

# Utjecaj pandemije COVID-19 na psihofizički status mladih; strategija suočavanja i moć samokontrole

## The impact of the COVID-19 pandemic on the psycho-physical status of young people; coping strategy and the power of self-control

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### Sažetak

**Uvod:** U svrhu razvoja strategija suočavanja sa stresom i prevencije narušavanja mentalnog zdravlja mladih osoba, sve se više primjenjuju razni modeli i edukacije s ciljem adekvatne kontrole narušene psihofizičke ravnoteže organizma. Brojni stresori koji su se javili kao posljedica ekonomskih i pravnih regulativa uvjjetovanih pandemijom COVID-19 imaju niz učinaka na zdravlje cijele zajednice. Suočavanje usmjereno na problem rezultira pravovremenom intervencijom u uklanjanju izvora akutnih stresora koji imaju tendenciju progresije u kronične stresore. Ovladavanje stresom potrebno je implementirati u svakodnevnicu da bi se prevenirao razvoj tjelesnih i psihičkih posljedica. Strah za vlastito zdravlje, kao i zdravlje članova obitelji ili prijatelja, rezultira izolacijom i odvajanjem od svakodnevnog društvenog života i rutina.

**Cilj:** Cilj istraživanja bio je odgovoriti na pitanje jesu li i u kojoj mjeri mladi osjetili fizičke ili psihičke posljedice izazvane mjerama izolacije i socijalnog distanciranja. Također, istaknut će se najčešće i najefikasnije metode koje mladi upotrebljavaju kao strategiju suočavanja u kriznom periodu pandemije COVID-19.

**Metode:** Radi provođenja analize prisutnosti stresa te primjenjivanja strategija suočavanja sa stresom kod mladih uslijed pandemije COVID-19, interno je konstruiran upitnik pomoću *online* obrasca. Prije početka procesa ispunjavanja navedena je obavijest o anonimnosti i svrsi dobivanja podataka.

**Rezultati:** Većina ispitanika potvrdila je prisutnost nekih od posljedica izolacije uoči pandemije COVID-19, a kao najčešće navode osjećaj stresa i tjeskobe koji usko prati pojava depresivnosti, poremećaj i poteškoće sa spavanjem te poteškoće s kontrolom emocija. Usprkos tomu, vrlo mali broj ispitanika zatražio je neki oblik podrške ili pomoći s ciljem smanjivanja ili uklanjanja stresa uzrokovanoj mjerama izolacije.

**Zaključak:** Studija zahtijeva provedbu daljnijih javnozdravstvenih istraživanja o najadekvatnijim strategijama suočavanja sa stresom kod mladih, kao i o važnosti pružanja psihološke podrške mladima.

**Ključne riječi:** COVID-19, mentalno zdravlje, strategije suočavanja, stres, moć samokontrole, socijalna distanca

**Kratak naslov:** Navike spavanja studenata

### Abstract

**Introduction:** For development of the stress coping strategy and prevention of mental health disorders in young people, various models and education are increasingly applied with the aim of adequate control of the disturbed psycho-physical balance of the organism. Multiple stressors, which occurred as a consequence of economic and law COVID-19 pandemic-based regulations, carry with them several effects on the health of the whole community. Problem-oriented coping results in timely intervention in the removal of sources of acute stressors that tend to progress into chronic stressors. Stress management needs to be implemented in everyday life to prevent the development of physical and psychological consequences. Fear for own health, as well as the health of family members or friends, results in isolation and separation from everyday social life and routines.

**Aim:** The research aimed to answer the question did young people and in which measure felt the physical or psychological consequences because of measures of isolation and social distancing. Also, the most common and effective methods used by young people as a coping strategy in the crisis period of the COVID-19 pandemic will be highlighted.

**Methods:** To analyze the presence of stress, as well as to implement strategies for coping with stress in young people due to the COVID-19 pandemic, an internal questionnaire was constructed using an online form. Before the commencement of the survey process, a notice of anonymity and the purpose of obtaining the information was provided.

**Results:** Most respondents confirmed the presence of some of the consequences of isolation on the eve of the COVID-19 pandemic, most feelings are stress-like and anxiety that closely accompany depression, sleep disorders, and difficulty, as well as emotional control. Nevertheless, a very small number of respondents sought some form of support or assistance to reduce or eliminate stress caused by isolation measures.

**Conclusion:** The study requires the implementation of further public health research on the most adequate strategies for coping with stress in young people, as well as the importance of providing psychological support.

**Keywords:** COVID-19, mental health, coping strategies, stress, power of self-control, social distancing

**Running head:** Sleeping habits of students

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## Uvod

U svrhu razvoja strategija suočavanja sa stresom i prevencije narušavanja mentalnog zdravlja mladih osoba sve se više primjenjuju razni modeli i edukacije s ciljem adekvatne kontrole narušene psihofizičke ravnoteže organizma. Brojni stresori koji su se javili kao posljedica ekonomskih i pravnih regulativa uvjetovanih pandemijom COVID-19 imaju niz učinaka na zdravlje cijele zajednice. Ovladavanje stresom potrebno je implementirati u svakodnevnicu da bi se prevenirao razvoj tjelesnih i psihičkih posljedica s naglaskom na ovisnosti koje su postale jedan od vodećih javnozdravstvenih i socijalnih problema suvremenog svijeta.

Složenost i međuovisnost raznih biopsihosocijalnih čimbenika zdravlja i bolesti dobro opisuje poznata definicija zdravlja Svjetske zdravstvene organizacije prema kojoj je „zdravlje stanje potpunog tjelesnog, psihičkog i socijalnog blagostanja, a ne samo odsustvo bolesti i iznemoglosti“ (Ustav Svjetske zdravstvene organizacije, 1946) [1].

Stres se u medicini počinje definirati oko 50-ih godina dvadesetog stoljeća nakon provedenog istraživanja kanadskog endokrinologa Hansa Selyea koji je istaknuo u svojim rezultatima značajan utjecaj stresa na endokrinološke i imuno-funkcije organizma. Već je tada utvrđena važnost homeostaze, odnosno ravnoteže organizma. Bilo kakav oblik ugroze organizma rezultira nizom reakcija (fizioloških, emocijonalnih itd.) koje također rezultiraju jednim od dva oblika ponašanja, a to su bijeg ili borba, ovisno o mogućnostima pojedinca da se suoči s novonastalom situacijom.

Opća definicija stresa koja uključuje sve spomenute vidove stresa glasi: „Stres je stanje poremećene fiziološke, psihološke i socijalne ravnoteže pojedinca, izazvano individualnom procjenom fizičke, psihičke ili socijalne ugroženosti njega samog ili njemu bliske osobe.“ Stanje stresa javlja se kad pojedinac ne može ispuniti prekomjerne zahtjeve koje on sam ili njegova okolina na njega postavlja. Stres je poremećaj tjelesne i psihičke harmonije organizma (homeostaze) kojim su zahvaćeni svi sustavi organizma, ali stanje stresa najviše djeluje na neuroendokrinološki i imunosni sustav, a putem njih ili izravno i na ostale organske sistave [2].

Društveni život mladih osoba uslijed širenja pandemije COVID-19 okarakteriziran je osjećajem zabrinutost, frustracije pa čak i dosade. Čovjek je stvoren kao socijalno biće te je jedna od njegovih osnovnih potreba upravo potreba za prijateljstvom. Strah za vlastito zdravlje i zdravlje članova svoje obitelji ili prijatelja rezultira izolacijom i odvajanjem od svakodnevnog društvenog života i rutina.

Pandemija COVID-19 rezultirala je nizom stresora kod mladih. Uočen je velik utjecaj na mentalno zdravlje mladih zbog socijalne izolacije i osjećaja izoliranosti. Svakodnevni izazovi u međuljudskim odnosima (obitelj, prijatelji, radne kolege) uslijed socijalne distance, socijalnih promjena i promjena u društvenom odnosu, ekonomski krize kao posljedice gubitka posla i slični izazovi rezultiraju psihološkim teškoćama s tendencijom razvoja u psihološke bolesti [3].

## Cilj

Svrha je istraživanja procijeniti prisutnost fizičkih i psihičkih posljedica kod mladih osoba koje su izazvane mjerama

## Introduction

To develop strategies for dealing with stress and preventing damage to the mental health of young people, various models and education are increasingly being applied to adequately control the disturbed psycho-physical balance of the organism. Numerous stressors, which occurred as a result of economic and legal regulations caused by the COVID-19 pandemic, have several effects on the health of the entire community. Managing stress needs to be implemented in everyday life to prevent the development of physical and psychological consequences with an emphasis on addictions, which have become one of the leading public health and social problems of the modern world.

The complexity and interdependence of various biopsychosocial factors of health and disease are well described by the definition of health by the World Health Organization, according to which "health is a state of complete physical, mental and social well-being, and not merely the absence of disease and infirmity" (Constitution of the World Health Organization, 1946) [1].

Stress began to be defined in medicine around the 1950s after the research of the Canadian endocrinologist Hans Selye, who highlighted the significant influence of stress on the endocrinological and immune functions of the body. The importance of homeostasis, i. e. the balance of the organism, was already established then. Any form of threat to the organism results in a series of physiological reactions. Consequences of those reactions have one of two forms of behavior, namely flight or fight, depending on the individual's ability to face the newly created situation.

The general definition of stress, which includes all mentioned types of stress, reads: "Stress is a state of disturbed physiological, psychological and social balance of an individual, caused by an individual assessment of the physical, psychological or social vulnerability of himself or a person close to him." A state of stress occurs when an individual cannot meet the excessive demands that he or his environment places on him. Stress is, therefore, a disturbance of the body's physical and psychological harmony (homeostasis) that affects all systems of the body, with the state of stress mostly affecting the neuroendocrinological and immune systems and, through them or directly, other organ systems [2].

The social life of young people due to the spread of the COVID-19 pandemic is characterized by feelings of concern, frustration, and even boredom. A man was created as a social being, and one of his basic needs is the need to belong. Fear for one's health and the health of family members and friends results in isolation and separation from everyday social life and routines.

The COVID-19 pandemic resulted in a series of stressors for young people, and a large impact was observed on mental health due to social isolation and feelings of isolation. Everyday challenges in interpersonal relationships (family, friends, boy/girlfriends-intimate partners, work colleagues) due to social distance, social changes, and economic crisis as a result of job loss and similar challenges result in psychological difficulties with a tendency to develop into psychological illnesses [3].

izolacije i socijalnog distanciranja. Dobivanjem podataka ovog ispitivanja istaknut će se najčešće i najefikasnije metode koje mladi upotrebljavaju kao strategiju suočavanja u kriznom periodu pandemije COVID-19 te na koji način samokontrola, fizička aktivnost, metode relaksacije i edukacija mogu biti korisne kao model prevencije razvoja niza komplikacija.

## Ispitanici i metode

Radi provođenja postupka analize prisutnosti stresa i primjenjivanja strategija suočavanja sa stresom kod mladih uslijed pandemije COVID-19, interno je konstruiran upitnik pomoću *online* obrasca. Prije početka procesa ispunjavanja navedena je obavijest o anonimnosti i svrsi dobivanja podataka. Osnovni kriterij za sudjelovanje u istraživanju bila je dob od 18 do 35 godina. U istraživanju je sudjelovalo ukupno 637 ispitanika. Ispitanici su ispunili upitnik anonimno i u potpunosti dobrovoljno. Upitnik se sastoji od 10 pitanja na koja ispitanici odgovaraju potvrđivanjem nekog od ponuđenih odgovora.

## Rezultati

Većina ispitanika pripada dobroj skupini od 18 do 23 godine (53,7 %), zatim dobroj skupini od 24 do 29 godina (28,3 %) te najmanji broj ispitanika pripada skupini od 30 do 35 godina (18,1 %). U istraživanju je sudjelovalo 489 osoba (76,8 %) ženskog spola te 148 osoba (23,2 %) muškog spola.

Početno pitanje je glasilo: *Tijekom provedbe mjera prevencije (primjerice zatvaranje kafića, trgovina, teretana...) osjetio/la sam neke od psiholoških ili fizičkih posljedica izolacije.* Najveći broj ispitanika, njih 489 (76,8 %) potvrdilo je da je osjetilo neke od posljedica izolacije, dok 148 (23,2 %) ispitanika kaže da nije osjetilo nikakve posljedice izolacije.

Na pitanje je li se pandemija COVID-19 uvelike odrazila na njihov socijalni život i mentalno zdravlje, dobiveni su idući rezultati: potvrđeno je odgovorilo 315 osoba (49,5 %), negativno su odgovorile 83 osobe (13 %), a djelomične posljedice osjetilo je 239 osoba (37,5 %).

Na pitanje vezano za glavne simptome narušenosti mentalnog zdravlja potvrđeno je da je jedna trećina ispitanika doživjela osjećaj stresa, a gotovo jedna trećina i osjećaj tjeskobe. Manje od 30 % ispitanika navodi pojavu osjećaja depresivnosti, a svega 18,5 % nije imalo ništa od navedenih simptoma (Slika 1.).

Odgovori vezani za potvrdu poteškoća koje ispitanici povezuju s učincima izolacije bili su višestrukog odabira. Najveći broj ispitanika potvrdio je prisustvo poteškoća sa spavanjem, dok su poteškoće s koncentracijom i poteškoće s kontrolom emocija zabilježene kod manje od polovice sudionika ispitivanja. Otprikljike jedna trećina ispitanika potvrdila je poteškoće vezane za prehranu/apetit (debljanje/gubitak kilograma) te umor, žgaravicu, mučninu ili glavobolju. Povećana konzumacija alkohola, cigareta i sličnih proizvoda potvrđena je kod 160 osoba (25,1 %), a kod manje od 20 % ispitanika nije prisutan nijedan od spomenutih simptoma (Slika 2.).

## Aim

The purpose of the research is to assess the presence of physical and psychological consequences in young people, caused by isolation measures and social distancing. By obtaining data from this study, the most common and most effective methods used by young people as a coping strategy in the crisis period of the COVID-19 pandemic will be highlighted. It will also be highlighted how self-control, physical activity, relaxation methods, and education can be useful as a model for preventing the development of several complications.

## Respondents and methods

To carry out the process of analyzing the presence of stress as well as applying stress-coping strategies among young people due to the COVID-19 pandemic, a questionnaire was constructed internally using an online form. Before the start of the filling process, there was a notice about anonymity and the purpose of obtaining data. The main criterion for participation in the research was the age of 18 to 35 years. A total of 637 respondents participated in the research. Respondents filled out the questionnaire anonymously and completely voluntarily. The questionnaire consists of 10 questions that respondents answer by choosing one of the offered answers.

## The results

The majority of respondents belong to the age group of 18 to 23 years (53.7%), followed by the age group of 24 to 29 years (28.3%) and the smallest number of respondents are in the group of 30 to 35 years (18.1%). A total of 489 women (76.8%) and 148 men (23.2%) participated in the research.

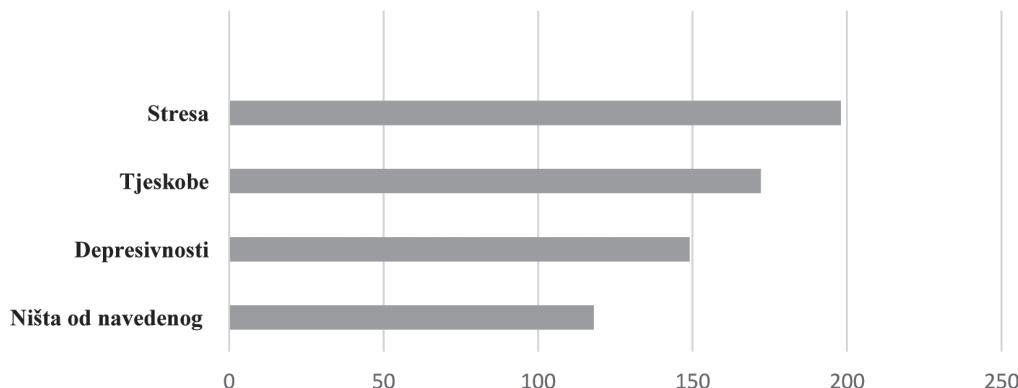
The initial question read: *During the implementation of prevention measures (for example, closing cafes, shops, gyms...) I felt some of the psychological or physical consequences of isolation.* Most respondents, 489 (76.8%), confirmed that they felt some of the consequences of isolation, while 148 (23.2%) had a negative answer – they did not feel any consequences of isolation.

When asked whether the COVID-19 pandemic had a major impact on their social life and mental health, the following results were obtained: 315 respondents (49.5%) answered affirmatively, 83 of them (13%) answered negatively, and 239 respondents (37.5%) said they felt partial consequences.

When asked about the main symptoms of impaired mental health, it was confirmed that one-third of respondents experienced a feeling of stress, and almost one-third experienced a feeling of anxiety. Less than 30% of the respondents reported feeling depressed, and only 18.5% had none of the above symptoms (Figure 1).

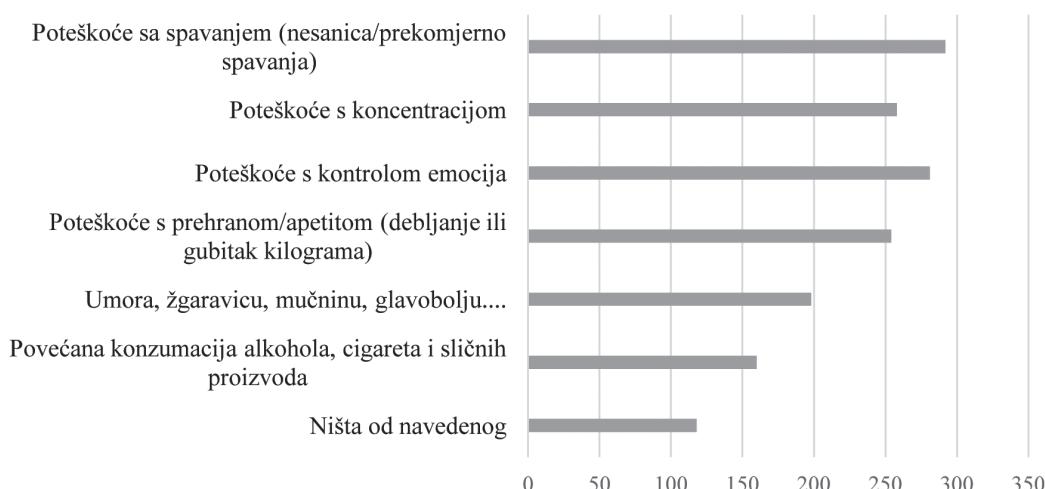
Answers related to the confirmation of the difficulties that the interviewee associates with the effects of isolation were multiple choices. Most respondents confirmed the presence of sleep difficulties, while difficulties with concentration and with emotion control were recorded in less than half of the test participants. About one-third of the respondents confirmed difficulties related to diet/appetite (weight gain/loss) and fatigue, heartburn, nausea, or headache. Increased consumption of alcohol, cigarettes, and similar products was confirmed in 160 persons (25.1%), and

## Najviši stupanj narušenosti mog mentalnog zdravlja očituje se osjećajem:



**SLIKA/FIGURE 1.** Stupanj narušenosti mentalnog zdravlja (0 – nijedan ispitanik do 489 – svi ispitanici) / Degree of impairment of mental health (0 - no respondents to 489 - all respondents)

## Tijekom pandemije COVID-19 osjetio/la sam neke od idućih poteškoća koje povezujem s učincima izolacije:



**SLIKA/FIGURE 2.** Prisutnost poteškoća povezanih s učincima izolacije (0 – nijedan ispitanik do 489 – svi ispitanici) / Presence of difficulties related to the effects of isolation (0-no respondents to 489-all respondents)

Bilo kakav oblik podrške ili pomoći s ciljem smanjivanja ili uklanjanja stresa uzrokovanog mjerama izolacije zatražilo je samo 16 % ispitanika, odnosno 101 osoba.

Ispitane su i strategije suočavanja s novonastalim stresnim događajem. Najčešće korištena strategija suočavanja usmjerenog na problem – djelovanje na izvor stresa, odnosno ciljano usmjeravanje svojih resursa k rješavanju problema planiranjem, organiziranjem, informiranjem i slično. Gotovo trećina ispitanika potvrđuje strategiju suočavanja traženjem socijalne podrške – smanjivanje stresa/rješavanje problema traženjem socijalne podrške, primjerice, u članovima obitelji, prijateljima ili kolegama, profesionalne podrške i slično. Najmanji broj ispitanika potvrdio je suočavanje izbjegavanjem – bilo kakav oblik udaljavanja od izvora stresnog podražaja (nepoduzimanje ili izbjegavanje rješavanja problema), 156 osoba (24 %) preferira suočavanje usmjere-

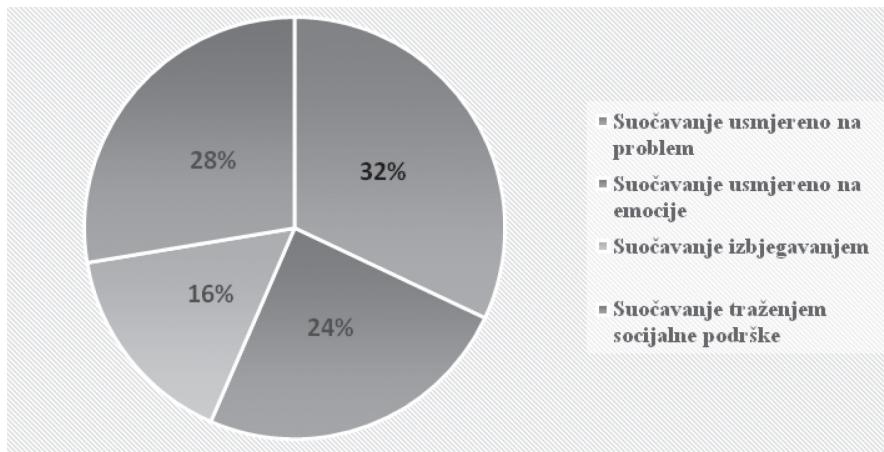
in less than 20% of respondents, none of the mentioned symptoms were present (Figure 2).

Any form of support or help aimed at reducing or eliminating the stress caused by isolation measures was requested by only 101 respondents (16%).

Coping strategies with a new stressful event were also examined. The most commonly used coping strategy focused on the problem – acting on the source of stress, i. e. targeting one's resources towards solving the problem by planning, organizing, informing, etc. Almost a third of the respondents confirmed the coping strategy of seeking social support for example from family members, friends or colleagues, professional support, and similar. The smallest number of respondents confirmed coping with avoidance - any form of moving away from the source of the stressful stimulus (not acting or avoiding solving the problem),

no na emocije – bilo kakav oblik emocionalne reakcije koja doprinosi rasterećenju i lakšem podnošenju nastalog stresa (isticanje pozitivnog, okretanje vjeri, mirenje sa sudbinom, smanjivanje napetosti i tako dalje) (Slika 3.).

156 people (24%) prefer coping focused on emotions - any form of emotional reaction that contributes to the relief and easier tolerance of the resulting stress (emphasizing the positive, turning to religion, coming to terms with fate, reducing tension, etc.) (Figure 3).



**SLIKA/FIGURE 3.** Metode suočavanja s problemom / Methods of dealing with the problem

Anketni upitnik završava procjenom osobnih npora koje ispitanik usmjerava na upravljanje vlastitim osjećajima i postupcima – sposobnost samokontrole u kriznim situacijama. Rezultati pokazuju da 314 osoba (49,3 %) djelomično ulaže napore u kontrolu psihofizičkog stanja, 273 osobe (42,9 %) izjasnile su se da ulažu značajne napore, dok 50 osoba (7,9 %) uopće ne ulaže nikakve napore u rješavanju spomenutog.

## Rasprava

Najveći broj ispitanika ovog istraživanja ženskog je spola i pripada dobroj skupini od 18 do 23 godine. Također, većina njih potvrdila je neke od posljedica izolacije uoči pandemije COVID-19 koje su se u najvećoj mjeri odrazile na njihov socijalni život i mentalno zdravlje.

Ispitanici navode najizražajniji osjećaj stresa i tjeskobe koji usko prati pojava depresivnosti, a kao najčešća smetnja spominje se poremećaj i poteškoće sa spavanjem te poteškoće s kontrolom emocija. Usprkos tomu, vrlo mali broj ispitanika zatražio je bilo kakav oblik podrške ili pomoći s ciljem smanjivanja ili uklanjanja stresa uzrokovanih mjerama izolacije.

Samosvijest o utjecaju stresa na psihičke i fizičke promjene u organizmu dovela je do sve veće potrebe za educiranjem javnosti o raznim metodama samokontrole s ciljem prevencije razvoja negativnih misli, emocija i reakcija. Dugotrajni utjecaj stresa na organizam dovodi do trajnog oštećenja zdravlja, a najčešće se posljedice odražavaju na rad srca, visinu arterijskog krvnog tlaka i slične vazomotorne promjene u krvnim žilama. Iako samokontrola predstavlja vrlo efikasnu metodu u očuvanju zdravlja, moć savladavanja psihičkih i fizičkih reakcija zahtijeva značajan angažman, volju, strpljenje i vrijeme pa je zbog toga nerijetko nezadovoljavajuće prihvaćena metoda u rješavanju problema/

The survey questionnaire ended with an assessment of the respondents' efforts to manage their feelings and actions - the ability to self-control in crises. The results show that 314 respondents (49.3%) partially make efforts to control their psycho-physical condition, 273 of them (42.9%) declare that they make significant efforts, while 50 of them (7.9%) do not make any efforts at all to solve the aforementioned.

## Discussion

Most respondents in the research are female and belong to the age group of 18 to 23 years. Also, most of them confirmed some of the consequences of isolation in the run-up to the COVID-19 pandemic, which had the greatest impact on their social life and mental health.

Respondents report the most pronounced feeling of stress and anxiety, which is closely followed by the appearance of depression. As the most common disturbance, sleep disorders and difficulties are mentioned, as well as difficulties in controlling emotions. Despite this, very few respondents asked for any support or help in reducing or eliminating the stress caused by the isolation measures.

Self-awareness about the impact of stress on mental and physical changes in the body has led to an increasing need to educate the public about various methods of self-control to prevent the development of negative thoughts, emotions, and reactions. The long-term impact of stress on the body leads to permanent damage to health, and the most common consequences are reflected in heart rate, arterial blood pressure, and similar vasomotor changes in blood vessels. Although self-control is a very effective method of preserving health, the ability to overcome mental and physical reactions requires significant commitment, will, patience and time, so it is often not a satisfactorily accepted method for solving problems/difficulties that an

poteškoća s kojima se pojedinac susreće. Jednom kad se savlada tehnika sposobnosti reguliranja i reagiranja na raznorazne izazove, takav usvojen obrazac nadograđuje se u svakodnevici. Važnost i moć samokontrole još nisu u potpunosti prihvaćene u radu svih zdravstvenih djelatnika jer samokontrola od njih iziskuje dodatne edukacije i napore iako se, s druge strane, kontinuirano ističe važnost holističkog i multidisciplinarnog pristupa.

Upravo zbog toga, ističe se važnost vlastitih interesa, volje i napora u pokušajima rješavanja, umanjivanja ili uklanjanja stresora. Emocije kao pokretač svih podražaja u našem tijelu ključne su u savladavanju osjećaja samokontrole i uklanjanja stresa. Samokontrola nas uči kako vladati stresom koji okupira naše tijelo i um, ali je važno znati da je usko povezana i s osjećajem samoefikasnosti. Primjerice, uspješno rješavanje određenog problema rezultira osjećjem kontrole i sigurnosti nad situacijom, u ovom slučaju stresom izazvanim mjerama prevencije COVID-19 pandemije. Suprotno tomu, niska razina samoefikasnosti rezultira osjećajem gubitka kontrole i nesigurnošću. Strah, tjeskoba, depresija samo su neki od negativnih psiholoških stanja koje je moguće vrlo efikasno kontrolirati ako to zaista želimo.

Uspješno suočavanje sa stresnim događajima uključuje samoregulaciju. Identificirane su tri vrste procesa samoregulacije. Prvi se proces događa automatski i nesvesno da bi se održala homeostaza čovjekovih fizioloških funkcija; druga su dva pod kognitivnom i dobrovoljnom kontrolom osobe. Cilj regresivne samokontrole jest obnavljanje normalnih funkcija koje su poremećene; reformativna samokontrola usmjerenja je na razbijanje navika radi usvajanja novih i učinkovitijih obrazaca ponašanja. Suočavanje s akutnim stresom zahtijeva nadoknadivu samokontrolu, usvajanje novih ponašanja poput ponašanja povezanih sa zdravljem koja zahtijevaju reformirajuću samokontrolu. Naučena snalažljivost odnosi se na bihevioralni repertoar neophodan i za ispravljačku samokontrolu i za reformativnu samokontrolu. Ovaj repertoar uključuje samoregulaciju nečijih emocionalnih i kognitivnih odgovora tijekom stresnih situacija, korištenje vještina rješavanja problema i odgađanje trenutnog zadovoljenja radi značajnijih nagrada u budućnosti. Rezultati istraživanja pokazuju da se visoko snalažljivi pojedinci učinkovitije nose sa stresnim situacijama i sposobniji su za usvajanje zdravstvenih ponašanja, kao i za druga ponašanja koja zahtijevaju reformirajuću samokontrolu [4].

Postoji nekoliko načina suočavanja sa stresom, a ovim ispitivanjem potvrđena je najčešće korištena strategija tzv. *suočavanje usmjereno k problemu i suočavanje usmjereno na emocije*. Suočavanje usmjereno na probleme uključuje aktivnost, tj. rješavanje problema ili poduzimanje akcije pa se ovaj način uglavnom upotrebljava kad osoba procijeni da može kontrolirati ishode stresnog događaja, dok suočavanje usmjereno na emocije prevladava u situacijama koje se procjenjuju nekontrolabilnim. Funkcija je suočavanja usmjerenog na problem mijenjanje odnosa osobe i okoline direktnim djelovanjem ili kognitivnim restrukturiranjem, dok je funkcija emocijama usmjerenog suočavanja smanjivanje stresnog doživljaja i/ili promjena interpretacije događaja [2].

individual encounters. Once the technique is mastered, the ability to regulate and react to various challenges, such as an adopted pattern, is only upgraded in everyday life. The importance and power of self-control are still not accepted in the work of all health professionals because it requires additional education and effort from them. On the other hand, the importance of a holistic and multidisciplinary approach is continuously emphasized.

Precisely because of this, the importance of one's interests, power of will and efforts in attempts to solve, reduce, or remove stressors are emphasized. Emotions, as the driver of all stimuli in our body, is crucial in mastering the feeling of self-control and removing stress. Self-control teaches us how to manage the stress that occupies our body and mind, but it is important to know that it is closely related to the feeling of self-efficacy. For example, successfully solving a certain problem results in a feeling of control and security over the situation, in this case, the stress caused by the prevention measures of COVID-19. Conversely, a low level of self-efficacy results in feelings of loss of control and insecurity. Fear, anxiety, and depression are just some negative psychological states that can be controlled very effectively if we want to.

Successful coping with stressful events involves self-regulation. Three types of self-regulation processes have been identified. The first happens automatically and unconsciously to maintain the homeostasis of human physiological functions; the other two are under the cognitive and voluntary control of the person. Regressive self-control aims to restore normal functions that have been disturbed; reformative self-control is aimed at breaking habits to adopt new and more effective patterns of behavior. Coping with acute stress requires compensable self-control, and adopting new behaviors, such as health-related behaviors, require reforming self-control. Learned resourcefulness refers to the behavioral repertoire necessary for both corrective self-control and reformative self-control. This repertoire includes self-regulating one's emotional and cognitive responses during stressful situations, using problem-solving skills, and delaying immediate gratification for more meaningful rewards in the future. Research findings show that highly resourceful individuals cope more effectively with stressful situations and are more capable of adopting health behaviors and other behaviors that require reforming self-control [4].

There are several ways of coping with stress, and this study confirmed the most commonly used strategy, the so-called "problem-focused coping and emotion-focused coping". Problem-oriented coping involves activity, i. e., solving problems or taking action, so this method is mainly used when a person estimates that he can control the outcomes of a stressful event, while emotion-oriented coping prevails in situations that are assessed as uncontrollable. The function of problem-oriented coping is to change the relationship between the person and the environment through direct action or cognitive restructuring, while the function of emotion-oriented coping is to reduce the stressful experience and/or change the interpretation of events [2].

Polizzi, Lynn & Perry (2020) proveli su studiju tijekom pandemije COVID-19 koja potvrđuje vezu između načina suočavanja i razine stresa. Najveći broj ispitanika kao strategiju suočavanja sa stresom koristi logičku analizu i rješavanje problema. Najčešći stresori tijekom pandemije bili su vezani za obitelj i voljene, a ne za samog sebe. Ispitanici su bili jako zabrinuti zbog prenošenja virusa u svoje obitelji, gubitka svojih najmilijih i odvojenosti od svojih obitelji [5].

U istraživanju koje su provele Guszkowska M. i Dąbrowska-Zimakowska A. (2021) na 1330 studenata u dobi od 18 do 30 godina potvrđeno je da su prihvatanje, bavljenje nečim drugim, aktivno suočavanje i tjelesna aktivnost najčešće korištene strategije za suočavanje sa stresom tijekom drugog vala pandemije. Korištenje supstanci, poricanje i odustajanje od ponašanja bili su najniži u hijerarhiji strategija suočavanja. Strategije suočavanja u značajnoj su korelaciji s psihičkim blagostanjem [6].

## Važnost fizičke aktivnosti

Iako za pandemiju COVID-19 vežemo niz prepreka i zabrana, tjelesna se aktivnost ne mora nužno održavati u teretanama, na bazenima ili drugim zatvorenim objektima. Održavanje tjelesne i mentalne kondicije snažno utječe na sprečavanje psihičkih poremećaja uzrokovanih rapidnim promjenama i preporukama vezanima za COVID-19. Redovita tjelesna aktivnost dovodi do stabilnog raspoloženja, ali i do racionalnog upravljanja emocijama. Suočavanje sa stresom kroz moć samokontrole danas se primjenjuje kod značajnog broja psihičkih poremećaja. Bitan utjecaj redovitog vježbanja uočen je kod osoba s anksioznim poremećajem, depresijom, demencijom i sličnim stanjima [7]. Upravo kod takvih stanja, jačanje kognitivnih funkcija i samopouzdanja tjelesnom aktivnošću dovodi do boljeg psihičkog balansa. Dakle, fizička aktivnost neupitno utječe na podizanje kvalitete života te doprinosi smanjenju emocionalnog distresa koji nam je jedna od najznačajnijih komponenta u psihološkom statusu osoba za vrijeme pandemije COVID-19.

Neki pojedinci uobičajeno provode tjelesnu aktivnost, a nekima ovo može biti idealna prilika za nešto novo, za upoznavanje samog sebe i jačanje psihofizičke kondicije. Održavanjem fizičke aktivnosti pojedinac aktivno djeluje na osjećaj samopouzdanja i sigurnosti što doprinosi stjecanju vještina za suočavanje sa stresom. Osim što vježbanje trenutno odvlači pozornost od izvora stresa, dugoročni učinak uočljiv je u općenitoj osjetljivosti na stres. Pojačana tjelesna aktivnost od uobičajene može dovesti do osjećaja nedostatka zraka, do palpitacija ili znojenja pa se potrebno na vrijeme educirati o mogućim negativnim reakcijama kako iste ne bi rezultirale nelagodom i prestankom vježbanja.

Osim psihološke komponente, važno je spomenuti i utjecaj tjelesne aktivnosti na imunološki sustav, odnosno njegovu antivirusnu obranu. Jačanjem imuniteta i usvajanjem zdravih navika možemo prevenirati popratne bolesti poput pretilosti, hipertenzije, dijabetesa i slično, a koje mogu uvelike usporiti tijek oporavka oboljele osobe.

Prednost vježbanja uočena je i povoljnijm učinkom na mozak koji je zapravo povezan sa sistemskim utjecajem na cijelo tijelo. To znači da je euforija izazvana vježbanjem po-

Polizzi, Lynn & Perry (2020) conducted a study during the COVID-19 pandemic that confirms the link between coping styles and stress levels. Most respondents use logical analysis and problem-solving as strategies for stress-coping. The most common stressors during the pandemic were related to family and loved ones, not to oneself. Respondents were very worried about passing the virus to their families, losing their loved ones, and being separated from their families [5].

In the research conducted by Guszkowska M. and Dąbrowska-Zimakowska A. (2021) on 1330 students aged from 18 to 30, it was confirmed that acceptance, doing something else, active coping, and physical activity are the most frequently used coping strategies for stress during the second wave of the pandemic. Substance use, denial, and withdrawal behaviors were the lowest in the hierarchy of coping strategies. Coping strategies significantly correlate with psychological well-being [6].

## The importance of physical activity

Although the COVID-19 pandemic brings several obstacles and prohibitions, physical activity does not necessarily have to take place in gyms, swimming pools, or other closed facilities. Maintaining physical and mental fitness strongly influences the prevention of mental disorders caused by rapid changes and recommendations related to COVID-19. Regular physical activity leads to a stable mood, but also rational management of emotions. Coping with stress through the power of self-control is used today in a significant number of psychological disorders. A significant impact of regular exercise has been observed in people with anxiety disorders, depression, dementia, and similar conditions [7]. In such conditions, strengthening cognitive functions and self-confidence through physical activity leads to a better psychological balance. Therefore, physical activity undoubtedly affects the quality of life and contributes to reduced emotional distress, which is one of the most important components in the psychological status of people during the COVID-19 pandemic.

Some individuals usually carry out physical activity, and for some this can be an ideal opportunity for something new, to get to know themselves, and to strengthen their psycho-physical condition. Maintaining physical activity the individual action affects the feeling of self-confidence and security, which contributes to the acquisition of skills to cope with stress. Exercise can momentarily divert attention from the source of stress, and the long-term effect is noticeable in general sensitivity to stress. Increased physical activity than usual can lead to a feeling of lack of air, palpitations, or sweating, so it is necessary to educate yourself in time about possible negative reactions so that they do not result in discomfort and cessation of exercise.

In addition to the psychological component, it is important to mention the influence of physical activity on the immune system, i.e., its antiviral defense. By strengthening immunity and adopting healthy habits, we can prevent accompanying diseases such as obesity, hypertension, diabetes, etc., which can greatly slow down the course of recovery of the sick person.

vezana s oslobađanjem endogenih opioida (endorfina). Euforija se značajno povećava nakon pokretanja specifičnih učinaka na regiju u područjima mozga koja su zadužena za obradu afektivnih stanja i raspoloženja. Dakle, redovita tje-lovježba može sistemski ublažiti simptome i posljedice kantene poput depresije i traumatičnih poremećaja [8].

### **Metode relaksacije**

Kontrola misli i osjećaja mogu rezultirati odličnim balansom psihofizičkog stanja pojedinca. Danas postoje brojne, vrlo efikasne i svima dostupne metode upravljanja mislima i tijelom s ciljem smanjivanja/uklanjanja stresa. Vježbe disanja, meditiranje, autogeni trening i opuštanje mišića samo su neke od metoda relaksacija kojima je moguće prevenirati posljedice izolacije za vrijeme pandemije COVID-19. Svatko mora pronaći svoju strategiju suočavanja sa stresom, kao i metodu relaksacije. Kod pojedinaca su se vrlo efikasnima pokazale svakodnevne aktivnosti poput čitanja, igrača igrica, gledanja filmova, provođenja vremena u prirodi, spavanja, maženja kućnih ljubimaca, kuhanja i sličnih hobi-ja.

### **Edukacija kao ključ prevencije stresa, tjeskobe i depresije**

Prikupljanjem potrebnih informacija i upoznavanjem činjenica vezanih za COVID-19, svaki pojedinac razvija osjećaj sigurnosti i kontrole nad potencijalnim čimbenicima rizika od zaraze. Osnovne i svima dostupne higijenske smjernice koje se odnose na redovitu higijenu ruku i prostora/površina uvelike mogu pridonijeti osjećaju kontrole. Važno je znati da COVID-19 mogu širiti i osobe koje nemaju razvijene simptome pa ophođenje prema uputama svakako doprinosi osiguravanju sigurne okoline svojih najbližih.

Poznavanje putova prijenosa virusa i nošenje zaštitne mase smanjuju mogućnost prijenosa virusnih čestica kašljnjem, kihanjem ili pak govorom. Naglasak se u tom smislu stavlja na to da maske ne predstavljaju zamjenu za socijalnu distancu, već mjeru prevencije prijenosa virusa i zaraze istim. Maske je potrebno nositi uvijek kad se napušta dom, posebice kad je pojedinac okružen većim brojem ljudi, primjerice, u javnom prijevozu ili trgovackim centrima.

Nadalje, socijalni život ne mora nužno biti narušen zbog potrebe za socijalnom distancicom. Razvoj suvremene tehnologije osigurao je da većina populacije posjeduje neku od internetskih mreža ili aplikacija, bilo na računalu ili mobilnom uređaju. Dakle, sa svojim najbližima moguće je stupiti u kontakt na neki od spomenutih načina i tim principom održavati socijalne odnose.

### **Zaključak**

Procjenom utjecaja pandemije COVID-19 na psihofizički status mladih potvrđena je hipoteza da su se mjere izolacije odrazile na njihov svakodnevni život. Pravovremena identifikacija vlastitih psihofizičkih poteškoća, kao i poteškoća osoba iz okoline, može rezultirati adekvatnom prevencijom posljedica koje ima pandemija COVID-19. Samosvijest o vlastitoj ranjivosti i poteškoćama suočavanja sa stresom

The benefit of exercise is also notable in its beneficial effect on the brain, which is related to the systemic impact on the entire body. That means that exercise-induced euphoria is associated with the release of endogenous opioids (endorphins). Euphoria increases significantly after triggering specific effects on the region in the areas of the brain responsible for processing affective states and moods. Therefore, regular exercise can systematically alleviate the symptoms and consequences of quarantine, such as depression and traumatic disorders [8].

### **Relaxation methods**

Control of thoughts and feelings can result in an excellent balance of an individual's psycho-physical state. Today, there are numerous, very effective, and accessible methods of mind and body management to reduce/eliminate stress. Breathing exercises, meditation, autogenic training, and muscle relaxation are just some of the relaxation methods that can be used to prevent the consequences of isolation during the COVID-19 pandemic. Everyone has to find a strategy for coping with stress as well as a method of relaxation. For individuals, everyday activities such as reading, playing games, watching movies, spending time in nature, sleeping, petting pets, cooking, and similar hobbies have proven to be very effective.

### **Education is the key to preventing stress, anxiety, and depression**

By gathering the necessary information and learning the facts related to COVID-19, each individual develops a sense of security and control over potential risk factors of infection. Basic hygiene guidelines related to regular hygiene of hands and spaces/surfaces are accessible to everyone. They can greatly contribute to the feeling of control. It is important to know that people who do not develop symptoms can also spread COVID-19, so following the instructions certainly contributes to ensuring a safe environment for your loved ones.

Knowing the ways of virus transmission and wearing a protective mask reduces the possibility of transmitting virus particles by coughing, sneezing, or speaking. In this sense, we emphasize that masks are not a substitute for social distancing but a measure to prevent virus transmission and infection. People must always wear masks when leaving home, especially when an individual is surrounded by a large number of people, for example, in public transport or shopping centers.

Also, social life does not necessarily have to be disrupted due to the need for social distancing. The development of modern technology has ensured that the majority of the population owns one of the Internet networks or applications, either on a computer or a mobile device. So, it is possible to contact your loved ones in some of the mentioned ways and maintain social relations using this principle.

### **Conclusion**

The assessment of the impact of the COVID-19 pandemic on the psycho-physical status of young people confirmed

iziskuje usvajanje mehanizama suočavanja s istim da bi se učinkovito utjecalo na posljedice neadekvatnog uklanjanja stresnih podražaja. Prepoznavanje ranjive skupine podložne stresu, edukacija istih i pružanje podrške osigurava bolje mentalno zdravlje mladih. Sukladno tomu, razumijevanje i korištenje ponuđenih strategija suočavanja sa stresom predstavljaju ključ osiguravanja mentalnog zdravlja mladih. Također, prikupljanjem potrebnih informacija i upoznavanjem činjenica vezanih za COVID-19, svaki pojedinac razvija osjećaj sigurnosti i kontrole nad potencijalnim čimbenicima rizika od zaraze, čime dugoročno utječe na svoje fizičko, ali i mentalno zdravlje.

### Nema sukoba interesa.

the hypothesis that isolation measures are reflected in their daily life. Timely identification of one's psycho-physical difficulties and difficulties of people from one's environment can result in adequate prevention of the consequences of the COVID-19 pandemic. Self-awareness of one's vulnerability and difficulties in dealing with stress requires the adoption of coping mechanisms to effectively influence the consequences of inadequate removal of stressful stimuli. Recognizing a vulnerable group subject to stress, educating them, and providing support ensures better mental health of young people. Accordingly, understanding and using the offered strategies for coping with stress is the key to ensuring mental health among young people. Also, by collecting the necessary information and getting to know the facts related to COVID-19, each individual develops a sense of security and control over potential risk factors of infection, which in the long term affects their physical and mental health.

### Authors declare no conflict of interest.

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