



Document details

< Back to results | 1 of 1

↗ Export Download Print E-mail Save to PDF Add to List More... >

Full Text

View at Publisher

Malaysian Journal of Public Health Medicine [Open Access](#)
Volume 20, Issue 2, 2020, Pages 116-122

THE GADGET GENERATION : BODY MASS INDEX AND DURATION OF PHYSICAL ACTIVITY AND SCREEN-VIEWING AMONG PRESCHOOLERS IN KUANTAN , PAHANG (Article) [\(Open Access\)](#)

Mustafa, N., Rusali, R., Ramos, A.-H.A., Ghazali, J., Mohd Shukri, N.A. ✉ 👤

Department of Nutrition Sciences, Kulliyah of Allied Health Sciences, International Islamic University Malaysia, Kuantan, Pahang 25200, Malaysia

Abstract

View references (31)

Sedentary lifestyle due to physical inactivity and increased screen-viewing (SV) duration is one of the risk factors for childhood obesity. Thus, this study aimed to assess body mass index (BMI), SV and physical activity (PA) durations among children aged four-to-six years (N=284) attending kindergartens in urban and rural areas of Kuantan, Pahang. The SV and PA durations were estimated via a questionnaire completed by their parents. The preschoolers' height and weight were measured using a stadiometer and a digital weighing scale, respectively. The BMI-for-age status was interpreted using the CDC growth charts and cut-off points. A total of 37.8% of respondents were underweight, 16.7% overweight/obese, while the rest had normal BMI. Almost 90% of the children were using electronic gadgets. In addition, 89.8% of them recorded >two hours/day of total SV duration, exceeding the international recommendation of <two hours/day of screen time and the Malaysian Dietary Guideline's recommendation of <two hours/day of sedentary activity. Only 49.8% (on weekdays) and 75.4% (on weekends) of the children met the recommended one hour/day of moderate PA by the WHO. There were no significant differences of BMI, SV and PA durations between urban and rural respondents. The preschoolers in Kuantan were largely found to exceed the recommended SV duration and only half of them met the recommended PA duration on most days. This suggests that intervention is needed to curb these obesity-inducing sedentary behaviours due to long SV duration and physical inactivity among preschoolers across urban and rural areas of the Pahang capital district.

© 2020

SciVal Topic Prominence ⓘ

Topic: Screen Time | Sedentary Lifestyle | Preschool Children

Prominence percentile: 98.814



Author keywords

BMI childhood obesity electronic gadget physical activity Screen-viewing

Metrics ⓘ View all metrics >



PlumX Metrics

Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

Set citation alert >

Related documents

Results from Malaysia's 2016 report card on physical activity for children and adolescents

Sharif, R., Chong, K.H., Zakaria, N.H.
(2016) *Journal of Physical Activity and Health*

Prospective associations between toddler television and subsequent lifestyle habits in adolescence

Simonato, I., Janosz, M., Archambault, I.
(2018) *Preventive Medicine*

Associations between food and beverage consumption and different types of sedentary behaviours in European preschoolers: the ToyBox-study

Miguel-Berges, M.L., Santaliestra-Pasias, A.M., Mouratidou, T.
(2017) *European Journal of Nutrition*

View all related documents based on references

References (31)

View in search results format >

Authors > Keywords >

All Export Print E-mail Save to PDF Create bibliography

- 1 (2018) *Taking Action on Childhood Obesity Report*. Cited 36 times.
1. World Health Organization (WHO) [Re WHO/NMH/PND/ECHO/18.1](#)
-
- 2 Ismail, MN, Ruzita, AN, Norimah, AK
Prevalence and trends of overweight and obesity in two cross-sectional studies of Malaysian children, 2002–2008
(2009) *MASO 2009 Scientific Conference on Obesity: Obesity and our environment*. Cited 10 times.
2
-
- 3 Reilly, J.J., Kelly, J.
Long-term impact of overweight and obesity in childhood and adolescence on morbidity and premature mortality in adulthood: Systematic review ([Open Access](#))

(2011) *International Journal of Obesity*, 35 (7), pp. 891-898. Cited 1101 times.
doi: 10.1038/ijo.2010.222

[View at Publisher](#)
-
- 4 Griffiths, L.J., Parsons, T.J., Hill, A.J.
Self-esteem and quality of life in obese children and adolescents: A systematic review

(2010) *International Journal of Pediatric Obesity*, 5 (4), pp. 282-304. Cited 287 times.
doi: 10.3109/17477160903473697

[View at Publisher](#)
-
- 5 (2007) *Physical activity guidelines for infants & toddlers*
5. National Association for Sport and Physical Education (NASPE) Retrieved January 23, 2016, from <http://www.aahperd.org/naspe/template.cfm?template=toddlers.html>
-
- 6 Müller, A.M., Khoo, S., Lambert, R.
Review of physical activity prevalence of Asian school-age children and adolescents ([Open Access](#))

(2013) *Asia-Pacific Journal of Public Health*, 25 (3), pp. 227-238. Cited 26 times.
doi: 10.1177/1010539513481494

[View at Publisher](#)
-
- 7 (2017) *National Health and Morbidity Survey (NHMS) 2017: Adolescent Nutrition Survey 2017*. Cited 11 times.
7. Institute for Public Health Malaysia
-
- 8 (2010) *Global Recommendations on Physical Activity for Health*. Cited 5869 times.
8. World Health Organization (assessed in July 2019)
<https://www.who.int/dietphysicalactivity/publications/9789241599979/en/>

-
- 9 (2013) *Malaysian Dietary Guidelines for Children and Adolescent*. Cited 35 times.
9. Ministry of Health Malaysia Nutrition Division. Putrajaya, Malaysia
-
- 10 Tremblay, M.S., Gray, C.E., Akinroye, K., Harrington, D.M., Katzmarzyk, P.T., Lambert, E.V., Liukkonen, J., (...), Tomkinson, G.
Physical activity of children: A global matrix of grades comparing 15 countries
([Open Access](#))
- (2014) *Journal of Physical Activity and Health*, 11, pp. S113-S125. Cited 226 times.
<http://journals.humankinetics.com/doi/pdf/10.1123/jpah.11.s1.s113>
doi: 10.1123/jpah.2014-0177
- [View at Publisher](#)
-
- 11 Lee, S.T., Wong, J.E., Shanita, S.N., Ismail, M.N., Deurenberg, P., Poh, B.K.
Daily physical activity and screen time, but not other sedentary activities, are associated with measures of obesity during childhood ([Open Access](#))
- (2015) *International Journal of Environmental Research and Public Health*, 12 (1), pp. 146-161. Cited 36 times.
<http://www.mdpi.com/1660-4601/12/1/146/pdf>
doi: 10.3390/ijerph120100146
- [View at Publisher](#)
-
- 12 Cox, R., Skouteris, H., Rutherford, L., Fuller-Tyszkiewicz, M., Aquila, D.D., Hardy, L.L.
Television viewing, television content, food intake, physical activity and body mass index: A cross-sectional study of preschool children aged 2-6 years
- (2012) *Health Promotion Journal of Australia*, 23 (1), pp. 58-62. Cited 53 times.
<http://www.healthpromotion.org.au/journal/journal-downloads/tags/1-hpja/1112-health-promot-j-austr-vol-23-no-1-apr-2012?download=1&record-d=449&field=9>
doi: 10.1071/he12058
- [View at Publisher](#)
-
- 13 Prentice-Dunn, H., Prentice-Dunn, S.
Physical activity, sedentary behavior, and childhood obesity: A review of cross-sectional studies
- (2012) *Psychology, Health and Medicine*, 17 (3), pp. 255-273. Cited 130 times.
<http://www.tandf.co.uk/journals/titles/13548506.asp>
doi: 10.1080/13548506.2011.608806
- [View at Publisher](#)
-
- 14 De Jong, E., Visscher, T.L.S., Hirasing, R.A., Heymans, M.W., Seidell, J.C., Renders, C.M.
Association between TV viewing, computer use and overweight, determinants and competing activities of screen time in 4- to 13-year-old children ([Open Access](#))
- (2013) *International Journal of Obesity*, 37 (1), pp. 47-53. Cited 111 times.
doi: 10.1038/ijo.2011.244
- [View at Publisher](#)
-

- 15 Lipsky, L.M., Iannotti, R.J.
Associations of television viewing with eating behaviors in the 2009 health behaviour in school-aged children study ([Open Access](#))

(2012) *Archives of Pediatrics and Adolescent Medicine*, 166 (5), pp. 465-472. Cited 57 times.
<http://archpedi.ama-assn.org/cgi/reprint/166/5/465>
doi: 10.1001/archpediatrics.2011.1407

View at Publisher
-
- 16 Pearson, N., Biddle, S.J.H.
Sedentary behavior and dietary intake in children, adolescents, and adults: A systematic review ([Open Access](#))

(2011) *American Journal of Preventive Medicine*, 41 (2), pp. 178-188. Cited 330 times.
www.elsevier.com/locate/amepre
doi: 10.1016/j.amepre.2011.05.002

View at Publisher
-
- 17 Olafsdottir, S., Berg, C., Eiben, G., Lanfer, A., Reisch, L., Ahrens, W., Kourides, Y., (...), Lissner, L.
Young children's screen activities, sweet drink consumption and anthropometry: Results from a prospective European study ([Open Access](#))

(2014) *European Journal of Clinical Nutrition*, 68 (2), pp. 223-228. Cited 41 times.
doi: 10.1038/ejcn.2013.234

View at Publisher
-
- 18 Kremers, S.P.J., van der Horst, K., Brug, J.
Adolescent screen-viewing behaviour is associated with consumption of sugar-sweetened beverages: The role of habit strength and perceived parental norms

(2007) *Appetite*, 48 (3), pp. 345-350. Cited 77 times.
doi: 10.1016/j.appet.2006.10.002

View at Publisher
-
- 19 Halford, J.C.G., Gillespie, J., Brown, V., Pontin, E.E., Dovey, T.M.
Effect of television advertisements for foods on food consumption in children

(2004) *Appetite*, 42 (2), pp. 221-225. Cited 326 times.
doi: 10.1016/j.appet.2003.11.006

View at Publisher
-
- 20 Halford, J.C., Boyland, E.J., Hughes, G.
Beyond-brand effect of television (TV) food advertisements/commercials on caloric intake and food choice of 5-7-
(2007)
20
-
- 21 Sisson, S.B., Shay, C.M., Broyles, S.T., Leyva, M.
Television-viewing time and dietary quality among U.S. children and adults

(2012) *American Journal of Preventive Medicine*, 43 (2), pp. 196-200. Cited 45 times.
doi: 10.1016/j.amepre.2012.04.016

View at Publisher

- 22 Poh, B.K., Ng, B.K., Siti Haslinda, M.D., Nik Shanita, S., Wong, J.E., Budin, S.B., Ruzita, A.T., (...), Norimah, A.K.
Nutritional status and dietary intakes of children aged 6 months to 12 years: Findings of the Nutrition Survey of Malaysian Children (SEANUTS Malaysia) ([Open Access](#))
(2013) *British Journal of Nutrition*, 110 (SUPPL.3), pp. S21-S35. Cited 89 times.
doi: 10.1017/S0007114513002092
[View at Publisher](#)
-
- 23 *Centers for Disease Control and Prevention Recommended BMI-for-age Cutoffs 2004*
23. (Accessed on July 20th, 2020)
<https://www.cdc.gov/nccdphp/dnpao/growthcharts/training/bmiage/page4.html>
-
- 24 Brasholt, M, Chawes, B, Kreiner-Moller, E
Objective assessment of levels and patterns of physical activity in preschool children
(2013) *International Pediatric Research Foundation*, 15, p. 969.
24
-
- 25 Reilly, J.J.
Low levels of objectively measured physical activity in preschoolers in child care
(2010) *Medicine and Science in Sports and Exercise*, 42 (3), pp. 502-507. Cited 159 times.
doi: 10.1249/MSS.0b013e3181cea100
[View at Publisher](#)
-
- 26 *Global Mobile Market Report (2017–2022)*
26. (Accessed on July 20th, 2020)
https://resources.newzoo.com/hubfs/Factsheets/Newzoo_The_Global_Mobile_Market_Report_Fact_Sheet.pdf
-
- 27 Mak, Y.W., Sau Ting Wu, C., Wing Shun Hui, D., Lam, S.P., Tse, H.Y., Yu, W.Y., Wong, H.T.
Association between screen viewing duration and sleep duration, Sleep quality, And excessive daytime sleepiness among adolescents in Hong Kong ([Open Access](#))
(2014) *International Journal of Environmental Research and Public Health*, 11 (11), pp. 11201-11219. Cited 32 times.
<http://www.mdpi.com/1660-4601/11/11/11201/pdf>
doi: 10.3390/ijerph111111201
[View at Publisher](#)
-
- 28 Fakhouri, T.H.I., Hughes, J.P., Brody, D.J., Kit, B.K., Ogden, C.L.
Physical activity and screen-time viewing among elementary school-aged children in the United States from 2009 to 2010 ([Open Access](#))
(2013) *JAMA Pediatrics*, 167 (3), pp. 223-229. Cited 138 times.
http://archpedi.jamanetwork.com/data/journals/PEDS/926503/poa120069_223_229.pdf
doi: 10.1001/2013.jamapediatrics.122
[View at Publisher](#)
-

- 29 Jago, R., Stamatakis, E., Gama, A., Carvalho, I.M., Nogueira, H., Rosado, V., Padez, C.
Parent and child screen-viewing time and home media environment (Open Access)

(2012) *American Journal of Preventive Medicine*, 43 (2), pp. 150-158. Cited 65 times.
doi: 10.1016/j.amepre.2012.04.012

[View at Publisher](#)

- 30 Bickham, D.S., Blood, E.A., Walls, C.E., Shrier, L.A., Rich, M.
Characteristics of screen media use associated with higher BMI in young adolescents
(Open Access)

(2013) *Pediatrics*, 131 (5), pp. 935-941. Cited 55 times.
<http://pediatrics.aappublications.org/content/131/5/935.full.pdf+html>
doi: 10.1542/peds.2012-1197

[View at Publisher](#)

- 31 Stamatakis, E., Coombs, N., Jago, R., Gama, A., Mourão, I., Nogueira, H., Rosado, V., (...), Padez, C.
Associations between indicators of screen time and adiposity indices in Portuguese
children (Open Access)

(2013) *Preventive Medicine*, 56 (5), pp. 299-303. Cited 22 times.
doi: 10.1016/j.jpmed.2013.02.006

[View at Publisher](#)

👤 Mohd Shukri, N.A.; Department of Nutrition Sciences, Kulliyah of Allied Health Sciences, International Islamic
University Malaysia, Kuantan, Pahang, Malaysia; email:norazwani@iiium.edu.my

© Copyright 2020 Elsevier B.V., All rights reserved.

< Back to results | 1 of 1

^ Top of page

About Scopus

[What is Scopus](#)
[Content coverage](#)
[Scopus blog](#)
[Scopus API](#)
[Privacy matters](#)

Language

[日本語に切り替える](#)
[切换到简体中文](#)
[切换到繁體中文](#)
[Русский язык](#)

Customer Service

[Help](#)
[Contact us](#)

ELSEVIER

[Terms and conditions](#) ↗ [Privacy policy](#) ↗

Copyright © Elsevier B.V. ↗. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

We use cookies to help provide and enhance our service and tailor content. By continuing, you agree to the
use of cookies.

RELX