

# Binge Eating Disorder Among Adolescents in Selected Private Schools of Pokhara Valley: A Cross-sectional Study

Nitu Kumari Singh<sup>1</sup>, Laxmi Paudyal<sup>2</sup>, Indu Sah<sup>3</sup> and Harikala Soti<sup>4</sup>

<sup>1,2,3,4</sup>Lecturer Advanced Child Health Nursing, Gandaki Medical College Teaching Hospital and Research Center (GMCTHRC), Pokhara, Nepal

Email: [nitusingh3418@gmail.com](mailto:nitusingh3418@gmail.com)

**Abstract**— Binge eating disorder is the highest prevailing set up of eating disorder which is common among adolescents. among youths, Binge eating disorder (BED) signifies one of the extremely troublesome clinical conditions. They carry an increased risk of health and are correlated with salient physical health and psychosocial morbidity. The top age of onset of the eating disorder is 15-25 years. The prevalence of eating disorder behaviors is high in high-income countries, especially in combination with obesity. Now a day's teens are too apprehensive about the physical maintenance of the body especially the age between 13-21 years. Due to the inadequate knowledge, adolescent girls go for over restriction of food or starvation, misapply of laxatives, and over-exercising that may result in other somatoform disorders like malnutrition, anemia, etc. The study was conducted to assess binge eating disorders among adolescents. The Researcher adopted a cross-sectional descriptive design in the study. A Self-structured behavioral checklist of DSM-IV and DSM-5 diagnostic criteria was used to assess binge eating disorder among adolescents. A Simple random sampling technique was used to select 136 adolescents from school. Findings revealed that 14.7% had No BED (Binge eating disorder), 71.3% had Mild BED, 11.0% had Moderate BED and, 2.9% had Severe BED. The study found a significant relationship between binge eating disorder and demographic variables. The Study concludes that adolescents are specify by a high risk for the onset of BED. Additional studies are required to explore the complicated and multidisciplinary case of binge eating disorder and its related health effects including obesity.

**Keywords**— Adolescents, Binge eating disorder, Private school

## I. INTRODUCTION

Eating Disorder is the prime persistent illness and the highest extensive form of Eating Disorder among adolescents. According to the *Diagnostic and Statistical Manual of Mental Disorders* Binge eating, is defined as consuming in a distinct period, a quantity of food that is huge than most people would consume in the same period under the same events and feeling a loss of

command over consumption during the events.<sup>1</sup> Binge eating is commonly seen among adolescents and they often look for treatment.<sup>2,3</sup> Numerous reports reveal that binge eating problems are mainly noticed in obese and overweight adolescents collate to healthy weight adolescents.<sup>4,5</sup> As well symptoms of anxiety and a higher level of the eating disorder attitude are seen in adolescents who have binge eating patterns.<sup>3</sup> To confirm binge eating behavior correlates to substance abuse, mood disorder, and anxiety disorder in adolescents, in 3 months individuals should have binge eating at least once a week. The important element in binge eating is a loss of control while eating.<sup>6,7</sup>

Adolescents reported with binge eating have an eating pattern that includes more carbohydrates, especially sweetened food, chocolates, packaged food, snacks, dessert items which results in high-calorie consumption compared to the need of the body.<sup>9,10</sup>

Adolescence is an intermediate phase of life distinguished by expeditious and intensely physical, emotional, and neural growth changes. In this period, adolescents experience rapid neurobiological and body changes, which may be followed by increased care and consciousness for individual body shape and size. It is influenced by societal pressures for slim body image for peer acceptance. The top age of onset of an eating disorder is 15-25 years i.e. at a developmentally sensitive time. The prevalence of eating disorder behaviors is high in high-income countries, especially in conjunction with obesity.<sup>11</sup>

A descriptive study was conducted among adolescent girls' regarding the knowledge of eating disorders shows that 87% have inadequate knowledge and 13% have moderately adequate knowledge regarding eating disorders<sup>12</sup>. To raise awareness among public view, healthcare providers, and institutions and to reduce the hurdle to treatment and to improve the early identification of affected cases, knowledge about eating disorders among the general population may be an important determinant<sup>13</sup>. Now a day's teens are too concerned about the physical maintenance of the body especially in the age group between 13-21 years<sup>14</sup>. Hence, a few studies have been conducted on adolescents' behavior from different regions of the

world regarding this behaviors<sup>15-16</sup> but to our knowledge, very few researches have been conducted in Nepal concerning this topic.

Therefore, information about binge eating behavior will identify areas that may be focused on future communication strategies to enhance healthcare services and to execute effective public health interventions.

## II. METHODOLOGY

This research aimed at assess the binge eating disorder among adolescents of Pokhara valley.

### Research approach and design

A cross-sectional descriptive design was found to be appropriate to assess binge eating disorder among adolescents.

### Setting

This study was conducted in a selected private school in Pokhara valley.

### Sampling procedure

The sample of the study comprises 136 adolescents of a selected private schools of Pokhara valley, fulfilling inclusion criteria. A Simple random sampling technique was used to select 136 adolescents from the selected school.

### Ethical Approval

Ethical clearance was obtained from the Institutional review committee of Gandaki medical college (IRC-GMC).

### Data collection technique

In this study, researcher has used a self-structure checklist made according to the DSM-IV and DSM-5 diagnostic criteria which consist of 9 behavioral statements to collect data from adolescents.

The tool was further divided into two Parts.

1. **Part I include:** Demographic variables
2. **Part II includes:** Behavioral checklist made according to the DSM- IV and DSM-5 diagnostic criteria.

There are 9 statements that indicate binge eating disorder. Each statement has 5 options from less severe to more severe form of BED which is made according to DSM-5 BED severity grading.

Each option is given a score from 1 to 5. Thus, the overall score for the tool ranges from 9 to 45. The

severity of Binge-eating Disorder will be graded as follows.

- No BED- Score up to 9
- Mild BED- Score 10-18
- Moderate BED- Score 19-27
- Severe BED- Score 28-36
- Extreme BED- Score 37-45

## III. RESULTS

The substantive summary of the analysis was under the following sections

### Section 1- description of variables of adolescents

- Frequency and percentage distribution of demographic variables of adolescents

Table 1: Distribution of respondents according to demographic variable

S.N	Demographic Variable	Frequency	Percentage
<b>A</b>	<b>Age</b>		
1	10-12	6	4.4
2	12-14	6	4.4
3	14-16	12	8.8
4	16-18	112	82.4
<b>B</b>	<b>Sex</b>		
1	Male	48	35.3
2	Female	88	64.7
<b>C</b>	<b>Religion</b>		
1	Hindu	116	85.3
2	Others	20	14.7
<b>D</b>	<b>Family Income per month</b>		
1	10,000-20,000	55	40.4
2	20,001-30,000	22	16.2
3	30,001-40,000	15	11
4	40,001-50,000	19	14.4
5	50,000 and above	25	18.4
<b>E</b>	<b>Class</b>		
1	8-10	33	24.26
2	11-12	103	75.74
<b>F</b>	<b>Dietary habit</b>		
1	Vegetarian	17	12.5
2	Non-Vegetarian	119	87.5
<b>G</b>	<b>Birth order</b>		
1	First child	45	33.1
2	Middle child	45	33.1
3	Last child	46	33.8
<b>H</b>	<b>Weight of child</b>		
1	25-35Kg	7	5.1

2	36-45Kg	53	39.0
3	s46-55Kg	64	47.1
4	56 Kg and above	12	8.8
<b>I</b>	<b>Family type</b>		
1	Nuclear	90	66.2
2	Joint	43	31.6
3	Extended	3	2.2
<b>J</b>	<b>Area of Residence</b>		
1	Rural	23	16.9
2	Semi-Urban	45	33.1
3	Urban	68	50.0

Table 1 presents the frequency and percentage distribution of adolescents according to their demographic variables.

According to age, the majority of the adolescents were 82.4% within 16-18 years, 8.8 %were 14-16 years and 4.4% were 12-14 years as well as 10-12 years.

According to sex, the majority of the adolescents were 64% Female and 35.3%, Male

According to family income, majority of adolescent's family income were 10,000-20,000 (40.4%), 16.2%,11%, 14.4%, 18.4%

According to class, 75.24% belongs to the 11-12 class and 24.26% were belongs to the 8-10 class

Non- vegetarian was 87.5% and 12.5 were vegetarian

Birth order, 33.8 % was last child and 33.1% was the first child and second child.

Weight of child, 47% were fall into 46-55 kg, 39% were 36-45kg, 8.8% were 56 kg and above and 5.1% were 25-35kg.

Family type, 66.2% were belonged to the Nuclear family, 31.6% were belonged to the joint, and 2.2 were belonged to the Extended.

Area of residence, 50% were belonged to Urban, 33.1% were from semi-urban, and 16.9% from Rural.

### Section 2- Description of Binge eating disorder among adolescents

- Frequency and percentage distribution of Binge eating disorder

Table 2: Binge Eating Disorder among School Children

Severity of Binge Eating Disorder (BED)	Frequency	Percentage
No BED	20	14.7
Mild BED	97	71.3
Moderate BED	15	11.0
Severe BED	5	2.9
Total	136	100

Table 2 presents the frequency and percentage distribution of Binge eating disorder among adolescents

According to the severity of Bing eating disorder, 14.7% was having No BED, 71.3% was having mild BED,

11% was having Moderate BED and 2.9% was having Severe BED.

### Section 3- Association of BED with selected demographic variable

Table 3: Association of BED with selected demographic variable

S.N	Demographic Variable	Chisquare Value	d.f	p-value	Remarks
1	Age	39.698	2	0.000	S
2	Sex	13.710	2	0.001	S
3	Religion	42.234	2	0.90	NS
4	Class	10.045	2	0.07	NS
5	Family type	4.989	2	0.91	NS
6	Weight	0.700	2	0.03	S
7	Family income	39.137	4	0.078	NS
8	Dietary pattern	6.588	2	0.067	NS
9	Birth order	15.982	4	0.03	S
10	Residence	14.189	4	0.75	NS

N=136

Table 3 showed the outcomes of the association between binge eating disorder and demographic variables. Out of demographic variables, religion, class, family type, family income, dietary pattern, and residence were not statically significant at 95% level ( $p > 0.05$ ) and other variables were significantly associated with binge eating disorder.

## IV. DISCUSSION

### Major findings

- Findings of demographic performa

1. According to age, the majority of the adolescents were 82.4% within 16-18 years, 8.8 % were 14-16 years and 4.4% were 12-14 years as well as 10-12 years.
2. According to sex, the majority of the adolescents were 64% Female and 35.3%, Male
3. According to family income, the majority of adolescent's family income were 10,000-20,000 (40.4%), 16.2%, 11%, 14.4%, 18.4%
4. According to class. 75.24% belongs to the 11-12 class and 24.26% were belongs to the 8-10 class
5. Non- vegetarian was 87.5% and 12.5 were vegetarian
6. Birth order, 33.8 % was last child and 33.1% was the first child and second child.
7. Weight of child, 47% were fall into 46-55 kg, 39% were 36-45kg, 8.8% were 56 kg and above and 5.1% were 25-35kg.
8. Family type, 66.2% were belonged to the Nuclear family, 31.6% were belonged to the joint, and 2.2 were belonged to the Extended.
9. Area of residence, 50% were belonged to Urban, 33.1% were from semi-urban, and 16.9% from Rural.

**Objective 1: to assess the binge eating disorder among adolescents.**

It shows that, 14.75% of the respondent possess No BED, 71.3% possess Mild BED, 11% possess Moderate BED and 2.9% possess Severe BED.

The findings of the study were supported by Epidemiological research that examined the prevalence of BED in adolescent samples in conformity with Diagnostic and Statistical Manual of Mental Disorders, 4th edition reveals a prevalence ranging from 1% to 4%.

Recently in conformity with the Diagnostic and Statistical Manual of Disorders, Fifth Edition criteria, only a few studies have investigated the prevalence of BED, revealed a prevalence of ~1%–5%.

Studies show that adolescents with BED have an increased risk of evolving several undesirable effects, including obesity, social troubles, substance use, suicidality, and other emotional/mental strain/toil, especially in the internalizing area and engrossed on the possible impact.

And also revealed that BED may have an impact on physical, psychological, and social functioning.

**Objective 2: To measure the association between binge eating disorder with selected demographic variable**

It shows that there was a significant association between age, Sex, Weight, and Birth order with Binge eating disorder of adolescents. There was no statically significant of other variables.

The findings of the present study were supported by a study conducted in selected schools of Bangalore to assess the adolescents eating behavior and their knowledge and attitudes of eating disorders. The findings revealed that age, place of residence, type of family, and economic status was significantly associated with an eating disorder. And there is no association between the other variables.

**V. CONCLUSION**

The present study aims to assess the eating behavior of adolescents. In this study, moderate binge eating disorder was common in adolescents and was associated with age, sex, weight, and birth order. Additional studies are required to explore the complicated and multidisciplinary case of binge eating disorder and its related health effects including obesity. To enhance the healthcare services and to execute effective public health interventions, Information about binge eating behavior will identify areas that may be focused on future communication strategies.

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