



INCREASED INTERNET AND INTERNET-SPECIFIC ACTIVITIES USAGE DURING PROLONGED STRESS PERIOD IN CROATIA

Zrnka Kovačić Petrović^{1,2}, Lea Tomašić², Tina Peraica^{3,4}, Mirta Blažev⁵, Dragica Kozarić-Kovačić⁴

¹ University of Zagreb School of Medicine, Zagreb, Croatia, ² University Hospital Vrapče, Zagreb, Croatia, ³ Department of Psychiatry, University Hospital Dubrava, Zagreb, Croatia, ⁴ University Department of Forensic Sciences, Split, Croatia, ⁵ Ivo Pilar Institute of Social Sciences, Zagreb, Croatia

INTRODUCTION AND OBJECTIVES

Studies show that trauma-related events are risk factors for the development of addictive behaviors. Thus, the aim of our study was to investigate the effect of the first three waves of the COVID-19 pandemic and concurrent earthquakes on the overall Internet (IU) and Internet-specific activities usage (ISAU) (online gaming, pornography viewing, social media activities, online shopping) in the Croatian adult population and its relation to the prior IU and ISAU and sociodemographic factors.

MATERIALS AND METHODS

1,118 participants (220 men and 898 women) completed survey providing sociodemographic data, COVID-19 and earthquake-related stress factors, overall IU and ISAU before and during the first three waves of the pandemic and earthquakes.

Authors declare no conflict of interest.

Differences in the overall increase in Internet usage and Internet-specific activities usage during the pandemic and earthquakes compared to prior Internet usage habits (*N* = 1,118)

	Internet usage prior to the pandemic and earthquakes		χ^2	df	Φ	P
	No	Yes				
	n (%)	n (%)				
OGB⁺	9(0.8)	6(22.2)	–	1	0.29	< 0.001
OG	9(1.2)	109(30.5)	221.73*	1	0.45	< 0.001
PV	6(0.8)	65(18.1)	122.32*	1	0.33	< 0.001
SM	17(19.8)	523(50.7)	30.38*	1	0.17	< 0.001
OS	47(12.5)	260(35.0)	63.11*	1	0.24	< 0.001
IU	16(28.1)	570(53.7)	14.27*	1	0.11	< 0.001

OGB - online gambling; OG - online gaming; PV - pornography viewing; SM - social media; OS - online shopping; IU - overall Internet usage. ⁺ Fisher's Exact Test; **P* < 0.001.

1 King DL, Delfabbro PH, Billieux J, Potenza MN. Problematic online gaming and the COVID-19 pandemic. *J Behav Addict.* 2020;9:184-6. doi:[10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)

2 Bao Y, Sun Y, Meng S, Shi J, Lu L. 2019-nCoV epidemic: address mental health care to empower society. *Lancet.* 2020;395:e37-e8. doi:[10.1016/S0140-6736\(20\)30309-3](https://doi.org/10.1016/S0140-6736(20)30309-3)

RESULTS

A more significant increase in overall IU (*p*<0.001), online gaming (*p*<0.001), pornography viewing (*p*<0.001), social media use (*p*<0.001) and online shopping (*p*<0.001) during the pandemic and earthquakes was higher in the group using the Internet before the pandemic and earthquakes. Women (*p*<0.001), less educated (*p*=0.001) and single participants (*p*=0.027) increased overall IU. Online gaming was associated with younger (*p*=0.001), less educated (*p*<0.001), single participants (*p*=0.006), those with no children (*p*=0.001) and living in less urban places (*p*=0.032). Increased pornography viewing was associated with younger (*p*<0.001), male (*p*< 0.001), less educated (*p*<0.001), single participants (*p*=0.001) and those with no children (*p*< 0.001). Increased social media use was associated with women (*p*<0.001) and lower education (*p*<0.001).

To reduce the negative impacts of prolonged stress, experts should consider sociodemographic risk factors associated with IU and ISAU.