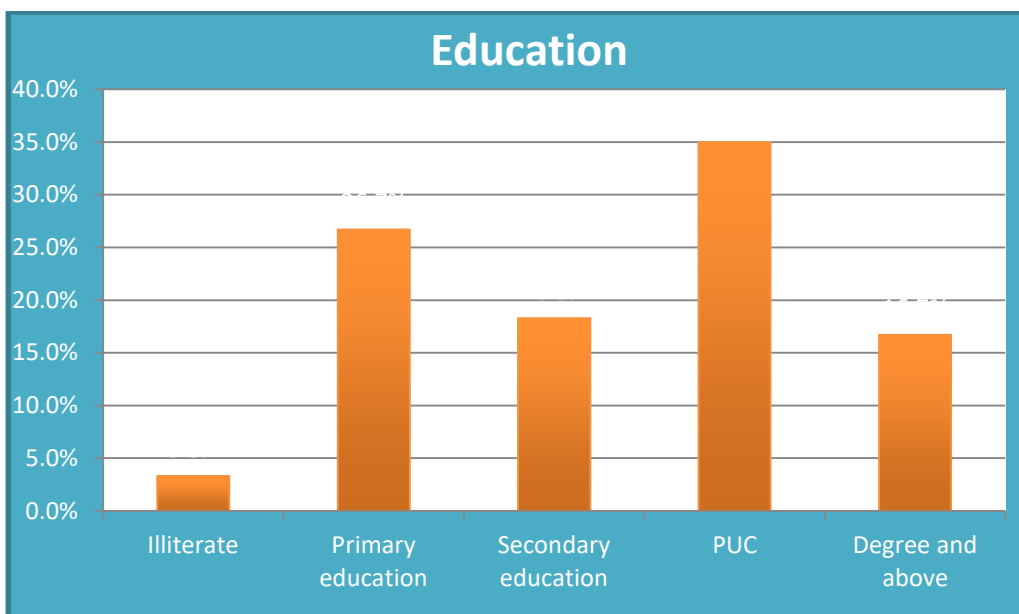
Fig 2: Distribution of subjects by education

Table 3: Distribution of bodybuilders by occupation
N = 60

3. Occupation	Frequency	Percentage
a. Private employment	38	63.3
b. Self employed	6	10.0
c. Gym instructor	11	18.3
d. Government employee	5	8.3
Total	**60**	**100**

The above table depicts that among bodybuilders 63.3% were private employees, 18.3% were Gym instructors, 10% were self employed and remaining 8.3% were Full time Bodybuilding.
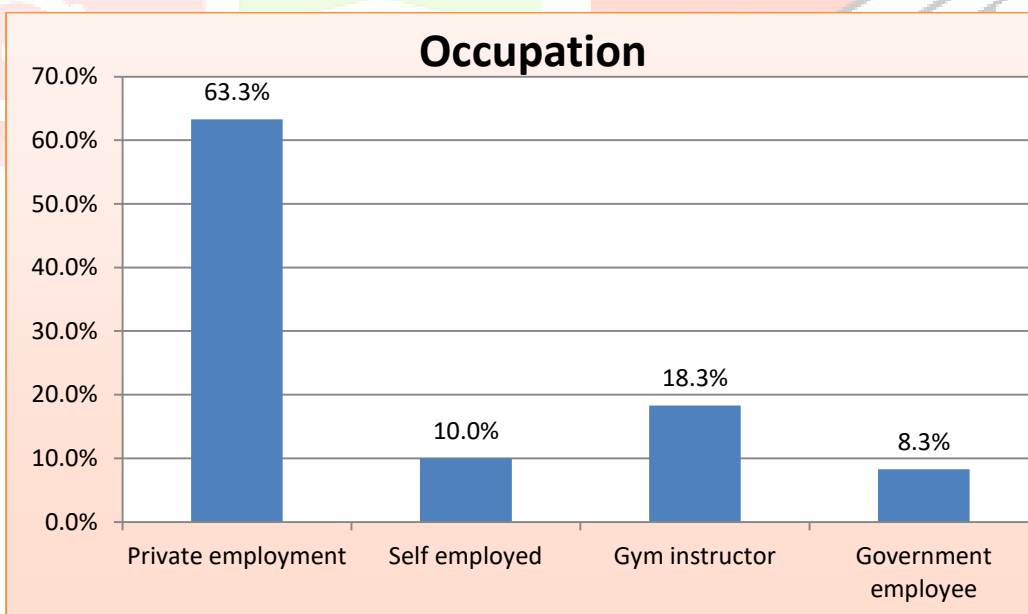
Fig 3: Distribution of subjects by occupation

Table 4: Distribution of bodybuilders according to religion
N = 60

4. Religion	Frequency	Percentage
a. Hindu	49	81.7
b. Muslim	5	8.3
c. Christian	6	10.0
Total	**60**	**100**

The above table shows that majority 81.7% subjects belong to Hindu religion, 8.3% were Muslims and 10% were Christians.
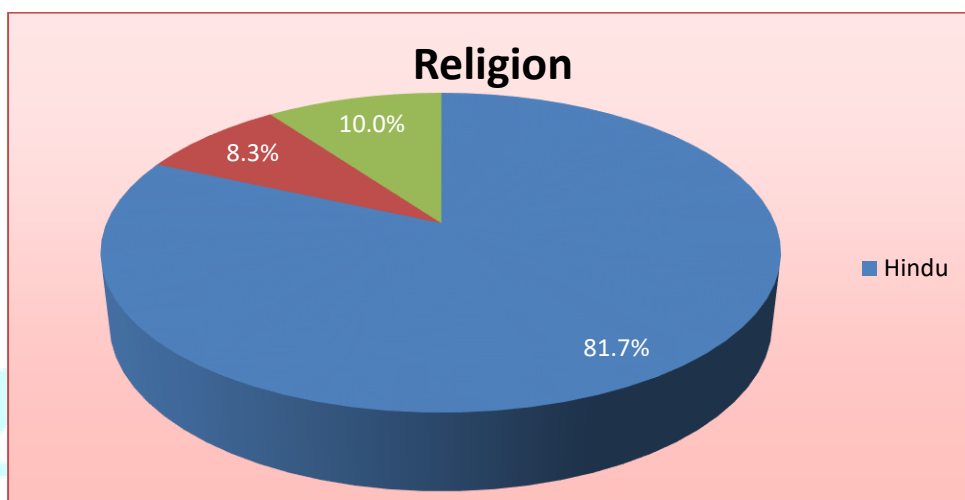

Fig 5: Distribution of subjects by religion

Table 6: Distribution of bodybuilders by type of diet
N = 60

Type of diet	Frequency	Percentage
a. Mixed diet	53	88.3
b. Vegetarian	7	11.7
Total	**60**	**100**

The above table reveals that 88.3% of subjects were taking mixed diet and only 11.7% were vegetarians.

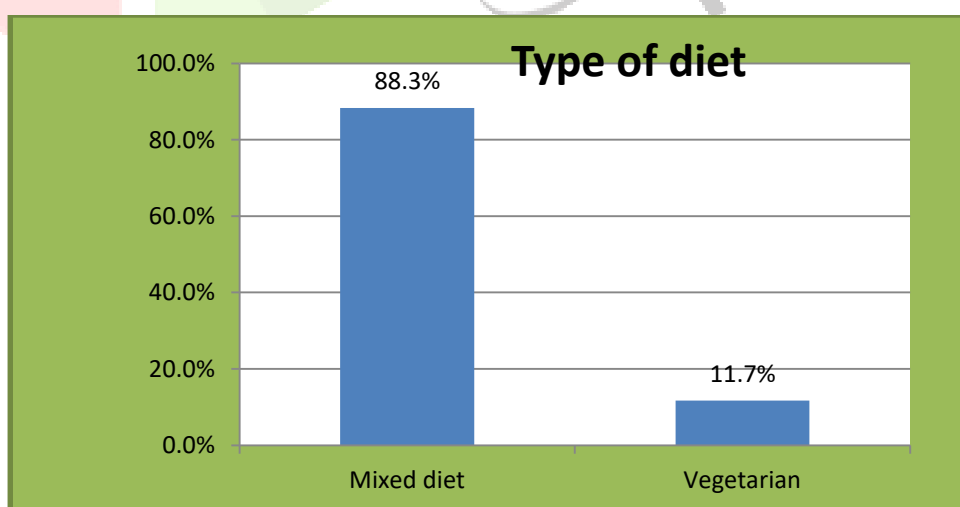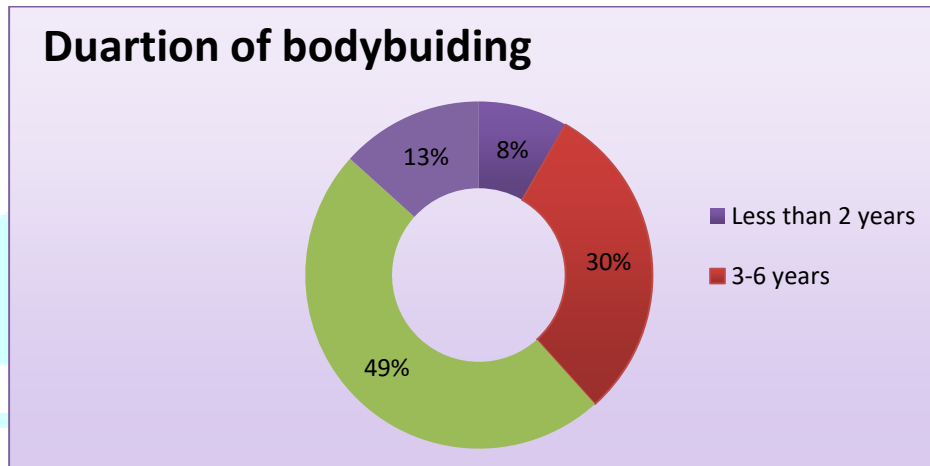**Fig 7: Distribution of subjects by their type of diet**

Table 6: Distribution of bodybuilders according to duration of bodybuilding
N = 60

| Duration of bodybuilding	Frequency	Percentage
a. Less than 2 years	5	8.3
b. 3-6 years	18	30.0
c. 7-10 years	29	48.3
d. 11 years and above	8	13.3
Total	**60**	**100**

The above table shows that among bodybuilders majority 48.3% of subjects were in bodybuilding from 7-10 years, 30% had duration of bodybuilding between 3-6 years, 8.3% were having less than 2 years of bodybuilding experience and only 13.3% were in bodybuilding since 11 years and above.

Fig 8: Distribution of subjects by duration of bodybuilding

Table 7: Distribution of bodybuilders according source of information
N = 60

5. Source of information	Frequency	Percentage
a. Mass media	4	6.7
b. Friends	19	31.7
c. Gym instructor	19	31.7
d. Health personnel	18	30.0
Total	**60**	**100**

The above table reveals that 31.7% of subjects gets information by their friends, 31.7% from Gym instructor and 30% of them had health personnel as their source of information.
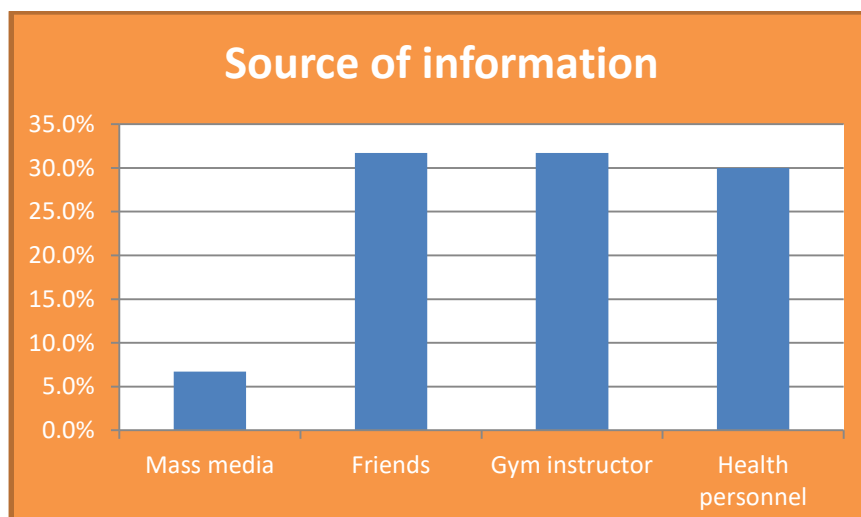
Fig 9: Distribution of subjects by present source of information

SECTION II: KNOWLEDGE LEVEL OF BODYBUILDERS REGARDING THE PREVENTION OF ANXIETY AND DEPRESSION

Table 8: Overall pretest and post test knowledge scores of the bodybuilders.

N = 60

Knowledge level	Pre test		Post test	
	Frequency	%	Frequency	%
a. Inadequate knowledge	54	90.0	6	10.0
b. Moderate knowledge	6	10.0	38	63.3
c. Adequate knowledge	0	0	16	26.7
Total	**60**	**100**	**60**	**100**

Table 8 depicts that majority 90% of the bodybuilders had inadequate knowledge and 10% had moderate knowledge in the pretest. After administration of Self Instructional Module 26.7% of the subjects had adequate knowledge, 63.3% had moderate knowledge and only 10% had inadequate knowledge regarding Prevention of anxiety and depression in the post test.
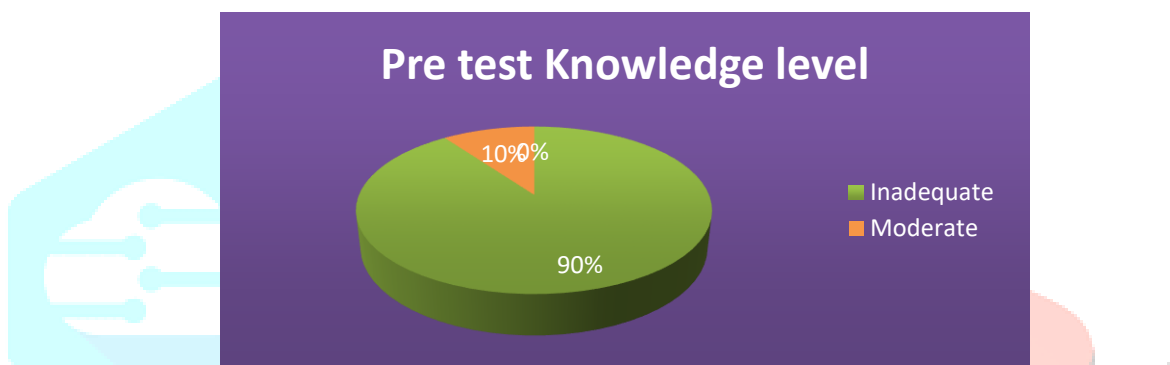

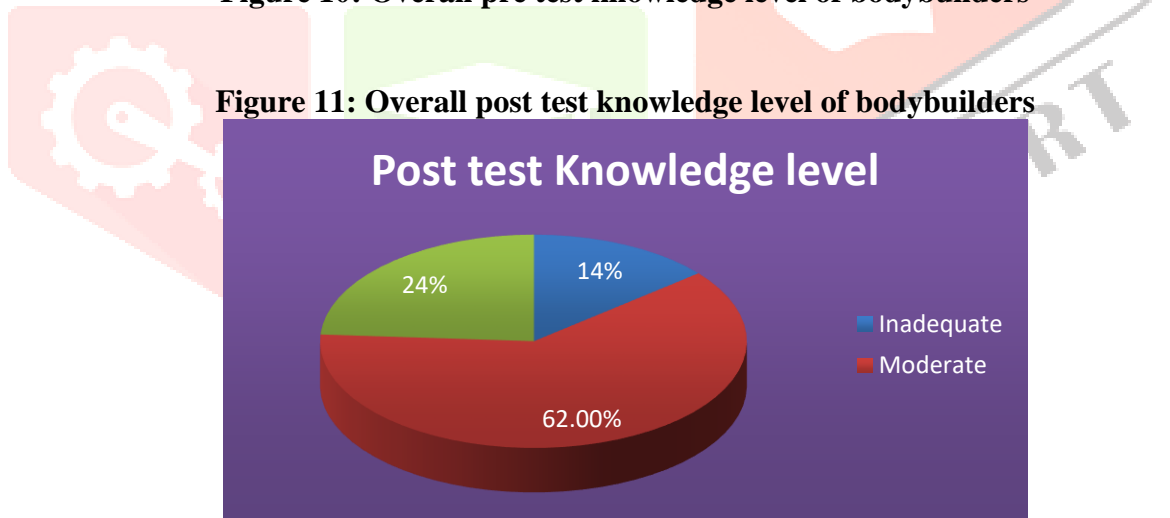**Figure 10: Overall pre test knowledge level of bodybuilders**

Figure 11: Overall post test knowledge level of bodybuilders

Table – 9: Area wise analysis of pretest knowledge scores of bodybuilders

N = 60

Knowledge aspects	Number of Items	Maximum Score	Mean	Mean %	Median	SD
a. General information regarding anxiety and depression	6	6	1.97	32.83	1.5	1.301
b. Causes and risk factors of anxiety and depression	6	6	3.98	66.33	4	2.119
c. Management of anxiety and depression	6	6	2.48	41.33	3	1.228
d. Prevention of anxiety and depression	8	8	3.5	43.75	4	1.780
Overall	26	26	11.93	45.88	13	4.437

Table 9 depicts that the maximum mean percentage obtained by the bodybuilders in pretest is in the aspect of Causes and risk factors of anxiety and depression (66.33%), followed by Prevention of anxiety and depression (43.75%), Management of anxiety and depression (41.33%) and least mean knowledge score (32.83%) found in the aspect of General information regarding anxiety and depression. Therefore overall knowledge scores of respondents were found to be 45.88% with standard deviation 4.437.
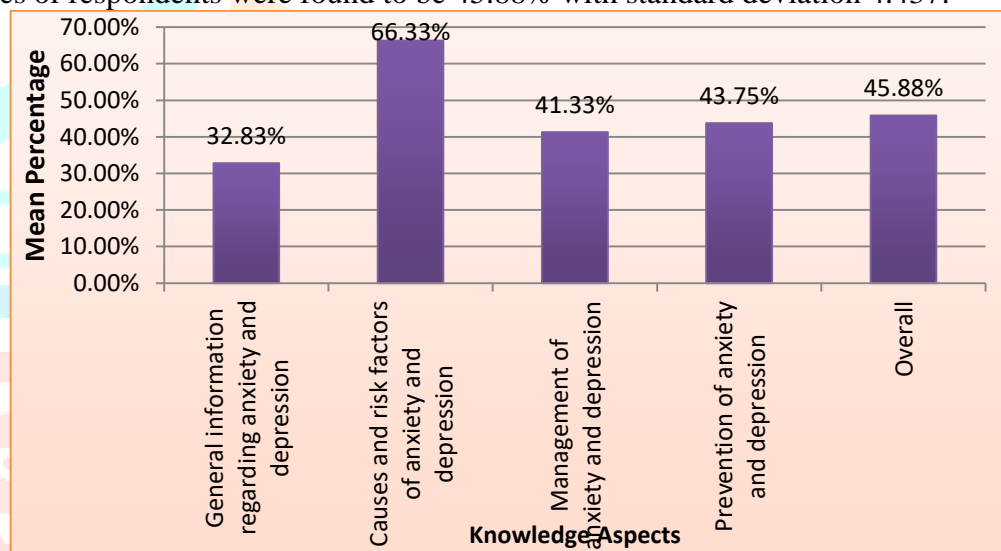

Figure 12: Area wise pre test knowledge scores of bodybuilder

Table – 10: Area wise analysis of post test knowledge scores of bodybuilders

N = 60

Knowledge aspects	Number of Items	Maximum Score	Mean	Mean %	Median	SD
a. General information regarding anxiety and depression	6	6	4.78	79.66	5	0.958
b. Causes and risk factors of anxiety and depression	6	6	4.83	80.5	5	1.304
c. Management of anxiety and depression	6	6	4.77	79.5	6	1.741
d. Prevention of anxiety and depression	8	8	5.93	74.12	6	1.894
Overall	26	26	17.85	68.65	18	3.409

Table 10 depicts that the maximum mean percentage obtained by the bodybuilders in post test is in the aspect of Causes and risk factors of anxiety and depression (80.5%), followed by General information regarding anxiety and depression (79.66%), Management of anxiety and depression (79.5%) and least mean knowledge

score (74.12%) found in the aspect of Prevention of anxiety and depression. Therefore overall knowledge scores of respondents were found to be 68.65% with standard deviation 3.409.
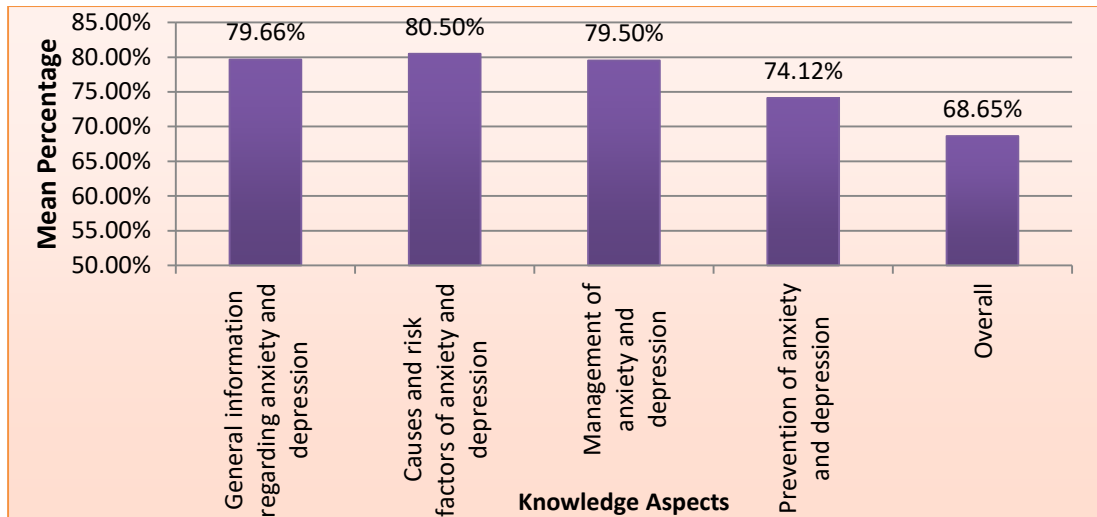

Figure 13: Area wise post test knowledge scores of bodybuilders

SECTION III: COMPARISON OF THE KNOWLEDGE LEVEL OF BODYBUILDERS

Table 11: Area-wise comparison of knowledge scores of bodybuilders
N = 60

Sl No	Knowledge aspects	Pre test		Post Test		Mean differenc e	t value	Inferenc e
		Mean	SD	Mean	SD			
1	General information regarding anxiety and depression	1.97	1.301	4.78	0.95 8	2.817	16.677	S
2	Causes and risk factors of anxiety and depression	3.98	2.119	4.83	1.30 4	0.850	3.188	S
3	Management of anxiety and depression	2.48	1.228	4.77	1.74 1	2.433	10.595	S
4	Prevention of anxiety and depression	3.5	1.780	5.93	1.89 4	2.283	10.235	S
	Overall knowledge	11.9 3	4.437	17.85	3.40 9	5.917	8.278	S

From the table 11 it is evident that the obtained "t" value 8.278 is greater than the table value both at 0.05 level of significance. Therefore, "t" value is found to be significant. Hence it is inferred that there is significant difference between the knowledge bodybuilders at selected bodybuilding training centers, Bengaluru regarding the Prevention of anxiety and depression.

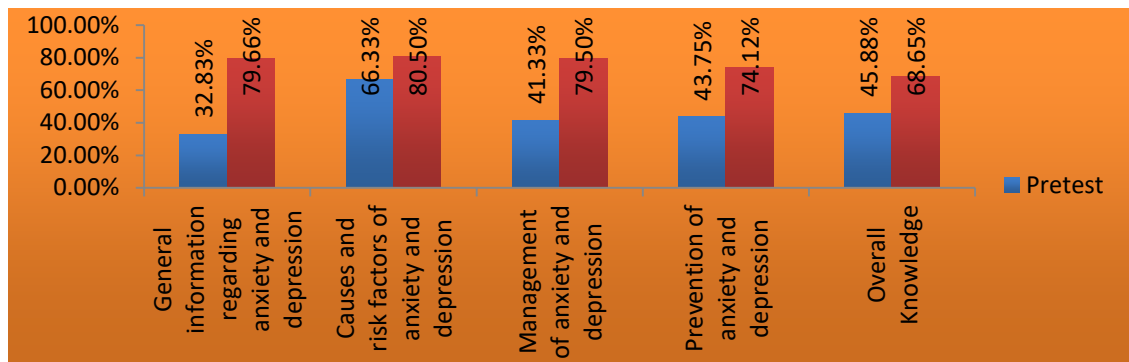**Area-wise comparison of knowledge scores of bodybuilders**

Figure 14: Comparison of mean percentage of pre-test and post-test scores

SECTION IV: ASSOCIATION OF THE PRE TEST KNOWLEDGE SCORES OF BODYBUILDERS WITH THE DEMOGRAPHIC VARIABLES

Table – 12: Association of post test knowledge score of bodybuilders with the demographic variables.

N= 60

Variables	Below Median	Median and above	Chi square	Df	P value (0.05)	Inference
1. Age in years						
a. 21-25 years	8	3				
b. 26-30 years	11	6	9.225	3	7.82	S
c. 31-35 years	7	19				
d. 36-40 years	3	3				
2. Education						
a. Illiterate	2	0				
b. Primary education	11	5				
c. Secondary education	6	5	8.541	4	9.49	NS
d. PUC	6	15				
e. Degree and above	4	6				
3. Occupation						
a. Private employment	20	18				
b. Self employed	3	3	1.058	3	7.82	NS
c. Gym instructor	4	7				
d. Government employee	2	3				
4. Religion						
a. Hindu	25	24				
b. Muslim	3	2	2.824	2	5.99	NS
c. Christian	1	5				
5. Type of diet						
a. Mixed diet	26	27	0.095	1	3.84	NS
b. Vegetarian	3	4				
6. Duration of bodybuilding						
a. Less than 2 years	4	1				
b. 3-6 years	14	4	15.064	3	7.82	S
c. 7-10 years	7	22				
d. 11 years and above	4	4				
7. Source of information						
a. Mass media	3	1	5.526	3	7.82	NS
b. Friends	7	12				

c. Gym instructor	13	6				
d. Health personnel	6	12				

The table 12 shows χ2 value computed between the knowledge level of bodybuilders at selected bodybuilding training centers, Bengaluru on Prevention of anxiety and depression and selected demographic variables. Variables such as age and source of information were significant at 0.05 level. Thus it can be inferred that there is significant association between knowledge level of the bodybuilders and selected variables. Therefore the hypothesis stated there will be significant association between knowledge level of bodybuilders and the selected demographic variables is accepted.

I. ACKNOWLEDGMENT:

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