A Correlational Study to Assess the Relationship Between Eating Pattern and Self-Esteem among Adolescents in a Selected School of Delhi

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Abstract

Introduction: It has been known that gender, self-esteem, body image, and perceived self-worth seem to be related to dietary habits and eating disorders. The study aimed to assess eating pattern and self-esteem of adolescents, determine the correlation between eating pattern and self-esteem among adolescent students and also to find the association between eating pattern and background variables of the participants. The study also sought to determine the association between self-esteem and background variables such as gender and body mass index.

Methods: A descriptive correlational design was used to synthesize research findings concerning the relationship between eating pattern and self-esteem of adolescent students. The data was collected from 100 students at Kendriya Vidyalaya, Tughlaqabad, New Delhi. A structured questionnaire was used for data collection and data were analysed using descriptive and inferential statistics.

Results: Results revealed that 47% of the students had unhealthy eating pattern and 53% had healthy eating pattern, while 48% of students had low self-esteem and 52% had high self-esteem. It was also found that there was statistically non-significant relationship between eating pattern and self-esteem, as the r value was lower than the table value of 0.197 at df (98). Further, no significant association was found between eating pattern and selected background variables, and self-esteem and selected background variables.

Conclusion: The major conclusions drawn were: Approximately half of the study subjects had unhealthy eating pattern and as well as low self-esteem, there was statistically non-significant correlation between eating pattern and self-esteem, no significant statistical relationship was found between eating pattern of the adolescent students and their gender and BMI, and no significant statistical association was found between self-esteem of the adolescent students and their gender and BMI.

Keywords: Adolescents, Eating pattern, Self-esteem

Introduction

Adolescence is well recognized as a stage of rapid growth and development. Nutrition is an important determinant of growth and development that takes place during this stage. However, nutritional needs of adolescents are ignored, as they are considered healthy. This neglect may lead to a number of health problems related to malnutrition. Although under nutrition, particularly of girls is a more serious problem in India, over nutrition and obesity are also on the rise. Adequate nutrition during adolescence enables young people to realize their potential. For example, appropriate nutrition helps in physical growth, attaining normal bone strength and timely reproductive and sexual maturity. Good nutrition during adolescence facilitates overall development.
may also help in preventing osteoporosis (weakening of bones) later in life.

Self-esteem is an important issue in eating disorders. It has been known that gender, self-esteem, body image, and perceived self-worth seem to be related to dietary habits and eating disorders; but researchers have wanted to understand the relationship more clearly, comprehending the degrees to which they interact with each other.  

Eating disorders are associated with a number of psychological and health problems. Krause et al. point out that “a sense of depression, loss and helplessness is often associated with eating disorders”. Individuals with eating disorders also report having more negative emotions and general anhedonia. Osvald et al. point out that “another distinctive psychological feature of self-esteem is an inability to identify one’s own feelings and a profound sense of ineffectiveness”. Health problems are related to the dangerous weight loss practices employed by young people. Dangerous practices include laxative abuse, vomiting, starvation, smoking and using slimming pills.

Promoting high self-esteem is important because it relates to academic and life success, but before investing significant time, money, and effort on packaged programs, principals should understand why such endeavours have failed and what schools can do to effectively foster students’ self-esteem and self-concept.

The cognitive, physical, social, and lifestyle changes during adolescence can create profound changes in their eating patterns. Adolescents as a group tends to snack, miss meals, eat away from home, consume fast foods, and diet (especially among females) more frequently than younger children.

Objectives of the Study
The objectives of the study are:

- To assess the eating patterns of adolescents in a selected school of Delhi.
- To assess the self-esteem of adolescents in a selected school of Delhi.
- To determine the relationship between eating pattern and self-esteem among adolescents.
- To find association between eating pattern and selected background variables, that is, gender and BMI.
- To find association between self-esteem and selected background variables, i.e gender and BMI.

Methods
The research approach in this study (from August 2017 to May 2018 at Kendriya Vidyalaya, Tughlaqabad, New Delhi) was quantitative with descriptive correlational design to assess the relationship between eating pattern and self-esteem among adolescents in a selected school of Delhi. Sample comprised of 100 adolescent students from all sections of class 12th, selected through convenient sampling.

The tool used for data collection was structured questionnaire. It consisted of 3 sections. Section 1 comprised of questions related to background data, section 2 comprised of a structured questionnaire to assess the eating pattern of the adolescents consisting of 33 items, and section 3 was a standardized rating scale to assess the self-esteem among adolescents consisting of 10 items. Paper and pencil method were used to administer the tool. The reliability of section 2 was calculated using Cronbach’s alpha formula and it was found to be reliable (0.73). To ensure the validity of the tool, it was given to seven experts selected from the fields of Psychiatry and Mental Health Nursing.

For the collection of the data, a formal administrative approval was sought from the school’s authorities to conduct the study. The data was collected from 20th October to 30th October, 2017. The purpose of the study was explained to respondents and their consent to participate in the study taken. The data obtained was subjected to analysis (using SPSS software) using descriptive and inferential statistics.

Results

Section 1: Demographic profile of Adolescent students

The data in Figure 1, summarizes that 4% of the study subjects were 15 years of age, 33% were 16 years of age, 54% were 17 years and 9% were 18 years of age. Religion wise distribution showed that 86% belonged to Hinduism, 12% belonged to Islam, 1% belonged to Sikhism and rest 1% belonged to other religion. Out of 100 study subjects, 63% were male and 37% were female.
The data in Figure 2, summarizes that out of 100 subjects 76% lived in own house and 24% in rented house. The data revealed that 82% were from nuclear family, 16% were from joint family and 2% were from extended family. All the 100 subjects were from urban community. The data also revealed that 49% were vegetarian, 45% were non-vegetarian and 6% were vegan.

Section 2: Findings related to Eating pattern and Self-esteem of Adolescent students

Table 1.Frequency and percentage distribution of adolescent students by their level of eating pattern

<table>
<thead>
<tr>
<th>Categories</th>
<th>Possible range of scores</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unhealthy eating pattern</td>
<td>0-132</td>
<td>47</td>
<td>47%</td>
</tr>
<tr>
<td>Healthy eating pattern</td>
<td>53</td>
<td></td>
<td>53%</td>
</tr>
</tbody>
</table>

The data in Table 1 indicate that out of 100 study subjects, 47% had unhealthy eating pattern and 53% had healthy eating pattern.

Table 2.Frequency and percentage distribution of adolescent students by their self-esteem

<table>
<thead>
<tr>
<th>Categories</th>
<th>Possible range of scores</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low self-esteem</td>
<td>0-30</td>
<td>05</td>
<td>05</td>
</tr>
<tr>
<td>Moderate self-esteem</td>
<td>74</td>
<td></td>
<td>74</td>
</tr>
<tr>
<td>High self-esteem</td>
<td>21</td>
<td></td>
<td>21</td>
</tr>
</tbody>
</table>

The data in Table 2 indicates that out of 100 study subjects, 5% were having low self-esteem, 74% were having moderate self-esteem and 21% were having high self-esteem.

Section 3: Findings related to relationship between eating pattern and self esteem

Table 3.Co-efficient of Correlational between eating pattern and self-esteem

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Co-efficient of correlation (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating pattern</td>
<td>93.88</td>
<td>0.190</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>19.84</td>
<td></td>
</tr>
</tbody>
</table>

r (98) = 0.197 at 0.05 level of significance = Not significant.
The co-efficient of correlation (r) value was lower than the table value of 0.197 at df (98). It showed that there was statistically non-significant relationship between eating pattern and self-esteem among adolescent students.

### Section 4: Association between eating pattern and selected demographic variable

#### Table 4. Correlation between eating pattern and gender

<table>
<thead>
<tr>
<th>Category</th>
<th>Unhealthy eating pattern</th>
<th>Healthy eating pattern</th>
<th>df</th>
<th>Chi-square value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>35</td>
<td>28</td>
<td>1</td>
<td>3.001</td>
<td>0.083</td>
</tr>
<tr>
<td>Female</td>
<td>27</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ x^2 (1) = 3.841 \text{ at } 0.05 \text{ level of significance} = \text{Not-significant.} \]

The computed chi-square value, between eating pattern and gender was found to be 3.001, which was less than table value of 3.841 at df (1) at 0.05 level of significance. This indicated that there was statistically non-significant relationship between eating pattern and gender.

#### Table 5. Association between eating pattern and BMI

<table>
<thead>
<tr>
<th>Category</th>
<th>Unhealthy</th>
<th>Healthy</th>
<th>Fisher’s Exact test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>13</td>
<td>28</td>
<td>2.243</td>
<td>0.598</td>
</tr>
<tr>
<td>Normal</td>
<td>22</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overweight</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obese</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fishers’ Exact p value ≥ 0.05 level of significance = Non-significant.

The computed Fishers’ exact p value, to establish between eating pattern and BMI was found to be 0.598, which is higher than 0.05 level of significance. This indicated that there was statistically non-significant relationship between the eating pattern and BMI.

### Section 5: Association between Self-esteem and selected Demographic variables

#### Table 6. Association between Self-Esteem and Gender

<table>
<thead>
<tr>
<th>Category</th>
<th>Low self-esteem</th>
<th>Moderate self-esteem</th>
<th>High self-esteem</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2</td>
<td>47</td>
<td>14</td>
<td>0.469</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>28</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Fishers’ Exact p value ≥ 0.05 level of significance = Non-significant.

The computed Fisher’s exact p value between self-esteem and gender was found to be 0.469, which is higher than 0.05 level of significance. This indicated that there was statistically non-significant relationship between self-esteem and gender.

#### Table 7. Association between self-esteem and BMI

<table>
<thead>
<tr>
<th>Category</th>
<th>Low self-esteem</th>
<th>Moderate self-esteem</th>
<th>High self-esteem</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>4</td>
<td>29</td>
<td>8</td>
<td>0.613</td>
</tr>
<tr>
<td>Normal</td>
<td>1</td>
<td>40</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Overweight</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Obese</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Fishers’ Exact p value ≥ 0.05 level of significance = Non-significant.

The computed Fishers’ exact p value, between self-esteem and BMI was found to be 0.613, which is higher than 0.05 level of significance. This indicated that there was statistically non-significant relationship between the self-esteem and BMI.

**Discussion**

The present study assessed the eating pattern and self-esteem among adolescent students and the correlation between
the two, and it was found that there was non-significant relationship between adolescent students’ eating pattern and self-esteem.

A study was conducted in Scotland on 299 school going girls to find out the association between eating habits, body-esteem and self-esteem. The result indicated that there was a strong association between low self-esteem and an abnormal pattern of eating, as well as dislike of body shape. However, the current study was done on both the genders and on adolescent students only and instead of association of self-esteem and eating pattern, the researcher had done correlation between self-esteem and eating pattern.

In previous research, Robins and Trzesniewski found that boys and girls reported similar level of self-esteem during childhood, but by adolescence, adolescent boys had higher self-esteem than adolescent girls. Similarly, in the current study it had shown that 14% of adolescent boys and 6% of adolescent girls had high self-esteem, while 47% of adolescent boys and 28% of adolescent girls had moderate self-esteem.

The decline in self-esteem that occurs at this age is a result of many changes the adolescent experiences. Firstly, this is a time when boys and girls develop secondary sexual characteristics. In addition, they acquire the capacity of formative thought, enabling them to think about phenomena in far more complex ways than earlier. Socially as well as emotionally this is a period when adolescents start to spend less time with their families and move towards peers. Friendship and romantic relationships often take precedence over family. Difficulty in being accepted by peers and relationship failures can leave adolescents vulnerable to feelings of social inadequacy. Peer relationships have been identified as an extremely significant context for adolescent development. Peers serve as sources of emotional support and security.

Litwack, Aikins and Cillessen found that perceived popularity among peers is uniquely related to decrease in depressive affect and increases in adolescent self-esteem. However, in the present study; assessment of self-esteem was done to check its level alone and not the areas affecting self-esteem.

Conclusion

The major conclusions drawn from the findings of the study have been presented below:

- Approximately half of the study subjects had unhealthy eating pattern and as well as low self-esteem.
- There was statistically non-significant correlation between eating pattern and self-esteem.
- No significant statistical relationship was found between eating pattern of the adolescent students and their gender and BMI.
- No significant statistical association was found between self-esteem of the adolescent students and their gender and BMI.

Acknowledgement

I take this opportunity to thank Prof. (Dr.) Manju Chhugani, Principal, Rufaida College of Nursing for extending facilities and support for the research study. A word of thank to Mr. S.U. Malik and Mr. Abhay for their help in providing library assistance to get the literature. I am thankful to entire faculty of Nursing, both teaching and non-teaching staff for their help and co-operation.

Conflict of Interest: None

References


Date of Submission: 2018-05-31
Date of Acceptance: 2018-09-13