

Original Article

Health ratings for underweight, overweight and obese adolescents: disparities between adolescent's own report and the parent's report

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In many Asian countries, overweight and obese children are sometimes considered healthier than their underweight or normal weight counterparts. Using Taiwan as an example, this research aims to examine the relationship between inappropriate weight and self-rated health (SRH) for adolescents, and inappropriate weight and the parent's impression of their adolescent's general health. We analyzed data from 1,879 adolescents (933 boys and 946 girls) from the third year (2003) of a panel survey conducted by the Academia Sinica of Taiwan. Adolescents were identified as underweight, normal weight, overweight and obese using body mass index (BMI). Kappa statistic was used to determine agreements between adolescent's own report and their health as reported by their parent. Logistic regression was used to determine odds of reporting reduced health by adolescents with inappropriate weight. A separate regression was carried out using the parent's reports for these adolescents. We found that underweight boys were more likely to report reduced health (OR=2.15, $p<0.01$). Overweight girls had lower odds of reporting reduced health compared with normal weight girls (OR=0.42, $p<0.01$). Parents were more likely to report reduced health for underweight girls (OR=2.10, $p<0.01$). For boys, parents were less likely to report reduced health for overweight boys compared with reports for normal weight subjects (OR=0.51, $p<0.01$). Being underweight is associated with poor perceived health by both the adolescents and their parents. This contrasts with overweight and obesity, which are not. Health educational programs could help in adjusting perceptions concerning the health consequences associated with overweight and obesity.

Key Words: adolescent, thinness, obesity, parent, health

INTRODUCTION

Childhood obesity has increased rapidly in Asian countries as these countries begin to Westernize their lifestyle habits.¹ In many Asian countries, overweight and obese children are sometimes considered healthier than their underweight or normal weight counterparts since fatter children are perceived to be more likely to survive undernourishment and diseases. It is thus important to determine the relationship between inappropriate weight and perceived health in Asian countries. Previous research has investigated the relationship between weight and self-rated health (SRH) for adults.²⁻⁴ However, such a relationship is yet to be established for adolescents. In addition, when adolescents are the subjects of interest, a parent or guardian is often used as a proxy rater since children and adolescents are sometime considered unreliable respondents.⁵ Other than being proxy raters, parents, in contrast to physicians as raters, are the adults with whom the adolescents have most frequent contacts, and if any health care or behaviour change is to be initiated for the adolescents due to an inappropriate weight, it will probably have to be pushed forward by these adults. It is thus important to compare ratings of health by inappropriately weighted adolescents with health ratings by their parents. Underweight, overweight and obesity can be considered some of the most serious public health concerns to appear

in recent years,^{6,7} and the prevalence of these states has increased for adolescents in many countries over the past decade.⁷⁻⁹ Inappropriate weight is associated with many adverse health consequences for adolescents. For example, overweight and obesity for adolescents are related to obesity in adulthood, depressive symptoms, a lower quality of life and the development of cardiovascular risk factors in the future,¹⁰⁻¹³ while underweight is associated with mortality and survival during disease.^{7,14} Though the relationship between inappropriate weight and adverse health effects is clear for adolescents, the link between inappropriate weight and SRH is not. SRH is important because it is a measure of how a person perceives his health. Previous studies assessing the psychological health conditions of obese persons are over reliant on the physicians' interpretations; proper assessment of health should also include health as interpreted by the individual themselves.³ Furthermore, for adolescents with inappropriate weight, how

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their perceptions of health differ from that of their parents, who are often used as proxy raters, is yet to be determined.

Health ratings by parents and ratings by children and adolescents have been investigated outside the realm of SRH and inappropriate weight. Leon, et al,¹⁵ for example, investigated the consistency between parent rated behavioural problems for depressed children and the rating by the children themselves; they found that the similarities between the parties was low. Wake and Hesketh used a sample of 128 parents and 71 adolescents and found that parents rated their child's health lower than a normative sample if the adolescent had diabetes, while these adolescents reported their own health similar to that of a normative sample.¹⁶ Some research analyzed the relationship between ratings by children of their health-related quality of life (HRQoL) as made by their parents and by the children themselves, and found that there is higher similarity in HRQoL ratings between parents and children with chronic illness compared to parents and healthy children.¹⁷ However, very little data exist to date concerning the relationship between inappropriate weight and SRH for adolescents and their health as perceived by their parents. For adults, obesity is associated with a lower SRH.²⁻⁴ For adolescents, available evidence showed that inappropriate weight is associated with lower self-esteem and global self-worth and with a lower health-related quality of life.^{18,19} Underweight is associated with emotional problems among boys.²⁰ In order to provide insight into the relationship between inappropriate weight and SRH for adolescents, we examined a database that consisted of 1,879 adolescents and analyzed this in relation to their parents' perception of the adolescents' health.

MATERIALS AND METHODS

Data

We used the data from the third year (2003) of the Youth Project, which was a panel survey conducted by the Academia Sinica of Taiwan in 2001. Only data from 2003 were analyzed because information on weight and height was only available in this year's survey. A multi-stage stratified sampling method was used for this sample. The various criteria used for the sampling included urbanization degree, proportion of student population in each stratum, and average class size in each stratum. A total of 29 sub-regions were obtained. Classes were chosen at random within each stratum. Once a class is chosen, all students within the class as well as their parents were interviewed. Overall, 81 classes were chosen from 40 schools (16 from Taipei City, 15 from Taipei County and 9 from Yi-Lan County). The survey consists of 2,652 students who were at the first year of junior high school (mean age=15.3 years). Both the student and one of the parents of each chosen individual were interviewed. Only subjects with complete data for all the variables were used in the analysis, and this gives us a final sample of 1,879 subjects (933 boys and 946 girls). Since the number of subjects decreased largely after we excluded those with missing values for any of the variables, it is necessary to determine whether the final sample differs in distribution from that of the original database. To do so, we calculated the distribution of each variable, as shown in Table 1, by gender and the differences in means or percentages of

each variable between the final database (n=1,879) and the original database (n=2,652) were less than 1.5% for

Table 1. Sample characteristics

	Boys	Girls	p-value [†]
n (Total=1879)	933	946	
Height (cm)	168.3±6.4	158.8±5.5	**
Weight (kg)	60 ± 12.7	51.4 ± 8.7	**
Body mass index (kg/m2)	21.1 ± 3.9	20.4 ± 3.1	**
Weight category (%)			
Underweight	7.4	8.2	
Normal weight	67.0	81.5	**
Overweight but not obese	17.7	8.4	**
Obese	5.0	1.9	**
Self-rated health by adolescents (%)			
Excellent	18.4	8.5	**
Very good	48.3	38.6	**
Average	29.4	42.8	**
Poor	3.4	9.7	**
Very poor	0.4	0.4	
Adolescent health reported by parents (%)			
Excellent	39.0	33.6	*
Very good	38.0	40.7	
Average	20.5	22.6	
Poor	2.3	2.7	
Very poor	0.2	0.3	
Maternal education (%)			
Primary school or below	19.5	21.9	
Junior high school	29.0	24.9	
Senior high school	24.4	22.3	
Technical school	17.6	23.9	**
University or above	10.0	7.5	
Parent self-reported health (%)			
Excellent	25.2	24.8	
Very good	36.0	37.2	
Average	31.3	32.1	
Poor	6.5	5.1	
Very poor	1.5	1.3	
Symptom score	3.83± 3.81	5.39± 4.00	**

** $p < 0.01$, * $p < 0.05$

[†] p values from t-test for the continuous variables and from a Fisher's exact test for the categorical variables. These tests compared the variables by sex.

all variables. We thus may assume the missing values are at random and should not affect the results of the analysis.

For the student survey, a questionnaire was filled out in the classroom by each adolescent. The parent survey was conducted at the student's home, with a questionnaire being filled out by one of the parents (either the father or the mother) of the adolescent. If neither parent was available, the main guardian of the adolescent was asked to fill out the questionnaire. The adolescents were asked to report their height and weight at the date of the survey, and body mass index (BMI, kg/m²) was calculated as weight in kilograms divided by height in meters squared.

In terms of SRH, the adolescents were asked the question "How do you rate your general health?" and the respondent can choose from "Excellent", "Very good", "Average", "Poor" and "Very poor". The parent was asked to rate the general health of the adolescent using a similar question, "How do you rate this child's general health?" with the same five responses named above available. The parent was also asked to rate their own health using the question "How do you rate your general health?", also with the five responses named above. This study was approved by the Academia Sinica, Taiwan.

Definition of underweight, overweight and obesity

Overweight and obesity were defined using the international standard for children and adolescents.²¹ This standard was developed for the purpose of international comparison for child overweight and obesity studies and was calculated based on the BMI of children from six large nationally representative cross sectional surveys, including Brazil, Great Britain, Hong Kong, the Netherlands, Singapore and the United States. Age and sex specific cut-off points for overweight and obesity were deter-

mined by this measure. For more details on this standard, please see Cole, Bellizzi, Flegal, and Dietz.²¹ Given the average age of our subjects (15.3 years), overweight was defined using this standard of $23.6 \leq \text{BMI} < 28.88$ for boys and $24.17 \leq \text{BMI} < 29.43$ for girls. Obesity was defined as $\text{BMI} \geq 28.88$ for boys and $\text{BMI} \geq 29.43$ for girls. Underweight is defined using the recommendation by Cole, Bellizzi, Flegal, and Dietz as $\text{BMI} < 17$ for both boys and girls.²¹

Statistical analysis

Means and standard deviations were calculated for continuous variables (height, weight and BMI). Fisher's exact tests and t-tests were used to assess the differences between variables by sex for categorical and continuous variables, respectively (Table 1).

To see the distribution of adolescent's self-ratings of health and their rating by their parents, we calculated the percentages of responses by each weight categories (Table 2). Following Okosun *et al.*,³ we compared agreement between an adolescent's SRH and the parent's health impression using Cohen's κ (Table 2). Cohen's κ has been used by previous researchers to compare consistency between different raters of health.^{3,22} An absolute κ value of 1 indicates perfect agreement, and a value of zero indicate that agreement was not better than by chance.³

We used logistic regressions to determine the risks associated with a reduced SRH as assessed by the adolescents (Table 3), and reduced health as reported by their parent (Table 4), where reduced health is defined as health ratings not equal to *Excellent* or *Very good*. While Okosun *et al.* defined reduced health as not reporting excellent for the perceived health,³ we exclude those that reported "very good" in identifying those reported re-

Table 2. Adolescent self-ratings and parent's rating by weight categories (%)

	Underweight	Normal weight	Overweight	Obese
n (Total=1879)	174	1396	244	65
Self-rated health by adolescents				
Excellent	11.49	13.25	15.98	12.3
Very good	40.23	43.05	47.54	44.62
Average	39.08	36.25	33.2	36.92
Poor	9.2	7.09	2.87	3.08
Very poor	0.00	0.36	0.41	3.08
Adolescent health reported by parents				
Excellent	24.71	34.96	48.77	49.23
Very good	43.68	39.9	34.84	33.85
Average	28.16	22.2	14.34	16.92
Poor	3.45	2.65	1.64	0.00
Very poor	0.00	0.29	0.41	0.00
p-value	*	**	**	

** $p < 0.01$ and * $p < 0.05$ using Fisher's exact test comparing response between adolescent self-reports and reports from parents.

duced health to make the definition more conservative, since a person may not be sensitive across adjacent responses. Two separate logistic regressions were used for the adolescent's self-reports and reports from parents (hereafter, adolescent regression and parent regression). Adolescents who fall within the "normal weight" category are used as the comparison reference for underweight, overweight and obese adolescents in both regressions. The models were controlled for the mother's educational attainment and the parent's own SRH, since previous research has indicated that the parent's characteristics are closely associated with their children's health,²³⁻²⁶ and parent's own self-ratings of health is closely associated with parent-reported child health.²⁷ Since disease status would affect adolescent's own SRH as well as their parent's impression of their adolescent's general health, it is necessary to control for it in the analysis. Unfortunately, the survey did not record the actual name of the diseases. However, the survey included six questions that asked the adolescents whether they had the following symptoms during the week before the interview: headache, dizziness, muscle pain, insomnia, paralysis or unknown pain, and body infirmity. For each of these six conditions, the adolescent can choose from "never" (0 point), "rare" (1 point), "sometimes" (2 points), "often" (3 points) and "very often" (4 points). To proxy for the disease status, we computed a "symptom score", which is calculated as the summation of the scores from the six health conditions.

Table 3. Agreement between subjects and parents with regard to perceived health for adolescents

Statistics (N=1879)	Underweight	Normal weight	Overweight	Obese
Boys				
κ^\dagger	0.13*	0.07**	0.02	-0.04
Girls				
κ	0.12*	0.04*	0.02	0.22*

** $p < 0.01$, * $p < 0.05$

$\dagger \kappa$ is the Kappa coefficient for the original five categories of responses.

RESULTS

The descriptive analysis of the subjects is presented in Table 1. Boys tended to be taller and heavier than their female counterparts as expected ($p < 0.01$), and their BMI was higher on average ($p < 0.01$). Overweight and obesity represents 17.7% and 5%, respectively, for boys and was much lower for girls (8.4% and 1.9%, respectively). Underweight represented a higher percentage for girls (8.2%) than for boys (7.4%).

Table 2 shows the percentage distribution of response by weight categories. The distribution again showed that adolescents reported poorer health than their parents. Regardless of weight categories, the percentage of parents reporting excellent health is significantly higher than the

Table 4. Odds ratios for reduced self-rated health due to obesity

	Full sample	95% CI	Boys	95% CI	Girls	95% CI
N	1,879		933		946	
Weight category						
Underweight	1.62**	(1.15-2.28)	2.15**	(1.35-3.44)	1.22	(0.74-2.03)
Normal weight	1.00		1.00		1.00	
Overweight but not obese	0.94	(0.69-1.28)	1.47*	(1.00-2.16)	0.42**	(0.25-0.71)
Obese	1.21	(0.70-2.11)	1.24	(0.63-2.43)	1.46	(0.52-4.15)
Adolescent sex	0.52**	(0.43-0.64)				
Mother's education						
Primary school or below	1.00		1.00		1.00	
Junior high school	1.29	(0.96-1.74)	1.68*	(1.07-2.65)	1.03	(0.69-1.55)
Senior high school	1.49*	(1.10-2.03)	1.90**	(1.19-3.01)	1.22	(0.80-1.86)
Technical school	1.85**	(1.35-2.54)	2.16**	(1.31-3.56)	1.65*	(1.08-2.51)
University or above	1.75**	(1.17-2.62)	2.55**	(1.44-4.51)	1.22	(0.67-2.21)
Parent self-reported health						
Excellent	1.00		1.00		1.00	
Very good	1.55**	(1.19-2.02)	1.64*	(1.11-2.45)	1.54*	(1.07-2.21)
Average	1.77**	(1.35-2.33)	1.73**	(1.15-2.59)	1.92**	(1.32-2.80)
Poor	1.93**	(1.22-3.07)	2.39**	(1.28-4.48)	1.52	(0.77-3.02)
Very poor	2.30	(0.95-5.56)	4.27*	(1.36-13.5)	1.02	(0.29-3.61)
Symptom score	1.21**	(1.17-1.24)	1.19**	(1.14-1.23)	1.24**	(1.19-1.29)

** $p < 0.01$, * $p < 0.05$

Table 5. Odds ratios for reduced parent-rated adolescent health due to obesity of adolescents

	Full sample	95% CI	Boys	95% CI	Girls	95% CI
Weight category						
Underweight	1.57*	(1.09-2.28)	1.21	(0.72- 2.03)	2.10**	(1.23- 3.60)
Normal weight	1.00		1.00		1.00	
Overweight but not obese	0.60*	(0.41-0.88)	0.51**	(0.31- 0.84)	0.78	(0.43- 1.41)
Obese	0.64	(0.32-1.27)	0.71	(0.32- 1.55)	0.42	(0.09- 1.91)
Adolescent sex	0.96	(0.76-1.22)				
Maternal education						
Primary school or below	1.00		1.00		1.00	
Junior high school	0.91	(0.65-1.27)	0.69	(0.42- 1.12)	1.17	(0.73- 1.87)
Senior high school	1.09	(0.77-1.53)	0.99	(0.61- 1.59)	1.17	(0.72- 1.91)
Technical school	1.36	(0.96-1.93)	1.16	(0.69- 1.97)	1.54	(0.96- 2.46)
University or above	1.52	(0.98-2.37)	1.10	(0.59- 2.04)	2.13*	(1.12- 4.05)
Parent self-reported health						
Excellent	1.00		1.00		1.00	
Very good	1.67**	(1.16-2.40)	1.70	(0.99- 2.91)	1.62	(0.99- 2.65)
Average	6.20**	(4.40-8.73)	6.28**	(3.80- 10.4)	6.13**	(3.83-9.83)
Poor	5.98**	(3.64-9.82)	5.70**	(2.83- 11.5)	6.29**	(3.07-12.9)
Very poor	4.23**	(1.72-10.4)	3.03	(0.76- 12.0)	5.40**	(1.56-18.7)
Symptom score	1.06**	(1.04-1.09)	1.05*	(1.01-1.10)	1.07**	(1.03-1.12)

** $p < 0.01$, * $p < 0.05$

adolescent's self reports ($p < 0.01$). In addition, underweight and normal weight adolescents are significantly more likely to report poor health than their parents ($p < 0.05$ for underweight individuals and $p < 0.01$ for normal weight individuals).

We used Cohen's κ to assess the degree of agreement between adolescent and parent reports of the subject's health (Table 3). A κ value less than 0.4 can be considered low in concordance in subjective general health ratings.^{3, 22} Based on this cut-off point, the agreement was low regardless of the weight categories for either gender. The degree of concordance tends to decrease with increasing weight for boys. In fact, the kappa coefficient turned negative (indicating agreement is less than what would be expected by chance) for those in the obese category. For girls, the degree of concordance showed a J-shape trend, where κ decreases and then increase with weight.

Using logistic regression models, we estimated gender-specific trends in reporting reduced health of the subjects (not reporting excellent or very good health) by the subjects themselves (Table 4) and by the parent (Table 5), adjusting for maternal education, parent's own health (parent's SRH) and symptom score. For the adolescent's own report, the full sample regression showed that compared with normal weight adolescents, adolescents who were underweight were significantly more likely to report reduced health (OR=1.62, $p < 0.01$), and boys are less likely to report reduced health than girls (OR=0.52, $p < 0.01$). Gender-specific regressions showed that com-

pared with subjects who were normal in weight, boys who were underweight were significantly more likely to report reduced health (OR=2.15, $p < 0.01$). Overweight and obese boys also had higher odds ratios for reporting reduced health (OR=1.47 and OR=1.24, respectively) compared with those who had normal weight, and was significant for overweight ($p < 0.05$). For girls, those who were underweight and obese had higher odds ratios for reporting reduced health (OR=1.22 and OR= 1.46, respectively), though insignificant ($p > 0.05$). However, overweight girls had significantly lower odds of reporting reduced health, compared with normal weight girls (OR=0.42, $p < 0.01$). For both genders, higher maternal education, and bad parental health (parent's own SRH) were significantly associated with reporting reduced health.

In order to determine whether the parent's reports of adolescent's health is associated with the adolescent's weight category, we ran a separate logistic regression with the dependent variable being the perceived health for the adolescents by the parents, and different results were obtained. First, the full sample regression showed that while parents were significantly more likely to report reduced health for underweight adolescents (OR=1.57, $p < 0.05$), parents were less likely to report reduced health for overweight and obese adolescents compared with normal weight adolescents (OR=0.6, $p < 0.05$ for overweight and OR=0.64, $p > 0.05$ for obese). Similar results were obtained from the gender-specific estimations. The odds ratios for the underweight category were greater than 1 for both gender, and this was significant for girls

(OR=2.10, $p<0.01$). For boys, parents were significantly less likely to report reduced health for overweight boys compared with reports for normal weight subjects (OR=0.51, $p<0.01$).

DISCUSSION

Despite research on the relationship between weight and SRH for adults, very little information exists on this relationship for adolescents. In addition, parents are normally used as proxies for adolescents, and how different reports from adolescents are from that of their parents with regard to the health status of adolescents with inappropriate weight remain to be investigated. The importance of SRH as a subjective measure of a person's health status has been widely acknowledged as it is a global summary measure of health,³ and is a good predictor for future health conditions.²⁸

Unlike studies that used obese adults as the study subjects, we found that being underweight is associated with higher odds of reporting reduced health by adolescents themselves as well as by their parents, while overweight and obesity are not associated with reporting reduced health by either the adolescents themselves or their parents. The results may be interpreted in two ways. Firstly, that the underweight adolescents do indeed have the worst health due to health impairment associated with being underweight, or secondly, adolescents and parents simply perceive being underweight as the state with the worst health, and overweight/obesity is actually perceived as healthy. Historically, it has been believed that fat children are healthier since they are more likely to survive undernourishment and infection.²⁹ This concept still exists in many developing countries and especially in parents with a lower level of education. Though this concept may be less prevalent in Western societies today, it is common among many Asia countries. In addition, an estimate showed that the Asian and Pacific Islander population in the United States has increased substantially since the 1980s,³⁰ and two-thirds of US Asians are foreign-born.³¹ Thus it is important not to overlook the health concepts of this group of the population in many Western countries, and their perception concerning overweight and obesity is an important concern for public health. Health educational programs could help to adjust perceptions on the health consequences associated with overweight and obesity, and such adjustments are particularly important for Asians.

We found weak agreement on health status as reported by the subject and their parents. The lack of agreement may be caused by several factors such as age and education, which are most likely to vary between the adolescent and the parent. However this was not investigated in this study.

We found that adolescents tend to report poorer health than that reported by their parent. According to Bailis *et al.*,³² individual differences in sensitivity to certain symptoms (in this case, being inappropriately weighted), and willingness to report these symptoms, would seem to explain better the occurrence of consistently lower or higher SRH than any given health status indicator. Applying this finding to our results, the results suggest that inappropriately weighted adolescents may be more willing

to report their weight problems, as reflected in their SRH, than their parents when it is reflected in the parent's rating of the adolescent's health. Inconsistency among adolescents' self-rated health and that rated by their parents may imply that the parents are not good proxies for adolescents, due to, for example, unawareness of the health conditions of the adolescents. According to Jeffery *et al.*,³³ overweight for children goes largely unrecognized as parents are poor at identifying this state in their children, and such unawareness is more significant for sons than for daughters. This may explain our findings whereby there were significant lower odds of reporting reduced health for overweight boys by parents, but not for girls. In order to reduce the prevalence of inappropriate weight for adolescents, it is first important for the adolescent and parents to realize that being overweight and obese may cause health problems. Although adolescents with inappropriate weight may not necessarily have poor health, nonetheless, conditions such as obesity mimic chronic diseases in many respects.³ The finding that parents actually reported better health than that reported by adolescents may indicate that these adults with whom the adolescents have most frequent contact are not fully aware of the health conditions of the adolescents. In these circumstances, it seems unlikely that the parents are more likely than the adolescents to initiate health care or behavioural changes for the inappropriate weight condition of the adolescents. Previous research also suggested that one of the most frequent cited barriers to the treatment of overweight and obesity among children and adolescents is a lack of parent involvement,³⁴ and such a lack of involvement may be attributed to unawareness by the adults of the problems facing these adolescents.

However, it is important to note that the higher rating of health by parents may be explained in many ways. First, the inappropriate weight condition has not yet caused physical ill health and thus the adolescents may actually have better health than they perceive. Second, it is possible that the inappropriate weight condition does cause some poor physical effects; however, the parents do not feel such conditions are a problem or concern. Our results may partially echo this explanation, where we found while the symptom score turned out to be significant for both the adolescent and the parent regressions, the magnitude of the odds ratios were much smaller in the parent's regression. Third, it is possible that people tend to rate other's health differently. For example, there is evidence that physician rated and patient rated SRH are only weakly correlated.³⁵ The true underlying mechanism causing the lack of concordance between parents and adolescent's rating is yet to be investigated.

The results of this research should be viewed in light of its limitations. First, as with all research using surveys, biases due to survey non-responses and missing values is possible. However, the distributions of the variables in the truncated sample are similar to that of the original sample in this research. Second, the cross-sectional features of the data cannot determine causality. We are unable to determine whether the association between inappropriate weight and perceived health observed is due to actual poor health or other factors such as psychological conditions, social factors or other unobserved confound-

ers. Though we controlled for the symptom score, it nevertheless can not capture all the actual physical conditions of the adolescents. Actual diseases may be more suitable; however disease status was not available in our data. Some research has found that obese individuals can have lower SRH after controlling for levels of morbidity and functional limitations,⁴ and it is possible that obesity could have an impact on one's perceived health even without adverse health consequences.³⁶ In addition, the actual mechanisms through which the disagreement between parent's and adolescents' ratings are unknown and these remain to be investigated. Third, the survey was conducted in Taiwan, and future research should investigate whether similar results can be found in Western countries.

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AUTHOR DISCLOSURES

None declared.

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Original Article

Health ratings for underweight, overweight and obese adolescents: disparities between adolescent's own report and the parent's report

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青少年過輕、過重與肥胖之健康評級：自評與父母評估之差異

在許多亞洲國家，肥胖或過重之孩童會比過輕或正常體重之孩童更被認為健康。本文以台灣為例，探討體重與青少年自評，及父母對青少年子女健康評級之關聯。研究樣本為 1,879 位青少年(933 位男生及 946 位女生)。資料來源為 2003 年台灣中央研究院社會學研究所之青少年追蹤研究。以身體質量指數(BMI)區分樣本為肥胖、過重、正常或過輕。以 kappa 統計檢定青少年自評健康層級及父母對青少年健康評級之一致性。使用羅吉斯迴歸(logistic regression)探討青少年及父母對健康評估與不同體重之關聯。研究結果顯示，體重過輕之男生比較會自評健康不佳(OR=2.15, $p<0.01$)，而體重過重女生較正常體重同儕不易自評健康不佳(OR=0.42, $p<0.01$)。父母對於過輕之女性青少年較易評級為健康不佳(OR=2.10, $p<0.01$)。但父母對於過重之男生較不會有不佳之健康評估(OR=0.51, $p<0.01$)。體重過輕，不論青少年本身或父母均認定是較不健康，而過重和肥胖則無此現象。因此應加強父母及青少年對於體重過重及肥胖之健康認知。

關鍵字：青少年、纖瘦、肥胖、父母、健康