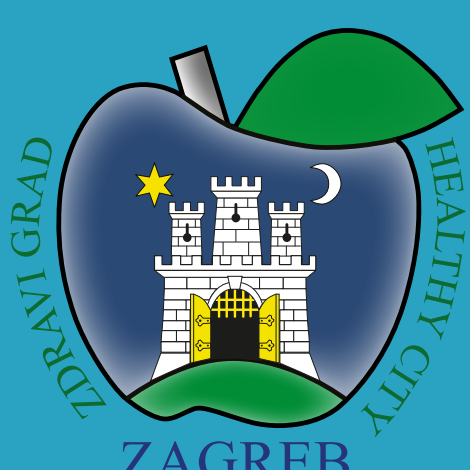


# “Who is that in the mirorr?”, prevention of eating disorders

Jelena Balabanić Mavrović, MS; Ivan Balabanić, MS  
Association NET+/Udruga PET+



## Introduction

Development of eating disorders is a result of number of factors: personality traits, family dynamics, peer influence and cultural values. Eating disorders are common mostly for female population (90- 95% patients are women). Anorexia, bulimia and eating disorder not otherwise specified (compulsory overeating included) commonly occur in adolescence, and some studies show that number of patients younger than 14 years old has risen from 5 to 25%. However, 90% of patients belong to the female group 12 till 25 years of age. The most endangered population is girls from big urban centers from 14 till 17 years of age.

Eating disorders are often called “the secret disease” because only 10- 30 % of people with symptoms receive any form of expert help. Most eating disorders have started as a “diet that went wrong”, what is especially worrying is a social context of promotion of thin female body as beauty ideal creating a culture of dieting.

In Croatia, there is no survey about prevalence of eating disorders, but it is estimated that statistics correspond to European average: in general population around 1% anorexia nervosa, 3% bulimia, 4-6% EDNOS (eating disorder not otherwise specified).

Research showed more successful rehabilitation of eating disorders, earlier in the course of the disease the treatment has begun. Therefore, selective and induced prevention of eating disorders is extremely important.

## Materials and methods

This study is conducted to evaluate the effectiveness of **Programme for prevention of eating disorders „Who is that in the mirror?”**. The prevention programme is based on series of workshops conducted in population of secondary school students in Zagreb (Croatia). All surveyed adolescents participated in 10 interactive preventive workshops.

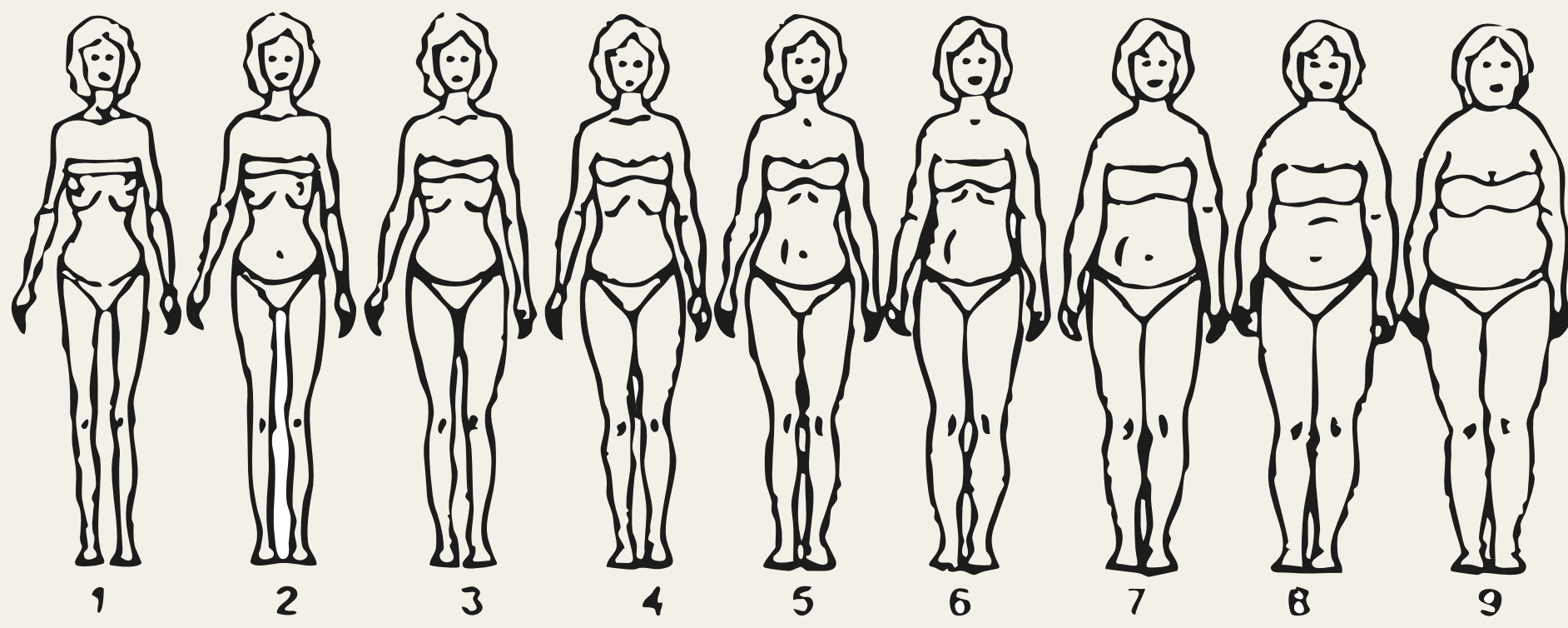
The program objectives were:

- (1) achieved changes in self-image and raise of participants' self-esteem,
- (2) Promotion of healthy eating habits and other behaviours relevant to health,
- (3) Changes in attitudes and cultural stereotypes of thinness as an ideal of feminine beauty.

Study was conducted on a sample of 165 female students in eight high schools (15 classes) in Zagreb area, in a convenience sample (18 years old = 13%; 17 years old= 54%; 16 years old= 30%; 15 years old= 3%).

Students filled out the questionnaire at the beginning and end of the workshop cycle. Questionnaire was used, with questions regarding general level of individual self-esteem (Rosenberg scale), issues related to general satisfaction with body appearance (Body Shape Questionnaire), questions which determined opinions of students about the importance of "lean" body for quality and happy life (their attitudes toward obese individuals included), questions about eating habits of secondary school students and the possible presence of symptoms of eating disorders.

Figural rating scale: own body / ideal body



## Results

Results of comparing data gathered at the beginning and end of preventive programme intervention showed that female students after attending the workshops showed greater self-esteem and that they assigned less importance to “thinness” for overall quality of life.

## Behaviour risky to develop eating disorders

Behaviours in last 4 weeks	Type of behaviour	F1	%	F2	%
1.) In last 4 weeks, have you been on a diet (whether you've lost weight or not)?	Yes	35	21,21	23	13,93
	No	130	78,78	142	86,06
2.) Have you been without food during longer periods (8 or more awake hours) in last 4 weeks?	Yes	21	12,72	11	6,66
	No	144	87,27	154	93,33
3.) How often have you measured your weight during last 4 weeks?	Every day more times	0	0	1	0,60
	Once a day	16	9,69	8	4,84
	Once a week	21	12,72	19	11,51
	Every two weeks or fewer	50	30,30	44	26,66
	I have not measured at all	78	47,27	93	56,36
4.) Have you intentionally vomit during last 4 weeks?	Yes	1	0,60	0	0
	No	164	0	165	100
5.) Have you used laxatives for losing weight in last 4 weeks?	Yes	1	0,60	1	0,60
	No	164	99,39	164	99,39
6.) Have you experienced episodes of overeating in last 4 weeks (eating large amounts of food until feeling of heaviness in your stomach has stopped you)?	Yes	42	25,45	36	21,81
	No	123	74,54	129	78,18
7.) In last 4 weeks, have you engaged in everyday excessive sport activities to lose weight?	Yes	25	15,15	17	10,30
	No	140	84,84	148	89,69
Total		165	100,00	165	100,00
P <0,05					

Also, participants of the prevention programme significantly lowered their engagement in risk behaviours associated with the appearance of anorexia, bulimia, and eating disorders not otherwise specified (fewer frequency of weighing, extreme dieting, overeating, obsessive sports activities in order to lose weight).

### Rosenberg Self Esteem Scale

Month	M	SD	t	P	N
survey 1	30,53	4,47	-3,046	0,03	165
survey 2	32,03	4,48			165
p<0,05					

### SMM scale: Importance of Thinness for Quality of Life

Month	M	SD	t	P	N
Survey 1	24,40	3,48	-3,165	0,02	165
Survey 2	25,44	2,96			165
p<0,05					

There was no difference in the results considering body perception (picture left). In the first and last survey examinees think about ideal body figure as thinner than their perceived body. Further, there was no recorded change on Body Shape Questionnaires (BSQ) before and after prevention programme intervention.

A connection is established among self esteem, attitudes about the importance of thinness for life-quality (scale SMM) and own body satisfaction. Adolescents who consider thinness less important for quality of life (higher result on SMM scale) have higher self esteem. Adolescents who are more satisfied with their body appearance (less score on BSQ scale) have higher self esteem. Identical situation is registered in emphasizing the importance of thinness in quality of life.

Attributing higher importance of thinness in overall quality of life is related to higher body dissatisfaction. Further, female adolescents who are dissatisfied with their body appearance are more likely to develop behaviors risky for development of eating disorders.



## Conclusion

After three months of workshops, female students have produced statistically better results on self esteem scale, and they diminish behaviors' patterns risky for development of eating disorders (frequent weighing, extreme dieting, and overeating, obsessive exercising due to losing weight).

In the first survey, 25% of female students have engaged in some of elements of risky food- behaviors. After 10 preventive workshops elements of harmful behaviors that could lead to eating disorders were present in 20% of female students.

Registered reduction of harmful behaviors related to eating disorders, increased self esteem and change of attitudes about importance of thinness could be related to participation of examinees in prevention of eating disorders programme “Who is that in the mirror?”, so the impact of prevention programme could be described as positive in terms of lowering the risk of eating disorders in female adolescent population. However, for that conclusion repeated survey is needed with control group testing, so the influence of other intervening variables could be excluded.

Positive influence of participation in preventive programme during 3 months was not sufficient to change body satisfaction or alter cultural stereotypes of “a body thinner than mine” as an ideal body. It could be concluded that preventive programmes have limited range of influence when their target group is embedded in culture of dieting and strong media influence.

This survey has not included family influence as an important assessment of risk for eating disorders development in youth population. In further surveys one could test certain personality traits (perfectionism, anxiety etc) as predictors of eating disorders development.

## References

1. International Journal of Eating Disorders, 2006
2. Substance Abuse and Mental Health Services Administration, 2008
3. Eating Disorders Treatment and Prevention, 2005
4. „Poremećaji u prehrani“, dr.Vranešić Bender, Darija; Plivazdravlje.ba,2008.
5. „Anoreksija nervosa“, dr.Grubišin, Jasmina; Plivazdravlje.ba;2002
6. C.Costin, Eating disorders: 100 questions and answers, 2010.

## Acknowledgements

We thank Office for Health and Veterans -City of Zagreb, National Fund for Civil Society Development and Institute for Public Health „Dr.Andrija Štampar“ on their great support.

## Contact Information

www.petplus.hr  
mavrovic.jelena@gmail.com

