

Body Image, Body Satisfaction and Dieting Behavior in Japanese Preadolescents: The Toyama Birth Cohort Study

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Abstract

Objectives: To examine the relationships between body image, body satisfaction and dieting behavior in the context of pubertal changes in Japanese preadolescents.

Methods: A cross-sectional study of dieting behavior among 5,244 preadolescents (2,452 boys and 2,792 girls aged 12–13) born in Toyama prefecture.

Results: The percentages of those who perceived themselves fat, wanted to be thinner, and had tried dieting, which increased with body mass index (BMI), were significantly higher in girls than in boys (34.2% vs. 20.0%, 58.0% vs. 26.0%, and 17.3% vs. 5.7%, respectively). Independent of sex and BMI, those who wanted to be thinner and those who had tried dieting were more frequently observed in those who perceived themselves fat, and those who had tried dieting were more frequently observed in those who wanted to be thinner. Pubertal changes were significantly associated with dieting behavior, but their relationships to body image and body satisfaction differed between sexes; for boys, those who perceived themselves fat were more frequently observed in those without pubertal changes; whereas for girls, those who wanted to be thinner were more frequently observed in those with pubertal changes.

Conclusions: Dieting behavior of Japanese preadolescents was associated with whether they perceived themselves fat and wanted to be thinner, sometimes independent of whether they were actually overweight. Pubertal changes might induce a positive perspective of growing fat among boys and a desire to be thinner among girls, with the consequence that dieting behavior would be reinforced in those with pubertal changes.

Key words: preadolescents, body mass index, body image, body satisfaction, dieting behavior

Introduction

Recently in Japan, the prevalence of being overweight has increased among men and that of being underweight has increased among young women (1). Overweight is a major risk factor for chronic diseases (2), and underweight is associated with nutritional deficiency. Although the desire to be thinner and dieting behavior are widespread, weight control (weight loss in overweight persons and weight gain in underweight persons)

is a reasonable target for health promotion. Previous studies suggested the tracking of lifestyles, health conditions, and risk factors over the life span, particularly from childhood to adulthood (3–7). Both for children's and adults' health, it may be important to inculcate a sense of weight control from childhood.

Many investigators take interest in body image, body satisfaction, and dieting behavior in pre- and post-adolescents (8–22). Dramatic physical changes accompany puberty, and they may play a role in the establishment of body image (8, 9, 13). The gap between actual and ideal body images may potentially induce dieting behavior caused by body dissatisfaction (23). However, there have been few studies on the relationships between body image, body satisfaction, and dieting behavior in the context of pubertal changes. Moreover, it is uncertain whether the findings in western populations are applicable to Japanese population given the different backgrounds (e.g., ethnicity, culture, and lifestyles) (12). A better

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understanding of these relationships and the path to dieting behavior may help promote weight control. In this study, we aimed to examine the relationships between body image, body satisfaction, and dieting behavior in the context of pubertal changes in Japanese preadolescents.

Subjects and Methods

The Toyama Birth Cohort Study is an ongoing population-based birth cohort study, which consists of almost all children born from April 2, 1989 to April 1, 1990 in Toyama prefecture, Japan (24). The initial survey with a questionnaire and anthropometric measurement was conducted in 1992 (at ages 2–4). The follow-up surveys with a questionnaire were conducted in 1996 (at ages 6–7), 1999 (at ages 9–10, described below as age 9), and 2002 (at ages 12–13, described below as age 12). Information on family members, lifestyles, and physical status of children and their parents was collected at each survey. Informed consent was obtained from all parents of participants, and we paid special attention to the protection of the anonymity and confidentiality of the available information.

Study subjects were 5,244 eligible participants in the age 12 survey (2,492 boys and 2,752 girls), who had complete information on sex, height and weight at age 12, body image, body satisfaction, dieting behavior, pubertal changes, maternal height and weight (collected at the age 12 survey), and height and weight at age 9 (collected at the age 9 survey).

Heights and weights at ages 9 and 12 were reported by children and parents. Heights were specified to the nearest 0.1 cm and weights were specified to the nearest 0.1 kg. Previous studies revealed that heights and weights reported by children and parents were close to those measured actually (25,

26). Body mass index (BMI; kg/m²) was used to assess obesity in children, because the International Obesity Task Force proved BMI to offer a reasonable measure of body fat in children (27). BMI in childhood changes substantially with age (28, 29), therefore, BMIs were classified as age- and sex-specific quartiles of the study subjects: ≤15.4, 15.5–16.7, 16.8–18.5, and 18.6≤ for boys at age 9; ≤15.2, 15.3–16.4, 16.5–18.0, and 18.1≤ for girls at age 9; ≤17.1, 17.2–18.4, 18.5–20.4, and 20.5≤ for boys at age 12; ≤17.0, 17.1–18.5, 18.6–20.5, and 20.6≤ for girls at age 12.

Body image, body satisfaction, and dieting behavior were assessed using the following questions, respectively: (1) Do you perceive yourself thin, average, or fat? (2) Do you want to be thinner or fatter, or are you satisfied as you are? (3) Have you tried dieting? Pubertal changes were defined by one or more affirmative answers to the following questions: (1) Has your axillary hair grown? (2) Has your pubic hair grown? (3) Has your voice changed? (for boys) (4) Have you experienced your first menstruation? (for girls).

Statistical analyses were performed with the Statistical Analysis Systems (SAS, version 8.2). The distributions of body image, body satisfaction, and dieting behavior were compared by chi-square test and Mantel-Haenszel test (for stratified data). The percentages of those who want to be thinner (prevalence of the body dissatisfaction (want to be thinner)), those who perceived themselves fat (prevalence of the body image of fat), and those who have tried dieting (prevalence of dieting behavior) were calculated by BMI quartile, and their trends were examined by the Cochran-Armitage test.

Results

Table 1 shows the distributions of body image, body

Table 1 Distributions of body image, body satisfaction, and dieting behavior

BMI quartiles	Body image			Body satisfaction			Dieting behavior	
	Thin	Average	Fat	Want to be thinner	Satisfied	Want to be fatter	-	+
Boy (n=2492)								
All	656 (26.3%)	1338 (53.7%)	498 (20.0%)	647 (26.0%)	1541 (61.8%)	304 (12.2%)	2351 (94.3%)	141 (5.7%)
1st	421 (66.0%)	212 (33.2%)	5 (0.8%)	21 (3.3%)	428 (67.1%)	189 (29.6%)	632 (99.1%)	6 (0.9%)
2nd	176 (29.2%)	405 (67.2%)	22 (3.6%)	75 (12.4%)	458 (76.0%)	70 (11.6%)	589 (97.7%)	14 (2.3%)
3rd	55 (8.8%)	502 (80.1%)	70 (11.2%)	157 (25.0%)	431 (68.7%)	39 (6.2%)	599 (95.5%)	28 (4.5%)
4th	4 (0.6%)	219 (35.1%)	401 (64.3%)	394 (63.1%)	224 (35.9%)	6 (1.0%)	531 (85.1%)	93 (14.9%)
Girl (n=2752)								
All	332 (12.1%)	1478 (53.7%)	942 (34.2%)	1595 (58.0%)	1085 (39.4%)	72 (2.6%)	2275 (82.7%)	477 (17.3%)
1st	266 (39.1%)	380 (55.8%)	35 (5.1%)	167 (24.5%)	447 (65.6%)	67 (9.8%)	630 (92.5%)	51 (7.5%)
2nd	59 (8.5%)	545 (78.4%)	91 (13.1%)	343 (49.4%)	347 (49.9%)	5 (0.7%)	602 (86.6%)	93 (13.4%)
3rd	7 (1.0%)	415 (60.8%)	261 (38.2%)	481 (70.4%)	202 (29.6%)	0 (0.0%)	538 (78.8%)	145 (21.2%)
4th	0 (0.0%)	138 (19.9%)	555 (80.1%)	604 (87.2%)	89 (12.8%)	0 (0.0%)	505 (72.9%)	188 (27.1%)

BMI: body mass index.

BMIs were classified as age- and sex-specific quartiles of the study subjects.

(1st ≤17.1, 2nd 17.2–18.4, 3rd 18.5–20.4, 4th 20.5≤ for boys at age 12; 1st ≤17.0, 2nd 17.1–18.5, 3rd 18.6–20.5, 4th 20.6≤ for girls at age 12)

Table 2 Prevalence of body image of fat according to BMIs at ages 9 and 12

BMI quartiles at age 12	BMI quartiles at age 9		
	1st	2nd, 3rd	4th
Boy (n=2492)			
All	14/606 (2.3%)	119/1266 (9.4%)	365/620 (58.9%)
1st	1/400 (0.3%)	4/234 (1.7%)	0/4 (0.0%)
2nd	4/134 (3.0%)	13/448 (2.9%)	5/21 (23.8%)
3rd	4/61 (6.6%)	42/445 (9.4%)	24/121 (19.8%)
4th	5/11 (45.5%)	60/139 (43.2%)	336/474 (70.9%)
Girl (n=2752)			
All	52/739 (7.0%)	407/1351 (30.1%)	483/662 (73.0%)
1st	10/462 (2.2%)	25/215 (11.6%)	0/4 (0.0%)
2nd	20/202 (9.9%)	64/452 (14.2%)	7/41 (17.1%)
3rd	13/59 (22.0%)	182/488 (37.3%)	66/136 (48.5%)
4th	9/16 (56.3%)	136/196 (69.4%)	410/481 (85.2%)

BMI: body mass index.
 BMIs were classified as age- and sex-specific quartiles of the study subjects.
 (1st ≤15.4, 2nd 15.5–16.7, 3rd 16.8–18.5, 4th 18.6≤ for boys at age 9; 1st ≤15.2, 2nd 15.3–16.4, 3rd 16.5–18.0, 4th 18.1≤ for girls at age 9; 1st ≤17.1, 2nd 17.2–18.4, 3rd 18.5–20.4, 4th 20.5≤ for boys at age 12; 1st ≤17.0, 2nd 17.1–18.5, 3rd 18.6–20.5, 4th 20.6≤ for girls at age 12)

satisfaction, and dieting behavior. The prevalence of the body image of fat, the body dissatisfaction (want to be thinner), and dieting behavior were higher in those who had a higher quartile of BMI at age 12 (Cochran-Armitage test for trend $p < 0.001$). The distributions of body image, body satisfaction, and dieting behavior were significantly different between sexes. Girls showed a higher prevalence of the body image of fat than boys (34.2% vs. 20.0%). In the first quartile group for BMI, those who perceived themselves thin were more frequently observed than those who perceived themselves average among boys but not among girls. Girls showed a higher prevalence of the body dissatisfaction (want to be thinner) than boys (58.0% vs. 26.0%). Even in the first quartile group for BMI, the percentage in girls was 24.5% compared with 3.3% in boys. Girls showed a higher prevalence of dieting behavior than boys (17.3% vs. 5.7%). Even in the first quartile group for BMI, the percentage in girls was 7.5% compared with 0.9% in boys.

Table 2 shows the prevalence of the body image of fat according to BMIs at ages 9 and 12. In every quartile group for BMI at age 12, those who perceived themselves fat were more frequently observed in those who had a higher quartile of BMI at age 9. This result indicates that body image may be built on both past and present BMIs.

Table 3 shows the prevalence of the body dissatisfaction (want to be thinner) and dieting behavior according to BMI and

Table 3 Prevalence of body dissatisfaction (want to be thinner) and dieting behavior according to BMI and body image

BMI quartiles		Body image		
		Thin	Average	Fat
Boy (n=2492)				
All	Want to be thinner	11/656 (1.7%)	249/1338 (18.6%)	387/498 (77.7%)
	Dieting behavior	8/656 (1.2%)	58/1338 (4.3%)	75/498 (15.1%)
1st	Want to be thinner	3/421 (0.7%)	14/212 (6.6%)	4/5 (80.0%)
	Dieting behavior	4/421 (1.0%)	2/212 (0.9%)	0/5 (0.0%)
2nd	Want to be thinner	6/176 (3.4%)	53/405 (13.1%)	16/22 (72.7%)
	Dieting behavior	3/176 (1.7%)	9/405 (2.2%)	2/22 (9.1%)
3rd	Want to be thinner	2/55 (3.6%)	105/502 (20.9%)	50/70 (71.4%)
	Dieting behavior	1/55 (1.8%)	20/502 (4.0%)	7/70 (10.0%)
4th	Want to be thinner	0/4 (0.0%)	77/219 (35.2%)	317/401 (79.1%)
	Dieting behavior	0/4 (0.0%)	27/219 (12.3%)	66/401 (16.5%)
Girl (n=2752)				
All	Want to be thinner	18/332 (5.4%)	707/1478 (47.8%)	870/942 (92.4%)
	Dieting behavior	9/332 (2.7%)	180/1478 (12.2%)	288/942 (30.6%)
1st	Want to be thinner	10/266 (3.8%)	124/380 (32.6%)	33/35 (94.3%)
	Dieting behavior	5/266 (1.9%)	37/380 (9.7%)	9/35 (25.7%)
2nd	Want to be thinner	6/59 (10.2%)	249/545 (45.7%)	88/91 (96.7%)
	Dieting behavior	3/59 (5.1%)	63/545 (11.6%)	27/91 (29.7%)
3rd	Want to be thinner	2/7 (28.6%)	241/415 (58.1%)	238/261 (91.2%)
	Dieting behavior	1/7 (14.3%)	55/415 (13.3%)	89/261 (34.1%)
4th	Want to be thinner	0/0 (-)	93/138 (67.4%)	511/555 (92.1%)
	Dieting behavior	0/0 (-)	25/138 (18.1%)	163/555 (29.4%)

BMI: body mass index.
 BMIs were classified as age- and sex-specific quartiles of the study subjects.
 (1st ≤17.1, 2nd 17.2–18.4, 3rd 18.5–20.4, 4th 20.5≤ for boys at age 12; 1st ≤17.0, 2nd 17.1–18.5, 3rd 18.6–20.5, 4th 20.6≤ for girls at age 12)
 Prevalence of body dissatisfaction (want to be thinner): $p < 0.001$ in boys, $p < 0.001$ in girls (Mantel-Haenszel test).
 Prevalence of dieting behavior: $p < 0.001$ in boys, $p < 0.001$ in girls (Mantel-Haenszel test).

body image. In every quartile group for BMI at age 12, those who wanted to be thinner and those who had tried dieting were more frequently observed in those who perceived themselves fat. Table 4 shows the prevalence of dieting behavior according to body image and body satisfaction. In every group of body

Table 4 Prevalence of dieting behavior according to body image and body satisfaction

Body image	Body satisfaction		
	Want to be thinner	Satisfied	Want to be fatter
Boy (n=2492)			
All	104/647 (16.1%)	29/1541 (1.9%)	8/304 (2.6%)
Thin	3/11 (27.3%)	2/395 (0.5%)	3/250 (1.2%)
Average	35/249 (14.1%)	21/1039 (2.0%)	2/50 (4.0%)
Fat	66/387 (17.1%)	6/107 (5.6%)	3/4 (75.0%)
Girl (n=2752)			
All	427/1595 (26.8%)	50/1085 (4.6%)	0/72 (0.0%)
Thin	5/18 (27.8%)	4/249 (1.6%)	0/65 (0.0%)
Average	137/707 (19.4%)	43/764 (5.6%)	0/7 (0.0%)
Fat	285/870 (32.8%)	3/72 (4.2%)	0/0 (-)

p<0.001 in boys, p<0.001 in girls (Mantel-Haenszel test).

Table 5 Prevalence of body image of fat according to BMI and pubertal changes

BMI quartiles	Pubertal changes	
	-	+
Boy (n=2492)		
All	198/966 (20.5%)	300/1526 (19.7%)
1st	2/353 (0.6%)	3/285 (1.1%)
2nd	13/258 (5.0%)	9/345 (2.6%)
3rd	31/162 (19.1%)	39/465 (8.4%)
4th	152/193 (78.8%)	249/431 (57.8%)
Girl (n=2752)		
All	147/819 (17.9%)	795/1933 (41.1%)
1st	24/419 (5.7%)	11/262 (4.2%)
2nd	34/231 (14.7%)	57/464 (12.3%)
3rd	35/103 (34.0%)	226/580 (39.0%)
4th	54/66 (81.8%)	501/627 (79.9%)

BMI: body mass index.

BMI's were classified as age- and sex-specific quartiles of the study subjects.

(1st ≤17.1, 2nd 17.2–18.4, 3rd 18.5–20.4, 4th 20.5≤ for boys at age 12; 1st ≤17.0, 2nd 17.1–18.5, 3rd 18.6–20.5, 4th 20.6≤ for girls at age 12)

p<0.001 in boys, p≤0.7 in girls (Mantel-Haenszel test).

Table 6 Prevalence of body dissatisfaction (want to be thinner) according to body image and pubertal changes

Body image	Pubertal changes	
	-	+
Boy (n=2492)		
All	244/966 (25.3%)	403/1526 (26.4%)
Thin	3/308 (1.0%)	8/348 (2.3%)
Average	85/460 (18.5%)	164/878 (18.7%)
Fat	156/198 (78.8%)	231/300 (77.0%)
Girl (n=2752)		
All	322/819 (39.3%)	1273/1933 (65.9%)
Thin	5/191 (2.6%)	13/141 (9.2%)
Average	180/481 (37.4%)	527/997 (52.9%)
Fat	137/147 (93.2%)	733/795 (92.2%)

p=0.9 in boys, p<0.001 in girls (Mantel-Haenszel test).

Table 7 Prevalence of dieting behavior according to body satisfaction and pubertal changes

Body satisfaction	Pubertal changes	
	-	+
Boy (n=2492)		
All	33/966 (3.4%)	108/1526 (7.1%)
Want to be thinner	22/244 (9.0%)	82/403 (20.3%)
Satisfied	9/569 (1.6%)	20/972 (2.1%)
Want to be fatter	2/153 (1.3%)	6/151 (4.0%)
Girl (n=2752)		
All	90/819 (11.0%)	387/1933 (20.0%)
Want to be thinner	70/322 (21.7%)	357/1273 (28.0%)
Satisfied	20/449 (4.5%)	30/636 (4.7%)
Want to be fatter	0/48 (0.0%)	0/24 (0.0%)

p<0.001 in boys, p<0.05 in girls (Mantel-Haenszel test).

image, those who had tried dieting were more frequently observed in those who wanted to be thinner. These results indicate that the body image of fat is associated with the body dissatisfaction (want to be thinner), and body dissatisfaction is associated with dieting behavior.

The relationships of pubertal changes to body image, body satisfaction, and dieting behavior, were examined. Table 5 shows the prevalence of the body image of fat according to BMI and pubertal changes. Pubertal changes were significantly associated with the body image of fat among boys but not among girls. Particularly in boys who had a higher quartile of

BMI at age 12, those who perceived themselves fat were more frequently observed in those without pubertal changes. Table 6 shows the prevalence of the body dissatisfaction (want to be thinner) according to body image and pubertal changes. In contrast to body image, pubertal changes were significantly associated with the body dissatisfaction (want to be thinner) among girls but not among boys. Particularly in girls who perceived themselves thin or average, those who wanted to be thinner were more frequently observed in those with pubertal changes. Table 7 shows the prevalence of dieting behavior according to body satisfaction and pubertal changes. Those who had tried dieting were more frequently observed in those with pubertal changes in both sexes. These results indicate that the relationships of pubertal changes differ between sexes; for boys, pubertal changes are associated with the body image of fat but not with the body dissatisfaction (want to be thinner). Pubertal changes may induce a positive perspective of growing fat, but on the other hand they may promote dieting behavior in those who want to be thinner; for girls, pubertal changes are associated with the body dissatisfaction (want to be thinner) but not with the body image of fat. Pubertal changes may induce a desire to be thinner and promote dieting behavior in those who want to be thinner.

Discussions

Based on the Toyama Birth Cohort Study, we examined the relationships between body image, body satisfaction, and dieting behavior in the context of pubertal changes. To our knowledge, this is the first study that demonstrated these relationships and the path to dieting behavior and confirmed the effects of pubertal changes on body image, body satisfaction, and dieting behavior in Japanese preadolescents.

We confirmed that the body image of fat is associated with the body dissatisfaction (want to be thinner), and body dissatisfaction is associated with dieting behavior. As mentioned in a review of literature on body image (23), body image may play a key role in the establishment of behavior patterns, and the gap between actual and ideal body images may potentially induce dieting behavior caused by body dissatisfaction.

Body image was significantly associated with BMIs at ages 9 and 12. On the other hand, even in the first quartile group for BMI, there were quite a few girls who perceived themselves average or fat (60.9%), wanted to be thinner (24.5%), and had tried dieting (7.5%). These percentages, which were equal to those shown in other Japanese populations (11, 14), indicate that the desire to be thinner and dieting behavior has permeated even preadolescent girls. Indeed, body image may be built on both past and present BMIs, but those who perceive themselves fat are not always consistent with those who are actually overweight, particularly among girls. The distributions of body image, body satisfaction, and dieting behavior were significantly different between sexes. Girls showed higher prevalences of the body image of fat, the body dissatisfaction (want to be thinner), and dieting behavior than boys. Previous studies suggested similar sex-specific differences; girls showed a greater gap between actual and ideal body images (12, 14, 19, 23), more critical assessment of their physical attractiveness

(8), more strong dissatisfaction with their body (10, 17, 23), more frequent weight concerns, and a higher prevalence of dieting behavior (11, 12, 14–16, 18, 23, 30) than boys. Dieting behavior can be associated with poor diet quality (20), and frequent dieters can be at a high risk of growth failure, puberty delay, and developing eating disorders (31, 32). To prevent harmful dieting behavior of preadolescent girls, it is important to help them understand their healthy weight and establish their correct body image (both actual and ideal body images).

Pubertal changes were significantly associated with dieting behavior, but their relationships to body image and body satisfaction differed between sexes; for boys, those who perceived themselves fat were more frequently observed in those without pubertal changes; whereas for girls, those who wanted to be thinner were more frequently observed in those with pubertal changes. The roles of pubertal changes in the path to dieting behavior may differ between sexes. Boys with pubertal changes may have a positive perspective of growing fat, but on the other hand they may pursue dieting if they want to be thinner. Previous studies revealed that boys showed an increased body satisfaction with age (8, 10, 17) and adopted strategies to increase muscle tone (16, 18). Boys seem to positively accept pubertal changes, particularly physiological changes leading to a muscular body. Meanwhile, girls with pubertal changes may have a stronger desire to be thinner, consequently leading to dieting behavior. Previous studies revealed that girls showed an increased body dissatisfaction with age (8, 10, 11), and body dissatisfaction was significantly stronger in postadolescents than in preadolescents (9). Girls seem to negatively accept pubertal changes, particularly a physiological increase in body fat. There is no doubt that increasing emphasis on thinness by the mass media has a profound effect on the desire to be thinner, particularly among female (15, 16, 18–22, 33). Alarming, such current trends may affect even preadolescents.

This study had the following potential limitations. First, the Toyama Birth Cohort Study relied on a relatively simple self-report of body image, body satisfaction, and dieting behavior. There are several figure rating scales for assessing actual and ideal body images; the gap between actual and ideal body images indicates a degree of body satisfaction (23, 34). However, such scales are not easy to use in a large population. Moreover, a review of literature on body image measures suggested that verbal measures might be more successful than visual measures (23). Second, Toyama prefecture is located in the middle of Japan, with both rural and urban areas. Environmental factors, particularly sociocultural factors, are somewhat different from prefecture to prefecture. However, because of advance in information technology and the mass media, people can obtain the same information at the same time. It is unlikely that the results of this study are quite different from what actually happens in Japan. Third, the cross-sectional design makes it difficult to determine causal relationships. There may be a feedback loop among BMI, body image, body dissatisfaction, and dieting behavior; BMI might contribute to the establishment of body image, and body image might contribute to the promotion of dieting behavior caused by body dissatisfaction, with the consequence that BMI would change (23).

However, the prevalence of the body image of fat was higher in those who had a higher BMI, the prevalence of the body dissatisfaction (want to be thinner) was higher in those who perceived themselves fat, and the prevalence of dieting behavior was higher in those who wanted to be thinner. It is unlikely that the results of this study are affected by the feedback loop. The relationships and the path to dieting behavior shown in this study should be confirmed in other populations and in a follow-up design.

In conclusion, dieting behavior of Japanese preadolescents was associated with whether they perceived themselves fat and wanted to be thinner, sometimes independent of whether they were actually overweight. Pubertal changes might induce a positive perspective of growing fat among boys and a desire to be thinner among girls, with the consequence that dieting

behavior would be reinforced in those with pubertal changes. Previous studies revealed that environmental factors such as parents, peers, friends, the mass media, and other sociocultural factors might influence body image, body satisfaction, and dieting behavior (15, 16, 18, 20, 22). Further studies may be required to examine the effects of these environmental factors on Japanese preadolescents.

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健康診断と個人情報の保護

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はじめに

情報環境が高度化し、多くの情報が共有される現代、個人のプライバシーを確保することで、個人の尊厳を保つことが求められてきている¹⁾。一方、学校保健は児童生徒が健康的な学校生活を確保するために必要な事業であり、取り扱われるデータも個人情報に関連するものである。

個人情報適切に管理される環境で活用される際、今までにない個別化された新たな保健活動が期待されることから、個人情報の管理について十分な配慮が求められる。学校健診の結果は適切に活用されることで、健康管理上重要な情報源であり、適切な運用が求められる。

本論文では、学校保健における個人情報の扱いについて整理して、解決すべき課題をまとめた。とくに、個人情報は単に保護することが最終目的ではなく、活用することを前提にしたうえで個人情報のあり方について理解することを目標としている。

1. 学校保健における個人情報の考え方

学校における生徒等に関する個人情報の適正な取扱いを確保するために事業者が講ずべき措置に関する指針（平成16年11月11日文科科学省告示第161号）が出されている。

保健事業における個人情報の取扱いにおいて留意すべき点

1) 利用目的による制限と活用

個人情報の収集は、その目的を明確に説明できるものだけが許され、現実の収集がその目的に適合することが必要である。さらに、個人情報を収集した者は、収集した個人情報を当該目的のために活用する責任を課される。収集された情報の活用によって防止することができた事故が、情報の不活用によって防止されなかった場合には、情報を収集した者は、その事故によって生じた損害について責任を問われる可能性がある。言い換えると、活用できない/されない情報は収集してはならないことになる。

利用目的については抽象的一般的に特定するのではなく、利用された結果が合理的に想定ができる程度に、具体的に記載することが求められる。

2) 適正な取得

個人情報の入手に際しては、情報の収集に法律上の根拠がある場合は、事業の趣旨を説明したうえで個人情報を取得することが求められる。法律上の根拠がない場合には、事業の趣旨を説明するとともに児童生徒および保護者の同意を得る必要がある。

3) 正確性の確保

取得した情報が正確に確保される必要がある。

4) 安全性の確保

保管において、プライバシー保護や個人情報漏洩防止のための措置が講じられなければならない。

保存期間が過ぎた情報の廃棄において、焼却、完全匿名化、上書によるハードディスクのデータ消去などの措置が講じられなければならない。

情報の保管を第三者に委託する場合には、情報管

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理委託契約などにおいて、プライバシー保護や個人情報漏洩防止のための措置が講じられていることを確認する必要がある。

情報の第三者提供は原則的に禁止される。第三者提供が許される場合においては、対象者の同意を得る必要性を確認されなければならない。

児童生徒の進学、転校などに際して、プライバシー保護や個人情報漏洩防止のための措置が講じられなければならない。

5) 透明性の確保

取得された個人情報保護に関する事実（個人情報を収集していること、収集方法、情報の内容、その取り扱いなど）の開示が求められる。収集された個人情報の内容は、原則として、本人に伝えられなければならない。個人情報の開示請求、訂正請求のための措置が講じられなければならない。

II. 学校が保有する個人情報

学校教育法施行規則 15 条 1 項 4 号 5 号により、学校が保有する情報には、指導要録、出席簿、健康診断に関する表簿（学校保健法 6 条 1 項）、入学者の選抜に関する表簿、成績考査に関する表簿、事故報告書、奨学金に関する記録などがある。そのほかに、法律で指定されていない家庭環境調査、生徒指導個人調査、体力記録簿、健康に関する記録、性格検査・職業適性記録、図書閲覧記録などが存在している。

III. 学校保健事業で扱われる個人情報

学校保健法施行規則の一部を改正する省令の施行及び今後の学校における健康診断の取扱いについて（平成 16 年 12 月 8 日、文部省体育局長文体学第 168 号）では、健康診断実施上の留意点として、プライバシー保護について言及している。学校においては、児童生徒等の健康診断を行ったときは、その結果を児童生徒及び保護者等に通知する健診の結果に基づき、必要な医療受診の指示、学習等の軽減などの事後措置をとるために利用される一方、健診結果は児童生徒等および保護者と教員がその内容を知れば十分であり、他の児童生

徒等に健診結果が知られることがないように制限された範囲で利用される必要があるとしている。学校においては、健康診断を的確かつ円滑に実施するため、必要と認めるときに、児童生徒等の発育などに関する調査（保健調査）を行うものとしている（学校保健法施行規則第 8 条 2）が、個人のプライバシーに十分配慮しつつ、児童生徒等の生活の実態を把握するとともに、学校において日常の健康観察を行い、他の体力・運動能力テストの結果を健診の結果と併せて活用することにより、児童生徒の保健指導を適切に行うことが求められている。

学校保健で使用される個人情報について以下に整理する。

1. 法的根拠

学校健診には、学校保健法によって記載されている項目、学校保健法にない血中脂質、貧血検査が含まれる。検査項目の趣旨を児童生徒と保護者に説明するとともに、とくに学校保健法に記載されていない項目を実施する際には児童生徒と保護者の同意を得ることが必要である。

2. 学校保健事業の責任者

学校保健事業において、公立学校においては教育委員会が、私立学校においては設置者が責任者としている。公立学校においては、学校長が責任者として機能しており、教育指導要領に準じた調査において、教育委員会の承認を受けることはほとんど行われていない。

3. 情報入手に関する通知公表と承諾

学校保健事業に関する調査では、学校から保護者に口頭や通知による説明で行われ、調査への協力を得ている。調査の回収率は高いものの、文書による個別の承諾を得ることは行われていないことが多いが、拒否権の確保についても検討する必要がある。

4. 情報の入手方法

学校保健で使用される情報の入手については、調査票によるもの、健診結果、健康観察票、学校

生活管理指導票，それ以外に個別面談があげられる。調査票については，本人または保護者が記入したものを担任を介して回収することが多いので，回収に際しては本人から直接手渡しや封入することでプライバシーを確保することが求められる。

学校健診では身長体重測定や診察においてプライバシー保護に配慮が行われており，他の児童生徒に身体計測値が知られないように遮蔽板を設置するなどの工夫が行われている。一方，やせ願望や高身長をボディイメージとして希望するために，測定結果を改竄することがあり，児童生徒による記録の改竄を防止する工夫が求められる。

健康観察票は，学校における公簿ではなく，担任が受持児童生徒に関して記載する書類である。

学校生活管理指導表は，慢性疾患より学校生活に配慮が必要な児童生徒を対象として，指導区分，運動クラブ活動の指示，次回受診などが記載されている。主治医からの意見書として学校活動の制限などに活用されるものであり，関連する教員のみで限定されて利用されるべきである。

5. 保 存

学校保健事業の関係書類は，学校長の責任において保存される。保存場所については，学校により保健室，職員室など特定の場所に保存される。

6. 保 管

保管については，公簿の有無により取り扱いが区別される。公簿については，最終学年の学校に5年間保存される。公簿外の保健調査については，学校卒業時に本人に返却されることが多い。

7. 利活用

健診結果については，児童生徒と保護者に通知されている。通知に際しては，有所見者に差別が発生しないように十分に配慮される必要がある。健診結果について，その意味を十分に説明することで，健診結果の正しい理解を得てから配布する試みがなされており，興味本位の差別によりプライバシーが侵害されないように配慮する必要がある。

保健指導に際しては，児童生徒に報告書を配布

する際に，個別に封入することにより，プライバシーの保護を図るようにしている。

喘息やてんかんなどについて保健調査により学校側が入手した健康情報を学校側は児童生徒の安全健康配慮に活用している。これらの疾患に関する診療情報は学校行事における児童生徒の安全配慮をしていくうえで必要不可欠な情報である。

8. 発 表

学校事業評価として，保健事業に関する事例発表会が学内や校外で行われることがある。学校保健事業以外に個人情報を利用する場合には，以下の手続きを経ることが求められる。

- 1) 倫理審査委員会などの第三者機関による承認を受けること。
- 2) 児童生徒及び保護者に趣旨を説明するとともに同意を得ておくこと。

9. 開示／訂正

個人情報には正確に保存されている必要があり，誤記載については本人保護者からの申請により適切に対応されている。

IV. 文部科学省「定期健診における結核健診マニュアル」に関連したプライバシー保護

平成14年12月26日文部科学省より，上記のマニュアルが通知された。結核健診の運用方法におけるプライバシー保護についてまとめた。新たな結核健診の体制では，一律に定期健診を行うことから，問診により「最近の結核感染強く疑われる」事例を問診によりチェックすることが行われる。問診には，「家族や同居人で結核に罹患したこと」が含まれる。児童生徒本人以外の個人情報取り扱いから，個人情報の取り扱いには十分に配慮する必要がある。

新たな結核健診において，教育委員会は結核対策委員会を設置して，①学校における結核健診の実施状況・結果の把握，②精密検査対象児童生徒の管理方針の検討，③患者発生時に関係機関との協力と対策の検討，④地域の連携による学校の

結核管理方針の検討を行うとされている。この際、学校医以外の医師が結核対策委員会に関与することがあり、プライバシーの保護が求められる。

学校は結核健診結果について、① 結核健診実施状況報告、② 結核対策委員会要検討者名簿、③ 精密検査結果名簿を整理することになり、プライバシー保護を徹底する必要がある。

V. 情報の活用に関する考え方²⁾

情報の活用の際には、情報を収集する段階において目的を明確にすることが必要である。そして、取得時の目的以外の利用は限定されるべきである。

目的外に利用する際には、次の条件で使用が許される。一つはデータ主体による同意がある場合であり、もう一つは法律の規定により利用される場合であり、① 利用する行為が社会の正当な関心事であり、表現内容が不当でない場合、② 差し

迫った危難を避けるため、緊急止むを得ない特別な事情があり、必要限度内で例外的に法定の手続きを経ないで、実力を用いて自分の権利を守る場合（民法第720条）、③ 法令で承認されたり正当な業務上の行為である場合が相当する。したがって、学校保健で収集された個人情報の活用に十分に配慮して、児童生徒の健康増進に活用していく。

まとめ

学校健診で得られた情報を有効に活用する体制を構築することは、児童生徒等の健康づくりや疾病予防に大きく寄与する。そのためには、個人の尊厳を保証する体制を確保するとともに、適正に活用する体制づくりを行うことが求められる。

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