



EFFECTIVENESS OF VIDEO-ASSISTED TEACHING MODULE ON REDUCTION OF WEIGHT GAIN BY AEROBIC EXERCISE AMONG OBESE FEMALE COLLEGE

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Abstract

“Aerobic exercise” is a moderately intense physical activity, which improves your cardio-respiratory fitness and your overall health. A pre-experimental “study” (one group pre-test post-test design) was conducted to assess the effectiveness of a video-assisted teaching module on the reduction of weight gain by aerobic exercise ” among (50) “Obese female students” of “Sashi Bhusan Government Women’s College and City Women’s College (10), Berhampur, Ganjam, Odisha. The objectives of the “study” were to assess the “obesity ” of “Female adolescent college students “ before & after VATM, to evaluate the effectiveness of VATM on the reduction of weight gain by aerobic exercise among obese female students, to find out the association between the post-test measurement score of obese female college students with their selected demographic variables. Data were collected by using a structured demographic variable questionnaire and measurement of height, weight, and BMI schedule. The findings of the study were the mean score & standard deviation value of height were (154.36 ± 5.19) in the pre-test whereas the mean score & standard deviation value of height is (154.36 ± 5.19) in the post-test, the mean score & standard deviation value of weight is (56.78 ± 10.37) in the pre-test, whereas the mean score & standard deviation value of weight is (58.24 ± 12.01) in post-test, the mean score & standard deviation value of BMI is (23.90 ± 4.02) in the pre-test whereas the mean score & standard deviation value of BMI is (24.90 ± 5.02) in post-test respectively. The “P” value of “Demographic Variable wise ” ranges from 0.078 to 0.008. The chi-square (χ^2) result shows that there was no significant association

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found between post-test “measurement ” scores when compared to demographic variables. The findings indicate that “VATM” given on “Reduction of weight ” by “Aerobic exercise” was effective.

Keywords: Aerobic exercise, Female adolescent college students, Obese female students, Reduction of weight, VATM.

I. Introduction

Aerobic exercise is any type of cardiovascular conditioning. It can include activities like brisk walking, swimming, running, or cycling. You probably know it as “cardio.” By definition, **aerobic exercise** means “with oxygen.” Your breathing and heart rate will increase during **aerobic** activities.

Aerobics is a form of physical exercise that combines rhythmic aerobic exercise with stretching and strength training routines to improve all elements of fitness.

Adolescence, as a term was derived from the Latin word adolescence which means “growing into maturity”. It is the fascinating period of life that makes the transition from being a dependent child to becoming an independently functioning adult. This is a period when aims are high and plans are plenty. It is the time of dilemmas regarding yes or no, the thoughts are a bundle of contradictions. The mind has wings and often leaps beyond emotions that anyway are colourful. They want the freedom to make their own choice but hesitate to face consequences. Due to the physical changes and psychological instability, they seek love and good understanding. Generally unhappy with their parent's rules and curbs, often get on each other's nerves. They are looking for an oasis due to their impending identity. According to WHO, an adolescent is a person between 10 to 19 years of age. One in every five people in the world is an adolescent”.

Adolescence transitional phase of growth and development between childhood and adulthood. The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19.

Adolescence is a transitional phase of growth and development between childhood and adulthood. The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19. This age range falls within WHO's definition of young people which refers to individuals between ages 10 and 24. According to Ogilvie 1999 “Adolescence is an attractive age or a time when the growing child is easy to live with, adolescents who should shoulder the responsibilities of the future nation are in stress and strong by their developmental characters. A nation which identifies their needs and cares for them only can hope for a better tomorrow”.

Obesity is becoming one of the burning problems all over the world. Obesity can occur at any age. It is one of the most deterrent health hazards in the world, affecting more than 30% of the global population. Not only has it sparked a lot of talk, but it has also begun to be ranked as a serious risk comparable to certain diseases. Obesity is a serious risk to our health. In fact, some doctors even call obesity itself a disease.

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Based on World Health Organization (WHO) reports, childhood obesity is one of the most serious global health challenges of the twenty-first century which is steadily affecting many low- and middle-income countries . It has also been stated that overweight or obese children are more likely to remain overweight or obese in adulthood. This persistence of obesity into adulthood is associated with increased morbidity risk in later life, leading to the development of adult diabetes, coronary heart disease, and a range of cancers.

The beneficial impact of regular exercise on cardiovascular health is partly mediated by psychobiological mechanisms. However, the effect of acute exercise on psychobiological responses is unclear. Thus, we performed a systematic review of randomized controlled trials (RCTs) that examined the effect of acute aerobic exercise on blood pressure (BP) responses (the change from baseline to stress) to psychosocial laboratory tasks. Fifteen RCTs met inclusion criteria of which ten demonstrated significant reductions in post-exercise stress-related BP responses compared with control (mean effect sizes for systolic and diastolic BP, 0.38 and 0.40). Studies involving greater exercise doses tended to show larger effects, with the minimum dose to show a significant effect being 30 min at 50% V $\dot{O}_2$ max. No other moderators emerged from the examination of participant characteristics, research designs, and stressor characteristics. In conclusion, an acute bout of aerobic exercise appears to have a significant impact on the BP response to a psychosocial stressor.

II. Research Significance

The prevalence of obesity is known to vary significantly across the world. It is therefore important to design region-specific public health policies; this requires the collection of epidemiological data relating to obesity from different geographical areas.

The epidemic of obesity in youths is spreading at alarming rates. The percentage of youths who are at risk of becoming overweight continues to increase.

The global obesity epidemic continues, and a new report shows that about two billion people worldwide are overweight or obese. That's about 30% of the world's population. Almost 30% of People In the **World Are Obese or Overweight**.

Globally, more than 1.9 billion adults are overweight and 650 million are obese. Approximately 2.8 million deaths are reported as a result of being overweight or obese.

In 2016, 39% of adults aged 18 years and over (39% of men and 40% of women) were overweight. Overall, about 13% of the world's adult **population** (11% of men and 15% of women) were **obese** in 2016. The **worldwide prevalence of obesity** nearly tripled between 1975 and 2016.

Worldwide obesity has nearly tripled since 1975.

In 2016, more than 1.9 billion adults, 18 years and older, were overweight. Of these over 650 million were obese.

39% of adults aged 18 years and over were overweight in 2016, and 13% were obese.

Most of the world's population live in countries where overweight and obesity kills more people than underweight.

40 million children under the age of 5 were overweight or obese in 2018.

Over 340 million children and adolescents aged 5-19 were overweight or obese in 2016.

II.i. Statistical Analysis for obese female students

Overall pre-test measurement mean scores of obese female adolescent college students were assessed by measurement of height, weight & BMI and the result was **height 154.36** with SD **5.19**, **weight 56.78** with SD **10.37**, **BMI 23.90** with SD **4.02**. The post-test measurement mean score was **height 154.36** with SD **5.19**, **weight 56.24** with SD **10.01**, and **BMI 23.90** with SD **4.02**. The score was at **P=< 0.05** level of significance. Demographic variable-wise **p-value ranges from 0.078 to 0.008** which is greater than the tabulated value at 0.05 level of significance and shows non-significant in all areas of demographic variables. Therefore, it was concluded that the reduction of weight through video-assisted teaching modules by aerobic exercise was very non-significant. Hence the result can be interpreted that VATM was effective both demographic variable-wise and overall.

III. Experimental Study

Materials

To accomplish the objectives of the current study quantitative research approach was chosen by the investigator.

A quantitative research approach was adopted to conduct the present study to assess the effectiveness of VATM on the reduction of weight gain by aerobic exercise among obese female college students in a selected college, Berhampur, Ganjam, Odisha.

III.i. Research Design

Research design is the overall plan for obtaining answers to the research questions being studied and for handling some of the difficulties encountered during the research process. Keeping in view the objectives of the study, the pre-experimental research approach with one group pre-test post-test design was adopted to evaluate the effectiveness of VATM on the reduction of weight gain by aerobic exercise among obese female college students in a selected college, Berhampur, Ganjam, Odisha.

III.ii. Symbolic Representation of Research Design $O_2 - O_1 = E \quad O_1 \times O_2$

Pre-test Intervention Post-test O_1 : Assess the obesity of undergraduate female students (n-50) who are studying in S. B. Rath, Govt (Auto) Womens' college, Berhampur, Ganjam. X : Conducting video-assisted teaching on aerobic exercise. O_2 : Evaluate the effectiveness of VATM on reduction of weight gain by aerobic exercise of obese female students by comparing pre & post test measurement score

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III.iii. Sample Pre-Test Day – 1 Treatment Day Posttest Day (after 15 days)

Undergraduate college students (n=50) who are studying in S.B. Rath, Govt (Auto) Womens' college, Berhampur, Ganjam. Assess the obesity of undergraduate female students (n=50) who are studying in S.B.Rath, Govt (Auto) Womens' college, Berhampur, Ganjam. Evaluate the effectiveness of VATM on the reduction of weight gain by aerobic exercise of obese female students by comparing pre & post-test measurement scores Association between the post measurement score with selected variables

IV. Variables Under Study

IV.i. Independent variable

In the present study, the independent variable was the 'video-assisted teaching module Dependent Variable In the present study the dependent variable was a reduction of weight gain by aerobic exercise of obese female students. Influencing Variable For this study the socio-demographic variables were age, marital status, family, living with parents, religion, and education.

IV.ii. Sample and Sample Size

Sample In the present study the samples were the obese female college students of Sashi Bhushana Rath Women's College, Berhampur.

Sample size

In the present study, the sample comprised 50 numbers of obese female college students of Sashi Bhushana Rath Women's College, Berhampur.

IV.iii. Sampling Technique

A purposive sampling technique was adopted for the present study to select the sample.

IV.iv. Criteria for Selecting the Sample

Inclusion criteria

Obese female college students who are

- Who is cooperative and willing to participate & available during the period of data collection.
- Can understand both English and Hindi.
- Students present at the time of study.

IV.v. Development of Tools

Tools were prepared based on the objectives of the study. A self-structured interview schedule & measurement scale were developed to evaluate the effectiveness of VATM on the reduction of weight among obese female college students.

IV.vi. The steps used for the preparation of the tool were as follows:

- Extensive literature review
- Consultation with experts
- Personal experience
- Review of standardized tools developed by others

IV.vii. Analysis and Interpretation

This chapter deals with the analysis and interpretation of the data collected from the sample of 50 obese female college students in Sashi Bhusan Government Women's College, Ganjam, Berhampur, Odisha. The present study was designed to assess the effectiveness of VATM on weight reduction among obese female college students in selected colleges, in Berhampur.

The data was collected utilizing an interview schedule & by measurement of height & weight. The collected data was tabulated, organized, and interpreted using descriptive and inferential statistics.

IV.viii. Objective of the Study

To assess the obesity of obese female college students.

To evaluate the effectiveness of VATM on the reduction of weight gain by aerobic exercise by aerobic exercise of obese female students by comparing pre & post-test measurement scores.

To find the association between the post-measurement score with selected variables.

Table No 1: Frequency and percentage distribution of obese female college students according to their Demographic variables. N=50

Demographic Variables		F	%
1. Age	a.<18yr	30	60.0
	b.19-23yr	20	40.0
	c.>24yr	0	0
2. Marital status	a.Unmarried	46	92.0
	b.Married	0	0
	c.others	4	8.0
3. Family	a.Nuclear	30	60.0
	b.Joint	19	38.0
	c.Extended	1	2.0
4. Living with parents	a.yes	19	38.0
	b.No	31	62.0
5. Religion	a)Hindu	44	88.0
	b)Christian	6	12.0
	c)Muslim	0	0
	d)Others	0	0
6. Education	a)Primary	0	0
	b)Secondary	0	0
	c)Higher Secondary	30	60.0
	d)Graduation & above	20	40.0

The above table depicts that about the age of the obese female college students data reveals that out of 50 obese female college students, 30 (60%) students were less than 18yrs, & 20 (40%) students were in the age group of 19-23yrs.

Regarding marital status, the data reveals that out of 50 obese female college students, 46 (92%) were unmarried and 4 (8%) were divorced.

About the family, the data reveals that out of 50 obese female college students, 30 (60%) students were from a nuclear family, 19 (38%) were from a joint family, 1 (2%) student was from an extended family.

Regarding living with parents the data reveals that out of 50 obese female college students, 19 (38%) students were living with their parents whereas 31 (62%) students were not living with their parents.

Regarding religion, the data reveals that out of 50 obese female college students, 44 (88%) were Hindu, whereas 6 (12%) were Christian.

Regarding education, the data reveals that out of 50 obese female college students, 30 (60%) students had higher secondary & 20(40%) students were having graduation & above.

Description of demographic characteristics of sample subjects according to their demographic variables.

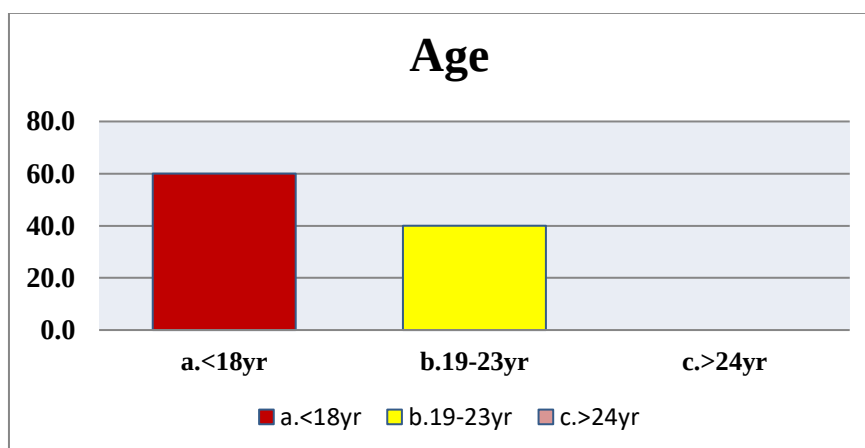


Fig. 2. Simple cone diagram showing percentage-wise distribution age of obese female college students.

The above figure shows that, out of 50 obese female college students, 30 (60%) students were less than 18yrs, & 20(40%) students were in the age group of 19-23 yrs

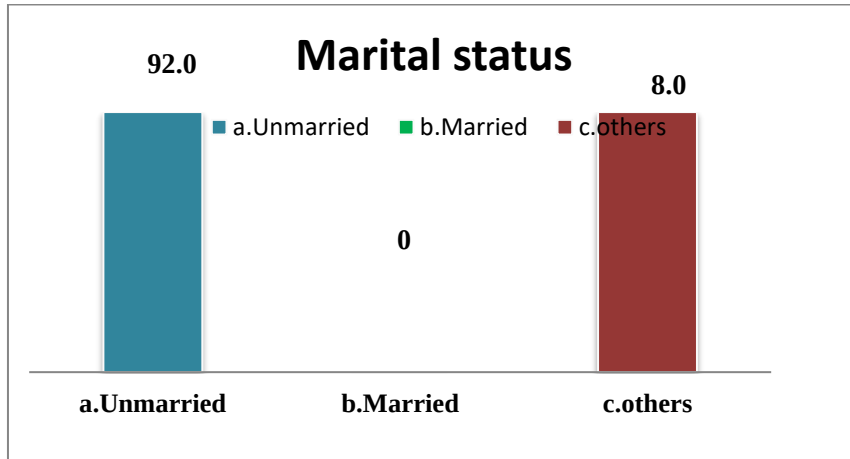


Fig. 3. Simple bar diagram showing the percentage-wise distribution of marital status of obese female college students.

The above figure shows that out of 50 obese female college students, 46 (92%) were unmarried and 4 (8%) were divorced.

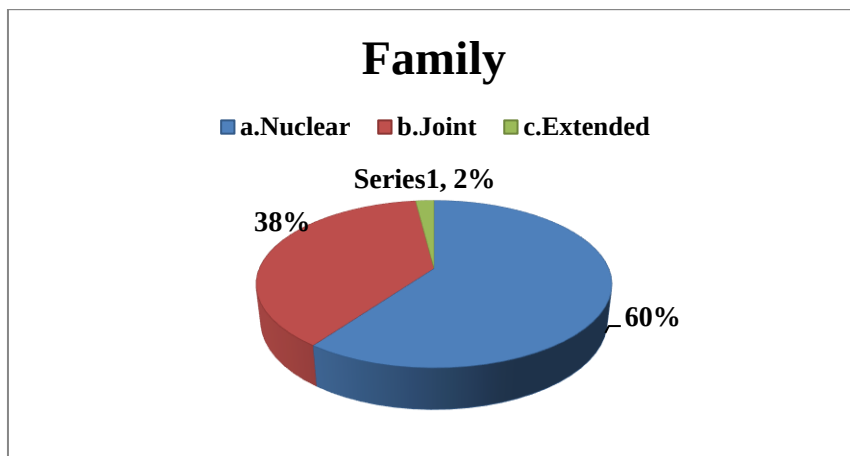


Fig. 4. Pie Diagram showing the percentage-wise distribution of family status of obese female college students.

The above figure shows that, out of 50 obese female college students, 30 (60%) students were from a nuclear family, 19 (38%) were from a joint family, and 1 (2%) student was from an extended family.

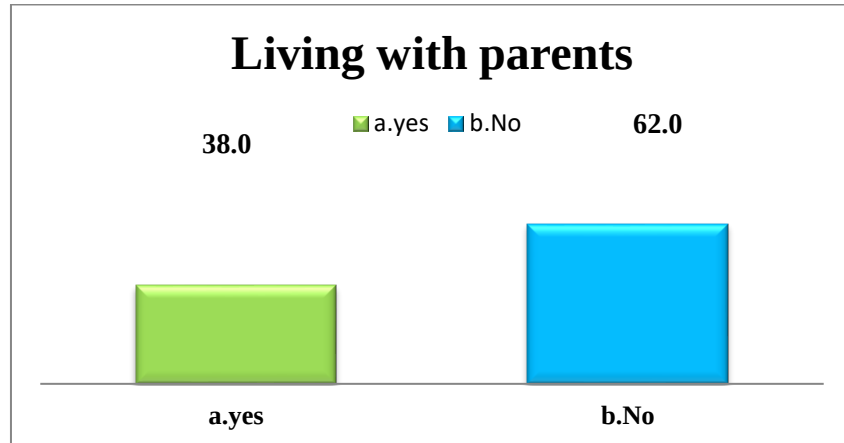


Fig. 5. Simple Bar diagram showing the percentage-wise distribution of obese female college students living with parents.

The above figure shows that, out of 50 obese female college students, 19 (38%) students were living with their parents whereas 31 (62%) students were not living with their parents.

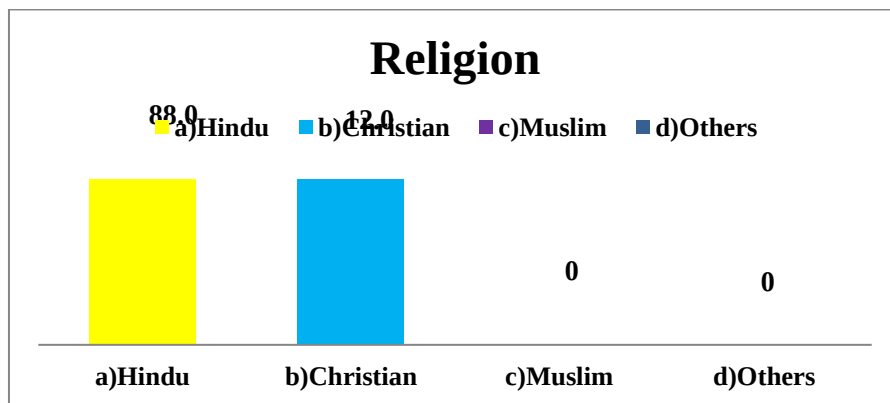


Fig.6. Simple Cone diagram showing the percentage-wise distribution of religious status of obese female college students.

The above figure shows, that out of 50 obese female college students, 44 (88%) were Hindu, whereas 6 (12%) were Christian.

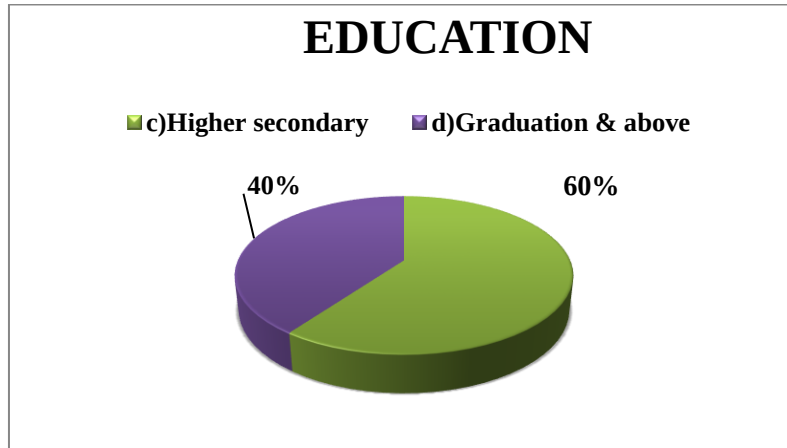


Fig. 7. Pie diagram showing the percentage-wise distribution of the education of obese female college students.

The above figure shows that, out of 50 obese female college students, 30 (60%) students were having higher secondary & 20(40%) students were having graduation & above.

Section – II

Assessment of pre-test & post-test mean score and standard deviation of obese female college students.

Table 2: Mean score and standard deviation of pre-test and post-test scores of female adolescent college students regarding Height, Weight, and BMI.

ASSESSMENT OF THE MEAN AND STANDARD DEVIATION OF THE HEIGHT, WEIGHT & BMI N=50

VARIABLES	Pre-test		Post –test		Mean difference of post-test and pre-test score
	Mean	Standard deviation	Mean	Standard deviation	
HEIGHT	154.36	5.19	154.36	5.19	0.00
WEIGHT	56.78	10.37	58.24	12.01	1.46
BMI	23.90	4.02	24.90	5.02	1.00

The above table depicts that the mean score & standard deviation value of height is (154.36 ± 5.19) in the pre-test whereas the mean score & standard deviation value of height is (154.36 ± 5.19) in the post-test , the mean score & standard deviation value of weight is (56.78 ± 10.37) in the pre-test, whereas the mean score & standard deviation value of weight is (58.24 ± 12.01) in post-test , the mean score & standard deviation value of BMI is (23.90 ± 4.02) in the pre-test whereas

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the mean score & standard deviation value of BMI is (24.90 ± 5.02) in post-test.

It is interpreted that there is a decrease in weight by 1.46.

Table 3: Paired “t” value of pre-test and post-test measurement score regarding height, weight, and BMI among obese female college students.

ASSESSMENT OF THE MEAN AND STANDARD DEVIATION OF THE HEIGHT , WEIGHT & BMI							Remark
	Pre-test			Post- test			
VARIABLE	Mean	Standard deviation	t- Value	Mean	Standard deviation	t-Value	
HEIGHT	154.36	5.19	210.49	154.36	5.19	210.49	Highly significant
WEIGHT	56.78	10.37	38.73	58.24	12.01	39.74	Highly significant
BMI	23.90	4.02	42.08	24.90	5.02	43.08	Highly significant

T= 2.00, df=49 , p=<0.05

The above table depicts that **paired “t”** value findings of the mean post-test measurement score of the obese female college students regarding height, weight, and BMI were found to be significantly more than pre-test measurement scores in all areas of variable. The variable-wise “t” value ranges from **39.74 to 210.49** which is **greater than** the tabulated value at **0.05 level significance** and shows high significance in all areas of a variable. Hence research hypothesis was accepted. Therefore, it was concluded that there was reduction of weight by aerobic exercise through video-assisted teaching modules (VATM) among obese female college students was very highly significant.

Table 4: Paired “t” value of pre-test and post-test measurement scores regarding height, weight, and BMI among obese female college students.

Variables	Group	Mean	SD	calculated t- value	DF	Inference
Overall measurement score	Pre-measurement score	235.04	19.58	293.31	49	tabulated t value= 2.00, P < 0.05, Highly Significant
	Post-measurement score	237.5	22.22			

The above depicts that the mean value in pre-test measurement score was **235.04** with SD **19.58**. The post-test mean score was **237.5** with SD **22.22**. The “**t**” value is **293.31** which is greater than the **tabulated “t” value at 0.05 level of significance**. Hence the research hypothesis was accepted. Therefore, it can be concluded that obese female college student reduced their weight through VATM on weight & BMI.

Table 5: Association between the post-measurement score of obese female college students with their selected demographic variables.

ASSOCIATION BETWEEN THE POST MESEUREMENT SCORE OF OBESE				
DEMOGRAPHIC	CHI -	df	P-VALUE	Inference
1. Age	6.829	3	.078	significant
2. Marital status	7.729	3	.052	Significant
3. Family	3.462	3	.326	Significant
4. Living with parents	3.462	3	.326	Significant
5. Religion	2.952	3	.399	Significant
6. Education	11.839	3	.008	Highly significant

P= < 0.05

Chi-square was applied to calculate & find out the significant association between selected demographic variables of obese female college students with their post-measurement score regarding height, weight, and BMI. There was a significant association found between post-measurement scores.

The calculated value was more than the table value, hence it was interpreted that, the difference in mean score related to their demographic variables was the true difference. Hence the research hypothesis was accepted with their variable at 0.05 level of significance was accepted. The result can have

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interpreted that, VATM was effective for all the obese female college students irrespective of their demographic variables.

Implementation of VATM

Immediately after pre-measurement, VATM was imparted to the obese female adolescent college students of Sashi Bhushana Rath Govt Autonomous Women's College, Berhampur, Ganjam, Odisha, and also informed about the post-test.

Evaluation of VATM

The evaluation was done by conducting post-measurement after 15 days of implementation of VATM by using the same structured intervention measurement Schedule which was used for the pre-test.

PLAN FOR DATA ANALYSIS

The present study planned to analyze the data based on the objectives. The data obtained from 50 students was analyzed by using descriptive and inferential statistics as follows:

Descriptive statistics

- A master data sheet was prepared by the investigator to comply with the demographic data, containing the selected sample, and characteristics, and was analyzed by using the frequency and percentage distribution.
- Analyzed data will be presented in the form of tables and graphs.
- The mean and standard deviation of pre- measurement score were analyzed.

Inferential statistics

- The effectiveness of VATM on the reduction of weight gain by aerobic exercise among obese female college students has been analyzed and tested with the help of a paired "t" test. The analysis was presented in the form of a table.
- Chi-square test (X²) was used to find out the significant association of post-measurement score with the selected demographic variables.

V. Results and Discussions

This chapter attempts to discuss the findings of the study as per the objectives.

- Frequency and percentage distribution of obese female college students according to their Socio-Demographic variables.
- Assessment of pre-test & post-test mean score and standard deviation of obese female college student.
- Association between the pre-test measurement score of obese female college students with their selected demographic variables.
- Hypothesis testing

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SECTION-I:

Frequency and percentage distribution of obese female college student according to their Socio-Demographic variables.

Frequency & percentage wise distribution of obese female college students, out of 50 obese female college students, 30 (60%) students were less than 18yrs, & 20 (40%) students were in the age group of 19-23yrs.

Regarding marital status, the data reveals that out of 50 obese female college students, 46 (92%) were unmarried and 4 (8%) were divorced.

Regarding the family, the data reveals that out of 50 obese female college students, 30 (60%) students were from a nuclear family, 19 (38%) were from a joint family, 1 (2%) student was from an extended family.

Regarding the family, the data reveals that out of 50 obese female college students, 19 (38%) students were living with their parents whereas 31 (62%) students were not living with their parents.

Regarding religion, the data reveals that out of 50 obese female college students, 44 (88%) were Hindu, whereas 6 (12%) were Christian.

Regarding the family, the data reveals that out of 50 obese female college students, 30 (60%) students had higher secondary & 20(40%) students had graduation & above as per data shown in(table-1).

SECTION-II

Assessment of pre-test & post-test mean score and standard deviation of female adolescent college student.

The mean score & standard deviation value of height is (154.36 ± 5.19) in the pre-test as the mean score & standard deviation value of height is (154.36 ± 5.19) in post-test, the mean score & standard deviation value of weight is (56.78 ± 10.37) in pre-test, whereas the mean score & standard deviation value of weight is (58.24 ± 12.01) in post-test, the mean score & standard deviation value of BMI is (23.90 ± 4.02) in pre-test whereas the mean score & standard deviation value of BMI is (24.90 ± 5.02) in post-test.

It is interpreted that there is a decrease in weight by 1.46 as per data shown in (Table 2).

SECTION-III

Association between the post-measurement score of obese female with their selected demographic variables.

It was revealed that after administration of VATM, in reduction of the post-measurement mean score than the pre-test measurement mean score after intervention of VATM.

It was analyzed that the association between post -measurement score of obese female college students with their selected demographic variables .The post-measurement score shows that the 1(3.3%) underweight female adolescent college student belonged to a group of <18 yrs, whereas 2(10.0%) underweight female adolescent college students belonged to the group of 19-23yrs

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The post-measurement score shows that 8(26.7%) normal or healthy weight belongs to the group of fewer than 18 years, whereas 10(50%) normal or healthy weight belongs to the group of 19-23 years.

The post-measurement score shows that the 21(70%) overweight belong to the group of <18yrs whereas 7(35.0%) overweight female adolescent college students belong to the group of 19-23yrs whereas 1(5.0%) obese female adolescent college students belong to the group of >24yrs.

Regarding marriage status, 3(6.5) underweight female adolescent college students were unmarried, whereas the post-measurement score 14(30.4%) normal or healthy weight female adolescent college students were unmarried, the post-measurement score 28(60.9%) overweight female college students were unmarried, whereas 1(2.2%) obese female college students were unmarried.

The post-measurement score 4(100.0%) normal or healthy-weight female college students belonged to the group of divorced or widows.

Regarding Family status, 2(6.7%) underweight female adolescent college students were nuclear, 14(46.7%) normal or healthy-weight female adolescent college students were nuclear, whereas 14(46.7%) overweight female adolescent college students were nuclear.

The post-measurement score 1(5.3%) underweight female adolescent students were from a joint family.

4(21.1%) normal or healthy weight female adolescent college students were joint, whereas 13(68.4%) overweight female adolescent college students were joint, 1(5.3%) obese female adolescent college students were joint, whereas 1(100.0%) overweight female adolescent college students were extended.

Regarding living with parents, 6(31.6%) normal or healthy-weight female college students were living with parents, 13(68.4%) overweight female college students were living with parents, whereas 3 (9.7%) underweight female students were not living with parents.

The post-measurement score 12(38.7%) normal or healthy weight female students were not living with parents, whereas 15(48.4%) overweight female students were not living with parents, 1(3.2%) obese female college students were not living with parents.

Regarding religious status, the post-measurement score 3(6.8)) underweight female college students were Hindu, whereas 14(31.8%) normal or healthy-weight female college students were hindu.

26 (59.1%) overweight female college students were hindu , whereas 1(2.3%) obese female college students were Hindu, 4(66.7%) normal or healthy weight obese female adolescent college students were Christian, 2(33.3%) overweight female students were Christian.

Regarding the education status, 8(26.7%) normal or healthy-weight female students were in higher secondary, whereas 22(73.3%) overweight female students were in higher secondary, 3(45.0) underweight female students graduated and above, the

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post-measurement score 10(50.0%) normal or healthy weight female students were graduation and above.

The post-measurement score 6(30.0%) overweight female college students graduated & above, 1(5.0%) obese female college students were graduation & above as per data shown in (Table No-5) .

SECTION-IV

Hypothesis testing

SECTION-V: TESTING HYPOTHESIS.

1. H01-There will be no significant association between pre & post-measurement scores of weight reduction among obese females after aerobic exercise.

The mean value in pre-test measurement mean scores of knowledge which was assessed by measurement of height, weight & BMI and the result was **height 154.36** with SD **5.19**, **weight 56.78** with SD **10.37**, **BMI 23.90** with SD **4.02**. The post-test measurement mean score was **height 154.36** with SD **5.19**, **weight 56.24** with SD **10.01**, and **BMI 23.90** with SD **4.02**.. The demographic variable-wise **p-value ranges from 0.078 to 0.008** which is greater than the tabulated value at 0.05 level of significance and shows non-significant in all areas of demographic variables. Therefore, it was concluded that the reduction of weight through video-assisted teaching module by aerobic exercise was very non-significant as per data shown in Table no-2.

2. Association between post-measurement scores of obese female college students with their selected demographic variables

Table no-5 describes how Chi-square was applied to calculate & find out the significant association between selected demographic variables of obese female college students with their post-measurement score regarding height, weight, and BMI. There was a significant association found between post-measurement scores.

The calculated value was more than the table value, hence it was interpreted that, the difference in mean score related to their demographic variables was the true difference. Hence the research hypothesis was accepted with their variable at 0.05 level of significance was accepted. The result can have interpreted that, VATM was effective for all the obese female college students irrespective of their demographic variables.

VI. Conclusion

The present study supports that VATM was effective in the reduction of weight gain by the aerobic exercise of obese female students after the training programme. There was a significant difference found between post- measurement score and the pre-test measurement score. No significant association was found in the post-measurement score of obese female college students with selected demographic variables, hence it can be concluded that the demographic variables did not influence on reduction of weight gain of obese female adolescent college students in this study.

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Conflict of Interest

There is no conflict of interest related to the study.

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