

# A Study to Evaluate the Effectiveness of Health Education Intervention on Knowledge Regarding Life Style Modification in Prevention of Overweight among Early Adulthood Women at Selected Rural Areas of Shimoga

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## Abstract:

Obesity is defined as an enlargement of fat cell size or an abnormal growth of adipose tissue or increased number of fat cells or the combination of both. The risk factors are considered as sedentary life style, hormonal factors, environmental factors, and nutritional factors etc. The prevalence rate of obesity in India women within the age of 35-45 years is 12.6% .As per National Family Health Survey-3 data India is the country have highest prevalence rate of overweight. An evaluative approach with pre experimental one group pretest posttest design was used with purposive sampling techniques with the sample number of (N=40). A structured questionnaire was used to assess the knowledge and health education intervention was administered to find its effectiveness. The collected data was analyzed by using descriptive and inferential statistics. The mean percentage of posttest knowledge score (76.8%) was higher than the mean percentage of pretest knowledge score (54.87%). The calculated' (15.34) value is greater than the table value (0.05, 39df) = 1.68. It showed a significant difference between mean pre and post – test knowledge scores. Calculated x2 values are showed significant association between age group , educational qualification, marital status, occupational status, type of family, annual family income, area of living , source of information course ,qualification ,religion ,family income , type of family ,region ,previous knowledge and source of information of respondents with their post-test knowledge scores .Hence the both hypothesis is accepted .The finding of the study showed that there was a deficit in knowledge in early adulthood women before administration of Health education intervention. The results indicated that Health education intervention is effective in increasing the knowledge of early adulthood women regarding lifestyle modification and prevention of over weight.

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## I. INTRODUCTION

Women health is an important aspect and a reflection of the health status of large segment of population of next generation. Obesity is considered as global public Health problem. It is noted that since past 40 years obesity doubled among women. According to a nationally representative survey of adults in the United States, prevalence of obesity in 2013-2014 was 40% among women. According to the researchers note over the time of 2005 to 2014 shown that there is steady increase of obesity among women.

Abdominal obesity for women is considered as the major cause of, metabolic syndrome and polycystic ovary. Obesity among women causes greatest risk of Diabetes and this leads to the increased risk of cardiovascular disease. Obesity among women also increases the risk of major cancers like post-menopausal breast cancer and endometrial cancer. Obesity also increases the risk of, mortality rate among women in India. There is a more limited awareness of weight associated cancer and/or reproductive health risk. According to American Institute of Cancer Research suggested that, excess body fat has been clearly linked to 11 different cancers such rectum, endometrium, ovary, breast, pancreas, kidney, biliary tract system, gastric, esophagus, bone marrow, and cardiac problems. Having excess body fat also linked with higher insulin levels, higher estrogen levels and increased chances of inflammation and this can affect cell division. Cardozo et al. conducted a prospective study on examining women's obesity knowledge it was identified that there was limited awareness about female health conditions related with obesity. Approximately 18% were aware of endometrial cancer, 14.1% stillbirth, 23.7% birth defects, 28.0% breast cancer, 30.8% cesarean section, 33.9% infertility, 35.8% irregular periods, and 37.5% increased risk of miscarriage contrasting to

their well-recognized awareness of cardio metabolic conditions.

In certain cultures the stigma attached with obesity can lead to depression and it causes poor health status such as depression and anxiety. Obesity associated health effects are more common in women than men. With the female to male difference in obesity was +4.6%. Few reasons for this are consuming more calories but less physical activity. The cultural practice, modernization of food markets, economic growth are also a part of contributing factors of the obesity epidemic. The objective of this study is to examine the behavioral, personal and environmental factors of obesity in women using social cognitive theory. The purpose of this study was to examine the effectiveness of health education intervention on knowledge about life style modification in prevention of overweight among middle adulthood women of reproductive age.

## STATEMENT OF THE PROBLEM:

A study to assess the effectiveness of health education intervention on knowledge regarding life style modification in prevention of overweight among early adulthood women at selected rural areas of Shivamogga

## OBJECTIVES OF THE STUDY

1. To assess the knowledge of early adulthood women regarding life style modification in prevention of overweight among early adulthood women at selected women at selected rural areas of Shivamogga.

2. To assess the effectiveness of health education intervention on lifestyle modification in prevention of overweight among early adulthood women in selected women at selected rural areas of Shivamogga

3. To find the association between posttest knowledge score with the selected demographic variables among the early adulthood women at selected women at selected rural areas of Shivamogga.

### **HYPOTHESIS**

All hypotheses will be tested at 0.05 level of significance.

**H1-**There will be significant difference between the pretest and post test scores of early adulthood women regarding knowledge about lifestyle modification in prevention of obesity.

**H2-**There will be significant association between the posttest knowledge score and selected demographic variables.

**CONCEPTUAL FRAMEWORK:** Pender's Health promotion model was selected for this study.

**Research approach:** The research method used for this study Experimental approach.

**Research Design:** The research design adopted for present study was one group pretest posttest pre experimental design.

### **VARIABLES:**

**Independent variable:** Health education intervention is the independent variable

**Dependent variable:** Knowledge of early adulthood women is the dependent variable.

**External variables:** Age, education, place of residence, socio-economic status, source of information is the external variables.

### **Study setting**

The study was conducted in Bommanakattae, Bhadravathi, Shivamoggaoga.

### **Target Population**

Population consists of early adulthood women of age group 25-35 years old.

### **Sample and sampling technique:**

The sample size consists of forty early adulthood women. Simple purposive sampling technique was used.

**Sampling criteria:** Sample includes early adulthood women of age group 25-35 years old.

### **Data collection instrument**

The present study was planned primarily to determine the effectiveness of health education intervention on knowledge regarding life style modification in prevention of overweight among early adulthood women at selected community areas of Shimoga.

### **Development and description of tool**

A structured knowledge questionnaire was prepared to determine the knowledge regarding the life style modifications in prevention of overweight in selected areas of Shimoga.

### **Development of planned teaching programme**

The steps to prepare the teaching plan were:

- 1) Framing the outline of the teaching plan: this include setting of the general and specific

objectives, specifying the place, learners and duration of the session.

- 2) Framing the outline of the content: the content of the teaching plan include topic definition, causes, risk factors, clinical manifestations, and complications, assessment of obesity, lifestyle modification/prevention and management of obesity.
- 3) Deciding methods of instruction and audio visual aids: the method of instruction was lecture cum discussion and power point presentation.
- 4) Evaluation of the teaching plan: evaluations of the teaching plan were done by content validity. There was 100% agreement by one expert for structured teaching programme.

### Reliability of the tool

- Tool reliability for pretest was tested on 4 sample and found the value of 0.82. This indicate that the tool is reliable.

### Description tool

#### PART I:

- Section A:-section A consist of demographic variables for early adulthood women of age group between 25-35 years old..
- Section B: - section B consist of structured knowledge questionnaire related to obesity, causes, signs and symptoms and assessment.

#### PART II:

- Section C: - section C consists of questionnaire related to lifestyle modifications in preventing obesity.

### PILOT STUDY

The findings of the pilot study revealed that the study is feasible.

### DATA COLLECTION PROCEDURE

- Pre- test(01) The investigator obtained permission and conducted the pre-test to assess the knowledge of 40 early adulthood women regarding lifestyle modification in prevention overweight in selected community areas of Shimoga. The purposes and objectives of the study were explained to early adulthood women and confidentiality was assured with consent to participate in the study.
- Administration of structured teaching programme: The Health education intervention on lifestyle modification in prevention of overweight was carried out after pre-testing on the same day.
- Post- test(02)

Post test was conducted on 7<sup>th</sup> day after pre-testing and Health education intervention to find out the effectiveness of health education in terms of increase in their knowledge by using structured questionnaire

## PLAN FOR DATA ANALYSIS

- **Descriptive statistics:** collected data will be analyzed by descriptive statistics such as mean, standard deviation (SD), frequencies and percentage (%).

- **Inferential statistics:**

- Significance of difference in pretest and posttest knowledge regarding lifestyle modification in prevention of overweight will be analyzed by paired 't' test.
- Associations between demographic variables and posttest knowledge score will be analyzed by chi-square test.

## INCLUSION CRITERIA

The sample include early adulthood women of age group those;

- Early - adulthood women of age group 25-35 years.
- Early – adulthood women of age group 25-35 years who are available at the time of data collection.
- Early adulthood women of age group 25-35 years who are able to read and write.

## EXCLUSION CRITERIA

The sample will exclude early adulthood women those who are

- Early-adulthood women of age group 25-35 years who are not willing to participate in the study
- Early-adulthood women of age group 25-35 years who are Illiterate.

## SECTION I: CLASSIFICATION OF RESPONDENTS BY THE RELATED CHARACTERISTICS

CHARACTERISTICS	CATEGORY	RESPONDENT	
		NUMBER	PERCENTAGE(%)
Age	25-29	11	27.5%
	30-35	29	72.5%
Educational Qualification	Illiterate	0	0%
	Primary education(till 7 <sup>th</sup> standard	0	0%
	Secondary Education(till 12 <sup>th</sup> standard	26	65%
	Professional Education	14	35%
Occupational status	Private employee	9	22.5%
	House wife	25	62.5%
	Government employee	2	5%
	others	4	10%
Marital Status	Married	34	85%
	Unmarried	6	15%
	Separated	0	0%
	Divorced	0	0%
Type of family	Nuclear	23	57.5%
	Joint	17	42.5%
	Extended	0	0%
Annual family income	Less than 5000	12	30%
	10000-50000	16	40%
	Rs.50000- 1 lakhs	6	15%
	More than 1 lakhs	6	15%
Area of living	Urban	30	75%
	Rural	10	25%
Source of information	Health personnel	17	42.5%
	TV/internet	12	30%
	No previous information	4	10%
	others	7	17.5%

## SECTION 2: Findings related to knowledge of middle adulthood women regarding causes, signs, assesment and prevention of overweight

Finding of the study revealed that in the pre-test mean is 13.19 and post test mean is 18.45, pre-



test mean percentage is 54.87% and post test mean percentage is 76.8%.

### **SECTION 3 Findings related to effectiveness of health education intervention on prevention of overweight in middle adulthood women**

The finding of the study that 't' value computed between pre-test and post test knowledge score is statistically significant ('t')=15.34, table value 't'(df=39, level of significance 0.05) is 1.68, calculated value ie, 15.34 is greater than the table value ( $1.68 < 15.34$ ), this shows that there is a significant difference between mean pre-test and post test knowledge scores of middle adulthood women regarding prevention of overweight. It shows that health education intervention was very effective. Area wise analysis showed significant improvement in all the area of knowledge score after health education intervention, maximum improvement was found.

Pre experimental one group pre-test and post test design was conducted to evaluate the effectiveness of health education intervention on knowledge of middle adulthood women on prevention of overweight by using 24 structured questionnaire among 40 middle adulthood women. The result indicated that only 5% of women were having adequate knowledge and 57.5% were having moderate knowledge and 37.5% were having inadequate knowledge regarding prevention of overweight during pretest, were it increased to 42.5% adequate and

57.5% moderate knowledge during post test. The mean score of knowledge has been increased from 57.87% to 76.8%. The study concluded that health education intervention is playing an important role in increasing the knowledge of middle adulthood women

### **SECTION 4: Findings related to association between post test knowledge score and selected demographic variables:**

The association between selected demographic variables such as age, educational qualification, marital status, occupational status, type of family, annual family income, area of living, and source of information. Previous knowledge on prevention of overweight was calculated by using 'chi square test' the finding of the study revealed that there was 9 significant between post test knowledge score and selected demographic variable.

### **CONCLUSION**

**The following conclusion were drawn from the study**

- Adaptation of preventive measure has positive effects on prevention of overweight
- The knowledge of the early middle adulthood women was inadequate before the administration of structured teaching programme.
- There is significance difference between mean pre-test and post-test knowledge scores of early middle adulthood women on prevention of overweight.

- Health education intervention is proved to be one of the effective teaching methods.
- There is significant association between selected demographic variables and post-test knowledge scores.

### **Nursing implications**

The findings of the present study have brought out certain facts that have far reaching implications for nursing in the area of practice, education, administration and research.

#### **Nursing practice.**

Health education is an important tool for a health care agency. It is one of the most cost effective interventions to promote healthy living. Most of the early adulthood women were not aware about the preventive measures and effects of obesity because of inadequate knowledge and lack of exposure to effective teaching. Use of selected preventive measures is very important in working practice as they are very helpful for the prevention of overweight and improves the women's quality of life and reduces incidence. Thus, the information provided through Health education intervention on prevention of overweight help the early middle adulthood women to improve their knowledge and prevention of incidence, promotion of health and skills in their life.

**Nursing education:** The topic related to prevention of overweight and lifestyle

modification can be included as a requirement in curriculum. Thus, the information provided through Health education intervention on prevention of overweight and lifestyle modification helps the nursing students to improve their knowledge and reduce incidence of overweight among themselves and it helps them to provide knowledge to community people also.

**Nursing research:** Research findings will help to determine the quality of care, educate each other and manage their practice ; the future of nursing practice will be strongly influenced by the findings from ongoing nursing research .Similar type of teaching programme can be prepared to provide education regarding safe measurements in clinical settings and also in community setting and can be tested for their effectiveness. A more extensive and intensive study can be conducted in this area by using different methods of teaching, settings, samples and sampling technique.

**Nursing administration:**The Nursing administration can draw the attention of the Hospital administrators to assess the level of knowledge of his/her nursing students regarding prevention and lifestyle modification of overweight by using structured questionnaire schedule and to understand the learning and preventive measures and thus they can plan and organize educational programme for other students in different places. Health education intervention can be administered to evaluate their

knowledge regarding prevention and lifestyle modification of overweight.

### Limitations

1. The study was conducted over a small group of target population selected by simple random sampling technique. Hence generalization is limited to only few early adulthood women in an area. Teaching plan was not based on learning needs of the subjects under the study but on the basis of the review of literature and investigators experience.
2. Extraneous variables like age, education, place of residence, socio economic status and source of information or any other events occurred in the period between pre-test and post test were beyond the investigators control as control group was not used; therefore there were possibilities of threats to internal validity.
3. No attempts were made to do the follow up to check the retention of knowledge of early adulthood women.
4. Same study can be conducted by increasing the sample size of selected by probability sampling for wider generalization.
5. A Comparative study can be conducted to assess the practice and attitude of early adulthood women on prevention of overweight. A Similar study can be conducted on sample, different settings with different demographic variables.

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  2. A comparative study may be conducted to find out the effectiveness between structured teaching programme and planned teaching programme regarding the same topic.
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