EFFETTO COVID-19 SUL MOVIMENTO ABITUALE

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Caratteristiche del COVID-19 nei ragazzi e adolescenti

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RESEARCH ARTICLE

Epidemiological and clinical features of pediatric COVID-19



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Table 1 Epidemiological characteristics of pediatric COVID-19

Classification	Characteristic
Included patient number	341
Age, median (range)	7 years (4 days to 14 years)
Gender ratio	
Male/female (%)	183/158 (1.2)
Exposure to the source of transmission No.%	,
Family members with COVID-19	210/318 (66%)
Non-family members with COVID-19	10/318 (3.1%)
History of exposure to epidemic area	92/318 (28.9%)
Indefinite history of exposure	6/318 (1.9%)
Data unavailable	23/341 (6.7%)
Incubation period (days)	85
Median (range)	9 (0–20)
Quartile (Q1–Q3)	6–13



Classification	Children	Adults [5, 6, 14]					
Exposure to source of transmission	Family cluster (may have maternal-fetal vertical transmission)	Multiple ways (local residents of Wuhan, recently been to Wuhan, contacted with people from Wuhan and wildlife)					
Incubation period	(days)						
Median (range)	9 (0–20)	4 (0–24)					
Quartile (Q1–Q3)	6–13	2–7					
Clinical diagnosis							
Asymptomatic	5.9%	1%					
Abnormal chest radiograph	30%	No data available					
Mild/moderate	99.3%	81%					
Severe	0.6%	14%					
Critical	0.3%	5%					
Clinical symptoms	and signs						
Fever	77.9%	43.1%					
Cough	32.4%	67.7%					
Other	Lacrimation, stuffy nose, sneezing, sore throat, dyspnea, nausea and vomiting, diarrhea, conjunctivitis, dizziness and headache and myalgia, fatigue, body discomfort	Conjunctival congestion, nasal congestion, headache, sore throat, dyspnea, sputum production, fatigue, hemoptysis, shortness of breath, nausea or vomiting, diarrhea, myalgia or arthralgia, chill, throat congestion, tonsil swelling, enlargement of lymph nodes, rash					
Coexisting disorders	Congenital heart	Hypertension, diabetes, coronary heart disease, hepatitis B infection, chronic obstructive pulmonary disease, chronic renal diseases, immunodeficiency, cancer, cerebrovascular diseases, neurological manifestations					
Complications	Heart failure, myocardial injury, liver injury, acute respiratory distress syndrome, shock, acute kidney injury	Septic shock, acute respiratory distress syndrome, acute kidney injury, acute cardiac injury, disseminated intravascular coagulation, rhabdomyolysis, pneumonia, secondary infection					
Treatment	Symptomatic treatment, antiviral treatment, TCM, antibiotic treatment, nutritional support therapy, interferon therapy, immunoglobulin therapy, glucocorticoid therapy, mechanical ventilation	Symptomatic treatment, antiviral treatment, antibiotic treatment, antifungal medications, corticosteroids, immunoglobulin therapy, TCM, interferon therapy, noninvasive ventilation, invasive mechanical ventilation, extracorporeal membrane oxygenation (ECMO), continuous renal replacement therapy (CRRT)					
Clinical outcomes							
Death	0	2.3%					
Time from onset to	o cure (days)						
Median (range)	16 (6–39)	No data available					
Quartile (Q1–Q3)	13–21	No data available					

 Table 3 Comparison of the characteristics of COVID-19 between children and adults

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Effetto del COVID-19: il ruolo dell'esercizio fisico



International Journal of Environmental Research and Public Health



Article

Mental Health Problems during the COVID-19 Pandemics and the Mitigation Effects of Exercise: A Longitudinal Study of College Students in China

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Male *p*-Value Total Female 66 25 41 Ν Age (Year), Mean (SD) 20.70 (2.11) 21.08 (1.94) 20.46 (2.19) 0.251 Ethnicity, n (%) 61 (92.42%) 24 (96.00%) 37 (90.24%) 0.367 Han 5 (7.58%) 1 (4.00%) Minority 4 (9.76%) Body Mass Index, Mean (SD) 21.11 (2.92) 20.24 (2.80) 0.001 BMI (kg/m^2) 22.54 (2.56) Residence, n (%) 51 (77.27%) 33 (80.49%) 0.307 City 18 (72.00%) Countryside 15 (22.73%) 7 (28.00%) 8 (19.51%) METs of Weekly PA, Mean (SD) Vigorous PA 354.55 (613.41) 715.20 (785.62) 134.63 (367.78) < 0.001 Moderate PA 250.30 (374.19) 252.00 (301.66) 249.27 (415.84) 0.977 Light PA 462.00 (370.67) 0.005 327.50 (312.91) 245.49 (241.80) 629.390 (772.00) Total PA 932.35 (881.69) 1429.200 (835.56) < 0.001 Sedentary Behavior, Mean (SD) Total minutes of weekly sedentariness 2830.40 (1351.02) 0.770 2881.06 (1086.27) 2911.95 (905.38) Physical Activity Level, *n* (%) 0.002 Sedentary 10 (15.15%) 2 (8.00%) 8 (19.51%) Low 19 (28.79%) 2 (8.00%) 17 (41.46%) Moderate 29 (43.94%) 15 (60.00%) 14 (34.15%) 6 (24.00%) 2 (4.88%) High 8 (12.12%) PSQI Level, n (%) 0.520 Healthy (global PSQI \leq 5) 38 (57.58%) 14 (56.00%) 24 (58.54%) Unhealthy (global PSQI > 5) 28 (42.42%) 11 (44.00%) 17 (41.46%) Attitudes Towards COVID-19, n (%) Worried or very concerned 56 (84.85%) 21 (84.00%) 35 (85.40%) 0.572 Not very worried or no care 10 (15.15%) 4 (16.00%) 6 (14.60) Stress Level, n (%) normal 47 (71.21%) 20 (80.00%) 27 (65.85%) 0.171 19 (28.79%) 5 (20.00%) 14 (34.15%) abnormal Anxiety Level, n (%) 0.072 normal 36 (54.55%) 17 (68.00%) 19 (46.34%) 8 (32.00%) abnormal 30 (45.45%) 22 (53.66%) Depression Level, *n* (%) normal 51 (77.27%) 21 (84.00%) 30 (73.17%) 0.240 abnormal 15 (22.73%) 4 (16.00%) 11 (26.83%)

Note: *N* means the number of participants who participated in this study. *n* indicates the number of people who met a certain characteristic of demographic variable or health status. *SD* means standard deviation.

Table 1. Demographic characteristics and health status of all participants at baseline.

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Effetto del COVID-19 sulle abitudini relative al movimento

RESEARCH

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Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: a national survey



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	Children			Youth			
	Total (n = 690)	Girls (n = 321)	Boys (n = 369)	Total (n = 774)	Girls (n = 368)	Boys (n = 406)	
Current child health behaviours, M (SD)						
MVPA ≥60 min (days/week)	3.55 (2.33)	3.35 ^a (2.26)	3.73 ^a (2.38)	2.59 (2.33)	2.60 (2.28)	2.57 (2.38)	
Sleep (hours/day)	9.19 (2.33)	9.28 (2.18)	9.12 (2.45)	9.01 (2.30)	9.10 (2.10)	8.93 (2.46)	
Screen time (hours/day)	5.14 (3.54)	5.06 (3.26)	5.21 (3.78)	6.53 (3.31)	6.31 ^a (3.21)	6.72 ^a (3.39)	
Proportion of children meeting guideli	nes (%)						
MVPA	23.8	19.0 ^a	27.9 ^{ga}	13.2	11.4	14.8	
Sleept	69.9	72.6	67.5	72.1	73.6	70.7	
Screen time	16.5	16.2 ^a	16.8 ^a	6.6	7.9	5.4	
24 h combined	4.8	2.8	6.5 ^{ga}	0.6	0.8	0.5	
Change in child movement and play be	haviours during	COVID-19 outbre	eak, M (SD) ^a				
Walks or bikes in neighbourhood	2.57 (1.35)	2.54 ^a (1.36)	2.61 ^a (1.34)	2.19 (1.20)	2.24 (1.24)	2.15 (1.17)	
Physical activity or sport outside	2.28 (1.22) 2.26 ^a (1.25)		2.30 ^a (1.20)	2.30 ^a (1.20) 1.96 (1.13)		1.99 (1.15)	
Physical activity or sport inside	2.94 (1.15)	3.01 ^a (1.19)	2.88 ^a (1.11)	2.59 (1.21)	2.64 (1.55)	2.55 (1.15)	
Household chores	3.35 (0.80)	3.38 (0.83)	3.33 (0.78)	3.29 (0.84)	3.33 (0.81)	3.25 (0.86)	
Plays outside	2.58 (1.31)	2.57 ^a (1.30)	2.59 ^a (1.31)	2.24 (1.08)	2.20 (1.03)	2.27 (1.13)	
Plays inside	3.85 (1.00)	3.86 ^a (1.02)	3.84 ^a (0.99)	3.60 (1.00)	3.58 (0.97)	3.62 (1.03)	
Watches television (TV) or screens	4.10 (0.87)	4.10 (0.92)	4.11 (0.84)	4.21 (0.92)	4.21 (0.91)	4.21 (0.93)	
Uses social media	3.30 (0.89)	3.46 ^g (0.91)	3.16 (0.85)	3.78 (0.94)	3.97 ^{ag} (0.86)	3.62 ^a (0.97)	
Sleep quantity	3.21 (0.70)	3.30 ^g (0.70)	3.14 (0.69)	3.63 (0.84)	3.74 ^{ag} (0.78)	3.53 ^a (0.88)	
Sleep quality	3.05 (0.66)	3.05 (0.68)	3.05 (0.65)	3.04 (0.73)	3.05 (0.71)	3.02 (0.75)	
Overall healthy movement behaviours	2.66 (0.83)	2.68 ^a (0.81)	2.65 ^a (0.84)	2.44 (0.90)	2.49 (0.91)	2.38 (0.89)	
Overall time spent outside	2.38 (1.26)	2.35 ^a (1.25)	2.41 ^a (1.28)	2.08 (1.15)	2.05 (1.13)	2.11 (1.17)	
Family time in physical activity	2.72 (1.16)	2.70 (1.17)	2.74 (1.16)	2.57 (1.11)	2.58 (1.06)	2.56 (1.15)	
Family time in sedentary behaviours	3.87 (0.81)	3.90 (0.83)	3.85 (0.79)	3.88 (0.88)	3.94 (0.82)	3.83 (0.93)	

 Table 3 Summary of the movement and play behaviours in children and youth during the COVID-19 virus outbreak

MVPA Moderate to vigorous physical activity; ^a = significant age effect. ^g = significant gender effect; \dagger = for sleep, the column 'children' age is 5–13 years and 'youth' age is 14–17 years as per the 24-h sleep guidelines

^aRange from 1 to 5, 3 represents no change (see Table 1 for details)



Fig. 1 Forest plot of parent-reported changes in 24-h movement behaviours of Canadian children and youth. Forest plot of parent-reported changes in 24-h movement behaviours of Canadian children and youth (5–17 years) based on responses to a 5-point scale ranging from "a lot less" (scored 1) to "about the same" (scored 3) to "a lot more" (scored 5). PA = physical activity. See Table 1 and Additional File 1 for more details on the questions and response options. Data points are means with standard error bars (generally too small to be seen)

		1		5				5 1	, ,				
	Outside physical activity	Walking and biking	Outside play	Overall time outdoors	Inside physical activity	Household chores	Inside play	Family physical activity	Family sedentary behaviour	Screen time	Social media	Sleep	Sleep quality
Parent's age	-0.11*	-0.11*	-0.16*	-0.14*	-0.10*	-0.02	-0.07*	-0.11*	-0.01	0.04	-0.13*	0.12*	-0.07
Parent's gender $(1 = M; 2 = F)$	-0.01	0.00	0.04	0.02	-0.02	0.06	0.08*	0.03	0.05	0.08*	0.08*	0.07*	0.01
Parent's education	- 0.05	0.02	- 0.06	- 0.07*	- 0.01	- 0.01	0.02	- 0.05	0.09*	0.03	0.09*	_ 0.01	0.03
Parent's work status (1 = U; 2 = E)	0.02	0.04	0.01	0.03	0.02	-0.02	- 0.02	0.04	0.03	-0.03	0.03	0.01	0.04
Household income	0.03	0.13*	0.11*	0.05	0.01	0.07*	-0.03	0.04	0.07*	0.04	0.11*	0.01	0.02
Marital status ^a	0.06	0.06	0.11*	0.08*	0.05	0.10*	0.01	0.08*	-0.02	-0.05	-0.06	_ 0.05	0.05
Household type ^b	0.12*	0.13*	0.18*	0.14*	-0.01	0.09*	-0.09*	0.09*	0.01	0.01	0.04	-0.04	-0.03
Dog ownership (1 = no; 2 = yes)	0.07*	0.03	0.11*	0.10*	0.00	0.09*	-0.10*	0.06	-0.02	- 0.01	0.09*	0.07*	0.02
Parent encourages physical activity	0.17*	0.12*	0.14*	0.13*	0.12*	0.08*	-0.02	0.24*	0.05	0.07*	0.04	0.10*	0.07*
Parent participates in physical activity	0.32*	0.32*	0.39*	0.39*	0.14*	0.18*	-0.10*	0.44*	0.04	-0.02	0.00	-0.02	0.04
Parent supports physical activity	0.14*	0.10*	0.12*	0.15*	0.09*	-0.01	-0.10*	0.13*	-0.10	- 0.07*	-0.03	_ 0.03	-0.02
Parent discourages screen time	-0.06	-0.05	- 0.01	-0.06	0.00	0.08*	0.11*	0.00	0.06	0.13*	0.09*	0.09*	0.00
Parent encourages sleep	0.00	-0.03	-0.07*	-0.04	0.05	0.09*	0.13*	-0.01	0.07*	0.06	0.04	0.16*	0.15*

Table 4 Associations between perceived changes in movement behaviours and demographic, social, and environmental factors

* = p < 0.01; M Male, F Female, U Unemployed, E Employed, ^aMarital status, 1 = single, 2 = cohabited; ^bHousehold type, 1 = other, 2 = detached house

Conclusioni

- Durante il periodo di quarantena i ragazzi hanno sensibilmente diminuito il livello di attività fisica
- L'attività all'aperto è stata parzialmente sostituita con attività indoor
- Le attività a basso impegno energetico sono aumentate in modo importante
- Le attività svolte con i famigliari sono state prevalentemente a basso impatto energetico
- I comportamenti di tipo sedentario sono aumentati in modo sensibile