



SCIENTIFIC LETTER

Health-related quality of life in preadolescents before and during the lockdown[☆]**Calidad de vida relacionada con la salud en preadolescentes antes y durante el confinamiento**

Dear Editor:

The state of alarm declared in Spain due to the coronavirus disease 2019 (COVID-19) pandemic lasted for 98 days, during which the Spanish population was under strict home confinement.

Health-related quality of life (HRQoL) is a widely studied construct in the literature that refers to a state of physical, mental, and social well-being.¹ The objective of our study was to compare HRQoL in preadolescents in Spain before and during the COVID-19 lockdown.

We conducted a 2-wave longitudinal study (wave 1, December 2019; wave 2, lockdown period, at least 62 days after it began). The participants were 165 students (38.2% male) from year 6 of primary education to year 2 of compulsory secondary education (ESO in Spanish) enrolled in 5 schools in the regions of Aragón, Asturias and Castilla y León in Spain.

We used the KIDSCREEN-27.² This version assesses 5 dimensions with 27 items. The reliability indicators were adequate.

We obtained consent for participation of the students, and the study was approved by the schools and the research ethics committee.

We found significant differences in physical well-being, with a substantial decrease during the lockdown ($P < .001$) during the lockdown. In contrast, scores for the autonomy and parents dimension increased during the lockdown ($P < .001$) (Table 1). We did not find significant differences based on sex or educational stage.

The significant decrease in physical well-being could be expected given the restrictions to free movement and suspension of face-to-face classes and activities. This situation affecting a large portion of European children and adolescents was a major source of concern³ and should be taken into account in case of future total or partial lockdown situations.

When it comes to the significant increase in the autonomy and parents score, there are several possible explanations: 1) an adaptation to the pandemic through coping strategies⁴ that buffered the potential negative impact on HRQoL; 2) the time available to legal guardians and devoted to the children, which may have increased due to the confinement. According to the attachment and the self-expansion theories, when parents and children spend more time together, their mutual understanding and psychological well-being increase.

There are limitations to our study, including collection of data with a self-reporting instrument and the size of the sample, and therefore it should be considered merely exploratory. Nevertheless, the results show that in the case of future confinement, it would be important to provide access to outdoor recreational areas with implementation of COVID-19 prevention protocols (use of mask, implementation of staggered schedules and use of vaccination certificates, as applicable) to ensure physical well-being.

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Table 1 Repeated-measures ANOVA (before and during the lockdown) of HRQoL by sex and educational stage.

	Group	Time	Mean (SD)	Effects				
				Time $F(\eta^2)$	Group $F(\eta^2)$	Interaction $F(\eta^2)$		
Physical well-being	Sex	Male	Before During	52.45 (11.55) 47.75 (6.81)	23.51*** (0.14)	1.37 (0.01)	0.45 (0.00)	
		Female	Before During	50.30 (11.27) 46.74 (7.34)				
	Stage	Primary	Before During	50.12 (11.68) 47.37 (6.52)	15.10*** (0.10)	0.73 (0.01)	0.36 (0.00)	
		ESO	Before During	51.48 (11.31) 47.03 (7.38)				
	Psychological well-being	Sex	Male	Before During	52.79 (13.85) 54.25 (12.81)	0.11 (0.00)	2.86 (0.02)	0.88 (0.01)
			Female	Before During	50.72 (13.63) 50.01 (12.15)			
Stage		Primary	Before During	53.11 (12.71) 50.37 (11.49)	0.39 (0.00)	0.94 (0.00)	2.44 (0.02)	
		ESO	Before During	50.91 (14.06) 52.07 (12.91)				
Autonomy and parents		Sex	Male	Before During	49.63 (11.54) 53.80 (12.35)	25.77*** (0.15)	0.19 (0.01)	1.46 (0.01)
			Female	Before During	49.08 (11.50) 55.85 (11.76)			
	Stage	Primary	Before During	51.01 (13.69) 54.63 (11.68)	18.78*** (0.11)	0.64 (0.00)	0.21 (0.01)	
		ESO	Before During	48.66 (10.55) 55.09 (11.98)				
	Peers and social support	Sex	Male	Before During	49.52 (12.95) 50.45 (11.88)	0.62 (0.00)	0.19 (0.00)	2.53 (0.02)
			Female	Before During	52.06 (10.00) 49.30 (12.76)			
Stage		Primary	Before During	50.42 (13.47) 51.35 (10.33)	1.29 (0.01)	0.53 (0.00)	0.02 (0.00)	
		ESO	Before During	48.78 (13.76) 50.09 (11.91)				
School Environment		Sex	Male	Before During	51.27 (11.37) 52.27 (12.00)	0.06 (0.00)	2.47 (0.02)	0.53 (0.00)
			Female	Before During	54.52 (10.95) 54.02 (11.08)			
	Stage	Primary	Before During	51.82 (11.99) 52.61 (13.74)	0.07 (0.00)	0.77 (0.00)	0.20 (0.00)	
		ESO	Before During	53.85 (10.85) 53.63 (10.50)				

ESO, Spanish compulsory secondary education; SD, standard deviation.

*** $P < .001$.

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Ethical considerations

The study was approved by the Research Ethics Committee of the International University of La Rioja (research project 004/2019).

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Joaquín González-Cabrera^a, Jessica Ortega-Barón^a, Irene Montiel^a, Juan Manuel Machimbarrena^{b,*}

^a *Facultad de Educación, Universidad Internacional de la Rioja (UNIR), Logroño, La Rioja, Spain*

^b *Facultad de Psicología, Universidad del País Vasco (UPV/EHU), Donostia, País Vasco, Spain*

* Corresponding author.

E-mail address: juanmanuel.machimbarrena@ehu.es (J.M. Machimbarrena).