Assessing the Prevalence of Obesity and Measures to Control it among Females

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Obesity is described as the specific weight gain in a person caused specifically by fat deposition in the body. In women, the changes in lifestyle are the principal factors responsible for obesity. Being overweight may go unnoticed in the younger years, but as a woman reaches middle age, a decrease in the body's resistance makes her susceptible to a host of diseases like diabetes, cardiac problems and high blood pressure.

Obesity is defined as an abnormal growth of adipose tissue due to an enlargement of fat cell size (hypertropic obesity) or an increase in fat cell number (hyper-plastic obesity) or a combination of both.

Obesity is often expressed in terms of body mass index (BMI); being overweight is usually due to obesity but can arise from other causes such as abnormal muscle development or fluid retention. The present exploratory study was conducted to assess the prevalence of obesity and measures adopted to control it among females in a selected community of Ludhiana, Punjab. The study also sought to prepare guidelines to control it.

Objectives
The study aimed to achieve the following objectives:

1. To assess the prevalence of obesity among females.
2. To identify the measures adopted by the females to control obesity.
3. To identify the relationship of obesity with the selected variables e.g. age, education, religion, type of family, family income, marital status, number of children, dietary habits, occupation and history of obesity.
4. To assess the relationship of measures adopted to control obesity by females with the selected variables e.g. age, education, religion, type of family, family income, marital status, number of children, dietary habits, occupation and history of obesity.
5. To prepare guideline to control obesity among females.

Assumption: Females do gain weight during the ages of (26-50 years) due to physiological and pathological changes.

Delimitation: The study was limited to females in the age group of 26-50 years.

Review of literature: The literature is related to magnitude of the problem, overweight and obesity, and control and prevention of obesity.

Development and description of the tool: The tool was divided into two parts:

Part-I: Personal Information: This part consists of 10 items for obtaining personal information such as age, education, religion, type of family, family income, marital status, number of children, dietary habit, occupation, heredity, of obesity.

Part-II: Obesity Control Interview Schedule used consisted of measures adopted to control obesity. Three-point Likert scale was used, which consisted of 46 items, height and weight columns were also included to calculate BMI. Interview schedule required 40 to 50 minutes for the subject to answer it.

Methodology

Research Design
An exploratory design was considered appropriate.

Table 1: Prevalence of obesity in females according to BMI (n=150)

<table>
<thead>
<tr>
<th>Level of obesity</th>
<th>BMI criterion measure</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Underweight</td>
<td>&lt;18.5</td>
<td>6</td>
</tr>
<tr>
<td>Healthy</td>
<td>18.5 - 24.9</td>
<td>52</td>
</tr>
<tr>
<td>Overweight</td>
<td>25-29.9</td>
<td>34</td>
</tr>
<tr>
<td>Obese</td>
<td>&gt;30</td>
<td>58</td>
</tr>
</tbody>
</table>

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The present study was conducted to assess the prevalence of obesity and measures adopted to control it among females. The research design as shown in Table 1 was utilized to achieve the stated objectives.

### Analysis and Interpretation

Table 1 and Fig. 2 depict that 38.6 percent females were obese, 34.6 percent females were healthy, 22.6 percent females were overweight and only 4 percent females were underweight. Hence, it was concluded that a very large percentage of females were overweight.

Table 2 and Fig. 3 depict that maximum females (88.6%) adopted control measures of personal habits, followed by 6.7 percent of those who adopted control measure of dietary pattern and further; this was followed by 4.7 percent females who adopted control measure of exercise. Thus it was concluded that majority of females adopted personal habits to control obesity, very few took to dietary measures, and still few resorted to physical exercise.

### Implications

The findings of the study have several implications in five major areas which are discussed below:

- Nursing Administration
- Nursing Education
- Nursing Service
- Nursing Research
- General Awareness

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**Table 2: Percentage distribution of measures adopted by females to control obesity**

<table>
<thead>
<tr>
<th>Measures adopted</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dietary pattern</td>
<td>n = 10</td>
</tr>
<tr>
<td>Exercise</td>
<td>n = 7</td>
</tr>
<tr>
<td>Personal habits</td>
<td>n = 133</td>
</tr>
<tr>
<td></td>
<td>% 6.7</td>
</tr>
<tr>
<td></td>
<td>% 4.7</td>
</tr>
<tr>
<td></td>
<td>% 88.6</td>
</tr>
</tbody>
</table>

**BMI criteria**

- BMI ≤ 18.5 is healthy
- BMI = 18.5 - 24.9 is overweight
- BMI > 30 is obese

**Obesity control interview schedule**

- Max. score = 138
- Min. score = 46

**Obesity control level**

- Average control ≤ 77
- Good control 78 - 108
- Excellent control 109 - 138

**Figure 1: Research design**

**Figure 2: Prevalence of obesity in females according to BMI**
Nursing Administration

- The findings of the study can be used as a basis of training for health care professionals especially the community health workers. The need of a well-organised teaching programme is felt to promote the knowledge of obese females. Nursing Education.
- The study would provide a guideline to the nursing student for developing health education programme for obese female.
- The nursing curriculum for all levels of nursing students should give more emphasis on prevention and control of obesity as it is a major factor for morbidity and mortality.

Nursing Service

- Research-based nursing practice is a need of the hospital. On the basis of research the nursing care, practice should be modified. Health education should be planned and given to obese females.
- Health functionaries should plan to conduct action research in such areas and plan in-service education for the health workers and nursing professional to improve their knowledge and teaching skill.
- It should help the staff nurses to plan health education on prevention and control of obesity.

Nursing Research

The tool and methodology used in this study would provide a guideline to a future researcher who are interested in conducting community-based research.

Recommendations

Based on the results of the study, the following recommendation were made.

- Nurses, particularly community health nurses can play an active role in controlling and preventing obesity.
- They should include the middle-aged population in their regular care plan, and visit them regularly.
- Innovative programmes can be developed and implemented to profitably engage the housewives to make their leisure time more active and productive and not idly watching television. Many of them are good at hand works, crafts etc. and can learn newer skills thus becoming more productive.
- Community health nurses can design and develop activity diary, exercise diary, weekly diet diary and diet inventory sheet that can be distributed to obese women and monitored regularly. The participants can be rewarded suitably on a regular basis to encourage and sustain their motivation.

Summary

The present exploratory study design was considered appropriate for the study to assess the prevalence of obesity. An interview schedule was prepared to collect the data. Health promotion model was the base for the conceptual framework. Data was collected from 150 females between the age of 26-50 years from the Ahata Mohammed Tahir near Christian Medical College and Hospital, Ludhiana, Punjab. Data was collected using purposeful sampling technique.

Analysis and interpretation was done according to the objective of the study. The data was analysed by calculating percentage, mean and standard deviation.

References

2. Griffiths PL, Bentley ME. The nutrition transition is underway in India, Nutrition 2001; 131(10): 2692-2700