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Body Weight and the Effects of Misperceived Norms on Personal Body Image in Adolescence: Results from an Online Assessment Tool for Secondary Schools

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Abstract

The social norms model of misperceived norms and its consequences can be applied to concerns about body weight in adolescent populations. Data are drawn from an online survey students (N=5698) from seven middle and high schools. Results of four analyses will be presented: 1) Body mass index distributions by gender and grade are reported in relation to healthy body mass ranges to assess the prevalence of under/overweight adolescents. 2) Perceptions of average male and female body masses are compared with actual average body masses at each school to assess the extent of misperception of body weight norms. 3) Students' subjective assessments of themselves as over/underweight are then compared to the objective standards. 4) Finally, discrepancies between actually being under/overweight and perceiving oneself to be under/over weight are assessed in relation to misperceptions of the actual peer norms. Implications for school health programs will be discussed.

Web Surveys Online

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Social Norms Surveys Online

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36. What is your current weight and height?

a. Weight pounds

b. Height feet inches

37. Which of the following phrases best describes your opinion of your current weight? (select one)

a. Very underweight

b. Somewhat underweight

c. About right

d. Somewhat overweight

e. Very overweight

38. What would you guess is the average male and female weight for students in your grade? (just give your best estimate)

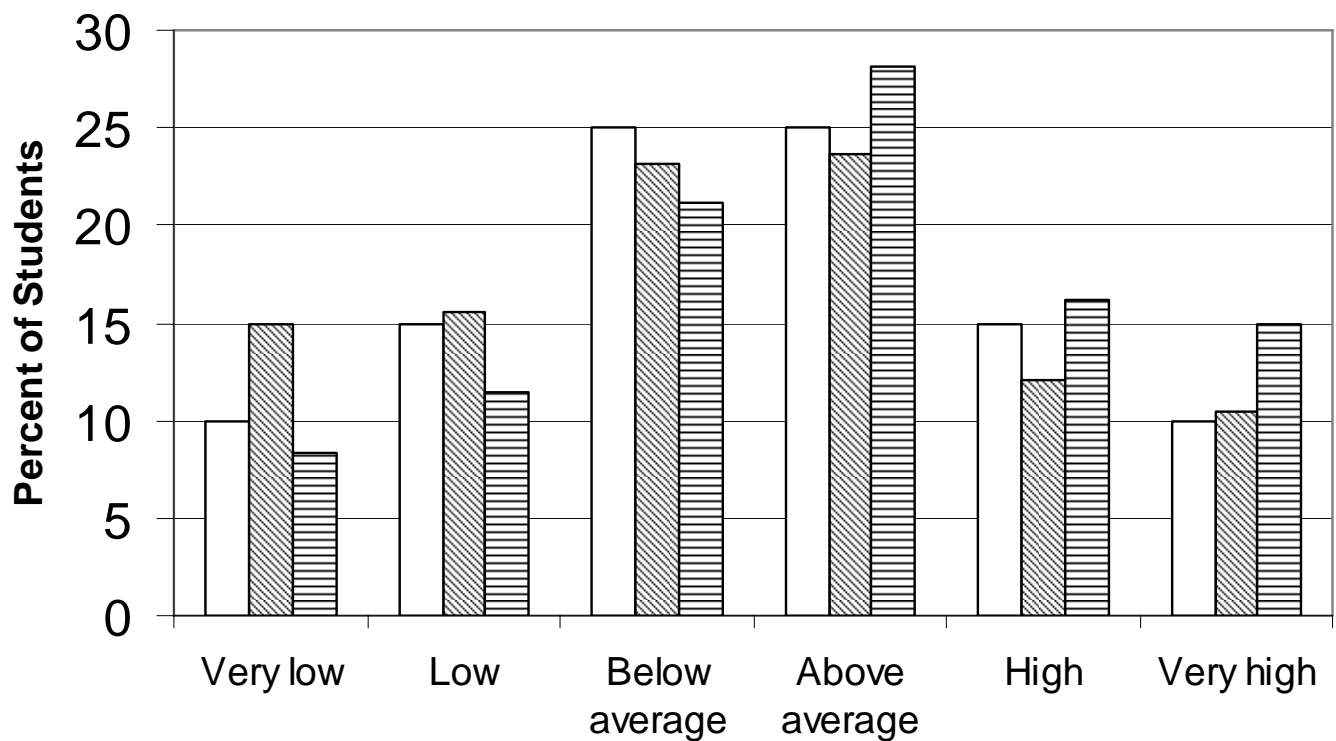
a. Average male weight in your grade pounds

b. Average females weight in your grade pounds

Sample Description

- Surveys from 6,374 students collected between Spring 2004 and Spring 2005 from 8 schools (6 high schools, 2 middle schools) grade range 6-12
- Response rates from target population ranged from a low of 61% to 96%
 - median response rate among cohorts was 70.1%
 - 98.6% English, 1.4% Spanish
 - ages 10-21
 - male 48.9%, female 51.1%

Figure 1a. Body Mass Index profile for sampled middle school students by school compared with national distribution



□ National

▨ MS1 (N=495)

▤ MS2 (N=228)

BMI Categories	Nationally Range Covers
very low	lowest 10%
Low	10-25%ile
Below Average	25-50%ile
Above Average	50-75%ile
High	70-90%ile
Very high	highest 10%

Body Mass Index Categories based on National Groupings (standardized for age and gender)

Figure 1b. Body Mass Index profile for sampled high school students by school compared with national distribution

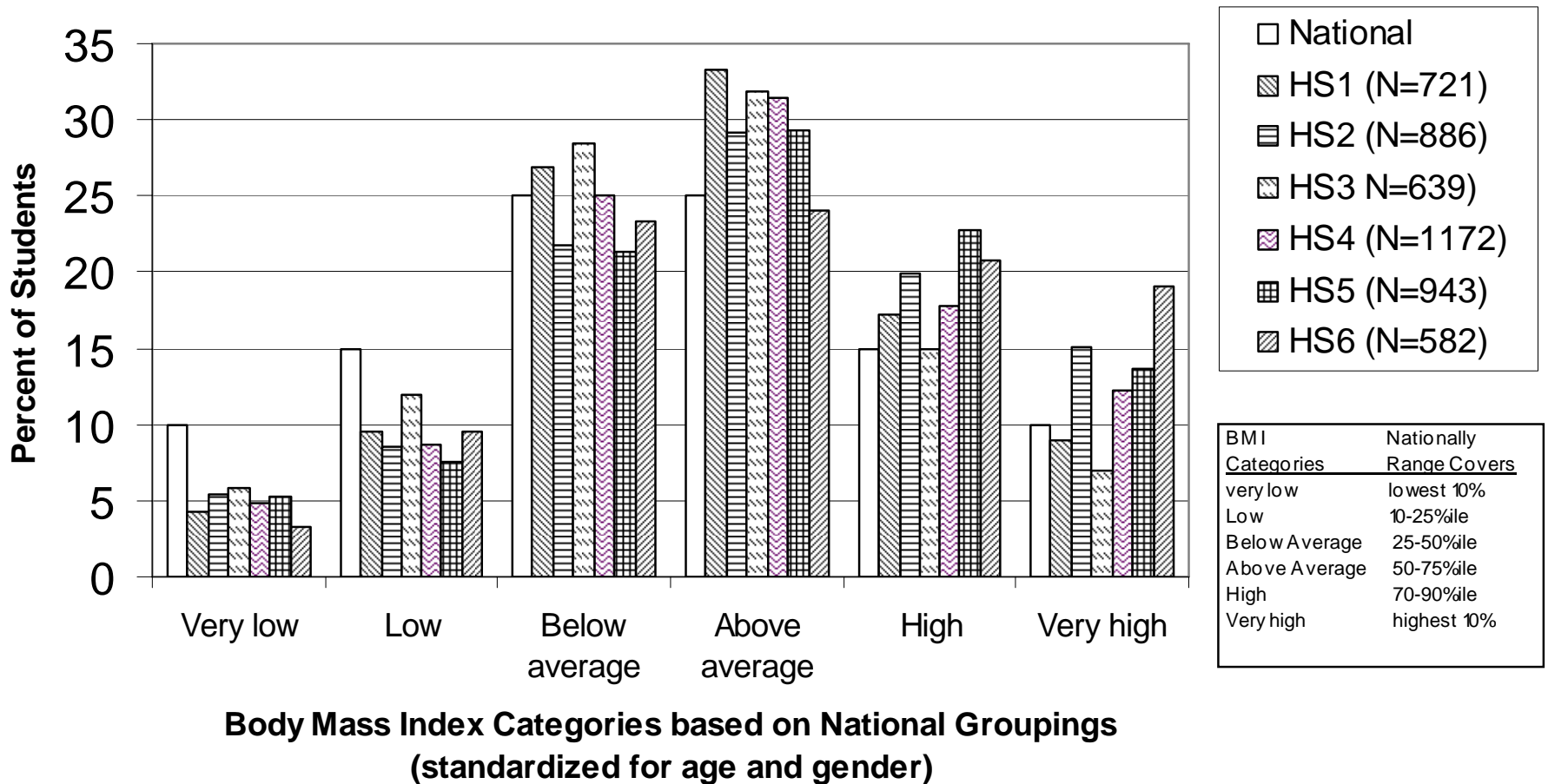


Figure 1c. Body Mass Index profile for surveyed males and females compared with national distribution

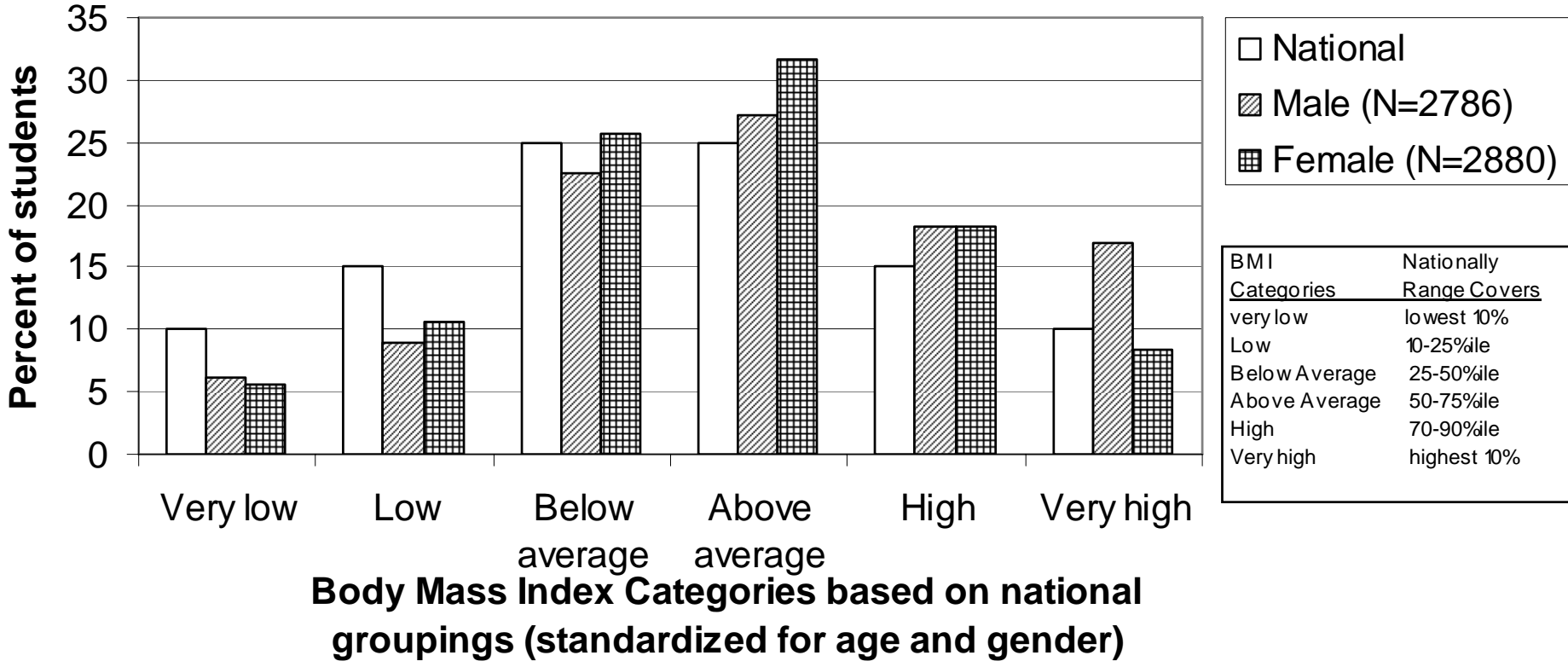
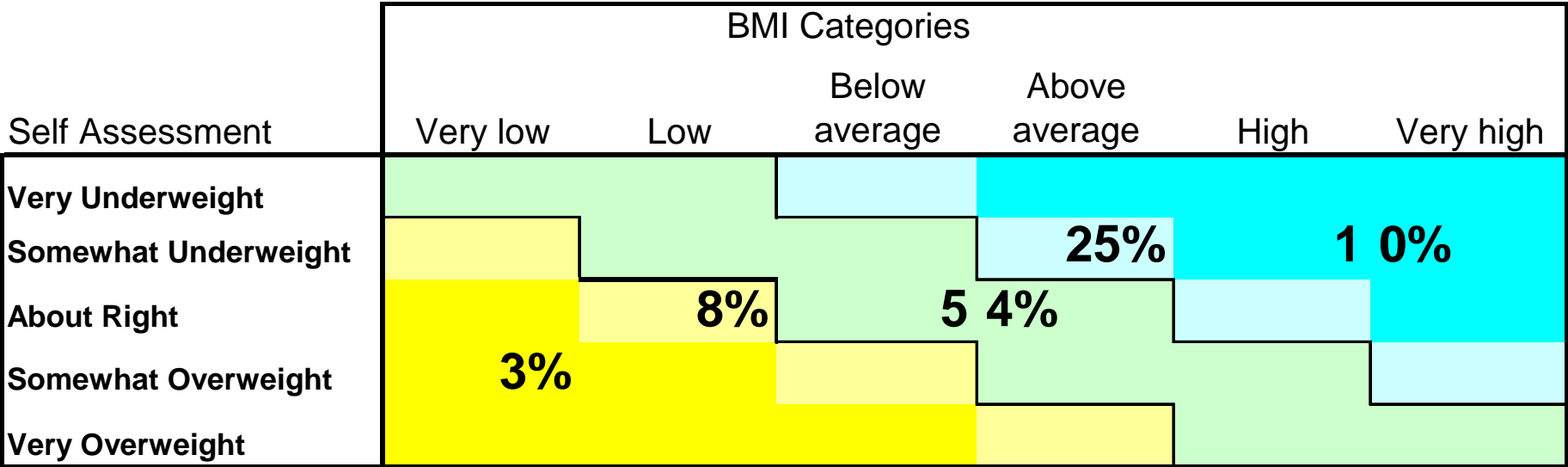


Table 2a. Accuracy of body image self-assessment compared with actual body mass (Percent of all males surveyed)



(Note: percentages denote students in each of the categories below)

Key	
Light Green	Accurate self-assessment of body mass
Light Blue	Inaccurate low self-assessment of body mass
Cyan	Highly inaccurate low self-assessment of body mass
Yellow	Inaccurate high self-assessment of body mass
Yellow	Highly inaccurate high self-assessment of body mass

Table 2b. Accuracy of body image self-assessment compared with actual body mass (Percent of all females surveyed)

Self Assessment	BMI Categories					
	Very low	Low	Below average	Above average	High	Very high
Very Underweight	Accurate self-assessment of body mass		Inaccurate low self-assessment of body mass	Highly inaccurate low self-assessment of body mass		
Somewhat Underweight	Inaccurate high self-assessment of body mass		Accurate self-assessment of body mass	14%	3%	
About Right	Highly inaccurate high self-assessment of body mass		13%	6%	Inaccurate low self-assessment of body mass	Highly inaccurate low self-assessment of body mass
Somewhat Overweight	4%		Inaccurate high self-assessment of body mass	Accurate self-assessment of body mass	Inaccurate low self-assessment of body mass	
Very Overweight	Highly inaccurate high self-assessment of body mass			Inaccurate high self-assessment of body mass	Accurate self-assessment of body mass	

Key

	Accurate self-assessment of body mass
	Inaccurate low self-assessment of body mass
	Highly inaccurate low self-assessment of body mass
	Inaccurate high self-assessment of body mass
	Highly inaccurate high self-assessment of body mass

Table 2c. Accuracy of body image self-assessment compared with actual body mass (Percent males by BMI category)

Self Assessment	BMI Categories					
	Very low	Low	Below average	Above average	High	Very high
Very Underweight	19		2	2		
Somewhat Underweight	42	45		15	9	
About Right	39	53	96		72	49
Somewhat Overweight		2	2	82		42
Very Overweight			<1	<1	19	9
Column Totals	100%	100%	100%	100%	100%	100%

Key

	Accurate self-assessment of body mass
	Inaccurate low self-assessment of body mass
	Highly inaccurate low self-assessment of body mass
	Inaccurate high self-assessment of body mass
	Highly inaccurate high self-assessment of body mass

Table 2d. Accuracy of body image self-assessment compared with actual body mass (Percent females by BMI category)

Self Assessment	BMI Categories					
	Very low	Low	Below average	Above average	High	Very high
Very Underweight	7		<1	<1		
Somewhat Underweight	40	26		3	2	
About Right	53	66	88		48	27
Somewhat Overweight		7	11	95		55
Very Overweight			<1	2	50	18
Column Totals	100%	100%	100%	100%	100%	100%

Key

	Accurate self-assessment of body mass
	Inaccurate low self-assessment of body mass
	Highly inaccurate low self-assessment of body mass
	Inaccurate high self-assessment of body mass
	Highly inaccurate high self-assessment of body mass

Table 2e. Male accuracy of body image self-assessment compared with actual body mass (Percent by school)

school	Inaccurate/highly inaccurate low self-assessment	Accurate self-assessment	Inaccurate/highly inaccurate high self-assessment
MS1	27	49	24
MS2	34	46	21
HS1	35	60	5
HS2	40	53	7
HS3	26	61	13
HS4	37	55	8
HS5	36	53	11
HS6	42	50	8

Table 2f. Female accuracy of body image self-assessment compared with actual body mass (Percent by school)

school	Inaccurate/highly inaccurate low self-assessment	Accurate self-assessment	Inaccurate/highly inaccurate high self-assessment
MS1	14	56	29
MS2	24	57	19
HS1	10	74	16
HS2	17	66	17
HS3	11	69	20
HS4	18	69	14
HS5	23	65	11
HS6	22	63	15

Table 3a. Misperceptions of same sex body weight norm in grade (Percent within gender)

	Percent underperceiving body weight norm in grade by more than 5%	Percent accurately perceiving body weight norm in grade within 5%	Percent overperceiving body weight norm in grade by more than 5%
Males	23	34	43
Females	21	48	31

Table 3b. Misperceptions of same sex body weight norm in grade by males (Percent within school)

	Percent underperceiving body weight norm in grade by more than 5%	Percent accurately perceiving body weight norm in grade within 5%	Percent overperceiving body weight norm in grade by more than 5%
MS1	31	28	41
MS2	19	29	52
HS1	11	48	41
HS2	23	33	44
HS3	24	35	41
HS4	25	32	43
HS5	20	31	49
HS6	28	31	41

Table 3c. Misperceptions of same sex body weight norm in grade by females (Percent within school)

	Percent underperceiving body weight norm in grade by more than 5%	Percent accurately perceiving body weight norm in grade within 5%	Percent overperceiving body weight norm in grade by more than 5%
MS1	33	32	35
MS2	26	47	27
HS1	16	56	28
HS2	21	47	32
HS3	18	52	30
HS4	16	47	37
HS5	23	51	26
HS6	22	45	33

Figure 4a. Inaccurately low self-assessments of personal body image among males by perception of same-sex body weight norm in grade

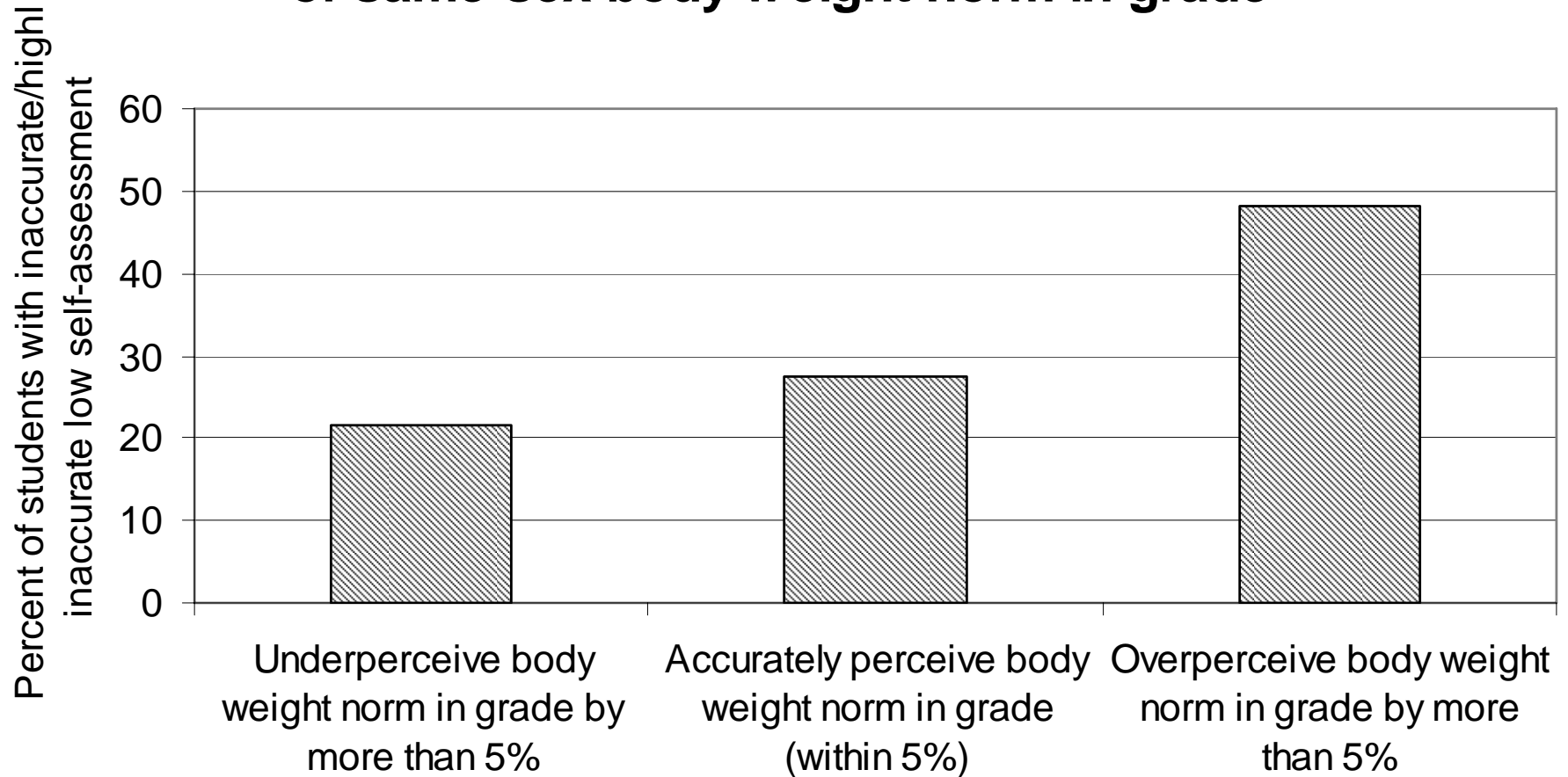


Figure 4b. Inaccurately low self-assessments of personal body image among females by perception of same-sex body weight norm in grade

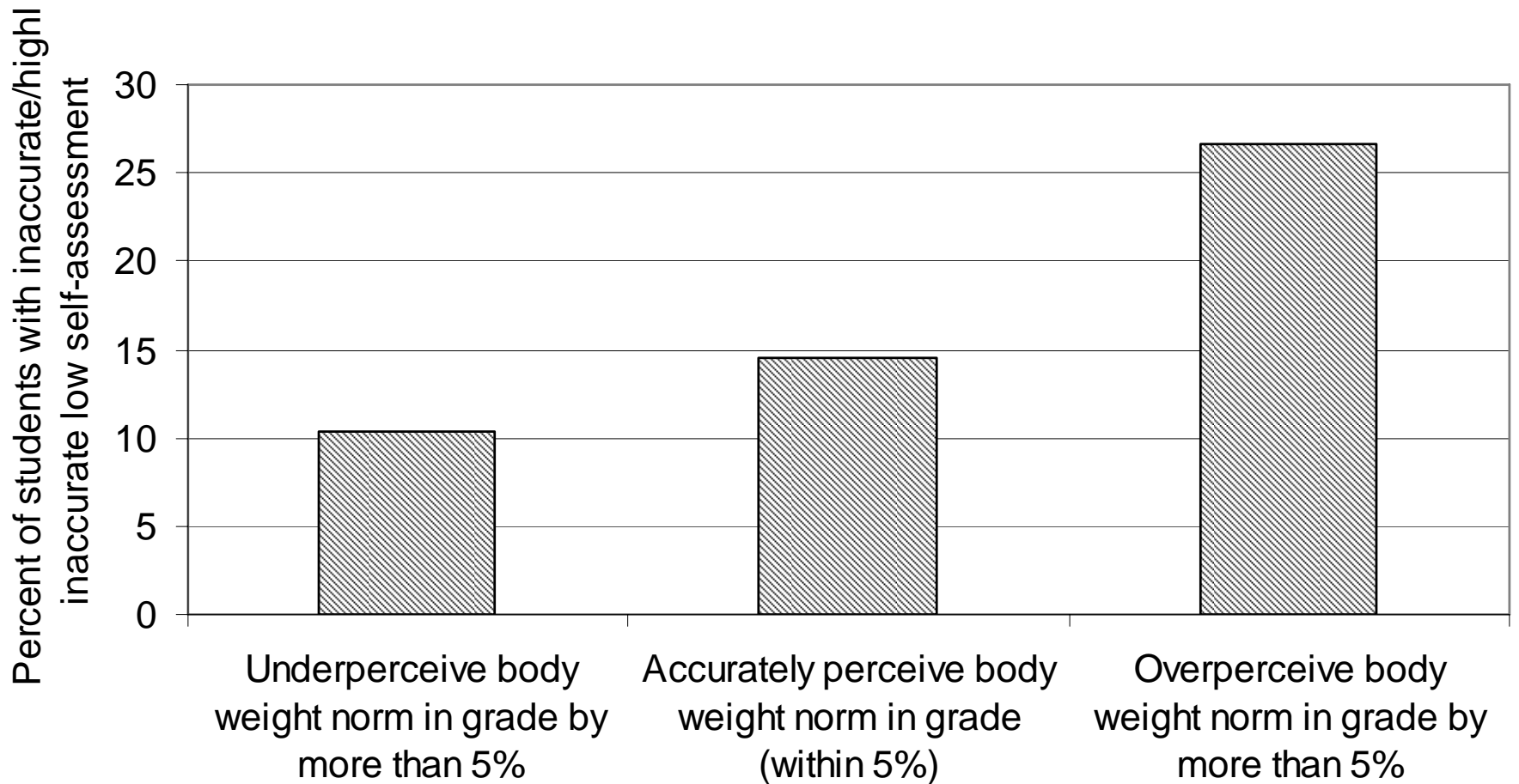


Figure 4c. Inaccurately high self-assessments of personal body image among males by perception of same-sex body weight norm in grade

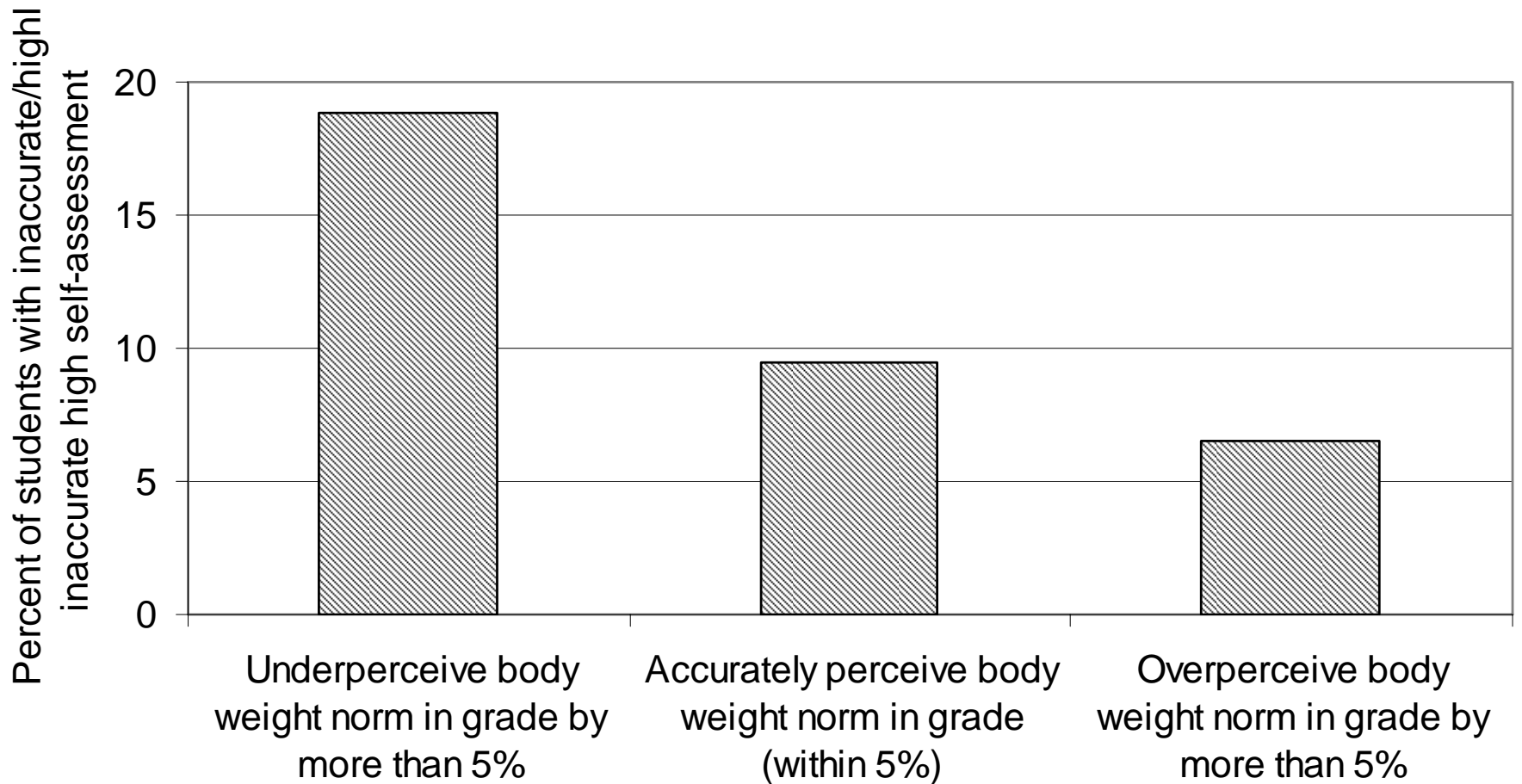


Figure 4d. Inaccurately high self-assessments of personal body image among females by perception of same sex-body weight norm in grade

