



University of Pécs  
“Education and Society” Doctoral School of Education  
Head of the Doctoral School:  
Prof. Dr. Katalin Kéri  
University professor and Member of the Hungarian Academy of  
Sciences

**Examining socio-cultural factors and attachment characteristics determining the body  
image among female university students**

**Prevention opportunities of body dissatisfaction and eating disorders in educational  
institutes**

Ph.D Thesis

by

**Judit Pukánszky**

Supervisors:

Prof. Dr. Andreas Héjj, university professor

Prof. Dr. Zsuzsanna Vajda, university professor

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In the prevention of body image disturbances and eating disorders, the environment of school plays a significant role as the eating disorder risk age groups are easily accessed and addressed (O'Dea, 2005). The incidence and possible consequences of body dissatisfaction are challenging for the teachers at each level of training institutes. However, in Hungary, as far as we know, there have been no preventive programs supporting the positive body image or preventing eating disorders in the school environment. According to international examples, the institution's staff can do a lot to support the mental health of the students and to equip them against the socio-cultural messages that are negatively affect the body image. This not only involves knowledge transfer and skill improvement embedded in subjects and workshops, but also global attitudinal changes of the global institute, e.g. improving tolerance and the prevention of school bullying (Kulin and Darvay, 2012; O'Dea, 2003; O'Dea, 2005).

In school health education and health promotion, the prevention of body disorders and eating disorders deserves special attention, as the existence of physical dissatisfaction may have serious consequences for physical and mental health, such as depression, low self-esteem, plastic surgeries, steroid use, smoking and eating disorders (Stice , 2002; Field et al., 2001; Cafri et al., 2005; Grogan, 2016). Early well-designed prevention programs can thus prevent problems related to physical and mental health or poor academic performance (e.g. Mikkilä, Lahti-Koski, Pietinen, Virtanen and Rimpelä, 2003).

Many factors play a role in the development and maintenance of the body's dissatisfaction. The present dissertation focuses on the role of the sociocultural factors, e.g. media, peers and parents, and the effect of individual attachment characteristics regarding the body image of young adult women. However, the school's environment is not negligible in shaping the body image and self-esteem: direct and indirect messages from teachers and peers, through modeling processes of their attitudes towards their body shape, body weight, and food. Thus increasing the teachers' self-knowledge plays an important role in the process of effective prevention (Elek, 1999; Lelesz, 2001).

Effective prevention can thus reduce the frequency of eating disorders, body image disorders and obesity; helps to reduce the school absences, discontinuation and poor academic performance associated with negative body image; reduce the number of young people using healthcare as a result of psychological problems (e.g. mood disorders, anxiety disorders, addictions, suicidal threat, etc.) related to body disorders and eating disorders. Thus effective preventive interventions can unburden the healing institutes in the long run (O' Dea, 2000).

## Hypotheses:

1. I assume that young adult women who spend more time with media consumption, based on the average weekly hours, report negative body image (increased Body Dissatisfaction and Drive for Thinness) and achieve significantly higher score on the Internalization-General scale. Those who report poorer body image after consuming thin-body ideal media, they significantly internalize these ideals.
2. I assume that there is a difference among the attachment categories in case of Internalization-General, Body Dissatisfaction and Drive for Thinness, as well as the prevalence of previous dieting. Thus, safe attachment entails a more positive body image and lower scores on the Internalization-General scale.
3. I assume that those women who report greater discrepancy between the current and the ideal body image on the Fallon-Rozin Test have significantly higher mean values on Drive for Thinness, Internalisation-General scales; and have higher scores on the Anxiety dimension of attachment.
4. I assume, according to normative body dissatisfaction, higher BMI category does not effect on the prevalence of previous dieting.

## Research questions:

1. Which tested high-level variables effect on body image (body dissatisfaction)?
2. Comparing the means of the tested interval variables is there a difference of those young women who have been dieting earlier and those who did not go on a diet during their lifetime?
3. Is there a direct effect from the social environment (i.e. parental and peer commentary, praise and criticism of appearance) on body image (Drive for Thinness, Body Dissatisfaction) and Internalization-General?

## Material and Methods

Data collection took place at the University of Szeged from January 2013 until October 2015. 661 female students aged 18-28 ( $M = 20.34$ ,  $SD = 1.38$ ) participated in the research. The paper-based questionnaire package included standardized questionnaires and self-designed questions, which were completed after the classes, under the tutor's supervision. For data collection we used non-probability sampling; convenience sampling (Szokolszky, 2004).

Firstly, questions were focused on demographic data (age, profession, location, parents' highest level of education) and anthropometric data (body height and body weight). Then frequency and duration of dieting and exercising were measured. The following questions included the frequency of parental and peer communication about body shaping, criticism and praise towards the respondent's physical appearance. Average media hours per week (Facebook, Instagram, women's magazines, women's series, and video clips) were assessed, as well as the perceived changes in the body image after the visual media consumption.

Two subscales of **Eating Disorder Inventory** (Garner, Olmsted and Polivy, 1983; Hungarian adaptation: Túry, Sáfrán, Wildman and László, 1997) were used; **Body Dissatisfaction subscale** of Eating Disorder Inventory was used to measure the attitudes towards different body parts e.g. hips, stomach or bottom on a six-point Likert scale (where 1=never and 5=always). The items reflect the conviction that the person is dissatisfied with its body, and it should be changed. Higher scores on the subscale implies higher level of body dissatisfaction. **Drive for Thinness subscale** of Eating Disorder Inventory was used to measure the excessive engagement with dieting, the fear for gaining weight and the drive for losing weight and being lean.

**Fallon-Rozin Test** (Fallon-Rozin, 1985) contains 9 schematic body figures in an ascending order, where 1 is underweight and 9 refers to extreme obesity. The participant has to choose that figure which depicts its own current body image and the body ideal, as well. Discrepancy between the current and the ideal body image can refer to body dissatisfaction.

**Sociocultural Attitudes Toward Appearance Questionnaire-3** (Thompson, van den Berg, Roehrig, Guarda és Heinberg, 2004; Hungarian adaptation: Czeglédi Edit; Czeglédi, Pál és Bartha, 2015) examines media transmitted sociocultural effects which can take part in the occurrence of eating disorders and body image issues. The questionnaire contains 30 items and

the participants can express their attitudes on a 5-point Likert scale (where 1=definitely disagree; 5=definitely agree). The four scales of the questionnaire are Internalization-General, Internalization-Athlete, Pressures and Information. Patients with eating disorders reach higher scores than control group.

The **Relationship Scales Questionnaire** (Griffin and Bartholomew, 1994; Hungarian adaptation: Csóka, Szabó, Saffron, Rochlitz and Bódizs, 2007) investigates the following four attachment styles: Secure, Fearful, Preoccupied and Dismissing. Instead of measuring discrete attachment categories, researchers suggest two dimensions: Anxiety and Independence (Csóka et al., 2007).

Microsoft Excel and IBM SPSS Statistics computer software were used for the statistical analysis. The following tests were applied: Two-Sample T-Test, Welch T-Test, ANOVA, Multivariate Linear Regression, K-Center Clustering and Chi-Square Test. Effective ethical regulations were followed during the data management.

## Results

Results are presented on the basis of descriptive statistics and hypothesis testing.

According to Body Mass Index (BMI) 75% (N = 487) of the sample were in the healthy range, 15% (N = 96) were overweight (or obese), and 10% (N = 62) were underweight. 75.2% of the students (N = 306) were exercise in order to shape their body, on average 3.23 hours per week (N = 2.95; SD = 2.29; minimum = 0 hours; maximum = 15 hours). According to the results of Fallon-Rosen test, 31% of women were satisfied with their body shape (N = 204), 58% wanted to lose weight (N = 386), and 11% wanted to gain weight (N = 70). 58.7% of respondents (N = 179) were dieting for 2-5 times previously, 15% once, 14% 5-10 times, and 11.7% more than 10 times.

In the **first hypothesis**, it was assumed that young adult women who spend more time with media consumption, based on the average weekly hours, report negative body image (increased Body Dissatisfaction and Drive for Thinness) and achieve significantly higher score on the Internalization-General scale. Those who report poorer body image after consuming thin-body ideal media, they significantly internalize these ideals. Two-Sample T-Tests results and the calculated frequencies show similar tendencies on body image after thin-media consumption (Facebook, Instagram, soap operas, magazines, video clips): about half of

the respondents reported moderate body dissatisfaction, while the other half of the group did not notice any change in the body image. Those women who showed higher body dissatisfaction after media use reached significantly higher scores on the Internalization-General and the Internalization-Athlete scales.

In the **second hypothesis**, I assumed that there is a difference among the attachment categories in case of Internalization-General, Body Dissatisfaction and Drive for Thinness, as well as the prevalence of previous dieting. Thus, safe attachment entails a more positive body image and lower scores on the Internalization-General scale. Attachment categories using Independence and Anxiety dimensions (Relationship Scale Questionnaire) were created with K-Centered Cluster Analysis, with providing four clusters. Results of the One-Way Analysis of Variance (ANOVA) and the post hoc analysis show, that women with insecure attachment (Preoccupied and Fearful), had significantly higher values on Internalization-General, Body Dissatisfaction and Drive for Thinness scales. According to the Chi-square results, more women were dieting previously in the group of Fearful attachment, and less in the group of Dismissing attachment.

In the **third hypothesis**, I assumed that those women who report greater discrepancy between the current and the ideal body image on the Fallon-Rozin Test have significantly higher mean values on Drive for Thinness, Internalization-General scales; and have higher scores on the Anxiety dimension of attachment. We extracted current body image variable scores from the ideal body image variable scores which resulted three groups: satisfied (N = 204), dissatisfied-„wanting to lose weight” (N = 386) and dissatisfied-„wanting to gain weight” (N = 70, who were excluded from the analysis due to the small sample size). The results of the Welch T-Tests have shown that the dissatisfied-„wanting to lose weight” group had significantly higher levels of Drive for Thinness, Internalization-General, Internalization-Athlete and Anxiety.

In the **fourth hypothesis** I assumed that according to the normative body dissatisfaction, higher BMI category does not effect on the prevalence of previous dieting. Chi-square test results shows significant correlation between the BMI categories and the previous dieting variables. According to the Cross-Table results, in the category of BMI <18.4 there were more previously non-dieters than the average, while in the BMI > 25 category there were more previous dieters.

The **first research question** was which tested high-level variables effect on body image (body dissatisfaction)?Multivariate linear regression was applied, the prediction model contained five predictors, an independent variable from the entered twelve variable, and did not exclude any variable from the model for five steps. Drive for Thinness was the highest in the model, followed by BMI, Internalization-General, the weekly average hours of training and the weekly average hours spent on Instagram. According to the results of the variance analysis, the regression model was significant, but since the model's explanatory power was 56%, there must be other factors that also determine the Body Dissatisfaction.

The **second research question** was that comparing the means of the tested interval variables is there a difference of those young women who have been dieting earlier and those who did not go on a diet during their lifetime?

To answer the question, Welch d-test and Two-Sample T-Test were performed. By highlighting two major results, previous dieters had significantly higher scores on Drive for Thinness and had Pressure from the media, compared to non-dieters.

The **third research question** was if there is a direct effect from the social environment (i.e. parental and peer commentary, praise and criticism of appearance) on body image (Drive for Thinness, Body Dissatisfaction) and Internalization-General? According to Spearman correlations, discussion with peers and family members about body shaping has shown a significant positive relationship with each of the tested variables. Criticism towards the body from family members and friends correlated significantly with Body dissatisfaction and Drive for Thinness, while there was no relationship with Internalization-General. Praise for physical appearance from parents and peers showed significant negative correlation with Body Dissatisfaction. Praise from peers negatively correlated with Drive for Thinness, while praise from the family had no connection with this variable. Praise toward the appearance from parents and peers had no correlation with Internalization-General.

### **Conclusions**

The results indicate the need for a holistic approach and changes of attitudes (O'Dea, 2005) at lower training levels; prevention programs implemented with a wider focus (i.e. critical thinking, stress reduction, self-esteem) or concentrating on body image and eating disorders (Neumark et al., 2006).

Based on the results of the study, it is worth to explore the average number of hours that young people spend on Facebook and Instagram. Almost half of the women in the sample perceived increased body dissatisfaction after media use for all investigated media surfaces. From this point of view, it is important to raise the awareness of the media effects on the body image among young people and to describe those mechanisms that can result body dissatisfaction. Risk groups for body image disturbances also needed to be addressed and involved to the programs. During process of the interventions, besides the transfer of theoretical knowledge, the emphasis should be on increasing self-esteem and skill-development, too.

Those women who internalized the thin body ideals were less satisfied with their physical appearance following media consumption. In parallel to this, in prevention programs designed for adolescent girls and college women assessing and decreasing the level of thin ideal internalization has a major role by the development of critical thinking, teaching downward social comparisons, or increasing self-esteem. Results also emphasize the need for the early interventions before the internalization of the Western thin ideals (Tiggemann, 2002).

Among overweight and obese respondents (BMI>25) previous dietary restrains were more frequent than average. However, body dissatisfaction can not be expected only by higher Body Mass Index - although higher BMI increases the likelihood of physical dissatisfaction (eg Moore and Franko, 2002), so the involvement of obese and overweight young people in negative body image prevention programs may be particularly justified. Increased BMI can enhance the vulnerability towards thin media messages (Tiggemann, 2002), which can further increase existing body dissatisfaction.

It is worthwhile to make students aware of the role of communication with peers and parents and body dissatisfaction (see also fat-talk, Nichter and Vuckovic, 1994). The results can also be expanded to the need of institutional communication changes, for example, by modifying the policy, by banning comments about the physical appearance from teachers and students.

Attachment characteristics can be especially useful during therapeutic interventions of body image disturbances and eating disorders. A well-functioning therapeutic relationship can correct the individual's attachment characteristics, which can also have a positive effect on the body image. The importance of adding the attachment focus to the therapeutic interventions of body image issues and eating disorders previously justified (Ward, Ramsay and Treasure, 2000). In school environment, attachment characteristics might be assessed by the school psychologists, as various interventions might be efficient for different attachment styles.



According to the present results, women with preoccupied and fearful attachment had more negative body image and a higher levels of internalization of the thin ideal compared to secure attachment women.

In the present investigation we aimed to examine the relationship between thin ideal internalization and attachment characteristics which, according to our knowledge, have not been assessed yet on a Hungarian sample.

The results might be helpful to design effective school-based prevention programs, with the present suggestions which factors might be included. Similar school-based intervention programs have not happened yet in our country, but the present results indicate the urgent need for prevention.

### **Publications in the topic**

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