



# Hong Kong Student Health Survey (2012-2016)

## Fact Sheet No.2: Physical Activity, Sedentary Behaviours, Sleeping Habits, and Weight Control

- The Hong Kong Student Health Survey (2012-2016) measured students' health behaviours such as oral health, dietary behaviours and overweight, physical activity, sedentary behaviours, tobacco use, life satisfaction, mental distress, intentional and unintentional injuries, and inappropriate social behaviours.
- Local primary schools and secondary schools in Hong Kong were invited to take part in a healthy school project on an annual basis. Among participating schools, students who were studying in Primary 4 (P4) and Secondary 3 (S3) were eligible to participate in the survey.
- This fact sheet presents selected survey results of consecutive five years from 2012/13 to 2016/17. It aims at reflecting students' physical activity, sleeping habits, and their time spent on sedentary behaviours such as TV watching, playing video games, using the social networking site or surfing the web. It also presents students' body weight status based on self-reported or parent-reported data, and the methods used by adolescents for weight control. The percentages are weighted based on the figures provided by the Education Bureau regarding student enrolment by district, grade, gender and age in corresponding school year. It also shows when there is a marked gender difference in the prevalence.

Results	Respondents	2012/13	2013/14	2014/15	2015/16	2016/17	Average
1. Number of respondents	P4 students	3,231	3,814	3,794	4,176	2,222	3,447
	S3 students	2,963	3,896	4,036	3,852	2,642	3,478
2. Mean age of respondents (years)	P4 students	9.8	9.7	9.8	9.8	10.0	9.8
	S3 students	15.0	15.0	15.0	15.1	15.3	15.1
3. Weighted percentage of students who had had moderate to vigorous-intensity physical activity* for a total of at least 60 minutes per day on <b>every day</b> #	P4 (both sexes)	16.7%	17.9%	18.2%	18.2%	20.1%	18.2%
	S3 (both sexes)	8.6%	7.6%	7.8%	8.0%	6.7%	7.7%
	P4 boys	19.3%	20.7%	21.0%	20.7%	22.4%	20.8%
	P4 girls	13.9%	15.0%	15.1%	15.6%	17.6%	15.4%
	S3 male adolescents	12.6%	11.9%	11.7%	12.4%	10.0%	11.7%
	S3 female adolescents	4.3%	3.0%	3.6%	3.2%	3.1%	3.4%
4. Weighted percentage of students who had had moderate to vigorous-intensity physical activity* for a total of at least 60 minutes per day on <b>0 days</b> #	P4 (both sexes)	12.2%	12.7%	10.7%	10.1%	11.3%	11.4%
	S3 (both sexes)	20.2%	22.0%	20.3%	21.8%	27.9%	22.4%
	S3 male adolescents	16.5%	17.1%	15.4%	16.9%	23.2%	17.8%
	S3 female adolescents	24.2%	27.3%	25.7%	27.2%	33.0%	27.5%
5. Weighted percentage of students who had gone running or jogging@#	P4(both sexes)	57.2%	57.3%	57.1%	58.7%	55.8%	57.2%
	S3(both sexes)	49.7%	44.3%	48.1%	44.2%	40.7%	45.4%
	S3 male adolescents	51.3%	45.1%	48.4%	45.6%	43.1%	46.7%
	S3 female adolescents	47.9%	43.3%	47.8%	42.6%	38.1%	43.9%
6. Weighted percentage of students who had played ball games@#	P4(both sexes)	52.0%	44.1%	46.8%	46.1%	50.6%	47.9%
	S3(both sexes)	43.6%	36.8%	40.9%	40.7%	36.1%	39.6%
	P4 boys	61.7%	52.9%	57.5%	56.3%	59.7%	57.6%
	P4 girls	41.7%	35.0%	35.3%	35.5%	40.8%	37.7%
	S3 male adolescents	55.9%	47.2%	55.4%	53.0%	46.3%	51.6%
	S3 female adolescents	30.4%	25.5%	25.2%	27.1%	25.1%	26.7%
7. Weighted percentage of students who had performed gymnastics or dancing, or had martial arts training@#	P4 (both sexes)	20.5%	23.0%	22.4%	23.4%	30.3%	23.9%
	S3 (both sexes)	14.8%	12.9%	10.9%	13.2%	15.0%	13.4%
	P4 boys	13.2%	14.6%	13.5%	15.7%	22.6%	15.9%
	P4 girls	28.4%	31.8%	32.0%	31.3%	38.6%	32.4%
	S3 male adolescents	8.3%	7.1%	4.8%	6.2%	7.4%	6.8%
	S3 female adolescents	21.8%	19.3%	17.4%	21.0%	23.3%	20.6%

\* "Moderate intensity" refers to any activity that increased your breathing but you can still talk normally. "Vigorous intensity" refers to any activity that increased your breathing to the extent that you cannot talk normally.

# The time frame of the question was set for during the 7 days before the survey.

@ Respondents could choose more than one option among 9 to 13 common physical activities.

Results	Respondents	2012/13	2013/14	2014/15	2015/16	2016/17	Average
8. Weighted percentage of students who had ridden a bicycle <sup>@#</sup>	P4	23.3%	22.1%	23.1%	22.8%	23.8%	23.0%
	S3	9.0%	8.0%	9.5%	8.7%	6.7%	8.4%
9. Weighted percentage of students who had played skipping rope <sup>@#</sup>	P4 (both sexes)	23.6%	24.3%	23.8%	25.6%	25.0%	24.5%
	S3 (both sexes)	7.5%	4.7%	5.3%	3.9%	5.4%	5.4%
	P4 boys	13.7%	14.3%	13.5%	16.2%	17.2%	15.0%
	P4 girls	34.3%	34.8%	34.9%	35.5%	33.4%	34.6%
10. Weighted percentage of students who had group activities such as number ball and Dodgeball <sup>@#</sup>	P4 (both sexes)	16.2%	17.5%	18.6%	19.5%	27.9%	19.9%
	S3 (both sexes)	9.8%	6.3%	5.3%	5.1%	11.0%	7.5%
11. Weighted percentage of students who had gone swimming or played water sports <sup>@#</sup>	P4 (both sexes)	15.2%	16.1%	17.6%	20.4%	28.5%	19.6%
	S3 (both sexes)	5.2%	6.4%	6.3%	7.9%	11.5%	7.5%
	P4 boys	16.1%	17.4%	18.9%	21.6%	27.5%	20.3%
	P4 girls	14.3%	14.8%	16.3%	19.3%	29.7%	18.9%
12. Weighted percentage of students who usually spent more than 2 hours <b>playing video games on an average school day</b>	P4 (both sexes)	13.7%	8.6%	15.2%	14.0%	18.6%	14.0%
	S3 (both sexes)	47.6%	37.8%	52.3%	55.0%	48.3%	48.2%
	P4 boys	17.1%	11.4%	19.3%	18.5%	24.1%	18.1%
	P4 girls	10.0%	5.6%	10.7%	9.3%	12.6%	9.6%
	S3 male adolescents	49.7%	47.0%	54.4%	57.5%	54.3%	52.6%
	S3 female adolescents	45.4%	27.9%	50.1%	52.1%	41.7%	43.4%
13. Weighted percentage of students who usually spent more than 2 hours <b>playing video games on weekend or holiday</b>	P4 (both sexes)	32.4%	30.7%	32.4%	34.4%	35.1%	33.0%
	S3 (both sexes)	69.4%	63.8%	72.2%	76.5%	67.4%	69.9%
	P4 boys	40.6%	39.2%	40.8%	44.0%	44.0%	41.7%
	P4 girls	23.6%	21.6%	23.6%	24.4%	25.7%	23.8%
	S3 male adolescents	75.5%	75.9%	78.6%	83.1%	77.8%	78.2%
	S3 female adolescents	62.8%	50.8%	65.4%	69.4%	56.5%	61.0%
14. Weighted percentage of students who usually spent more than 2 hours <b>using the social networking site on an average school day</b>	P4 (both sexes)	5.7%	4.0%	5.7%	4.9%	6.5%	5.4%
	S3 (both sexes)	29.8%	39.2%	35.7%	38.9%	40.0%	36.7%
	S3 male adolescents	24.6%	31.8%	27.6%	30.6%	32.3%	29.4%
	S3 female adolescents	33.4%	47.1%	44.5%	48.0%	48.3%	44.3%
15. Weighted percentage of students who usually spent more than 2 hours <b>using the social networking site on weekend or holiday</b>	P4 (both sexes)	12.1%	10.4%	11.2%	10.0%	10.4%	10.8%
	S3 (both sexes)	44.3%	53.9%	47.8%	52.5%	52.7%	50.2%
	S3 male adolescents	37.0%	44.1%	38.9%	43.2%	43.1%	41.3%
	S3 female adolescents	48.4%	64.5%	57.2%	62.4%	62.7%	59.0%
16. Weighted percentage of students who usually spent more than 2 hours <b>watching television programmes (including online TV programmes<sup>^</sup>) on an average school day</b>	P4 (both sexes)	26.2%	21.1%	29.6%	25.9%	31.9%	26.9%
	S3 (both sexes)	34.3%	28.0%	32.6%	30.7%	54.2%	36.0%
	P4 boys	26.1%	21.3%	31.0%	27.5%	35.3%	28.2%
	P4 girls	26.4%	20.8%	28.0%	24.3%	28.2%	25.5%
	S3 male adolescents	29.1%	25.4%	31.6%	27.9%	52.5%	33.3%
	S3 female adolescents	37.9%	30.8%	33.7%	33.7%	56.0%	38.4%
17. Weighted percentage of students who usually spent more than 2 hours <b>watching television programmes (including online TV programmes<sup>^</sup>) on weekend or holiday</b>	P4 (both sexes)	45.8%	51.1%	50.8%	50.0%	50.5%	49.6%
	S3 (both sexes)	55.3%	50.3%	50.2%	48.3%	77.6%	56.3%
	P4 boys	47.5%	52.7%	54.3%	53.2%	56.8%	52.9%
	P4 girls	43.9%	48.0%	47.2%	46.7%	44.0%	46.0%
	S3 male adolescents	49.6%	46.7%	48.0%	43.6%	75.1%	52.6%
	S3 female adolescents	57.5%	54.1%	52.5%	53.4%	80.2%	59.5%

<sup>@</sup> Respondents could choose more than one option among 9 to 13 common physical activities.

<sup>#</sup> The time frame of the question was set for during the 7 days before the survey.

<sup>^</sup> The time that the respondent spent on watching YouTube videos, in addition to online TV programmes, was also included in the question in 2016/2017.

Results	Respondents	2012/13	2013/14	2014/15	2015/16	2016/17	Average
18. Weighted percentage of students who perceived that prolonged periods of sedentary time had made their <b>eyes tired*</b>	P4 (both sexes)	45.6%	33.3%	47.9%	48.0%	37.6%	42.5%
	S3 (both sexes)	43.7%	44.4%	55.7%	54.7%	47.6%	49.2%
	P4 boys	38.5%	26.9%	41.9%	41.4%	32.3%	36.2%
	P4 girls	52.9%	40.0%	54.3%	55.1%	43.3%	49.1%
	S3 male adolescents	36.6%	35.3%	49.1%	48.7%	39.4%	41.8%
	S3 female adolescents	51.5%	54.2%	62.8%	61.3%	56.4%	57.2%
19. Weighted percentage of students who perceived that prolonged periods of sedentary time had caused <b>lacking sleep</b> and made them feel fatigue*	P4 (both sexes)	18.2%	21.6%	24.5%	23.5%	20.9%	21.7%
	S3 (both sexes)	34.9%	36.8%	35.6%	36.4%	30.7%	34.9%
	P4 boys	16.4%	17.8%	20.4%	19.6%	18.3%	18.5%
	P4 girls	20.1%	25.6%	29.0%	27.6%	23.8%	25.2%
	S3 male adolescents	31.3%	30.0%	31.4%	32.3%	26.0%	30.2%
	S3 female adolescents	38.8%	44.2%	40.1%	41.0%	35.7%	40.0%
20. Weighted percentage of students who perceived that prolonged periods of sedentary time had affected their <b>learning*</b>	P4 (both sexes)	15.4%	20.5%	28.9%	28.1%	21.6%	22.9%
	S3 (both sexes)	21.7%	24.8%	29.0%	27.4%	26.1%	25.8%
	P4 boys	14.3%	17.8%	24.7%	24.1%	17.7%	19.7%
	P4 girls	16.6%	23.3%	33.3%	32.3%	25.7%	26.2%
	S3 male adolescents	19.5%	21.6%	28.6%	25.9%	22.8%	23.7%
	S3 female adolescents	24.2%	28.2%	29.4%	29.0%	29.7%	28.1%
21. Weighted percentage of students who perceived that prolonged periods of sedentary time had produced <b>discomfort in their shoulders and neck*</b>	P4 (both sexes)	11.6%	14.3%	21.5%	23.5%	16.5%	17.5%
	S3 (both sexes)	16.1%	21.3%	25.0%	26.8%	20.0%	21.8%
	P4 boys	9.6%	11.7%	17.8%	20.1%	14.0%	14.6%
	P4 girls	13.7%	16.9%	25.5%	27.0%	19.3%	20.5%
	S3 male adolescents	11.3%	15.3%	19.6%	20.5%	15.2%	16.4%
	S3 female adolescents	21.3%	27.8%	30.7%	33.8%	25.2%	27.8%
22. Weighted percentage of students who perceived that prolonged periods of sedentary time had produced <b>discomfort in their waist and back*</b>	P4	8.0%	11.1%	15.8%	15.2%	10.8%	12.2%
	S3	13.0%	16.0%	17.9%	17.4%	12.8%	15.4%
23. Weighted percentage of students who perceived that prolonged periods of sedentary time had produced <b>discomfort in their hands and arms*</b>	P4	8.3%	9.7%	12.8%	11.8%	8.3%	10.2%
	S3	9.6%	10.7%	15.0%	14.3%	11.4%	12.2%
24. Weighted percentage of students who perceived that prolonged periods of sedentary time had caused their <b>emotion to fluctuate*</b>	P4	5.7%	5.5%	7.6%	8.5%	7.5%	7.0%
	S3	8.8%	9.4%	11.0%	10.8%	9.9%	10.0%
25. Mean hour of sleep ( $\pm$ standard deviation) based on self-reported bed time and wake up time on a usual school day	P4	8.73 ( $\pm 0.99$ )	8.71 ( $\pm 1.01$ )	8.70 ( $\pm 0.86$ )	8.69 ( $\pm 0.87$ )	8.61 ( $\pm 0.95$ )	8.69 ( $\pm 0.94$ )
	S3	7.35 ( $\pm 1.13$ )	7.31 ( $\pm 1.17$ )	7.31 ( $\pm 0.99$ )	7.32 ( $\pm 1.02$ )	7.08 ( $\pm 1.22$ )	7.27 ( $\pm 1.11$ )
26. Weight percentage of adolescents who usually went to bed later than 12:00 am	S3	27.9%	27.2%	29.0%	28.6%	35.5%	29.6%

\* Respondents could choose more than one option from 7 to 9 descriptions of common impacts caused by prolonged periods of sedentary time.

# The questions about S3 students' usual bed time and wake up time had been modified in 2016 by giving a defined time frame of "during the month before the survey".

Results	Respondents	2012/13	2013/14	2014/15	2015/16	2016/17	Average
27. Weighted percentage of students whose self-reported or parent-reported body weight was <b>normal</b> <sup>@</sup>	P4 (both sexes)	71.0%	72.6%	74.8%	76.3%	78.1%	74.6%
	S3 (both sexes)	70.9%	73.3%	75.8%	73.0%	74.5%	73.5%
	P4 boys	66.7%	66.7%	69.9%	71.1%	74.6%	69.8%
	P4 girls	75.5%	78.9%	80.0%	81.9%	81.8%	79.6%
	S3 male adolescents	67.9%	71.0%	72.6%	69.6%	69.8%	70.2%
	S3 female adolescents	74.0%	75.6%	79.2%	76.8%	79.3%	77.0%
28. Weighted percentage of students who were <b>overweight</b> (including obesity) according to self-reported or parent-reported data <sup>@</sup>	P4 (both sexes)	25.4%	23.8%	22.1%	20.5%	17.4%	21.8%
	S3 (both sexes)	20.9%	18.9%	17.1%	19.0%	16.9%	18.6%
	P4 boys	29.8%	30.4%	27.6%	26.3%	22.2%	27.3%
	P4 girls	20.9%	16.8%	16.2%	14.4%	12.4%	16.1%
	S3 male adolescents	23.0%	20.3%	19.4%	21.7%	19.8%	20.8%
	S3 female adolescents	18.5%	17.5%	14.6%	16.1%	13.9%	16.1%
29. Weighted percentage of adolescents who were trying to lose weight	S3 (both sexes)	35.7%	36.3%	32.6%	33.8%	33.5%	34.4%
	S3 male adolescents	25.1%	27.5%	24.9%	26.1%	24.0%	25.5%
	S3 female adolescents	47.0%	45.9%	40.8%	42.2%	43.8%	43.9%
30. Weighted percentage of adolescents who had tried to do exercise for weight control <sup>*</sup>	S3 (both sexes)	47.6%	46.0%	46.3%	47.5%	42.6%	46.0%
	S3 male adolescents	49.5%	46.6%	47.7%	48.7%	42.8%	47.1%
	S3 female adolescents	45.5%	45.3%	44.8%	46.2%	42.5%	44.9%
31. Weighted percentage of adolescents who had tried to reduce calorie intake for weight control <sup>*</sup>	S3 (both sexes)	33.5%	35.0%	32.7%	33.6%	33.7%	33.7%
	S3 male adolescents	25.3%	26.2%	23.8%	25.6%	24.4%	25.1%
	S3 female adolescents	42.5%	44.5%	42.1%	42.4%	43.7%	43.0%
32. Weighted percentage of adolescents who had used diet pills or teas for weight loss without doctor's advice <sup>*</sup>	S3	2.3%	2.5%	1.4%	1.6%	1.9%	1.9%

<sup>@</sup> Body height and weight information of respondents was either reported by themselves (for S3 students) or by their parents (for P4 students). According to local growth standards established from a local cross-sectional growth survey, undertaken in 1993, "normal weight" refers to body weight between 80 % and 120% of the median weight-for-height (Leung, 1995; Leung, Lau, Tse & Oppenheimer, 1996). For male respondents whose body height exceeds 175 cm and for female respondents whose body height exceeds 165 cm, which fall outside the growth standard ranges, his/her body weight was interpreted using Body Mass Index cutoffs for Asian populations which define "normal" body weight as the Body Mass Index between 18.5 and 22.9 kg/m<sup>2</sup> (World Health Organization Expert Consultation, 2004).

<sup>\*</sup> The time frame of the question was set for during the 30 days before the survey.

We hope that public health practitioners and school teachers will find useful information from the results of this survey. We also aim to inspire you and assist you in your important work in delivering quality health education and health promotion for young people. Other fact sheets of the Hong Kong Student Health Survey (2012-2016) include:

- Background of the Hong Kong Student Health Survey (2012-2016)
- Fact Sheet No.1: Dietary Behaviours and Oral Health
- Fact Sheet No.3: Mental Health, Safety, Intentional Injuries, and Sexual Behaviours
- Fact Sheet No.4: Inappropriate Social Behaviours and Substance Abuse

This fact sheet is prepared by Centre for Health Education and Health Promotion, Jockey Club School of Public Health and Primary Care, Faculty of Medicine, The Chinese University of Hong Kong in August, 2018. For additional information, please visit the Centre's website (<https://www.chep.cuhk.edu.hk>) or send an email to [chep@cuhk.edu.hk](mailto:chep@cuhk.edu.hk). Centre's address: 4/F, Lek Yuen Health Centre, 9 Lek Yuen Street, Sha Tin, New Territories, Hong Kong.

#### Reference:

- Leung, S.S.F. (1995). *Simple guide to childhood growth and nutrition assessment*. Hong Kong: MEDI-proficient.
- Leung, S. S. F., Lau, J. T. F., Tse, L. Y., & Oppenheimer, S. J. (1996). Weight-for-age and weight-for-height references for Hong Kong children from birth to 18 years. *Journal of paediatrics and child health*, 32(2), 103-109. doi: 10.1111/j.1440-1754.1996.tb00904.x
- World Health Organization Expert Consultation (2004). Appropriate body-mass index for Asian populations and its implications for policy and intervention strategies. *Lancet*, 363, 157-163. doi: 10.1016/S0140-6736(03)15268-3