

ONLAJN NASTAVA I ANKSIOZNOST STUDENATA TOKOM PANDEMIJE COVID-19: SRBIJA I CRNA GORA

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Apstrakt

Rad analizira volju srpskih i crnogorskih studenata da završe studije onlajn, kao i stepen njihove anksioznosti tokom COVID-19 pandemije.

Rezultati istraživanja baziranih na paketu upitnika (petostepena Likertova skala - 16 pitanja o njihovoj volji da uče online, kao i 7 pitanja iz skrining upitnika generalizovanog anksioznog poremećaja -GAD7) – ukazali su da faktori poput želje za očuvanjem zdravlja u pandemiji, osećaj udobnosti zbog pohađanja nastave iz sopstvenog doma, lakši i brži pristup materijalima za učenje pozitivno utiču na spremnost da se nastava pohađa onlajn.

Oko 57% studenata, iz obe posmatrane države je razvilo anksioznost. Glavni stresori su usamljenost, smanjena motivacija, briga o kvalitetu onlajn nastave i zabrinutost zbog povećanja troškova.

Ključne reči: volja za studiranjem, anksioznost, COVID-19

JEL: A12, O3, I23

Uvod

Prema zvaničnim podacima, zaključno sa 13. aprilom 2021. godine u Srbiji je zabeleženo 645,173 slučaja COVID-19, a u Crnoj Gori 94,419. U obe zemlje na snazi su bili propisi koji ograničavaju kretanja i aktivnosti, poput okupljanja i putovanja (OECD, 2021a; OECD, 2021b). Neposredna nastava u učionicama održavana je za učenike nižih razreda osnovnih škola, dok su studenti, uglavnom, pratili onlajn program.

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Učenje na daljinu samo po sebi predstavlja izazov u smislu spremnosti, stava i sposobnosti da se predaje onlajn (Phan, Dang, 2017; Martin et al., 2019; Ventayin, 2018); deljenja ideja, znanja i informacija (Britt, 2006); promena metoda ispitivanja (Sandhu, Wolf, 2020); novih troškova vezanih za razvoj visoke tehnologije (Bellini et al., 2021), itd. U krizama kakva je tekuća, timovi za podršku na fakultetima ne mogu pružiti dovoljan nivo podrške svima kojima je potrebna. Ubrzan pristup može umanjiti kvalitet kurseva i dostupnost materijala za učenje. Ove nestabilnosti mogu negativno uticati na proces učenja i mentalno zdravlje studenata.

Postoje izveštaji o psihološkom uticaju epidemije na odraslu populaciju Srbije (Vujčić et al., 2021), percipiranom stresu među studentima u jugoistočnoj Srbiji (Kostić et al., 2021), ulozi verovanja u zavere na ponašanje javnosti (Karić, Međedović, 2021), stepenu pripremljenosti građana za katastrofe (Cvetković et al., 2020), percepciji javnosti o merama politike u borbi protiv pandemije (Janković, Cvetković, 2020), ponašanju medija u kriznim situacijama (Jovanović, 2020), poverenju studenata u zdravstveni sistem (Vinogradac, 2020), izazovima koje nameće digitalno obrazovanje (Molnar et al., 2020) i uticaju masovnih medija na mentalno zdravlje studentkinja (Vukotić et al., 2020). Međutim, ni u jednoj od posmatranih zemalja ne postoji detaljna studija o percepciji studenata prema obrazovanju na daljinu ili njihovom mentalnom zdravlju u uslovima pandemije.

S tim u vezi, cilj ovog istraživanja je identifikacija faktora koji utiču na spremnost studenata da završe svoje studije onlajn, kao i utvrđivanje nivoa anksioznost u studentskoj populaciji Srbije i Crne Gore tokom pandemije. Dodatni cilj je upoređivanje eventualnih razlika u rezultatima dobijenim u dve posmatrane zemlje.

Metodologija

Ciljnu populaciju činili su studenti osnovnih, master i doktorskih studija iz dve posmatrane zemlje. Podaci za Srbiju prikupljeni su na različitim univerzitetima (Univerzitet u Novom Sadu, Univerzitet u Kragujevcu, Univerzitet u Beogradu), dok podaci iz Crne Gore potiču isključivo sa Univerziteta Crne Gore - jedinog nacionalnog javnog univerziteta. Studenti su odgovarali na anonimni strukturirani upitnik koristeći onlajn aplikaciju Google Form. Petostepena Likertova skala (raspon od 1 -potpuno se ne slažem do 5 -potpuno se slažem) primenjena je na 16 pitanja o spremnosti za onlajn studiranje, prednostima i rizicima obrazovanja na daljinu i poverenju u aktere involvirane u sprovođenje onlajn učenja, zdravstvenu zaštitu i zdravstvenu komunikaciju (*Tabela 1*). U cilju analize mentalnog zdravlja, studenti su odgovarali na Skalu generalizovanog anksioznog poremećaja (GAD-7), koju su razvili Spitzer et al. (2006) (Likertova skala od 4 nivoa u rasponu od 0 – uopšte ne, do 3 - skoro svaki dan). Konačni uzorak činilo je 407 ispitanika koji su popunili upitnik sa stopom odgovora od 100% (258 iz Srbije i 149 iz Crne Gore). Model koji smo definisali oslanja se na prethodna istraživanja. Dobro je poznato da: postoji inverzna relacija između percepcije rizika i koristi što je ključno za prihvatanje određenih aktivnosti ili tehnologija (Alhakami, Slovic, 1994); je društveno poverenje ključni faktor predviđanja uočenih rizika i koristi (Siergist et al., 2000); poverenje u

zdravstvene ustanove ima presudnu ulogu tokom pandemije (Vinogradarac, 2020); lak pristup materijalima za učenje ima značajan uticaj na prihvatanje onlajn studiranja (Drennan, 2005); iznenadna promena u metodologiji izvođenja nastave može povećati anksioznost među studentima (Favaz, Samaha, 2021; Garcia-Gonzalez et al., 2021) i može umanjiti kvalitet predavanja (Hodges et al., 2020); nedostatak društvenih interakcija, gubitak kolegijalne atmosfere i ograničeno angažovanje studenata predstavljaju izazove u ovoj vrsti učenja (Joshi et al., 2020; Koumpouras, Helfgott, 2020); GAD-7 je pouzdan i efikasan dijagnostički alat za anksioznost, posttraumatski stres i panični poremećaj (Johnson et al., 2019; Moreno et al., 2019).

Tabela 1. Upitnik

Grupa	
Percipirani benefiti (B)	B1. Virtuelno učenje doprinosi uštedi mog novca (za prevoz i stanovanje) i vremena.
	B2. Online nastava poboljšava interakciju između studenata i nastavnika.
	B3. Osećam se ugodnije kada nastavu pratim od kuće nego u učionici.
	B4. Virtuelno učenje u pandemiji doprinosi očuvanju mog zdravlja i zdravlja moje porodice.
	B5. Platforme za učenje na daljinu nude lak i brz pristup materijalima za učenje.
Percipirani rizici (R)	R1. Osećam se usamljeno i društveno izolovano tokom onlajn nastave.
	R2. Tehničke poteškoće su često prisutne tokom onlajn nastave.
	R3. Online učenje me čini manje motivisanim.
	R4. Mislim da je virtuelno učenje slabijeg kvaliteta u odnosu na neposredno učenje.
	R5. Skriveni troškovi su česti pratioci onlajn nastave (npr. troškovi tehnologije).
Poverenje (T)	T1. Imam poverenja u državne mere za suzbijanje pandemije korona virusa.
	T2. Studentima je obezbeđena visokokvalitetna zdravstvena zaštita tokom pandemije.
	T3. O kvalitetu onlajn nastave brinu relevantne državne institucije u Srbiji/Crnoj Gori.
	T4. Verujem da rukovodstvo fakulteta transparentno deli sve potrebne informacije relevantne za onlajn nastavu.
	T5. Imam poverenja u medijska izveštavanja o pandemiji COVID-19.
Volja (W)	W. Da li ste voljni da završite studije onlajn dok traje pandemija?

Izvor: Kompilacija autora

Primarni cilj ovog istraživanja bio je da se utvrdi uticaj tri elementa ulaznih modula (B, R, T) na izlazni modul - volju za završetak studija na daljinu (W). U tu svrhu koristili smo sledeće stavke: B1, B2, B3, B4, B5, R1, R2, R3, R4, R5, T3 i T4. Drugi cilj ovog istraživanja bio je da se proceni uticaj potencijalnih stresora (R1, R2, R3, R4, R5, T1, T2 i T5) na mentalno zdravlje (nivo anksioznosti) studenata tokom pandemije.

Validnost i pouzdanost upitnika potvrđena je Kronbahovom alfom (0,853- Srbija; 0,885- Crna Gora) vrednosti iznad preporučenih 0,70 (Ursachi et al., 2015). Na

pojedinačnim subskalama (faktorima) vrednosti koeficijenta su: faktor 1 – percipirani benefiti (B) (5 stavki; Srbija=0,88; Crna Gora=0,88); faktor 2 – percipirani rizici (R) (5 stavki; Srbija=0,79; Crna Gora=0,74); faktor 3 - poverenje (T) (5 stavki; Srbija=0,76; Crna Gora= 0,71).

U radu je korišćen IBM SPSS Statistics Software (besplatna probna verzija). Univarijabilnom analizom odabrane su varijable za multivarijabilnu logističku regresiju, sledeći Bursac et al. (2008) uputstva (0,1 alfa, p-vrednost 0,25). Binarni logistički regresioni model je korišćen za analizu odnosa između dihotomne varijable (postoji volja, nema volje - kodirane kao 1 i 0) i skupa objašnjavajućih varijabli. Spearmanov koeficijent korelacije poslužio je za merenje povezanosti stresora i nivoa anksioznosti (AL).

Analiza podataka i rezultati

U srpskom uzorku (258 studenata) dominirali su studenti osnovnih studija (četiri petine), ženskog pola (75,6%), starosne grupe 21-25 godina (57%). Takođe, u crnogorskom uzorku (149 studenata), dominirali su studenti osnovnih studija (dve trećine), ženskog pola (tri petine) u starosnoj grupi 21-25 godina (dve trećine) (Tabela 2). Postojala je razlika u njihovim odgovorima (Tabela 3).

Tabela 2. Demografske informacije

<i>pol</i>				
	Srbija		Crna Gora	
	n	%	n	%
Ženski	195	75.6	92	61.7
Muški	63	24.4	32	38.3
<i>Age</i>				
<21	93	36.0	35	26.2
21-25	147	57.0	82	69.1
26-30	14	5.4	1	0.7
>30	4	1.6	6	4.0
<i>Nivo studija</i>				
Osnovne	222	86.0	84	65.8
Master	29	11.2	38	32.2
Doktorske	7	2.7	2	2

Izvor: Kalkulacija autora

Tabela 3. Srednje vrednosti (MV) i standardna devijacija (SD) odgovora na upitnike u Srbiji (S) i Crnoj Gori (M)

Q	B1	B2	B3	B4	B5	R1	R2	R3	
S MV	3.37	2.48	3.24	3.62	3.50	2.78	2.99	2.51	
SD	1.33	1.17	1.31	1.21	1.21	1.29	1.07	1.39	
M MV	3.67	2.75	3.19	4.02	3.15	2.89	3.06	3.24	
SD	1.14	1.25	1.27	1.00	1.28	1.29	1.16	1.40	
Q	R4	R5	T1	T2	T3	T4	T5	W	AL
S MV	2.44	3.85	2.34	2.69	2.77	3.68	2.23	0.76	2.13

SD	1.27	1.12	1.08	1.03	.984	1.02	.986	0.43	1.17
M MV SD	3.46	2.19	2.66	2.82	2.87	3.35	2.72	0.86	1.99
	1.33	1.09	1.23	1.16	1.15	1.14	1.14	0.34	1.04

Izvor: Kalkulacija autora

U cilju pojednostavljivanja analize podataka odgovori na Likertovoj skali spojeni su na sledeći način: 1 i 2 – generalno negativan odgovor, 4 i 5 -generalno pozitivan odgovor.

Više od polovine ispitanika u Srbiji i Crnoj Gori (55% i 66,5%) smatra da onlajn učenje doprinosi uštedi novca i vremena (*Tabela 4*). Značajan deo ispitanika u obe zemlje (57% i 45,7%, respektivno) se nije složio sa tvrdnjom „Onlajn nastava poboljšava interakciju između studenta i nastavnika“. Studenti su se uglavnom (52,3% i 48,3%, respektivno) osećali prijatnije dok su pohađali nastavu od kuće nego u učionici. Više od dve trećine ispitanika (77,9%) u Crnoj Gori i preko tri petine (61,2%) u Srbiji smatra da virtuelno učenje u pandemiji doprinosi očuvanju zdravlja. Više od polovine (60,5%) ispitanika u Srbiji i 45,6% u Crnoj Gori veruje da platforme za onlajn učenje nude lakši i brži pristup materijalima za učenje.

Tabela 4. Percipirani benefiti, percipirani rizici i poverenje u Srbiji (S) i Crnoj Gori (M)

<i>Percipirani benefiti</i>										
	Potpuna nesaglasnost		Sklonost ka nesaglasnosti		Neopredeljenost		Sklonost ka saglasnosti		Potpuna saglasnost	
	S	M	S	M	S	M	S	M	S	M
B1.	11.2	5.4	19.4	13.4	14.3	14.8	31.0	42.3	24.0	24.2
B2.	23.3	19.5	33.7	26.2	18.2	22.8	20.9	22.8	3.9	8.7
B3.	12.1	12.1	20.8	21.0	18.8	16.9	34.5	32.9	17.8	15.4
B4.	7.8	3.4	10.9	4.7	20.2	14.1	34.5	42.3	26.7	35.6
B5.	7.0	9.4	18.2	29.5	14.3	15.4	38.8	28.2	21.7	17.4
<i>Percipirani rizici</i>										
R1.	8.1	13.4	29.8	34.2	14.3	17.4	27.5	20.1	20.2	14.8
R2.	3.9	6.0	37.2	34.9	20.9	16.8	30.2	31.5	7.8	10.7
R3.	9.7	15.4	22.5	19.5	10.1	12.8	24.8	29.5	32.9	22.8
R4.	6.2	9.4	20.5	20.1	13.6	12.8	30.6	30.2	29.1	27.5
R5.	30.2	25.5	45.7	51.7	8.1	6.0	10.9	12.1	5.0	4.7
<i>Poverenje u institucije</i>										
T1.	27.9	26.2	27.5	12.1	27.9	38.2	15.5	16.1	1.2	7.4
T2.	15.9	15.4	24.0	25.5	36.0	25.5	22.9	28.2	1.2	5.4
T3.	11.2	14.1	26.7	22.8	36.8	32.9	23.6	22.1	1.6	8.1
T4.	5.8	9.4	10.5	16.1	6.6	12.8	64.3	53.0	12.8	8.7
T5.	24.8	20.1	40.7	18.8	22.1	32.9	11.2	24.8	1.2	3.4

Izvor: Kalkulacija autora

Veliki deo ispitanika u Srbiji (47,7%) se osećao usamljeno i socijalno izolovano tokom onlajn studiranja. Suprotno, značajan deo studenata iz Crne Gore (47,6%)

negirao je postojanje takvih osećanja. Tvrdnja „Tehničke poteškoće su često prisutne tokom onlajn nastave“ podelila je ispitanike u dve grupe. U Srbiji se sa ovom tvrdnjom nije saglasilo 41,1%, a saglasilo se 38% ispitanika. U Crnoj Gori se 40,9% ispitanika nije saglasilo, dok se 42,2% saglasilo sa tvrdnjom. Smanjena motivacija za učenje je izraženija u Srbiji nego u Crnoj Gori – 57,7% i 52,3%, respektivno. Zabrinutost oko kvaliteta onlajn nastave izrazilo je 59,7% srpskih i 57,7% crnogorskih studenata. Ispitanici u obe zemlje uglavnom su odbacili tvrdnju „Skriveni troškovi su česti pratioci onlajn nastave“ (75,9% i 77,2%, respektivno).

Srpski studenti su izrazili veće nepoverenje u državne mere za suzbijanje pandemije korona virusa (55,4%) od crnogorskih studenata (38,3%). Veliki deo ispitanika u obe zemlje (39,9% i 40,9% respektivno) je bio nezadovoljan funkcionisanjem zdravstvenog sistema tokom pandemije. Više od jedne trećine ispitanika u Srbiji i Crnoj Gori (36,8% i 32,9% respektivno) bilo je neodlučno u vezi sa tvrdnjom „O kvalitetu onlajn nastave brinu relevantne državne institucije“. Većina njih u obe zemlje (77,1% i 61,7%, respektivno) imala je pozitivno mišljenje o transparentnosti deljenja podataka i informacija relevantnih za onlajn nastavu. Srpski studenti su izrazili veće nepoverenje u medijsko izveštavanje (65,5%) od crnogorskih (38,9%).

U celini posmatrano, većina ispitanika u obe zemlje je izrazila spremnost da nastavni plan i program završi onlajn – 76% i 86,6%, respektivno (*Tabela 5*).

Tabela 5. Spremnost da se nastavni plan i program završi onlajn

Srbija	Tendencija prihvatanja	(%)
	Sklonost neprihvatanju	24.0
	Sklonost prihvatanju	76.0
Crna Gora	Sklonost neprihvatanju	13.4
	Sklonost prihvatanju	86.6

Izvor: Kalkulacija autora

Nakon testiranja multikolinearnosti ($VIF < 3$) i reprezentativnosti primarnih podataka ($N > 50 + 8i$), testirana je volja da se kursevi završe onlajn kao zavisna varijabla putem binarne logističke regresije (*Tabela 6*).

Tabela 6. Značajni prediktori spremnosti da se studira onlajn

Prediktori	p	OR*	95% CI**	
			Lower	Upper
Srbija				
B3	0.001	1.802	1.278	2.541
B4	0.000	1.914	1.367	2.679
B5	0.030	1.438	1.036	1.997
R4	0.030	0.475	0.293	0.772
Crna Gora				
B3	0.035	1.838	1.043	3.238
B4	0.000	4.977	2.370	10.451

Izvor: Kalkulacija autora

Prema rezultatima univarijabilne analize varijabli, regresija za srpski uzorak uključila je različite komponente 'benefita' (B2, B3, B4, B5), 'rizika' (R2, R4, R5) i 'poverenja' (T4), dok je regresija za crnogorski uzorak uključila nivo studija, tri komponente „benefita“ (B2, B3, B4) i jednu komponentu „rizika“ (R5). Hosmer-Lemeshov test je potvrdio dobru podobnost logističkog regresijskog modela (χ^2 od 2,854 za srpski uzorak i 10,041 za crnogorski uzorak, $p > 0,05$). Značajan rezultat ($p < 0,05$), dobijen u Omnibus testu, takođe je ukazao na adekvatnost modela. Kvalitet modela je potvrđen na adekvatan način (-2 log-likelihood 171,561, pseudo-Nagelkerke's R2 0.531 za srpski uzorak; -2 log-likelihood 66.598, pseudo-Nagelkerke's R2 0.531 za crnogorski uzorak). Analiza tabele klasifikacije u odnosu na prediktivni kapacitet modela ukazala je na stopu uspešnosti od 86.0% za Srbiju i 94.0% za Crnu Goru. Specifičnost srpskog modela iznosila je 62,9%, dok je specifičnost crnogorskog modela bila 70,0%. Osetljivost modela bila je 93,4 i 97,7, respektivno.

U srpskom modelu, povećanje uverenja da je onlajn nastava nižeg kvaliteta od konvencionalne za 1 jedinicu je povezano sa smanjenom voljom za završetak kurseva onlajn. U procentima, takvo uverenje umanjuje za 52,5% verovatnoću navedenog. Kada se uzme u obzir osećaj udobnosti u pohađanju nastave iz sopstvenog doma, efekat je suprotan. Verovatnoća ispoljavanja volje uvećava se za 80,2%. Verovanje da onlajn obrazovanje doprinosi očuvanju zdravlja u pandemiji i uverenje da platforme za onlajn učenje nude lakši i brži pristup materijalima za učenje povećava verovatnoću voljnosti za 191,4%, odnosno 143,8%. U crnogorskom modelu, kod ispitanika koji veruju da onlajn učenje doprinosi očuvanju ličnog i porodičnog zdravlja verovatnoća da će voljno studirati online je 4,98 puta veća (95% CI 2,56-11,23). Osećaj udobnosti povećava spremnost za učenje onlajn 1,84 puta (95% CI 1,04-3,24).

Anksioznost studenata

U tabeli 7 prikazano je oštećenje mentalnog zdravlja studenata tokom pandemije. Analiza srpskog uzorka pokazala je da 42,6% studenata nije ispoljilo anksioznost, dok je udeo studenata sa blagom, umerenom i teškom anksioznošću značajan 21,3%, 16,3%, 19,8%, respektivno. U Crnoj Gori je sličan procenat studenata bez simptoma. Jaku anksioznost je ispoljilo 12,1% studenata, što je znatno manje nego u Srbiji.

Tabela 7. Nivo anksioznosti

Srbija	Nivo anksioznosti	(%)
	Normalan	42.6
	Blag	21.3
	Umeren	16.3
	Težak	19.8
Crna Gora	Normalan	42.3
	Blag	28.2
	Umeren	17.4
	Težak	12.1

Izvor: Kalkulacija autora

Primenjeni Kruskal-Valis test pokazao je da pol i starost nisu značajno uticali na anksioznost ($p > 0,05$), dok je nivo studija značajno uticao na anksioznost samo u Crnoj Gori (*Tabela 8*).

Tabela 8. Veza između demografskih varijabli i anksioznosti

		Statistika	p-vrednost
Pol	Srbija	6,730	0.081
	Crna Gora	5,406	0.144
Nivo studija	Srbija	3.693	0.297
	Crna Gora	19.852	0.000
Starost	Srbija	2.741	0.433
	Crna Gora	2.448	0.485

Izvor: Kalkulacija autora

Usamljenost i smanjena motivacija bili su umereno i pozitivno povezani sa nivoom anksioznosti srpskih studenata, dok su tehničke smetnje, zabrinutost za kvalitet onlajn nastave i zabrinutost zbog povećanja troškova pokazali blagu pozitivnu vezu sa anksioznošću. Anksioznost studenata bila je značajno manja ukoliko su smatrali da im je dostupna odgovarajuća zdravstvena podrška (*Tabela 9*). Kod crnogorskih studenata je ustanovljena umerena i pozitivna veza između brige za kvalitet onlajn nastave i brige zbog povećanja troškova i nivoa anksioznosti, kao i blago izražen pozitivan odnos između nivoa anksioznosti i usamljenosti, brige o tehničkim smetnjama i smanjene motivacije. Povećano poverenje u zdravstveni sistem smanjilo je nivo anksioznosti studenata. U obe zemlje, mediji nisu imali značajan uticaj na nivo anksioznosti.

Tabela 9. Korelacija između COVID-19 stresora i anksioznosti studenata

Stresor	R1	R2	R3	R4	R5	T1	T2	T5
Nivo anksioznosti R (Srbija)	.404**	.236**	.335**	.196**	.294**	.,070	-.251**	.000
Nivo anksioznosti R (Crna Gora)	.274**	.227*	.241**	.306**	.301**	-.173	-.246**	.025

Izvor: Kalkulacija autora

Diskusija i implikacije

Naše istraživanje je potvrdilo Zheng et al. (2020) mišljenje da su studenti posebno ranjivi tokom krize. Za razliku od Astani et al. (2010) studije koja je pokazala da većina ispitanika smatra online nastavu jednako kvalitetnom kao i neposrednu nastavu, rezultati ovog rada ukazuju na visok nivo zabrinutosti ispitanika za kvalitet

online nastave u Srbiji i Crnoj Gori. Navedeno sugerše da treba preduzeti mere za poboljšanje kvaliteta onlajn nastave kao što su predložili Chaturvedi et al. (2021). Saglasno rezultatima brojnih studija (Li i Čen, 2012; Kemp i Griv, 2014; Agasisti i Džons, 2015; Husein et al., 2020), naši rezultati su pokazali da većina ispitanika smatra da onlajn nastava doprinosi uštedi novca i vremena. U skladu sa Drennan et al. (2010) istraživanjem, uočena je pozitivna percepcija tehnologije u smislu lakog pristupa i upotrebe materijala za učenje. Studenti su izrazili nezadovoljstvo interakcijom student-nastavnik i percipirali su onlajn nastavu kao demotivisuću za učenje, što je kompatibilno sa Serhan istraživanjem (2020). U skladu sa člancima Karić, Mededović (2021) i Jovanović (2020), primetili smo smanjenje političkog poverenja. Studenti u Srbiji su pokazali niži nivo poverenja u zdravstveni sistem (24,1%) i odluke vlade u vezi sa merama za suzbijanje pandemije korona virusa (16,1%) nego kvalifikovani radnici u Marković et al. (2020) istraživanju (65,5% i 56,4%, respektivno).

Preko dve trećine studentske populacije u obe zemlje izrazilo je spremnost da završi svoje obaveze onlajn. Na studentsku populaciju Srbije, nekoliko faktora je uticalo pozitivno na volju za onlajn studiranje - percepcija kvaliteta nastave, osećaj udobnosti pohađanja nastave od kuće, lak pristup nastavnom materijalu i uverenje da onlajn nastava u krizi spasava živote. Među crnogorskim studentima, dva faktora su dominantno uticala na volju za onlajn studiranje - uverenje da onlajn nastava tokom pandemije doprinosi očuvanju zdravlja i osećaj udobnosti u pohađanju nastave od kuće.

Naši rezultati su pokazali da je godinu dana nakon zatvaranja i prelaska na onlajn studiranje u Srbiji i Crnoj Gori, 57,4% i 57,7% (respektivno) učesnika studije prijavilo simptome anksioznosti. Prevalencija anksioznosti je u saglasju sa Auerbach et al. (2018) rezultatima koji ukazuju da je nivo anksioznosti u studentskoj populaciji viši nego u opštoj populaciji. Ispoljeni nivo anksioznosti je viši nego u „normalnim“ vremenima pre COVID-a (Višnjčić et al., 2018). Razloge za veću prevalenciju anksioznosti verovatno treba potražiti u dodatnom stresu koji izaziva COVID-19 i njegove posledice.

Korelaciona analiza je ukazala da su faktori koji su značajno povezani sa višim nivoima anksioznosti usamljenost, smanjena motivacija za učenje, zabrinutost zbog tehničkih smetnji tokom onlajn nastave, zabrinutost za kvalitet onlajn nastave, finansijska briga i nedostatak poverenja u zdravstveni sistem. Za razliku od studije sprovedene u Srbiji među kvalifikovanim radnicima (Marković i sar., 2020) nismo pronašli značajnu vezu između poverenja u medije i nivoa anksioznosti.

Na osnovu poređenja uzoraka iz dve zemlje uočili smo postojanje izvesnih razlika. Najveća razlika je ispoljena u odgovorima na sledeće tvrdnje: „Osećam se usamljeno i socijalno izolovano kada učim onlajn“ – 47,7% studenata u Srbiji i 34,9% u Crnoj Gori priznalo je takva osećanja; „Imam poverenja u državne mere za suzbijanje pandemije korona virusa“ – sa tvrdnjom se ne slaže 55,4% studenata u Srbiji i 38,3% studenata u Crnoj Gori; i „Verujem u medijska izveštavanja tokom pandemije

COVID-19“. Srpski studenti su iskazali veće nepoverenje (65,5%) u medije od crnogorskih studenata (38,9%). Spremnost da se studije završe onlajn je izraženija u Crnoj Gori nego u Srbiji, 86,6% prema 76%.

Rezultati ovog rada koji su na izvestan način ukazali na nezadovoljstvo studenata onlajn nastavom tokom prelaznog perioda, mogu biti od koristi akademskim institucijama u formulisanju i primeni dodatnih i efikasnijih mera za poboljšanje kvaliteta ove vrste nastave. Takođe, mogu biti od koristi zdravstvenim radnicima u definisanju mera za sprečavanje i lečenje mentalnih poremećaja studenata tokom krize. Na kraju, studija upozorava da nadležni organi treba da posvete više pažnje studentskoj populaciji kako bi podigli nivo političkog poverenja.

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ONLINE TEACHING AND STUDENT ANXIETY DURING THE PANDEMIC COVID-19: SERBIA AND MONTENEGRO

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Abstract

The paper analyzes the will of Serbian and Montenegrin students to complete their studies online, as well as the degree of their anxiety during the COVID-19 pandemic.

Research results based on a package of questionnaires (five-point Likert scale - 16 questions about their willingness to learn online, as well as 7 questions from the screening questionnaire for generalized anxiety disorder -GAD7) - indicated that factors such as the desire to preserve health in a pandemic, the feeling of comfort due to attending classes from one's own home, easier and faster access to learning materials positively affect the willingness to attend classes online.

About 57% of students from both observed countries developed anxiety. The main stressors are loneliness, reduced motivation, concern about the quality of online classes and concerns about increasing costs.

Keywords: *willingness to study, anxiety, COVID-19*

JEL: *A12, O3, I23*

Introduction

According to official data, as of April 13, 2021, 645,173 cases of COVID-19 were recorded in Serbia, and 94,419 in Montenegro. In both countries, regulations were in force that limit movement and activity. like gatherings and travel (OECD, 2021a; OECD, 2021b). Direct teaching in classrooms was held for students of the lower grades of primary schools, while students and, mostly, followed the online program.

Distance learning itself is a challenge in terms of readiness, attitude and ability to teach online (Phan, Dang, 2017; Martin et al., 2019; Ventayin, 2018); sharing of ideas, knowledge and information (Britt, 2006); change in examination methods (Sandhu, Wolf, 2020); new costs related to the development of high technology (Bellini et al., 2021), etc. In crises such as the current one, the faculty support teams cannot provide a sufficient level of support to all who need it. Accelerated access may reduce the quality of courses and the availability of learning materials. These

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instability and may negatively affect the learning process and mental health of students.

There are reports on the psychological impact of the epidemic on the adult population of Serbia (Vujčić et al., 2021), perceived stress among students in southeastern Serbia (Kostić et al., 2021), the role of belief in conspiracies on public behavior (Karić, Mededović, 2021), degree of preparedness of citizens for disasters (Cvetković et al., 2020), public perception of policy measures in the fight against the pandemic (Janković, Cvetković, 2020), media behavior in crisis situations (Jovanović, 2020), students' trust in the health system (Vinogradac, 2020), the challenges posed by digital education (Molnar et al., 2020) and the impact of mass media on the mental health of female students (Vukotić et al., 2020). However, in none of the observed countries is there a detailed study on the perception of students towards distance education or their mental health in pandemic conditions.

In this regard, the goal of this research is to identify the factors that influence the willingness of students to complete their studies online, as well as to determine the level of anxiety in the student population of Serbia and Montenegro during the pandemic. An additional goal is to compare possible differences in the results obtained in the two observed countries.

Methodology

The target population consisted of undergraduate, master's and doctoral students from the two observed countries. Data for Serbia were collected at different universities (University of Novi Sad, University of Kragujevac, University of Belgrade), while data from Montenegro come exclusively from the University of Montenegro - the only national public university.

Students answered an anonymous structured questionnaire using the online application Google Form. A five-point Likert scale (ranging from 1 - completely disagree to 5 - completely agree) was applied to 16 questions about readiness for online studies, advantages and risks of distance education and trust in the actors involved in the implementation of online learning, health in protection and health in communication (*Table 1*). In order to analyze mental health, students responded to the Generalized Anxiety Disorder Scale (GAD - 7), developed by Spitzer et al. (2006) (4-point Likert scale ranging from 0 - not at all to 3 - almost every day). The final sample consisted of 407 respondents who filled out the questionnaire with a response rate of 100% (258 from Serbia and 149 from Montenegro).

The model we defined relies on previous research. It is well known that: there is an inverse relationship between the perception of risk and benefit, which is crucial for the acceptance of certain activities or technologies (Alhakami, Slovic, 1994); is social trust a key predictor of perceived risks and benefits (Siergist et al., 2000); trust in health institutions plays a crucial role during a pandemic (Vinogradarac, 2020); easy access learning material has a significant impact on acceptance of online learning (Drennan, 2005); a sudden change in teaching methodology can increase anxiety

among students (Favaz, Samaha, 2021; Garcia-Gonzalez et al., 2021) and can reduce the quality of lectures (Hodges et al., 2020); lack of social interactions, loss of collegial atmosphere and limited engagement of students represent challenges in this type of learning (Joshi et al., 2020; Koumpouras, Helfgott, 2020); The GAD-7 is a reliable and effective diagnostic tool for anxiety, PTSD, and panic disorder (Johnson et al., 2019; Moreno et al., 2019).

Table 1. Questionnaire

A group	
Perceived benefits (B)	B1. Virtual learning contributes to saving my money (for transportation and housing) and time.
	B2. Online teaching improves interaction between students and teachers.
	B3. Feel more comfortable following the lessons from home than in the classroom.
	B4. Virtual learning in a pandemic contributes to the preservation of my health and the health of my family.
	B5. Distance learning platforms offer easy and fast access to learning materials.
Perceived Risks (R)	R1. Feel lonely and socially isolated during online classes.
	R2. Technical difficulties are often present during online classes.
	R3. Online learning makes me less motivated.
	R4. Think virtual learning is of a lower quality than face-to-face learning.
	R5. Hidden costs are frequent companions of online classes (eg technology costs).
Trust (T)	T1. Have confidence in the state measures to combat the corona virus pandemic.
	T2. Students are provided with high-quality health care during the pandemic.
	T3. The relevant state institutions in Serbia/Montenegro take care of the quality of online teaching.
	T4. Believe that the management of the faculty transparently shares all the necessary information relevant to online teaching.
	T5. Have confidence in media coverage of the COVID-19 pandemic.
Will (W)	W. Are you willing to complete your studies online during the pandemic?

Source: Author's compilation

The primary goal of this research was to determine the impact of three elements of input modules (B, R, T) on the output module - willingness to complete distance learning (W). For this purpose, we used the following items: B1, B2, B3, B4, B5, R1, R2, R3, R4, R5, T3 and T4. The second aim of this research was to assess the impact

of potential stressors (R1, R2, R3, R4, R5, T1, T2 and T5) on the mental health (anxiety level) of students during the pandemic.

The validity and reliability of the questionnaire was confirmed by Cronbach's alpha (0.853- Serbia; 0.885- Montenegro) values above the recommended 0.70 (Ursachi et al., 2015). On the individual subscales (factors), the coefficient values are: factor 1 – perceived benefits (B) (5 items; Serbia=0.88; Montenegro=0.88); factor 2 – perceived risks (R) (5 items; Serbia=0.79; Montenegro=0.74); factor 3 - trust (T) (5 items; Serbia=0.76; Montenegro=0.71).

IBM SPSS Statistics Software (free trial version) was used in the work. Univariable analysis was used to select variables for multivariable logistic regression, following Bursac et al. (2008) guidelines (0.1 alpha, p-value 0.25). A binary logistic regression model was used to analyze the relationship between a dichotomous variable (there is willingness, no willingness - coded as 1 and 0) and a set of explanatory variables. Spearman's correlation coefficient was used to measure the association between stressors and anxiety levels (AL).

Data analysis and results

In the Serbian sample (258 students) undergraduate students dominated (four fifths), female (75.6%), age group 21-25 years (57%). Also, in the Montenegrin sample (149 students), undergraduate students (two thirds), female (three fifths) in the 21-25 age group (two thirds) dominated (Table 2). There was a difference in their answers (Table 3).

Table 2. Demographic information

<i>gender</i>				
	Serbia		Montenegro	
	n	%	n	%
Ladies	195	75.6	92	61.7
Male	63	24.4	32	38.3
<i>Aha</i>				
<21	93	36.0	35	26.2
21-25	147	57.0	82	69.1
26-30	14	5.4	1	0.7
>30	4	1.6	6	4.0
<i>Level of study</i>				
Basic	222	86.0	84	65.8
Master	29	11.2	38	32.2
Ph.D	7	2.7	2	2

Source: Author's calculation

Table 3. Mean values (MV) and standard deviation (SD) of responses to questionnaires in Serbia (S) and Montenegro (M)

Q	B1	B2	B3	B4	B5	R1	R2	R3		
With MV SD	3.37	2.48	3.24	3.62	3.50	2.78	2.99	2.51		
	1.33	1.17	1.31	1.21	1.21	1.29	1.07	1.39		
M MV SD	3.67	2.75	3.19	4.02	3.15	2.89	3.06	3.24		
	1.14	1.25	1.27	1.00	1.28	1.29	1.16	1.40		
Q	R4	R5	T1	T2	T3	T4	T5	W	AL	
With MV SD	2.44	3.85	2.34	2.69	2.77	3.68	2.23	0.76	2.13	
	1.27	1.12	1.08	1.03	.984	1.02	.986	0.43	1.17	
M MV SD	3.46	2.19	2.66	2.82	2.87	3.35	2.72	0.86	1.99	
	1.33	1.09	1.23	1.16	1.15	1.14	1.14	0.34	1.04	

Source: Author's calculation

In order to simplify data analysis, the answers on the Likert scale were combined as follows: 1 and 2 - generally negative answer, 4 and 5 - generally positive answer.

More than half of respondents in Serbia and Montenegro (55% and 66.5%) believe that online learning contributes to saving money and time (*Table 4*). A significant proportion of respondents in both countries (57% and 45.7%, respectively) disagreed with the statement "Online teaching improves interaction between students and teachers". Students mostly (52.3% and 48.3 %, respectively) feel more comfortable while attending classes from home than in the classroom. More than two-thirds of the respondents (77.9%) in Montenegro and over three-fifths (61.2%) in Serbia believe that virtual learning during the pandemic contributes to preserving health. More than half (60.5%) of respondents in Serbia and 45.6% in Montenegro believe that online learning platforms offer easier and faster access to learning materials.

Table 4. Perceived benefits, perceived risks and trust in Serbia (S) and Montenegro (M)

<i>Perceived benefits</i>										
	Total disagreement		Tendency to disagree		Indeterminacy		A tendency to agree		Full agreement	
	S	M	S	M	S	M	S	M	S	M
B1.	11.2	5.4	19.4	13.4	14.3	14.8	31.0	42.3	24.0	24.2

B2.	23.3	19.5	33.7	26.2	18.2	22.8	20.9	22.8	3.9	8.7
B3.	12.1	12.1	20.8	21.0	18.8	16.9	34.5	32.9	17.8	15.4
B4.	7.8	3.4	10.9	4.7	20.2	14.1	34.5	42.3	26.7	35.6
B5.	7.0	9.4	18.2	29.5	14.3	15.4	38.8	28.2	21.7	17.4
<i>Perceived risks</i>										
R1.	8.1	13.4	29.8	34.2	14.3	17.4	27.5	20.1	20.2	14.8
R2.	3.9	6.0	37.2	34.9	20.9	16.8	30.2	31.5	7.8	10.7
R3.	9.7	15.4	22.5	19.5	10.1	12.8	24.8	29.5	32.9	22.8
R4.	6.2	9.4	20.5	20.1	13.6	12.8	30.6	30.2	29.1	27.5
R5.	30.2	25.5	45.7	51.7	8.1	6.0	10.9	12.1	5.0	4.7
<i>Trust in institutions</i>										
T1.	27.9	26.2	27.5	12.1	27.9	38.2	15.5	16.1	1.2	7.4
T2.	15.9	15.4	24.0	25.5	36.0	25.5	22.9	28.2	1.2	5.4
T3.	11.2	14.1	26.7	22.8	36.8	32.9	23.6	22.1	1.6	8.1
T4.	5.8	9.4	10.5	16.1	6.6	12.8	64.3	53.0	12.8	8.7
T5.	24.8	20.1	40.7	18.8	22.1	32.9	11.2	24.8	1.2	3.4

Source: Author's calculation

A large part of respondents in Serbia (47.7%) feel lonely and socially isolated during online studies. On the contrary, a significant part of students from Montenegro (47.6%) denies the existence of such feelings. The statement "Technical difficulties are often present during online classes " divided the respondents into two groups. In Serbia, 41.1% disagreed with this statement, while 38 % of respondents agreed. In Montenegro, 40.9% of respondents disagreed, while 42.2% agreed with the statement. Reduced motivation to study is more pronounced in Serbia than in Montenegro - 57.7% and 52.3%, respectively. Concern about the quality of online teaching was expressed by 59.7% of Serbian and 57.7% of Montenegrin students. Respondents in both countries largely rejected the statement "Hidden costs are frequent companions of online classes" (75.9% and 77.2%, respectively).

Serbian students expressed greater distrust in state measures to combat the corona virus pandemic (55.4%) than Montenegrin students. students (38.3%). A large part of respondents in both countries (39.9% and 40.9% respectively) were dissatisfied functioning of the health system during the pandemic. More than one third of the respondents in Serbia and Montenegro (36.8% and 32.9% respectively) were undecided regarding the statement "Relevant state institutions care about the quality of online teaching". Most of them in both countries (77.1% and 61.7%, respectively) had a positive opinion about the transparency of sharing data and information relevant

to online teaching. Serbian students expressed greater distrust in media reporting (65.5%) than Montenegrin students (38.9%).

Overall, the majority of respondents in both countries expressed their willingness to complete the curriculum online – 76% and 86.6%, respectively (Table 5).

Table 5. Willingness to complete the curriculum online

Serbia	Acceptance tendency	(%)
	Tendency to not accept	24.0
	Propensity to accept	76.0
Montenegro	Tendency to not accept	13.4
	Propensity to accept	86.6

Source: Author's calculation

After testing multicollinearity ($VIF < 3$) and representativeness of primary data ($N > 50 + 8i$), the willingness to complete courses online was tested as a dependent variable through binary logistic regression (Table 6).

Table 6. Significant predictors of willingness to study online

Predictors	p	OR*	95% CI**	
			Lower	Upper
Serbia				
B3	0.001	1.802	1,278	2,541
B4	0.000	1.914	1,367	2,679
B5	0.030	1.438	1.036	1.997
R4	0.030	0.475	0.293	0.772
Montenegro				
B3	0.035	1.838	1.043	3.238
B4	0.000	4,977	2,370	10,451

Source: Author's calculation

According to the results of the univariate analysis of variables, the regression for the Serbian sample included different components of 'benefit' (B2, B3, B4, B5), 'risk' (R2, R4, R5) and 'trust' (T4), while the regression for the Montenegrin sample included the level of study, three "benefit" components (B2, B3, B4) and one "risk" component (R5). The Hosmer-Lemesh test confirmed the good suitability of the logistic regression model (χ^2 of 2.854 for the Serbian sample and 10.041 for the Montenegrin sample, $p > 0.05$). A significant result ($p < 0.05$), obtained in the Omnibus test, also indicated the adequacy of the model. The quality of the model was confirmed in an adequate way (-2 log-likelihood 171, 561, pseudo-Nagelkerke's R^2 0.531 for the Serbian sample; -2 log-likelihood 66.598, pseudo-Nagelkerke's R^2 0.531 for the Montenegrin sample). Analysis of the classification table in relation to the predictive capacity of the model indicated a success rate of 86.0 % for Serbia and 9.4 % for Montenegro. The specificity of the Serbian model was 62.9%, while the specificity of the Montenegrin model was 70.0%. The sensitivity of the model was 93.4 and 97.7, respectively.

In the Serbian model, an increase in the belief that online teaching is of lower quality than conventional teaching by 1 unit is associated with a decreased willingness to complete courses online. In percentage terms, such a belief reduces the probability of the above by 52.5%. When one considers the comfort of attending classes from one's own home, the effect is the opposite. The probability of manifesting the will increases by 80.2%. The belief that online education contributes to the preservation of health in a pandemic and the belief that online learning platforms offer easier and faster access to learning materials increase the probability of willingness by 191.4% and 143.8%, respectively. In the Montenegrin model, respondents who believe that online learning contributes to preserving personal and family health are 4.98 times more likely to willingly study online (95% CI 2.56-11.23). Feeling comfortable increases willingness to learn online 1.84 times (95% CI 1.04-3.24).

Student anxiety

Table 7 shows the damage to students' mental health during the pandemic. Analysis of the Serbian sample showed that 42.6% of students did not show anxiety, while the share of students with mild, moderate and severe anxiety was significant at 21.3%, 16.3%, and 19.8%, respectively. In Montenegro, there is a similar percentage of students without symptoms. Strong anxiety was expressed by 12.1% of students, which is significantly less than in Serbia.

Table 7. Level of anxiety

Serbia	Anxiety level	(%)
	Normal	42.6
	Mild	21.3
	Moderate	16.3
	You zak	19.8
Montenegro	Normal	42.3
	Mild	28.2
	Moderate	17.4
	Heavy	12.1

Source: Author's calculation

The Kruskal-Wallis test was applied showed that gender and age have no significant effect on anxiety ($p > 0.05$), while The level of study has a significant effect on anxiety only in Montenegro (*Table 8*).

Table 8. The relationship between demographic variables and anxiety

		Statistics	p-value
Gender	Serbia	6,730	0.081
	Montenegro	5,406	0.144
Level of study	Serbia	3,693	0.297

	Montenegro	19,852	0.000
Age	Serbia	2,741	0.433
	Montenegro	2,448	0.485

Source: Author's calculation

Loneliness and reduced motivation were moderately and positively related to the level of anxiety Serbian students, while technical distractions, concerns about the quality of online teaching, and concerns about increasing costs showed a slight positive relationship with anxiety. Student anxiety was significantly lower if they believed that adequate health support was available to them (*Table 9*). Among Montenegrin students, it was established a positive relationship between concern for the quality of online teaching and concern about increasing costs and the level of anxiety, as well as a slightly pronounced positive relationship between the level of anxiety and loneliness, concern about technical problems and reduced motivation. Increasing trust in healthcare the system reduced the level of students' anxiety. In both countries, the media had no significant effect on the level of anxiety.

Table 9. Correlation between COVID-19 stressors and student anxiety

A stressor	R1	R2	R3	R4	R5	T1	T2	T5
Anxiety level R (Serbia)	.404 **	.236 **	.335 **	.196 **	.294 **	.,070	-.251 **	.000
Anxiety level R (Montenegro)	.274 **	.227 *	.241 **	.306 **	.301 **	-.173	-.246 **	.025

Source: Author's calculation

Discussion and implications

Our research confirmed Zheng et al. (2020) opined that students are particularly vulnerable during a crisis. Unlike Astani et al. (2010) study that showed that the majority of respondents consider online teaching to be of the same quality as face-to-face teaching, the results of this paper indicate a high level of concern among respondents for the quality of online teaching in Serbia and Montenegro. The above suggests that measures should be taken to improve the quality of online teaching as suggested by Chaturvedi et al. (2021). Consistent with the results of numerous studies (Li and Chen, 2012; Kemp and Grieve, 2014; Agassisti and Jones, 2015; Hussein et al., 2020), our results showed that the majority of respondents believe that online teaching contributes to saving money and time. In accordance with Drennan et al. (2010) research, a positive perception of technology was observed in terms of easy access and use of learning materials. Students expressed dissatisfaction with student-teacher interaction and perceived online teaching as demotivating for learning, which

is compatible with Serhan research (2020). In line with the articles by Karić, Međedović (2021) and Jovanović (2020), we observed a decrease in political trust. Students in Serbia showed a lower level of trust in the health system (24.1%) and the government's decisions regarding measures to combat the corona virus pandemic (16.1 %) than qualified workers in Marković et al. (2020) research (65.5% and 56.4%, respectively).

Over two-thirds of the student population in both countries expressed a willingness to complete their assignments online. In the student population in Serbia, several factors positively influenced the willingness to study online - the perception of the quality of teaching, the feeling of comfort attending classes from home, easy access to teaching materials and the belief that online teaching is a crisis and saves lives. Among Montenegrin students, two factors had a dominant influence on the willingness to study online – the belief that online classes during the pandemic contribute to preserving health and the feeling of comfort in attending classes from home.

Our results showed that one year after the closure and transition to online studying in Serbia and Montenegro, 57.4% and 57.7% (respectively) of the study participants reported symptoms of anxiety. The prevalence of anxiety is in agreement with Auerbach et al. (2018) with results indicating that the level of anxiety in the student population is higher than in the general population. The expressed level of anxiety is higher than in "normal" times before COVID (Višnjić et al., 2018). The reason for the higher prevalence of anxiety should probably be sought in the additional stress caused by COVID-19 and its consequences.

Correlation analysis indicated that the factors significantly associated with higher levels of anxiety are loneliness, reduced motivation to learn, concern about technical interference during online classes, concern about the quality of online classes, financial concerns, and lack of trust in the health care system. Unlike a study conducted in Serbia among qualified workers (Marković et al., 2020), we did not find a significant relationship between trust in the media and the level of anxiety.

Based on comparisons samples from two countries we observed the existence of certain differences a. The biggest difference is manifested in the answers to the following statement: "I feel lonely and socially isolated when study online" - 47.7% of students in Serbia and 34.9% in Montenegro admitted such feelings; "I have confidence in state measures to combat the corona virus pandemic" - 55.4% of students in Serbia and 38.3% of students in Montenegro do not agree with this statement; and "I believe in media coverage during the COVID-19 pandemic." Serbian students expressed greater mistrust (65.5%) in the media than Montenegrin students (38.9 %). Willingness to complete studies online is more pronounced in Montenegro than in Serbia, 86.6% versus 76%.

The results of this work which in a certain way indicated to the displeasure of online students teaching during the transition period, may be of benefit to academic institutions in formulating and implementing additional and more effective measures to improve the quality of this type of teaching. Also, they can be useful to health

professionals in defining measures for the prevention and treatment of mental disorders of students during the crisis.

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