

EATING ATTITUDES IN ADOLESCENT GIRLS

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SUMMARY

Introduction: Eating disorders are more common in women; especially adolescent girls are at risk. Our objective was to assess whether the adolescent girls were satisfied with their present physical appearance and weight and to analyze their views about their appearance.

Subjects and methods: The survey was conducted among female adolescents, aged 16–17, in all secondary schools in Banjaluka, using the Eating Attitudes Test - EAT-26. The response rate was 1956 (87.3%) out of 2240 (total number in the first and second grade female students).

Results: Almost half of the students surveyed with BMI <18.5 kg/m² were sometimes dissatisfied with their body image. More than half (54.8%) with BMI 18.5-25 kg/m² were sometimes dissatisfied with their appearance, while 1 of 10 respondents had that feeling often. Nearly 20% declared that they often wanted to be slimmer. With statistically significant differences, the surveyed students with BMI <18 kg/m² stated that they were unaware of calorie value of foods in comparison to students with BMI of 18-25 kg/m² ($\chi^2=63.7$, $df=24$, $p=0.000$). Nearly 33% of respondents were always, very often, and often familiar with food calorie values.

Discussion: Unrealistic idea of the body size can bring out various health risks. The health risks ranges from inadequate child attempts to inability to recognize and stop the weight gain.

Conclusion: The survey highlights a need for education of young people in order to accept a healthy lifestyle.

Key words: adolescent girls - eating disorder - appearance

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INTRODUCTION

Adolescence is characterized by significant physical, emotional and intellectual changes, and changes in social roles, relationships and expectations. This is a time of growth, which is characterized by the change in body proportion, size, weight and body image, emotional changes, new sleep patterns and needs, development of sexuality and reproductive functions. These changes are a normal transition from childhood to adulthood. Adolescents are experiencing these changes in different ways. Adolescent girls are often concerned about their bodily appearance, express dissatisfaction with their appearance, weight and want to lose weight.

Girls in adolescence often perceive themselves as fatter than they really are and that is why they want to be slimmer and start dieting. Although most of these attitudes and behavior related to nutrition are benign, they can bear significant psychological and medical risks. These risks are not infrequently associated with the increasing risk of clinically manifested eating disorders. The conduct related to eating disorders is associated with the increasing risk of hazardous behavior such as smoking, consumption of alcohol and psychoactive substances, development of depression and suicidal behavior.

Eating disorders are more common in women. Especially teenage girls and young women are at greater risk of eating disorders, because they are preoccupied with their body shape, weight and diet.

Eating disorders involve serious disturbances in behavior related to nutrition (to eat too much or too little) (Steiger et al. 1999). They are unhealthy eating patterns and include anorexia nervosa, bulimia and non-specific eating disorders. Anorexia nervosa and bulimia are among the most common eating disorders in the developed western world. Images of beauty send a strong message to all women about what our culture expects them to become or what bodily appearance is desirable. A sad truth is that trying to look perfect, a young girl divides her "self" and her esteem becomes dependent on the reflection she sees in the mirror or on the number of pounds she reads on the balance (Thompson et al. 2001, Clay et al. 2005).

People with anorexia nervosa refuse to maintain body weight above or at the minimum normal body weight, they have intense fear of gaining weight and express significant disturbance in perception of their own bodily shape and size (American Psychiatric Association 1994).

But people with bulimia nervosa are subject to excessive intake of food, with a sense of loss of control over eating (in a sense that they cannot stop eating or cannot control what and how much they eat), and then use a compensatory behavior to prevent weight gain, such as induced vomiting, intensive exercising or abuse of laxatives, diuretics and starvation. They also attach exaggerated importance to their bodily shape and weight (Garfinkel 2002).

The development of eating disorder is considered to be a result of combination of biological, psychological and social factors (World Health Organization 2004, Hargreaves 2002, Hofschire et al. 2002).

The aim of the research is to assess whether the adolescent girls in Banjaluka are satisfied with their real physical bodily appearance and weight, and to determine it by analyzing their attitudes toward their own appearance.

SUBJECTS AND METHODS

The survey was conducted in seven secondary schools in Banjaluka in February 2007. The first and second grade female students, aged 16 and 17, from 116 classes were selected as a sample.

The survey was carried out by student interviewers during a 45 minute school hour, in the presence of the

teacher. The instructions were given on how to complete the survey, which was anonymous and voluntary.

Out of 2240 total number of I and II grade student girls in secondary schools surveyed, 1956 (87.3%) responded to the questionnaire - 91.2% in the first grade and 83.5% (950 out of total 1137), in the second grade (Table 1).

In this survey the EAT-26 questionnaire was used, while the girls recorded their weight and height by themselves (Garner, Olmsted, Bohr, & Garfinkel 1982, Williams 1987). It addressed items like satisfaction with one's body image, body weight and attitudes to diet and one's body (EAT-26 2006).

The Epi Info 2002 statistical program for statistical processing of collected questionnaire responses and the 95% assessment interval for estimation of accuracy degree were used.

Table 1. The percentage of students who responded to both questionnaires

Ordinal	Schools	Classes			Total number of students			Surveyed number of students			
		total	first	second	total	first	second	total	first	second	%
1.	Medical	18	8	10	406	192	214	372	175	197	91.6
2.	Economic	18	9	9	489	227	262	446	214	232	91.2
3.	Technology	20	10	10	453	248	205	413	231	182	91.2
4.	Agriculture	16	8	8	141	77	64	122	65	57	86.5
5.	Catering	22	10	12	315	145	170	218	135	83	69.2
6.	Grammar	19	9	10	405	200	205	361	176	185	89.1
7.	Music	3	2	1	31	14	17	24	10	14	77.4
	Total	116	56	60	2240	1103	1137	1956	1006	950	87.3

RESULTS

Of total number of female students who filled the survey (1956), the highest percentage (83.4%) had BMI of 18.5-25 kg/m², while 150 (7.7%) had BMI <18.5 kg/m² and 4.7% had BMI > 25 kg/m² (Table 2).

Almost half of the surveyed students with BMI <18.5

kg/m² stated that they were sometimes dissatisfied with their bodily appearance, 40.7% that they had never been dissatisfied with their appearance. 12.7% declared that they sometimes wanted to be slimmer, while 82.7% never had that feeling. 2.0% of subjects induced vomiting by themselves, while 97.3% never did that (Table 3).

Table 2. Classification of students in secondary schools by body mass index

Ordinal	Schools	Body mass index-BMI (kg/m ²)						Unknown		Total	
		<18.5		18.5-25		>25		N	%	N	%
		N	%	N	%	N	%				
1.	Medical	25	6.7	325	87.1	16	4.3	7	1.9	373	100
2.	Economic	26	5.8	392	88.1	18	4.0	9	2.0	445	100
3.	Technology	34	8.2	333	80.6	23	5.6	23	5.6	413	100
4.	Agriculture	13	10.6	97	79.5	9	7.4	3	2.5	122	100
5.	Catering	23	10.6	169	77.5	13	5.9	13	5.9	218	100
6.	Grammar	26	7.2	307	85.0	14	3.9	14	3.9	361	100
7.	Music	3	12.5	18	75.0	0	-	3	12.5	24	100
	Total	150	7.7	1641	83.9	93	4.7	72	3.7	1956	100

More than half (54.8%) of the surveyed students with BMI of 18.5-25 kg/m² were sometimes dissatisfied with their appearance, while 1 of 10 surveyed stated that they often had that feeling. Almost 20% said that they often wanted to be slimmer, and 41.9% had that desire sometimes, while 38.3% never wanted to be slimmer. 2.1% of surveyed subjects induced vomiting by themselves, and 97.1% never did that (Table 4).

With statistically significant difference, surveyed students with BMI <18 kg / m² declared that they were unfamiliar with caloric values of foods in relation to the surveyed students with BMI of 18-25 kg/m² (Chi-squared = 63.7, df = 24, p = 0.000).

Almost 33% of the surveyed students were always, very often, and often familiar with the calorie values of food, while more than half answered to this question as never or rarely (Table 5).

Table 3. Response of adolescent girls with BMI<18.5 kg/m²

		Unsatisfied with their bodily appearance	Want to be slimmer	Self-induced vomiting
Never	N	61	124	146
	% (CI)	40.7 (32.7-49.0)	82.7 (75.6-88.4)	97.3 (93.3-99.3)
Sometimes	N	74	19	3
	% (CI)	49.3 (41.1-57.6)	12.7 (7.8-19.1)	2.0 (0.4-5.7)
Often	N	13	6	0
	% (CI)	8.7 (4.7-14.4)	4.0 (1.5-8.5)	0.0
No response	N	2	1	1
	% (CI)	1.3 (0.2-4.7)	0.7 (0.0-3.7)	0.7(0.0-3.7)
Total	N	150	150	150
	%	100.0	100.0	100.0

Table 4. Response of adolescent girls with BMI 18.5-25 kg/m²

		Unsatisfied with their bodily appearance	Want to be slimmer	Self-induced vomiting
Never	N	576	629	1594
	% (CI)	35.1 (32.8-37.5)	38.3 (36.0-40.7)	97.1
Sometimes	N	899	687	35
	% (CI)	54.8 (52.3-57.2)	41.9 (39.5-44.3)	2.1 (1.5-3.0)
Often	N	164	324	11
	% (CI)	10.0 (8.6-11.6)	19.7 (17.9-21.8)	0.7 (0.4-1.2)
No response	N	2	1	1
	% (CI)	0.1 (0.0-0.5)	0.1 (0.0-0.4)	0.1 (0.0-0.4)
Total	N	1641	1641	1641
	%	100.0	100.0	100.0

Table 5. Familiar with calorie values of food

		Adolescent girls with BMI<18.5 kg/m ²	Adolescent girls with BMI 18.5-25 kg/m ²	Total
Always	N	14	204	253
	% (CI)	9.3 (5.2-15.2)	12.4 (10.9-14.1)	12.9 (11.5-14.5)
Very often	N	6	105	124
	% (CI)	4.0 (1.5-8.5)	6.4 (5.3-7.7)	6.3 (5.3-7.5)
Often	N	16	169	200
	% (CI)	10.7 (6.2-16.7)	10.3 (8.9-11.9)	10.2 (8.9-11.7)
Sometimes	N	22	278	335
	% (CI)	14.7 (9.4-21.4)	16.9 (15.2-18.9)	17.1 (15.5-18.9)
Rarely	N	29	373	435
	% (CI)	19.3 (13.3-26.6)	22.7 (20.7-24.9)	22.2 (20.4-24.2)
Never	N	62	502	594
	% (CI)	41.3 (33.4-49.7)	30.6 (28.4-32.9)	30.4 (28.3-32.5)
No response	N	1	10	15
	% (CI)	0.7 (0.0-3.7)	0.6 (0.3-1.2)	0.8 (0.4-1.3)
Total	N	150	1641	1956
	%	100.0	100.0	100.0

Chi-squared =63.7; df=24; p=0.000

DISCUSSION

In our study almost 20% of girls with BMI of 18.5 to 25 kg/m² want to be slimmer, while 41.9% want that sometimes. Our results are similar with the study of Moore, who found out at the sample of 854 female adolescents and young women, aged from 12 to 23, that 67% of the sample were dissatisfied with their body weight and 54% of them were dissatisfied with their body image (Moore 1988). Dissatisfaction with body weight and body shape is in a positive correlation with gaining body weight, but not with the advancement of age.

According to the South Australian study (Milne et al. 1998) more than 70% of girls believe that they are fat, while the medical record proved that only about 10% of girls were overweight.

Around half of the girls with BMI <18.5 kg/m² in our sample are dissatisfied with their body image while 12.7% of them state that they want to be slimmer. In the study conducted in the Centre, for Adolescents in Victoria in 1995, it was found out in the sample of 600 teenage girls that more than 70% of girls wanted to be slimmer, even those with a low body weight. Our results are similar and expected in line with other studies. Even in our sample more than 60% of girls are dissatisfied with their appearance and want to be slimmer. About 60% of Australian girls are on some diet, and 13% of girls believe that smoking is a good way to lose body weight. Similar results with a high level of dissatisfaction were found out in the study that included the sample of 576 adolescent girls aged from 10 to 14 (Rancourt et al. 2010). The results indicate that very popular and unpopular adolescents may be at a greater risk of conditions and behaviours related to nutrition compared with other adolescents.

In the study of three hundred and twenty-five adolescent girls from high schools, it was found out that overweight girls and girls at risk of overweight scored higher than average-weight girls on body dissatisfaction, dieting and a peer measure that assessed negative comments and attributions about the appearance (Thompson et al. 2007).

The study on a sample of 144 female undergraduate students examined the effects of both past and current physical activity and media use on women's body image (Slater & Tiggemann 2006). It was concluded that early experiences of both physical activity and media use during childhood and adolescence played an important role in the development childhood and of adult women's body image.

Dr. Dianne Neumark-Sztainer in 2000 estimated the prevalence of eating disorders and dieting on a sample of 6728 adolescents from the 5th to 12th grade, and reported that almost half of girls (45%) were on a diet, compared to 20% of boys. Eating disorders were found in 13% of girls and in 7% of boys. The study on 671 college students was conducted to determine the prevalence of anorexic attitudes and behaviors (Williford et

al. 1996). This study demonstrated a higher prevalence rate among college students of abnormal eating attitudes and behaviors than other similar reported studies using the EAT on this population group. In this study sample, 15.5% scored at risk. 5% of 182 males and 19% of 489 females had scores indicating that they displayed abnormal eating attitudes and behaviors. The questionnaires on eating behaviors were distributed to 534 female high school students (Stein et al. 1997). EAT scores revealed maladaptive behaviors in 18% of the subjects. In a cross-sectional study of 69 girls in the fourth through the sixth grade, it was found out that negative communication was associated with body image dissatisfaction, whereas modeling was associated with maladaptive eating attitudes and behaviors (Rosenblum et al. 1999). Familial and peer negative communication and modeling may be related to preadolescent girls' body image dissatisfaction and maladaptive eating attitudes and behaviors (Kichler et al. 2009). In our study, around 33% of girls stated that they were always or very often following a diet.

The results of our study are expected in line with the results of some other studies, and some smaller differences can be explained by cultural specificities. Social and cultural ideal of thinness have a strong influence on female adolescents.

CONCLUSION

The results indicate a high level of dissatisfaction with their figure among adolescents girls. Further, the results indicate that this population is indeed vulnerable to eating-disordered attitudes and behaviours. Unrealistic notion on the body size may carry different health risks. They vary from an adequate attempt to follow a diet to incapability to recognize and stop gaining weight.

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