ORIGINAL ARTICLE / ОРИГИНАЛНИ РАД

The stigma of obesity in adolescence

Aleksandra Stojadinović1, Snežana Lešović2, Željka Nikolašević3, Vojislava Bugarski-Ignjatović4
1University of Novi Sad, Faculty of Medicine, Institute of Health Care of Children and Adolescents of Vojvodina, Novi Sad, Serbia;
2Zlatibor Special Hospital for Diseases of Thyroid Gland and Metabolic Diseases, Zlatibor, Serbia;
3University of Novi Sad, Faculty of Philosophy, Department of Psychology, Novi Sad, Serbia;
4University of Novi Sad, Faculty of Medicine, Neurology Clinic, Clinical Center of Vojvodina, Novi Sad, Serbia

SUMMARY

Introduction/Objective Obese children and adolescents are exposed to stigma and discrimination from peers, teachers, and family, which can lead to numerous health problems, including psychosocial ones. The aim of this study is to determine whether obese adolescents in Serbia are exposed to stigmatization and which are the most common forms of stigmatization they face.

Methods The study included 335 adolescents hospitalized for the treatment of obesity. During hospitalization, weight and height were measured, and body mass index was calculated. Participants independently completed the Questionnaire about Weight-based Stigmatization made for the purposes of this research. The Questionnaire also included questions about the gender and age of the respondents, as well as questions about obesity of their family members.

Results Fifty-nine percent of the participants experienced offence, 19% were teased, 47.5% were the subject of gossip, and 25% were excluded from their peer group; 45% reported that people had prejudice against them. Male adolescents faced overt forms of stigmatization/discrimination significantly more often than female adolescents. Nineteen percent of participants were stigmatized by healthcare workers, and 6% stated that their family was ashamed of their obesity.

Conclusion A significant percent of obese adolescents in Serbia is exposed to a stigma due to their weight, most often to insults, gossip, and social exclusion. Obese adolescents are most often exposed to stigmatization by peers, but there are a significant proportion of adolescents who are exposed to stigma from healthcare workers. It is necessary to educate healthcare workers about the stigma of body weight and its harmful effects and to implement measures to mitigate consequences of stigmatization of obese adolescents, as well as to prevent it.

Keywords: adolescent, obese; obesity, stigma; body weight

INTRODUCTION

Adolescence is the period of transition from childhood to adulthood marked with significant and turbulent changes regarding growth and development, psychological and social development. It is defined arbitrarily as the period from 10 to 19 years of age, and is divided into early adolescence (10 to 13 years), middle (14 to 16 years), and late adolescence (17 to 19 years).

According to the WHO Child Growth Reference Data, children and adolescents who have the body mass index (BMI) z-score between +2 and +3 are overweight, and children who have the BMI z-score of over +3 are obese [1]. The prevalence of obesity is increasing in all age groups, but especially worrisome is the dramatic increase of prevalence of obesity in children and adolescents. Between 1970s and 2012, the prevalence of childhood obesity tripled in the USA and in Canada it increased by 2.5 times [2]. In Serbia, the percentage of overweight children went up from 8.2% to 10.1% in the period between 2000 and 2013, and the percentage of obese children increased by 1.88 times (from 2.6% to 4.9%) [3].

Stigmatized persons are seen as inferior, evil or with serious flaws because of some of their characteristics or because of being members of a particular group. Stigmatization based on body weight includes negative attitudes, beliefs that are manifested through stereotypes, prejudice and rejection of overweight or obese persons [4]. Stigmatization often results in discrimination that includes unfair treatment or acting based on prejudice towards stigmatized persons.

Pediatricians in Serbia are well aware of and successfully resolve somatic problems that are consequences of obesity for many years. In many countries, in addition to the physical problems associated with obesity, considerable attention is paid to stigma and discrimination against obese children and adolescents. There are numerous studies about the stigma and discrimination of obese adults in multiple domains of living, such as work, education, interpersonal relations. More and more research indicates that stigmatization of obesity begins in childhood and continues into adolescence and throughout life. Obese children and adolescents are exposed to stigma and discrimination from peers, teachers and family [5–10].
During adolescence, stigmatization and discrimination based on weight can lead to body dissatisfaction, lower self-esteem, overeating and other unhealthy eating behaviors, eating disorders, depressive symptoms, social isolation, substance abuse, lower academic achievement, lower education, and unsatisfactory interpersonal relationships [11, 12].

Stigmatization is a significant source of stress and can further aggravate the health problems that obese adolescents already face, such as insulin resistance, hypertension, dyslipidemia, chronic inflammation, and the like [13, 14]. Although numerous studies on stigmatization of obese adolescents have been conducted in a number of countries, a similar research has not been conducted in Serbia so far.

The aim of this study is to determine whether obese adolescents in Serbia are exposed to stigma and which are the most common forms of stigmatization they face.

METHODS

The research was conducted at the Center for Prevention and Treatment of Obesity in Children and Adolescents (“Čigotica”, Zlatibor) during 2014 and 2015. Adolescents who were on treatment were involved in the research. The study included 335 adolescents aged 10 to 19 years, 194 (57.9%) girls, and 141 (42.1%) boys. The average age of the participants was 14.27 years (SD = 1.89). One hundred and thirty-three (39.6%) adolescents were in early adolescence, 151 (44.9%) in middle adolescence, and 52 (15.5%) in late adolescence. Forty-seven (14%) participants were overweight, and 289 (86%) were obese.

The adolescents were weighed, their height was measured and the BMI was calculated. For the diagnosis of overweight and obesity the WHO Growth Reference Data were used.

Participation in the study was voluntary. The participants were informed of the aim of the study and gave their written consent to participate in the research. The participants independently completed the Questionnaire about Weight-based Stigmatization, which was prepared by researchers. The questions were formulated according to the forms of stigmatization most often cited in the literature. The following data were collected by the Questionnaire: gender and age of the respondents, obesity of their family members, and participants’ experiences of weight-based stigmatization. The respondents answered by selecting one of the multiple-choice answers on a four-point Likert scale. They had 30 minutes to fill out the Questionnaire.

The data were analyzed using the IBM SPSS Statistics for Windows, Version 20.0 (IBM Corp., Armonk, NY, USA). To show the presence of certain categories or a response, relevant variables were displayed as frequencies and percentages. For the analysis of numerical data, standard procedures of descriptive and comparative statistics were used. Within descriptive statistics, the data are presented in the form of means, standard deviations, and frequencies and percentages. Within the methods of comparative statistics, Student’s t-test was used to test the differences between two independent samples, and for determining the significance of differences between more than two groups, unifactorial variance analysis (ANOVA) was used. The levels of significance were set at p < 0.05 (the difference is statistically significant) and p < 0.01 (the difference is highly significant).

RESULTS

Table 1 shows stigmatization that participants experienced due to overweight/obesity and the incidence of these experiences.

The experience of stigmatization by gender is shown in Table 2. The differences between girls and boys in the average score for each question in the Questionnaire were tested using the Student’s t-test for independent samples. When the entire sample (10 to 19 years of age) was taken into account, the boys were teased or hit because of weight more often than girls. Comparing other forms of stigmatization, there was no statistically significant difference between girls and boys.

The frequency of exposure to various forms of stigmatization of adolescents in the early, middle, and late adolescence was tested using the univariate analysis of variance (ANOVA). There is a statistically significant difference (p = 0.029) between the age groups regarding teasing only. The oldest age group (late adolescence) achieved the highest average score, while participants from the middle adolescence group had the lowest average score. Post hoc comparisons using the Tukey HSD test showed that in terms of exposure to teasing, there is a significant difference between respondents both from the oldest and the youngest age group (early adolescence) in comparison to respondents from the middle adolescence age group.

Student’s t-test was used to test gender differences within age groups, and it was observed that girls in early adolescence (1.84 ± 1.06) reported more often than boys (1.43 ± 0.79) that someone had stared at them because of obesity (t (131) = -2.53; p = 0.014).

Six percent of participant stated that their family was ashamed of their obesity; 222 (66.7%) participants had other obese members in their family (mother, father, or both parents). Between adolescents whose parents are obese and those whose parents are not obese there was no statistically significant difference regarding the feeling of adolescents that their family is ashamed of their obesity. There were no statistically significant differences by age and gender in relation to stigmatization by obese or non-obese parents.

One fifth (19%) of participants experienced stigmatization from healthcare workers on one or more occasions. Girls in late adolescence reported statistically significantly more often than boys of the same age (girls: 1.40 ± 0.00; boys: 1.00 ± 0.81) that a doctor or nurse stigmatized them and commented on their weight (t (50) = -2.30; p = 0.012).

DISCUSSION

Stigmatization and discrimination against obese people represent serious social issues. It has been estimated that...
the prevalence of stigmatization and discrimination against adult obese people in the USA is very high and could be compared to the prevalence of racial discrimination. In the period between 2004 and 2006, 12% of obese people were exposed to discrimination due to obesity and 11% to racial discrimination [15, 16].

A high percentage of participants of our research were exposed to various types of stigmatization and discrimination. Forty-five percent of the participants reported that people had prejudice against them (as being stupid, lazy, etc.), 47.5% of participants were the subject of gossip, 25% were excluded from social life by the peer group, and 14% reported that their obesity ashamed their friends. Bacchini et al. [17] reported that obese children and adolescents were often the subject of gossip among their peers (11.5–14.5%), were ignored (10.1–14.5%) by their peer group or excluded from it or from its activities (14.3–18.5%).

Due to obesity, 59.2% of our participants experienced offense. In contrast, Puhl et al. [18] reported that 83% of adolescents aged 14–18 years in the weight loss treatment-seeking sample experienced insults. According to our results, 19.1% of participants were teased due to their weight. Similar results were reported by Madowitz et al. [19]. These findings are of great importance as teasing and social rejection were connected to psychological problems, lower academic achievements, unhealthy weight control behaviors such as strict dieting, fasting, self-induced vomiting, excessive physical activity, misuse of diet pills, diuretics, and laxatives [19].

### Table 1. Experiences of weight-based stigmatization of participants

<table>
<thead>
<tr>
<th>Question</th>
<th>Never (%)</th>
<th>Once in life (%)</th>
<th>Several times in life (%)</th>
<th>Many times in life (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I was teased that I am fat</td>
<td>80.9</td>
<td>9.3</td>
<td>7.2</td>
<td>2.7</td>
</tr>
<tr>
<td>2. I was insulted because of weight</td>
<td>40.8</td>
<td>15.8</td>
<td>24.4</td>
<td>19.0</td>
</tr>
<tr>
<td>3. I was hit or beaten because of weight</td>
<td>91.7</td>
<td>3.0</td>
<td>1.8</td>
<td>3.6</td>
</tr>
<tr>
<td>4. I was ignored by my peers</td>
<td>76.3</td>
<td>7.8</td>
<td>9.6</td>
<td>6.3</td>
</tr>
<tr>
<td>5. I was excluded from the peer group</td>
<td>75.0</td>
<td>8.3</td>
<td>9.2</td>
<td>7.4</td>
</tr>
<tr>
<td>6. Peers were spreading rumors about me</td>
<td>52.5</td>
<td>14.9</td>
<td>17.3</td>
<td>15.2</td>
</tr>
<tr>
<td>7. Some people have had negative assumptions about me (I am lazy, stupid)</td>
<td>54.8</td>
<td>15.8</td>
<td>18.2</td>
<td>11.3</td>
</tr>
<tr>
<td>8. I encountered some obstacles due to my weight (e.g., the chair was too small for me, I could not jump over the vaulted horse)</td>
<td>59.2</td>
<td>13.4</td>
<td>20.2</td>
<td>7.1</td>
</tr>
<tr>
<td>9. The doctor or nurse behaved badly towards me and commented on my weight</td>
<td>80.9</td>
<td>9.3</td>
<td>7.2</td>
<td>2.7</td>
</tr>
<tr>
<td>10. My family is ashamed of my weight</td>
<td>94.0</td>
<td>2.1</td>
<td>1.5</td>
<td>2.4</td>
</tr>
<tr>
<td>11. My friend is ashamed of my weight</td>
<td>85.7</td>
<td>7.4</td>
<td>4.5</td>
<td>2.4</td>
</tr>
<tr>
<td>12. I was stared at</td>
<td>60.1</td>
<td>14.6</td>
<td>15.8</td>
<td>9.5</td>
</tr>
</tbody>
</table>

### Table 2. Stigmatization experiences of participants by gender

<table>
<thead>
<tr>
<th>Question</th>
<th>Gender</th>
<th>Mean</th>
<th>SD</th>
<th>t-test</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I was teased that I am fat</td>
<td>male</td>
<td>2.80</td>
<td>1.04</td>
<td>23.11</td>
<td>0.021*</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>2.53</td>
<td>1.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I was insulted because of weight</td>
<td>male</td>
<td>2.28</td>
<td>1.16</td>
<td>0.863</td>
<td>0.389</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>2.17</td>
<td>1.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I was hit or beaten because of weight</td>
<td>male</td>
<td>1.29</td>
<td>0.79</td>
<td>2.710</td>
<td>0.007*</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>1.09</td>
<td>0.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I was ignored by my peers</td>
<td>male</td>
<td>1.54</td>
<td>0.96</td>
<td>1.418</td>
<td>0.157</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>1.40</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I was excluded from the peer group</td>
<td>male</td>
<td>1.58</td>
<td>1.03</td>
<td>1.404</td>
<td>0.161</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>1.43</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Peers were spreading rumors about me</td>
<td>male</td>
<td>1.89</td>
<td>1.16</td>
<td>-0.890</td>
<td>0.374</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>2.00</td>
<td>1.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Some people have had negative assumptions about me (I am lazy, stupid)</td>
<td>male</td>
<td>1.87</td>
<td>1.12</td>
<td>0.088</td>
<td>0.930</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>1.86</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I encountered some obstacles due to my weight (e.g., the chair was too small for me, I could not jump over the vaulted horse)</td>
<td>male</td>
<td>1.80</td>
<td>1.02</td>
<td>0.773</td>
<td>0.440</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>1.72</td>
<td>1.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. The doctor or nurse behaved badly towards me and commented on my weight</td>
<td>male</td>
<td>1.30</td>
<td>0.68</td>
<td>-0.448</td>
<td>0.655</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>1.33</td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. My family is ashamed of my weight</td>
<td>male</td>
<td>1.14</td>
<td>0.55</td>
<td>0.546</td>
<td>0.586</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>1.11</td>
<td>0.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. My friend is ashamed of my weight</td>
<td>male</td>
<td>1.27</td>
<td>0.64</td>
<td>0.964</td>
<td>0.336</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>1.21</td>
<td>0.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I was stared at</td>
<td>male</td>
<td>1.63</td>
<td>1.01</td>
<td>-1.714</td>
<td>0.087</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>1.83</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Buccianeri et al. [20] reported that weight-based teasing and harassment were more prevalent than teasing and harassment associated with race, gender, or socio-economic status. Weight-based teasing was associated with lower self-esteem and body satisfaction. According to our results, there were no significant differences between girls and boys in prevalence of weight-based teasing. However, results from the USA clearly show that female participants were teased due to their weight significantly more often [20].

When comparing the prevalence of any form of weight-based stigmatization in the early, middle, and late adolescence, the participants who belonged to the late adolescent group reported weight-based teasing most frequently. In contrast, bearing in mind the fact that late adolescence is a period when young people are becoming significantly more tolerant of differences and physical impairments, show more empathy and are better socialized, generally have better insight into their own values and qualities regardless of obesity, it would be expected that teasing often occurs as unpleasant experience during the early and middle, but not in late adolescence. Haines et al. [21] reported results similar to our own – teasing due to weight remains frequent throughout adolescence until young adulthood and it even becomes more frequent in male adolescents in this age group.

During the research, the participants have been asked if and how many times they had an unpleasant weight-based experience, but the age when they were exposed to these experiences was not the subject of our research. Therefore, we are not able to draw any conclusions as to whether teasing as the most commonly reported type of stigmatization has been reported by participants belonging to the oldest age group because they had the longest period to be teased (cumulative effect) or because they reported teasing as the type of stigmatization that affected them the most and as a result had been memorized the most and the longest.

Every seventh participant (14%) reported that his or her friends were ashamed of him or her due to obesity and it points to the stigmatization of obese adolescents by peers, as well as their view of obese adolescents as inferior compared to others. We did not find similar research in the available literature.

Eight percent of our participants reported to have been victims of physical violence. Bacchini et al. [17] also point out the fact that overweight and obese children and adolescents are far more likely to be victims of physical violence than their counterparts with healthy weight.

When all weight-based negative experiences are taken into account, male adolescents faced overt forms of stigmatization such as verbal insult and physical violence significantly more often than female adolescents. Female adolescents, especially in the early adolescence, reported non-verbal forms of stigmatization (“they stared at me”) significantly more often. Pearce et al. [6] also came to the conclusion that male adolescents reported overt stigmatization such as weight-based teasing and harassment more often, while female adolescents reported relational peer victimization such as exclusion more often.

It is well known that adolescents are preoccupied with their appearance and it is disturbing if they are different from their peers. It is likely that female adolescents are more vulnerable to non-verbal signals than male adolescents, therefore reporting more often that somebody stared at them. Eisenberg et al. [22] and Rojo-Moreno et al. [23] reported that teasing due to body weight is reported more often by female than by male adolescents. It is necessary to carry on additional research in order to find out whether there are differences in exposure of girls and boys to stigmatization or it is a matter of difference in their perception and vulnerability to certain forms of stigmatization.

Six percent of participants stated that their family felt ashamed because of their body weight and there was no significant difference when it comes to either gender or age. Leme et al. reported [24] that 39.9% female adolescents experienced weight-based teasing by family members. These results cannot be directly compared to the results of our research, but it seems that families in Serbia are more tolerant in regard to adolescents’ obesity or are not aware of the problem.

If a parent feels guilty for an overweight child, especially if this feeling is accompanied by unsuccessful attempts to reduce body weight, it is possible that the parent expresses his anger, feeling of helplessness and frustration through stigmatizing attitudes and behaviors such as criticizing and negative comments about their overweight child. Berge et al. [25] stated that unpleasant conversations in the family referring to body weight are more often initiated by mother and older siblings than by other family members. Conversations initiated by mothers focused on negative health consequences of being overweight, while conversation initiated by fathers and siblings mainly focused on appearance and had a form of teasing.

According to the findings of our research there was no significant difference in stigmatization between families of our participants whose parents were overweight and those whose parents were of healthy weight.

Nineteen percent of our participants had unpleasant experiences with healthcare workers. In the period of late adolescence, girls reported significantly more often than boys that health workers misbehaved towards them. It is possible that girls are more vulnerable than boys to stigmatizing behavior of healthcare workers in this period and that they easily recognize these forms of stigmatization. Findings of different researchers point out that doctors and other healthcare workers have strongly negative attitudes towards overweight people [26, 27, 28]. Many healthcare workers believe that overweight patients are lazy and lacking self-discipline and are personally responsible for their weight because they do not stick to the prescribed treatment and therefore deserve to be the subject of offensive jokes.

Despite the abundance of data about stigmatization of obese adult people by healthcare workers, we found only two papers about negative attitudes and anti-fat bias among healthcare workers who work with children and adolescents. According to the findings of Neumark-Sztainer et al. [29], more than 50% of school nurses have prejudice and negative attitudes towards overweight persons. Garcia et al. [30] also report weight biased attitudes towards obese pediatric patients among pediatric nurses and clinical support staff.
This research has been carried out as a cross-sectional study and has included only adolescents who were on a hospital treatment of obesity. It would be useful to research prevalence of weight-based stigmatization in the general population in Serbia. Carrying out a longitudinal research would make it possible to monitor stigmatization based on body weight during adolescence in different age groups.

CONCLUSION

A significant percent of obese adolescents in Serbia are stigmatized due to their weight. They are most often exposed to the stigmatization by peers, but there are a significant proportion of adolescents who are exposed to stigma from healthcare workers, as well as parents.

REFERENCES


Стигма гојазности у адолесценцији

Александра Стојадиновић1, Снежана Лешовић2, Жељка Николашевић3, Војислава Бугарски-Игњатовић4

1Универзитет у Новом Саду, Медицински факултет, Институт за здравствену заштиту деце и омладине Војводине, Нови Сад, Србија; 2“Специјална болница за болести штитасте жлезде и болести метаболизма „Златибор”, Златибор, Србија; 3Универзитет у Новом Саду, Филозофски факултет, Одсек за психологију, Нови Сад, Србија; 4Универзитет у Новом Саду, Медицински факултет, Клиника за неурологију, Клинички центар Војводине, Нови Сад, Србија

САЖЕТАК
Увод/Циљ Гојзна деца и адолесценти су изложени стигматизацији и дискриминацији од вршњака, просветних радника и породице, што може да доведе до бројних здравствених и психосоцијалних проблема. Циљ овог истраживања је да утврди да ли су и колико гојазни адолесценти у Србији изложени стигматизацији и који су најчешћи облици стигматизације којима су изложени.

Методе Укључено је 335 адолесцената хоспитализованих због гојазности. Свима је измерена телесна маса и висина, израчунат је индекс телесне масе и самостално су попунили Упитник о стигматизацији због гојазности, који је сачињен за потребе овог истраживања. Упитник је садржао и податке о полу, узрасту испитаника и гојазности других чланова породице.

Резултати Доживело је увреде 59% испитаника, 19% је задиривано, 47,5% је било предмет огаоварања, а 25% искључено из вршњачке групе; 45% испитаника је навело да су други имали предрасуде о њима. Адолесценти су чешће од адолесценткиња били изложени отвореној стигматизацији/ дискриминацији као што су увреде или физичко насиље. Од здравствених радника је стигматизовано 19% испитника, а 6% је навело да се породица стиди њихове гојазности.

Закључци Значајан процент гојазних адолесцената је изложен стигматизацији, најчешће у виду увреда, огаоварања и искључивања из вршњачке групе. Најчешће су изложен стигматизацији од вршњака, али је значајан удео доживео стигматизацију од здравствених радника.

Кључне речи: адолесцент, гојазан; гојазност; стигма; телесна маса