SOCIOCULTURAL INFLUENCES OF PARENTS ON BODY DISSATISFACTION IN ADOLESCENTS

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SUMMARY

The basic goal of this research was to evaluate sociocultural influence of parents on general body dissatisfaction among their adolescent children. The sample comprised (N = 228) of both male and female adolescents aged between 16-19 years. In this study, two measuring instruments were applied: Body image and body change inventory and the Perceived Sociocultural Influences on Body Image and Body Change Questionnaire. These instruments show internal consistency of high reliability, which makes them applicable to the Serbian population. According to results of the correlational analysis, there is a mild correlation between predictor variables (influence of mother and influence of father) and the criteria general body dissatisfaction. The applied hierarchical regression analysis showed that predictor variables explain 22% of the total variance of general body dissatisfaction. It was also established that variables (female gender, sociocultural influence of parents on body image and change in physical appearance) present significant predictors of overall body dissatisfaction in late adolescence. The majority of the obtained findings is in accordance with results from previous studies, and should provide directions for predicting body image and perceptive sociocultural contributions on body image, as well as designing programs of prevention regarding body dissatisfaction in adolescents of both genders.

Key words: Adolescence, physical appearance, body dissatisfaction, sociocultural influences
INTRODUCTION

From the second half of the 20th century up to today, there is an increasing number of research in psychology which emphasize the influence of body image, which presents a subjective perception of one’s own physical appearance and physical experiences, as well as expression of attitudes, thoughts and feelings of the individual that relate to one’s own body.¹ Body image is generated by internal (biological and psychological) and external (cultural and social) factors, and it develops, changes, or maintains through this complex network of interactions². Body image consists of two essential elements: perceptive and subjective. The core of body dissatisfaction occurs as a result of discordance between perceptive and internal or socially conditioned, perfect body image. If this discordance is greater, body dissatisfaction is greater.³ Findings of the authors⁴ point to the fact that the number of female adolescents who are dissatisfied with their own body is substantially increasing in the last few decades, and that this dissatisfaction is greater in female than in male adolescents.

During adolescence, physical appearance of young men and women becomes one of their main preoccupations. Discordance between perceptive and perfect physical appearance in adolescent age is becoming more prominent, which makes this period of life particularly sensitive for the development of body dissatisfaction.

Within this period of life, body dissatisfaction is in correlation with a greater sociocultural pressure on physical attractiveness, particularly for female gender. The perfect body image of women today assumes characteristic thinness, and


emphasizing its significance generates body dissatisfaction. Results of numerous researches signalize on the significant presence of preoccupation due to physical appearance among male and female adolescents. On the other hand, failure in reaching the perfect physical appearance set by the society can cause body dissatisfaction regardless of gender.

The significance of body image, as well as body dissatisfaction, is important in understanding eating disorders and dieting. Authors conclude that beside body dissatisfaction, the significance of body image is also an intensive predictor of body transformation among adolescents of both genders. Authors have established in their study that if a person does not pay attention to their physical appearance, there is a small probability that his/her physical appearance will contribute to their feeling of own valuableness, even if he/she is not satisfied with it. Moreover, the emphasis is on the significance of body image, and how it possesses an indirect function between sociocultural influences of parents and body dissatisfaction. Research findings turn the attention to the fact that


female adolescents, who were teased because of their physical appearance, are more dissatisfied with their body from classmates who weren't. In the study\textsuperscript{13} it is pointed out that frequency of teasing is in significant mutual relation with devolving one's own body, and overestimating its shape.

Gender, as a significant biological factor in adolescence has particularly important effect on the development of body dissatisfaction since it is characterized by various strong changes in physical appearance. It has been determined that boys and girls who are entering this age become more self-aware, and physical appearance is one of their main concerns\textsuperscript{14}. Body changes with female adolescents are manifested in the increase of body mass and accumulation of fatty tissue on hips and posterior. The study\textsuperscript{15} shows that girls view these changes as negative because they distance them from perfect, lean physical appearance. On the other hand, the changes in physical appearance of boys cause the formation of broad shoulders, flat stomach, slim waist and increase of muscle mass.\textsuperscript{16} Hence, the differences in the perception of perfect physical appearance with boys and with girls, which generates higher body dissatisfaction of females.

Apart from the biological factor of gender, a significant function in the creation, development, and maintenance of body dissatisfaction also have different sociocultural factors, primarily influence of parents. Negative contribution of parents on the dissatisfaction of adolescents can be achieved in several ways: directly, through teasing in the form of critic regarding physical appearance, and indirectly, through expression of concern regarding their own physical appearance and, as well as emphasizing the sociocultural influence toward a perfect body appearance.\textsuperscript{17}


Findings regarding how the mother and the father influence the formation and development of body image, as well as the intensity, are not consistent. Certain studies that have investigated these phenomena emphasize the difference in contribution of the mother from the father. According to the study\(^{18}\), influence of the mother has a greater impact on the development of body image among adolescents. Findings\(^{19}\) turn the attention to the fact that parents evaluate their daughters more critically than their sons in adolescent age, which could be explained by greater pressure of female children to accept the sociocultural ideal of thinness against their will. Also, according to research\(^{20}\), mothers and fathers give infrequent positive feedback about the physical appearance of their daughters. Moreover, research\(^{21}\) established that the majority adolescents of both genders with an increased body mass perceive that their mothers encourage them to lose body mass, particularly girls, and experience more critics from mothers with negative feedback regarding their physical appearance.

A significant difference in evaluation of feedback regarding physical appearance from the mother among male and female adolescents is not observed, but when it comes to evaluating feedback from the father, however, differences are observed. Female adolescents perceive that fathers more strictly evaluate their physical appearance.\(^{22}\) In addition, these authors conclude that among male adolescents, fathers have a more intensive influence on their attitudes toward their body, while female adolescents are influenced more intensively by their mothers. Also, it was established that mothers and fathers have a relevant function in adopting sociocultural claims about the perfect physical appearance in their adolescent children, emphasizing which physical characteristics are


recommended, and which are not.\textsuperscript{23} Research findings turn the attention to the fact that the family environment in which physical appearance is emphasized, as well as sociocultural patterns of the ideal physical appearance, can lead to increased body dissatisfaction in adolescents when establishing their (dis)content or (dis)approval on achieving or not achieving these norms\textsuperscript{24}. Furthermore, the quality of the relationship between parents and adolescents contributes to body image. It was observed that reduction of emotional warmth and support, as well as troubling relationships with parents stimulates the development of body dissatisfaction, while more positive relationships with parents are correlated with developing positive attitudes toward body image.\textsuperscript{25}

Having in mind the disparity in results of research performed regarding this topic, it is essential to conduct research on the Serbian adolescent population as well, in order to thoroughly evaluate the influences of sociocultural factors (parents) on body dissatisfaction among adolescents of both genders. Findings that will be revealed in this study can provide a better understanding of body dissatisfaction development during adolescence, and aid in creating steps and programs for its prevention.

\section*{METHOD}

\subsection*{Sample and procedure}

In this cross-sectional study, performed in January 2017, 228 Serbian students of both genders participated. Mean age of adolescents was 17,30 years (SD = 1,38). Our subjects were students of 3\textsuperscript{rd} and 4\textsuperscript{th} grades of Economic and Technical Schools in Valjevo. The sample was equally distributed between genders (Nf = 116 or 51,55\% and Nm = 112 or 49,77\%).

Anonymous questioning was conducted in groups, during regular school classes. Group size varied from 20 to 30 subjects. The average time of fulfilling questionnaires was 45 minutes. In accordance with the ethical codes of research

\begin{footnotesize}
\begin{enumerate}
\itemEmma Halliwell, Future directions for positive body image research\textit{"}, \textit{Body Image} 14 (2015): 177.
\end{enumerate}
\end{footnotesize}
in which subjects are under age, school principals and parents gave a formal consent for participation of students in the research. Before giving out the questionnaires, which served as measuring instruments, subjects were informed about the scope of research, as well as the method of data protection, after which they signed a consent form for voluntary participation in the research. During the research, students were able to withdraw from the study at any point (three students withdrew from the study).

After applying measuring instruments, five Univariate ($z > +/-3.34$) and five multivariate out layers – extreme results of measurements [$\chi^2 (10) > 30.22$, $p < .001$], were eliminated in the preliminary overview of the summation scores of all variables.

**Instruments**

**Body image and body change inventory (BIBCI; Ricciardelli and McCabe$^{26}$, 2002)**

In relation to the original inventory which contains a total of 69 items across eight scales, the adapted version of this instrument to evaluate body image and the body-image importance among male and female adolescents, which was used in this research, consists of two scales: scale body image satisfaction (10 items) and scale body-image importance (14 items). Both scales were translated from English to Croatian language.

First three items of the scale *body image importance* are independent and are an individual aspect of body dissatisfaction (for ex. “How satisfied are you with your body mass/body shape/muscle mass?”). The remaining seven items comprise dissatisfaction of certain body parts. Subjects answered on each item through a 5-degree Likert scale, depending on how they were satisfied with certain body parts, from 1 (very unsatisfied) to 5 (very satisfied). The total result is shaped as a single linear combination of evaluations on these items. A higher score points toward a greater dissatisfaction with body appearance or certain body parts.

The value of the *Cronbach-alpha* reliability coefficient for the entire modified scale was ($\alpha = .89$), which is a satisfying indicator of consistency and reliability. This finding is in accordance with research conducted by Jugović (2015) on a sample of adolescents in Croatia.

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The first five items in the scale *body-image importance* measures how much meaning a person gives to certain aspects of body appearance (significance of body mass, body shape, size and strength of muscles, and muscle tone). The remaining nine items measure how important is appearance of certain body parts to a person. Depending on how important is appearance of certain body parts, subjects answered to each item through a 5-degree Likert scale: from 1 (not important at all) to 5 (very important). The scale enables obtaining individual results regarding the body-image importance, and the total score is calculated as a simple linear combination of evaluation of subjects on all items. The theoretical range of results for body-image importance is from 14 to 70, while significance of certain aspects of body appearance from 1 to 5, with an increasing number of points pointing to a more pronounced meaning toward body appearance or aspects of it by an individual.

The *Cronbach-alpha* reliability coefficient in this scale was ($\alpha = .93$), which illustrates high reliability of internal consistency.

**Perceived Sociocultural Influences on Body Image and Body Change Questionnaire (TPSIBIBCQ; McCabe and Ricciardelli,272001)**

The original questionnaire contains 62 items distributed in five scales. Having in mind the goal of this research, this measuring instrument was adapted, and only two scales were used: Scale influence of the father (13 items) and scale influence of the mother (13 items).

Items in both scales relate to feedback regarding physical appearance, feedback to increase body mass, feedback to lose weight, and feedback to increase muscles, as well as how much do subjects give meaning to the feedback of both parents regarding their physical appearance. Both scales were, for the purpose of this research, adjusted by adding items (five items more for each scale) in order to evaluate teasing, encouraging the increase in muscle tone, and increase in muscle size more completely. First three items of each scale measure negativity/neutrality/positivity of feedback from either mother or the father regarding the physical appearance of adolescents, the fourth item measures how important is feedback from the parents to adolescents regarding their physical appearance, while the remaining three items measure the frequency of teasing.

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27 Marita P. McCabe, Lina A. Ricciardelli, „Parent, peer, and media influences on body image and strategies to both increase and decrease body size among adolescent boys and girls”, *Adolescence; Roslyn Heights* 36 (2001): 225.
and supporting weight loss, weight gain, as well as increase in body bulk and muscle stiffness.

Subjects evaluated how much they agree to the claims regarding comments about their physical appearance by answering the first three items on these scales using a 6-degree Likert scale: 0 – no comment, 1 – strongly disagree, to 5 – strongly agree. Importance of opinion (fourth item) was evaluated using a 5-degree Likert scale: from 1 – not relevant at all, to 5 – extremely relevant. For the frequency of teasing and encouragement for changing physical appearance, the same scale was used: from 1 – never, to 5 – all the time.

The calculated value of Cronbach-alpha coefficient for both scales was (\(\alpha = .90\)), which points to a relevant reliability of internal consistency.

**Scale Influence of the Mother**

The factorial structure of this scale was examined using the principal component analysis, using Varimax rotation, and was interpreted using the group matrix (Table 1). The Guttman-Kaiser criterion was used for isolating factors of second order.

### Table 1. Results of factorial analysis of items from the scale Influence of the mother

<table>
<thead>
<tr>
<th>Content of the item</th>
<th>(F_1)</th>
<th>(F_2)</th>
<th>(F_3)</th>
<th>(F_4)</th>
<th>(F_5)</th>
<th>(h^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>My mother tells me that I should strengthen my muscles.</td>
<td>.879</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.819</td>
</tr>
<tr>
<td>My mother tells me that I should increase my muscles.</td>
<td>.848</td>
<td>.596</td>
<td></td>
<td></td>
<td></td>
<td>.768</td>
</tr>
<tr>
<td>My mother tells me that I should exercise more.</td>
<td>.651</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.565</td>
</tr>
<tr>
<td>My mother teases me that my muscles aren't strong enough.</td>
<td></td>
<td></td>
<td>.857</td>
<td></td>
<td></td>
<td>.576</td>
</tr>
<tr>
<td>My mother teases me that my muscles aren't big enough.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My mother teases me that I am overweight.</td>
<td>.837</td>
<td>.808</td>
<td>.837</td>
<td>.809</td>
<td></td>
<td>.598</td>
</tr>
<tr>
<td>My mother teases me that I should eat less.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.789</td>
</tr>
<tr>
<td>My mother tells me that I should lose weight.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.747</td>
</tr>
<tr>
<td>How does your mother comment your physical appearance and your body?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.805</td>
<td>.758</td>
</tr>
<tr>
<td>How does your mother comment your eating habits (what, when, and how much you eat?)</td>
<td></td>
<td></td>
<td></td>
<td>.778</td>
<td></td>
<td>.669</td>
</tr>
<tr>
<td>How does your mother comment your physical</td>
<td></td>
<td></td>
<td>.85</td>
<td></td>
<td></td>
<td>.656</td>
</tr>
</tbody>
</table>
activities (for ex. How much do you exercise?) | 4 | .84 | .628
Your mother tries to strengthen her muscles. | 2 | .623 | .794
Your mother tries to increase her muscles. | .595 | .820
Your mother tries to gain weight. | .724 | .358
Your mother is on a diet in order to lose weight. | .646 | .282
My mother teases me that I am too skinny. | .592 | .750
My mother tells me that I should gain weight.

| Characteristic root | 3.48 | 2.39 | 2.08 | 1.40 | 1.21 |
| Percentage of explained variance | 27.12 | 15.06 | 12.32 | 8.05 | 7.24 |

Note: during the process of defining optimal latent structures, variables that did not have significant saturation (with the criterion > .40) were excluded.

Results of the factorial analysis in this study have shown that the scale Influence of the mother consists of five principal components, which cumulatively determine 67.11% of variance in the matrix. From a theoretical aspect, a relatively high percentage of explained variance suggests that the applied measuring instrument is valid in further analysis.

The first latent dimension (judgment of others and influence of the mother on increasing body bulk) is composed of five items which evaluate the influence of the mother on increasing body bulk through motivation and judgment of others. Three items within the second factor (judgment of others and influence of the mother for weight loss) determine the influence of the mother through motivation and judgment of others. The third factor (mother feedback physical appearance, nutrition and physical exercise) consists of three items which provides feedback of the mother regarding physical appearance, eating habits, and physical activity. The fourth factor comprises of four items (Influence of the mother on transformation of physical appearance through her own model of behavior), while the fifth factor is composed of two items (Judgment of others and encouragement for weight gain by the mother). The obtained five-factorial structure of the scale Influence of the mother in our research is practically identical to the structure of the instrument used in Croatian research, conducted by Jugović (2015).

Reliability (internal consistency) for factor F1 - judgment of others and influence of the mother on increasing body bulk, was (α = .79), for factor F2 - judgment of others and influence of the mother for weight loss (α = .82), for factor F3 - mother feedback regarding physical appearance, nutrition and physical exercise (α = .70), for factor F4 - Influence of the mother on transformation of physical appearance through her own model of behavior, (α = .67), and for the factor F5 - Judgment of others and encouragement for weight gain by the mother (α = .77). The obtained values of Cronbach-alpha coefficients suggest that the scale Influence of the Mother has high internal consistency.
Through factorial analysis, using the method of principal component analysis, with Varimix rotation and Guttman-Kaiser normalization, five orthogonal second-order factors were obtained, with characteristic root values $\lambda > 1$. Together, they are responsible for 67.83% of variance (Table 2).

Table 2. Results of factorial analysis of the scale Influence of the Father

<table>
<thead>
<tr>
<th>Content of the item</th>
<th>$F_1$</th>
<th>$F_2$</th>
<th>$F_3$</th>
<th>$F_4$</th>
<th>$F_5$</th>
<th>$h^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>My father tells me that I should strengthen my muscles.</td>
<td>.880</td>
<td>.852</td>
<td>.828</td>
<td>.762</td>
<td>.618</td>
<td></td>
</tr>
<tr>
<td>My father tells me that I should increase my muscles.</td>
<td>.733</td>
<td>.638</td>
<td>.618</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My father tells me that I should exercise more.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My father teases me that my muscles aren't strong enough.</td>
<td>.869</td>
<td>.852</td>
<td>.629</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My father teases me that my muscles aren't big enough.</td>
<td></td>
<td></td>
<td>.629</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My father teases me that I am overweight.</td>
<td>.744</td>
<td>.733</td>
<td>.786</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My father tells me that I should eat less.</td>
<td></td>
<td>.818</td>
<td>.742</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How does your father comment your physical appearance and your body?</td>
<td>.796</td>
<td>.810</td>
<td>.681</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How does your father comment your eating habits (what, when, and how much you eat?)</td>
<td></td>
<td></td>
<td>.674</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How does your father comment your physical activities (for example. How much do you exercise?)</td>
<td>.888</td>
<td>.876</td>
<td>.655</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your father tries to strengthen his muscles.</td>
<td></td>
<td>.876</td>
<td>.663</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your father tries to increase his muscles.</td>
<td>.612</td>
<td>.590</td>
<td>.876</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your father tries to gain weight.</td>
<td></td>
<td>.717</td>
<td>.872</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your father is on a diet in order to lose weight.</td>
<td></td>
<td>.717</td>
<td>.875</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My father teases me that I am too skinny.</td>
<td>.612</td>
<td>.590</td>
<td>.652</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My father tells me that I should gain weight.</td>
<td>.582</td>
<td>.717</td>
<td>.542</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Characteristic root</td>
<td>2.96</td>
<td>2.42</td>
<td>1.37</td>
<td>1.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of explained variance</td>
<td>27.05</td>
<td>14.45</td>
<td>9.64</td>
<td>7.56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: during the process of defining optimal latent structures, variables that did not have significant saturation (with the criterium > .40) were excluded.

The first factor is comprised of five items which determine the influence of the father on the increase of body bulk through motivation and judging others. The second factor is comprised of three items which determine the influence of the father on weight loss through motivation and through judging others. The
third factor consists of three items which explain the critics of the father regarding physical appearance, eating habits and physical activity; four items comprise the fourth factor, which undermine the influence of the father on body transformation through a model of his own behavior; and the fifth factor, which consists of two items, presume the influence of the father on the increase in body mass through motivation and judgment of others.

By considering the content of the items in each of the obtained latent dimensions, factors are interpreted in the following way: *Judgment of others and motivation to increase body bulk by the father* (F1); *Judgment of others and motivation for weight loss by the father* (F2); *Feedback of the father regarding physical appearance, nutrition, and physical exercise* (F3); *Influence of the father on body transformation through his own model of behavior* (F4); and *judgment of others and motivation for weight gain by the father* (F5).

Reliability (internal consistency), expressed using the Cronbach alpha coefficient, was ($\alpha = .84$) for F1; For F2 ($\alpha = .85$); For F3 ($\alpha = .78$); For F4 ($\alpha = .73$); and for F5 ($\alpha = .80$). The calculated values of Cronbach alpha coefficients point that reliability of the scale Influence of the Father is satisfying.

**RESULTS**

Overall data obtained in this study show that distribution of certain items within descriptive parameters significantly deviate from normal distribution of results of variables (Table 3). However, all measuring instruments that were applied are positively asymmetrical, which makes them eligible for use in parametric and multivariate statistical methods, according to standard criteria. Furthermore, they indicate that the distribution of results is neither bimodal nor U-curve shaped.

**Table 3.** Descriptive indicators of evaluation of body dissatisfaction on the scales of BIBCI and TPSIBIBICQ questionnaires

<table>
<thead>
<tr>
<th>Measuring instrument/item</th>
<th>TR</th>
<th>AM</th>
<th>SD</th>
<th>K-S</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body image and body change inventory</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body satisfaction</td>
<td>1-5</td>
<td>3.58</td>
<td>.69</td>
<td>.03</td>
</tr>
<tr>
<td>Significance of body image</td>
<td>1-5</td>
<td>3.56</td>
<td>.80</td>
<td>.07</td>
</tr>
<tr>
<td>Weight loss strategy</td>
<td>1-5</td>
<td>2.19</td>
<td>.93</td>
<td>.14</td>
</tr>
<tr>
<td>Weight gain strategy</td>
<td>1-5</td>
<td>1.82</td>
<td>.95</td>
<td>.19</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----</td>
<td>------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Muscle strengthening strategy</td>
<td>1-5</td>
<td>2.90</td>
<td>1.02</td>
<td>.09</td>
</tr>
<tr>
<td>Increase in body bulk</td>
<td>1-5</td>
<td>2.18</td>
<td>.88</td>
<td>.12</td>
</tr>
</tbody>
</table>

**Perceived Sociocultural Influences on Body Image and Body Change Questionnaire**

**Influence of the Mother**

<table>
<thead>
<tr>
<th>Importance of opinion</th>
<th>1-5</th>
<th>3.30</th>
<th>1.27</th>
<th>.18**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback for eating habits and balance</td>
<td>1-5</td>
<td>2.88</td>
<td>1.29</td>
<td>.07</td>
</tr>
<tr>
<td>Judgment of others and encouraging weight loss</td>
<td>1-5</td>
<td>1.47</td>
<td>.90</td>
<td>.29**</td>
</tr>
<tr>
<td>Judging others and encouraging weight gain</td>
<td>1-5</td>
<td>1.73</td>
<td>1.06</td>
<td>.27**</td>
</tr>
<tr>
<td>Judgment of others and encouraging increase of body bulk</td>
<td>1-5</td>
<td>1.70</td>
<td>.82</td>
<td>.19**</td>
</tr>
<tr>
<td>Model of behavior</td>
<td>1-5</td>
<td>1.48</td>
<td>.59</td>
<td>.19**</td>
</tr>
</tbody>
</table>

**Influence of the Father**

<table>
<thead>
<tr>
<th>Importance of opinion</th>
<th>1-5</th>
<th>2.94</th>
<th>1.41</th>
<th>.13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback for eating habits and balance</td>
<td>1-5</td>
<td>2.48</td>
<td>1.52</td>
<td>.07</td>
</tr>
<tr>
<td>Judgment of others and encouraging weight loss</td>
<td>1-5</td>
<td>1.39</td>
<td>.80</td>
<td>.37**</td>
</tr>
<tr>
<td>Judging others and encouraging</td>
<td>1-5</td>
<td>1.61</td>
<td>.88</td>
<td>.40**</td>
</tr>
</tbody>
</table>
In order to examine the partial moderating influence of predictor variables of gender, as well as the observed sociocultural influences of both parents in predicting the main criterion—general body dissatisfaction among male and female adolescents, a hierarchical regression model was used, which enables monitoring of changes in the percent of explained variance after including a new group of predictor variables.

Two groups of predictor variables were successively included in the regression analysis, in two steps, according to a previously defined order (Table 4). In the first step of hierarchical regression analysis, interactions of predictors (gender) and criterion variable (body dissatisfaction) were included. In the second step, predictors were control variables of parental influence: influence of both mother and the father through the following group of variables (feedback of the mother regarding physical appearance, nutrition, and physical exercise; judgment of others and encouragement of the mother for weight loss; Comments of the father about physical appearance, nutrition, and physical exercise; judgment of others and encouragement of the father for weight loss; judgment of others and encouraging weight gain by the father, and model of behavior).

With the previously defined gender differences, the obtained finding in the first group of predictors indicate that through partialization of the sociodemographic variable (gender), a relevant prediction of general body dissatisfaction can be made. According to the first regression equation, it significantly interprets the criterion with a tenth of variability proportion ($\Delta R^2 = .10$), at which body dissatisfaction is more pronounced in female adolescents rather than male.
Table 4. Hierarchical regression analysis of predicting general body dissatisfaction

<table>
<thead>
<tr>
<th>Predictors</th>
<th>β</th>
<th>S</th>
<th>ΔR²</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.23</td>
<td>6.21</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence of the mother</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments of the mother about physical appearance, nutrition, and physical exercise;</td>
<td>-.14*</td>
<td>.85</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Judgment of others and encouragement of the mother for weight loss</td>
<td>.18*</td>
<td>.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence of the father</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments of the father about physical appearance, nutrition, and physical exercise</td>
<td>-.16*</td>
<td>6.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgment of others and encouraging weight loss by the father</td>
<td>.10</td>
<td>.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgment of others and encouraging weight gain by the father</td>
<td>.07*</td>
<td>.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model of behavior</td>
<td>.08</td>
<td>.90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R = .63

Legend. β – Standard regression coefficient; S – standard error of regression; ΔR² - change in coefficient of determination value (contribution of a single group of predictors to the explained variance); R² – coefficient of determination (total contribution of predictors to the explained variance); R – coefficient of multiple correlation; * p < .05
By successive inclusion of control variables of the observed partial contribution of parental predictors (influence of the mother and the father) on body image in the second group of predictors, the value of determination coefficient significantly rises, at which the percentage of the proportion of variance significantly increases by 12% \( (\Delta R^2 = .12) \). The second regression function obtained, with a relevant probability, explains the criterion, even though only certain predictor variables (feedback of the mother regarding physical appearance, nutrition, and physical exercise; judgment of others and encouragement of the mother for weight loss; feedback of the father regarding physical appearance, nutrition, and physical exercise; judgment of others and encouragement of the father to lose weight; judgment of others and father encouragement for weight gain, and model of behavior) are significant predictors of body dissatisfaction. Subjects who perceive that parent give positive feedback regarding their physical appearance, nutrition, and physical exercise are more satisfied with their body. However, subjects who receive negative feedback from their parents through judgment of others and encourage them to lose weight are less satisfied with their body. In addition, body dissatisfaction is encountered among those adolescents who report frequent encouragement to increase body bulk by their fathers, and through their model, stimulate weight loss, weight gain and increase of body bulk.

In table 5, the correlation between predictor variables and variables for change in physical appearance among male and female adolescents is shown. It is observed there is a statistically significant and weak positive correlation only between variables general body dissatisfaction and body-image importance \( (r = .18, \ p \leq .05) \). The obtained positive and stochastically significant correlation point to a tendency of same direction (both either linearly rise or fall) in the examined adolescent population. The coefficients of correlation of other variables have values of zero, which represents the nonexistence of linear correlation between variability of analyzed phenomena, i.e. that on the basis of knowing values of one variable, no conclusions can be drawn of the values of the other.

**Table 5.** Pearson’s coefficients of correlation between predictor variables and variables for the change in physical appearance

<table>
<thead>
<tr>
<th>Variables</th>
<th>Gender</th>
<th>General body dissatisfaction</th>
<th>body-image importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>General body dissatisfaction</td>
<td>.18*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>body-image importance</td>
<td>-.05</td>
<td>.03</td>
<td>-</td>
</tr>
</tbody>
</table>

*p \leq .05
DISCUSSION

Results of the conducted hierarchical regression model have shown that significant predictors of general body dissatisfaction among adolescents of both genders are represented by the following variables: a) parental feedback regarding physical appearance, nutrition, and physical exercise; b) teasing and stimulation for weight loss by both parents; c) teasing and stimulation for increasing body bulk by the father; and d) behavioral model of the father. Subjects who experience positive feedback regarding physical appearance, eating habits, and physical activity from both parents are more satisfied with their body. On the contrary, adolescents who receive negative feedback from their parents, in the form of teasing, encouraging them to lose weight, are unsatisfied with their body. This dissatisfaction is also observed in those adolescents who report that their fathers frequently stimulate them to increase muscle mass, and through their model of behavior, stimulate weight loss, weight gain, and increase muscle mass. Additionally, it is necessary to point out that gender has a relevant moderating contribution to the relations of perceived critics regarding physical appearance, nutrition and physical exercise, as well as general body dissatisfaction, from the mother. This is shown by the fact that in female adolescents, the level of general body dissatisfaction is reduced if mothers give positive feedback regarding their physical appearance, nutrition, and physical exercise, while in male adolescents, significant changes are not observed. This obtained finding in our research is, despite belief, the only significant contribution of gender to the relations of the experienced sociocultural impacts and general body dissatisfaction. It was expected that gender would determine the relations of the observed sociocultural impacts on body image with general body dissatisfaction, and that correlation of the experienced sociocultural influences on body image directed toward weight loss with general body dissatisfaction among female adolescents would be greater than in male adolescents. On the other hand, the correlation of the observed sociocultural influences on body image focused on increasing body and muscle mass with general body dissatisfaction was expected to be much higher among male adolescents in relation to female adolescents. However, our results suggest that sociocultural influences on body image that are perceived by both male and female adolescents have no significant effects on their amount of body satisfaction when observing differences among gender. This observation illustrates that the adolescents of both genders experience an identical level of pressure and critic regarding their physical appearance28.

Results of this research are consistent with studies which determined that direct feedback of both parents regarding the body mass of their child is correlated with body dissatisfaction\textsuperscript{29}. The authors\textsuperscript{30} have established that female adolescents with eating disorders feel pressured from parents in comparison to adolescents of same age without eating disorders. Also, research\textsuperscript{31} has shown that parental stimulation for dietary restrictions is correlated with body dissatisfaction of their daughters in the period of late adolescence. In accordance with previous findings, we observed that subjects from our sample who more frequently experience positive feedback from their parents regarding their physical appearance, nutrition and physical activity, are more satisfied with their body. Conversely, those subjects who experience teasing and criticism regarding physical appearance from both parents, and encouragement for increasing muscle mass from fathers, are much more dissatisfied with their body.

Although the findings\textsuperscript{32} turn to the fact that the contribution of parents is important to the behavior and experiences that relate to body image and body mass, findings regarding the intensity and the way in which the parental contribution is achieved on body image are not entirely complementary. For example, some studies established that the influence of the mother has more intense consequences on the development of body image among female adolescents, while in other studies, the influence of the father is found to be more important in development of body image\textsuperscript{33}. Findings in our study are only partially in accordance with the mentioned results, since they point out that influence of the mother and the father on body image have equal contributions on body dissatisfaction among adolescents of both genders, i.e. parental influence is not different when it comes to gender. The exception is the previously noted finding regarding how the criticism of the mother regarding physical appearance, 

\begin{itemize}
  \item \textsuperscript{29} Jerica M. Berge, Craig Meyer, Richard F. MacLehose, Renee Crichlow and Dianne Neumark-Sztainer, „All in the family: Correlations between parents’ and adolescent siblings’ weight and weight-related behaviors”, Journal of Obesity 23–4 (2015): 833.
  \item \textsuperscript{31} Elizabeth K. Towner, Jennifer Reiter-Purtill, Richard E. Boles and Meg H. Zeller, „Predictors of caregiver feeding practices differentiating persistently obese from persistently non-overweight adolescents”, Appetite 84 (2015): 120.
  \item \textsuperscript{32} Julia Fredrickson, Peter Kremer, Boyd Swinburn , Andrea de Silva and Marita McCabe, „Weight perception in overweight adolescents: Associations with body change intentions, diet and physical activity“, Journal of Health Psychology 20–6 (2015): 774.
\end{itemize}
nutrition, and physical exercise on general body. In female adolescents, there is less body dissatisfaction if there is positive feedback of the mother regarding their physical appearance, nutrition and physical exercise, while in male adolescents, significant changes are not observed. This finding illustrates a greater sensitivity of female adolescents to criticism by their mothers regarding physical appearance, eating habits, and level of physical activity, which significantly impacts the level of body satisfaction in comparison to male adolescents, in whom body dissatisfaction occurs almost independently from positive or negative feedback from the mother. This correlates with the results in which the contribution of the mother has more intense consequences on the development of body image among female adolescents. These findings turn the attention to the fact that comments of the mother regarding physical appearance, nutrition and physical exercise can be risk factors for body dissatisfaction among girls.

In addition, parents who emphasize the significance of their own physical appearance by having strict diets and expression of discontent on their own physical appearance can contribute to the development of the same phenomena in their adolescent children of both genders, while fathers, through a model of their behavior, can encourage their sons to physical activity in order to transform their body. The authors conclude that mothers who take rigorous care of their body mass contribute to development of identical phenomena among adolescents of both genders, which was not confirmed in our study. Findings in this research are only partially in accordance with the mentioned results. Regardless of the fact that in our sample, those adolescents who more frequently encounter rigorous paternal behavior in terms of dietary restriction and body mass (both weight loss and gain) are less satisfied with their body, paternal model of behavior did not exhibit as a relevant determinant of body dissatisfaction among subjects. This finding concluded that dietary habits of both parents are not important predictors of body dissatisfaction of their children in the adolescent age. These

findings can be explained by insufficient consideration of parents during adolescence. Simultaneously, the authors\textsuperscript{38} have identified that parental stimulation on dietary restrictions are in direct relation with body dissatisfaction in their female children, but despite these findings, they did not establish interactions between dietary restrictions of parents and adolescent daughters, which is partially in accordance with findings of our research.

CONCLUSION

By summing the results obtained in this transverse research, the following conclusions can be drawn:

1. The applied measuring instruments on our sample (Body Image and Body Change Inventory, and Perceived Sociocultural Influences on Body Image and Body Change Questionnaire) have high reliability of internal consistency.

2. Female adolescents give much more credit to opinion of their mothers regarding their physical appearance than male adolescents. Teasing and stimulation for muscle mass increase from both parents has a greater effect on male adolescents rather than female.

3. Male and female adolescents, who experience positive feedback from their parents regarding physical appearance, nutrition, and physical activity, are more satisfied with their body, while those who receive negative feedback, those who are encouraged to lose weight, and those who are frequently motivated to increase their muscle mass by their fathers, are less satisfied with their physical appearance. Additionally, model of behavior expressed by the father, in which the example of weight loss and increase in muscle mass is expressed, is also a factor in body dissatisfaction among adolescents of both genders.

4. Gender is a significant indirect determinant of the relation between general body dissatisfaction and feedback of the mother regarding physical appearance, nutrition, and physical exercise. In female adolescents, the level of general body dissatisfaction decreases proportionally to the amount of positive feedback of the mother regarding physical appearance, nutrition and physical exercise, while in male adolescents, this moderating effect remains at an approximately same level.

Theoretical implications of our paper comprise evaluation of an already existing theoretical model of prediction of gender and sociocultural impacts of parents on the general body dissatisfaction in Serbian adolescents. The practical contribution of this study is that it can potentially aid in defining directions for designing preventive and interventional educational school programs which would encompass influence of parents as relevant factors (both risk and protective) of body dissatisfaction during adolescence, in order to provide help and prevent numerous adversities which can occur due to characteristic preoccupations of physical appearance and body dissatisfaction.

The main methodological limitation of this study is its correlational outline which does not enable us to draw conclusions of the cause-and-effect relationships between variables. Additionally, there is a possibility that sociocultural impacts have a far greater influence on those adolescents who are unsatisfied with their body, in comparison to those who do not feel this way. Moreover, it is possible that different sociocultural contributions cause, develop, and maintain body dissatisfaction in the period of adolescence. Finally, limitations of this study include the use of only one item, for ex. Evaluation of body satisfaction and the significance of body image which adolescents form based on the opinion of both the mother and the father regarding their physical appearance. These limitation factors reduce the ability to generalize the obtained results significantly, and should be, therefore, interpreted with caution.

Considering the fact that only perceived sociocultural influences on body image experienced by adolescents were evaluated, future longitudinal research should turn the attention to a more detailed investigation of experiences of parents regarding their individual contribution to the body image of their children. Also, beside the influence of parents, it is necessary to evaluate the correlation of other factors (classmates, media, as well as the influence of siblings) which can have an intense influence on body (dis)satisfaction in adolescents of both genders. Finally, in order to obtain a more complete view into the features of body dissatisfaction in late adolescence, as well as negative influences on body image, it is necessary to use qualitative methodology, for ex. Conduction of focus groups or semi-structured interviews with a smaller number of subjects.

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СОЦИОКУЛТУРНИ УТИЦАЈИ РОДИТЕЛА НА НЕЗАДОВОЉСТВА ТЕЛОМ КОД АДОЛЕСЦЕНТА

САЖЕТАК

Основни циљ овог истраживања био је да се испита предиктивност социокултурних утицаја радитеља на опште незадовољство телом код њихове деце у адолесценцији. Узорак је чинио (N = 228) ученика/-ца из Србије, узраста 16–19 година [17.30 ± 1.38 година]. У овој студији примењена су два мерна инструмената: Инвентар слике тела и промене физичког изгледа и Упитник перцепирано социокултурних утицаја на слику тела и промену физичког изгледа. Израчунате вредности Кронбах алфа коefицијента (Cronbach's Alpha Coefficient) указују на задовољавајућу интерну консистентност и валидност мерних инструмената, што је адекватно налазима до којих су дошли и други аутори, као и њихову применљивост и на српској популацији. У обради података примењене су методе дескриптивне, Пирсонов коефицијент корелације (r), и хијерархијска регресионана анализа за ниво вероватноће (p-вредност ≤ .01 или ≤ .05). Према резултатима корелационе анализе, постоји статистички значајна и слаба позитивна повезаност између предикторских варијабли опште незадовољство телом и важност слике телом (r = .18, p ≤ .05), док повезаност између осталих варијабли није сигнфикантна. Примењени линеарни мултиваријантни регресиони модели показао је на нивоу значајности (p ≤ .05), да предикторске варијабле статистички значајно објашњавају укупно 22% варијансу опште незадовољства телом. Утврђено је да варијабле (женски пол, као и парцијални опажени социокултурни утицаји родитеља на слику тела и промену физичког изгледа) представљају сигнфикантне предикторе општег незадовољства телом у касној адолесценцији. Добијени налази у овом истраживању углавном су у складу са резултатима у ранијим студијама. У раду, расправљено је о теоријским и практичним импликацијама добијених емпиријских резултата. У циљу дефинисања предиктивности социокултурних фактора родитеља на опште незадовољство телом код њихове деце, нужна су даља лонгитудинална истраживања у адолесентској популацији.

Кључне речи: адолесценција, физички изглед, незадовољство телом, социокултурни утицаји

СОЦИОКУЛЬТУРНОЕ ВЛИЯНИЕ РОДИТЕЛЕЙ НА НЕУДОВЛЕТВОРЕННОСТЬ ПОДРОСТКОВ СВОИМ ТЕЛОМ

АННОТАЦИЯ

Основная цель данного исследования заключалась в оценке социокультурного влияния родителей на общее недовольство своим телом среди их детей-подростков. Выборку составили (n = 228) подростки мужского
и женского пола в возрасте 16-19 лет. В данном исследовании были рассмотрены: образ тела и изменения тела, а также оценка социокультурных влияний на образ тела и изменения тела. Данные факторы показывают высокую надежность их внутренней согласованности, что делает их применимыми для сербского населения. Согласно результатам корреляционного анализа, существует слабая корреляция между предикторной переменной (влияние матери и влияние отца) и критерием общей неудовлетворенности телом.

Применение регрессионного анализа показало, что предикторная переменная определяет 22% общей дисперсии по общей неудовлетворенности телом. Было также установлено, что переменные (женский пол, социокультурное влияние родителей на образ тела и изменения внешности) являются значимыми предикторами общей неудовлетворенности телом в старшем подростковом возрасте.

Большинство полученных выводов в соответствии с результатами предшествующих исследований дают возможность наметить пути для прогнозирования отношения к своей внешности и влияния социокультурных факторов на восприятие своего тела, а также разработать программы профилактики в отношении неудовлетворенности телом у подростков обеих полов.

Ключевые слова: подростковый возраст, внешность, недовольство телом, социокультурное влияние

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