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Analiza depresivnosti u neformalnih njegovatelja osoba s Huntingtonovom bolesti

/ *Analysis of Depression Among Informal Caregivers of Persons With Huntington's Disease*

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Huntingtonova bolest (HB) nasljedni je neurodegenerativni poremećaj karakteriziran progresivnom trijadom motoričkih, kognitivnih i psihijatrijskih simptoma. Iako su kliničke značajke pacijenata dobro dokumentirane, psihološki utjecaj na njihove svakodnevne neformalne njegovatelje ostaje nedovoljno istražen, posebno u Hrvatskoj. Cilj ovog istraživanja bio je ispitati razinu depresivnosti među neformalnim njegovateljima osoba s HB u usporedbi s općom populacijom. Provedena je presječna studija na uzorku od 28 sudionika (N = 14 neformalnih njegovatelja; N = 14 kontrolna skupina). Depresivni simptomi procijenjeni su s pomoću Beckovog inventara depresije-II (BDI-II). Rezultati su otkrili statistički značajnu razliku u stupnju depresivnosti između skupina. Neformalni su njegovatelji u prosjeku postigli rezultat koji ukazuje na umjerenu do tešku depresivnost, dok je kontrolna skupina pokazala minimalne razine. Analizom dobi ispitanika nije se utvrdila značajna povezanost s razinom depresivnosti u obje skupine. Nalazi ovog istraživanja ukazuju na to da neformalni njegovatelji u Hrvatskoj doživljavaju značajan psihološki teret koji proizlazi iz same prirode skrbi. Rezultati ističu hitnu potrebu za holističkim pristupom koji uključuje sustavnu psihološku podršku neformalnim njegovateljima kako bi se poboljšala kvaliteta života cijele obitelji.

/ Huntington's disease (HD) is a hereditary neurodegenerative disorder characterized by a progressive triad of motor, cognitive, and psychiatric symptoms. Although the clinical features of patients are well documented, the psychological impact on their everyday informal caregivers remains understudied, especially in Croatia. The aim of this study was to examine the level of depression among informal caregivers of people with HD compared to that in the general population. A cross-sectional study was conducted on a sample of 28 participants (N = 14 informal caregivers; N = 14 controls). Depressive symptoms were assessed using the Beck Depression Inventory-II (BDI-II). The results revealed a statistically significant difference in depression levels between the groups. On average, informal caregivers achieved a score indicating moderate to severe depression, while the control group showed minimal levels. The analysis showed that the age of the participants was not significantly associated with depression levels in either group. This study's findings indicate that informal caregivers in Croatia experience a significant psychological burden stemming from the nature of caregiving. The results highlight the urgent need for a holistic approach that includes systematic psychological support for informal caregivers to improve the quality of life of the entire family.

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UVOD

Huntingtonova bolest, opterećenje neformalnih njegovatelja, trenutačna istraživanja

Huntingtonova bolest (HB) je neurodegenerativni poremećaj uzrokovan ponavljajućim širenjem CAG trinukleotida u genu huntingtin, što dovodi do toksičnog povećanja funkcije mutiranog proteina (1). U kontekstu hrvatske populacije, oboljeli imaju u prosjeku 47 trinukleotidnih CAG ponavljanja unutar navedenog gena (2). Slijedi autosomno dominantni obrazac nasljeđivanja, što znači da svako dijete oboljelog roditelja ima prosječno 50 % šanse za nasljeđivanje genske mutacije (0-100 %). HB se prezentira progresivnim trijasom motoričkih, kognitivnih i psihijatrijskih simptoma. Najznačajniji i najuočljiviji simptomi uključuju koreju, ponekad distoniju, a u mlađih bolesnika i rigiditet. HB također uključuje značajan kognitivni pad i psihijatrijske simptome što dovodi do deficita svih domena pamćenja, promjena raspoloženja ili depresije, agresije i izazova u komunikaciji (1,3).

Kada je riječ o epidemiološkim pokazateljima, globalna prevalencija bolesti iznosi između 8 i 10 oboljelih na 100.000 stanovnika, dok podatci za Hrvatsku ukazuju na nešto nižu stopu, s učestalošću od 4,46 bolesnika na isti broj stanovnika (4). Klinički početak HB obično je između 35. i 55. godine života, a progresija bo-

INTRODUCTION

Huntington's Disease, Caregiver Burden, and Current Research

Huntington's disease (HD) is a neurodegenerative disorder caused by the repeat expansion of the CAG trinucleotide in the huntingtin gene, leading to a toxic gain-of-function of the mutant protein (1). In the context of the Croatian population, affected patients carry an average of 47 CAG trinucleotide repeats in the specified gene (2). It follows an autosomal dominant pattern of inheritance, meaning that each child of an affected parent has, on average, a 50% probability of inheriting the gene mutation (0-100%). HD presents with a progressive triad of motor, cognitive, and psychiatric symptoms. The most significant and noticeable symptoms include chorea, on occasion dystonia, and, in younger patients, rigidity. HD also includes significant cognitive decline and psychiatric symptoms, leading to deficits in all domains of memory, mood swings or depression, aggression, and communication challenges (1,3).

In terms of epidemiological data, the global prevalence of the disease ranges from 8 to 10 cases per 100,000 individuals, whereas data for Croatia show a somewhat lower rate, with a prevalence of 4.46 patients per 100,000 inhabitants (4). Typically, the clinical onset of HD occurs between the ages of 35 and 55, followed by approximately 15-20 years of disease progression after the onset of motor dysfunction

lesti traje otprilike 15-20 godina nakon pojave motoričke disfunkcije (1,5). Dijagnoza se temelji na kliničkim značajkama i potvrđuje genetskim DNA testiranjem. Zasad ne postoji ciljani lijek za HB pa je liječenje uglavnom simptomatsko ili palijativno (6). U okviru simptomatske terapije motoričkih manifestacija, posebice koreje, u kliničkoj se praksi primjenjuju različiti lijekovi, no dokazanu učinkovitost primarno pokazuju blokatori dopamina, antiglutamatergici te nezasićene masne kiseline(4). Posljedično, zbog progresivne i kronične prirode bolesti, osobe s HB vremenom zahtijevaju cjelodnevnu njegu (24/7). S obzirom na činjenicu da pristup specijaliziranim uslugama varira od regije do regije (3), primarna odgovornost za svakodnevnu skrb najčešće pada na članove obitelji kao neformalne njegovatelje.Neformalni njegovatelji najčešće se definiraju kao primarni pružatelji svakodnevne skrbi unutar obiteljskog ili socijalnog kruga bolesnika, koji nisu medicinski profesionalci niti primaju novčanu naknadu za njegu koju pružaju.

Njega oboljelih od HB vrlo je zahtjevna i predstavlja jedinstvene izazove u usporedbi s njegom o rodbini s drugim neurodegenerativnim stanjima poput Alzheimerove ili Parkinsonove bolesti (3). Osobito otežavajuća okolnost je genetska osnova bolesti i njezin potencijal da zahvati više generacija unutar iste obitelji. Neformalni njegovatelji mogu biti jedini članovi obitelji bez mutacije ili, još gore, mogu i sami biti nositelji gena te iščekivati početak bolesti dok se aktualno brinu o oboljelom članu obitelji. Posljedično su neformalni njegovatelji izloženi znatnom emocionalnom naporu što u konačnici dovodi do zanemarivanja vlastitih potreba te izvještavanja o značajno smanjenoj kvaliteti života zbog njihovih obveza njege (7). Nadalje, tipično rana dob početka HB prisiljava članove obitelji, koji često već balansiraju zahtjeve roditeljstva i profesionalnog života, da preuzmu intenzivnu ulogu njegovatelja, što iz temelja mijenja obiteljsku dinamiku. Ovo povećanje odgovornosti rezultira time da neformal-

(1,5). Diagnosis is based on clinical features and confirmed by genetic DNA testing. Currently, there is no targeted cure for HD, and treatment is mainly symptomatic or palliative (6). As part of the symptomatic treatment of motor manifestations, specifically chorea, various medications are used in clinical practice; however, proven effectiveness has primarily been demonstrated by dopamine blockers, antiglutamatergics, and unsaturated fatty acids (4). Consequently, owing to its progressive and chronic nature, individuals with HD eventually require 24/7, round-the-clock care. Given that access to specialized services varies across regions (3), the primary responsibility for daily care most frequently falls upon family members as informal caregivers. Informal caregivers are most commonly defined as the primary providers of daily care within the patient's family or social circle. They are not medical professionals and do not receive financial compensation for the care they provide.

Caregiving in HD is very demanding and presents unique challenges compared to caring for relatives with other neurodegenerative conditions, such as Alzheimer's or Parkinson's disease (3). A particularly aggravating circumstance is the genetic basis of the disease and its potential to affect multiple generations of the same family. Informal caregivers may be the only family members without the mutation, or even worse, they may themselves be gene carriers anticipating disease onset while caring for an affected family member. This places the informal caregiver under substantial emotional strain, leading them to neglect their own needs and report a significantly reduced quality of life due to their caregiving responsibilities (7). Furthermore, the typically early age of onset forces family members, who are often already balancing the demands of parenthood and professional life, to assume intensive caregiving roles, fundamentally altering family dynamics. This increase in responsibilities results in informal caregivers abandoning their professional careers, leisure activities, and social

ni njegovatelji napuštaju svoje profesionalne karijere, slobodne aktivnosti i društveni život, što otežava održavanje uravnoteženog osobnog života (3). Posljedično, neformalni njegovatelji doživljavaju visoku razinu opterećenja i odgovornosti, fizičku i emocionalnu iscrpljenost, socijalnu izolaciju i opći pad kvalitete života. Neka od uobičajenih iskustava uključuju depresiju, anksioznost, usamljenost, frustraciju, zajedno s financijskim pritiskom, ograničenim pristupom zdravstvenim uslugama te ponekad nedostatnom podrškom i informacijama od strane zdravstvenih djelatnika (8).

HB može narušiti povezanost i komunikaciju unutar obitelji te postati izvor sukoba, pridonoseći osjećaju stigme i neugode. To često rezultira time da neformalni njegovatelji, osobito djeca oboljelih osoba, doživljavaju socijalnu izolaciju i poteškoće u održavanju odnosa s vršnjacima (9).

CILJ ISTRAŽIVANJA

Psihijatrijski simptomi temeljna su značajka HB, a među njima je depresija posebno česta. Javlja se kod otprilike jedne trećine do tri četvrtine pojedinaca, kako u premanifestnoj tako i u manifestnoj fazi HB-a, što je zapanjujuće veći broj od prevalencije zabilježene u općoj populaciji (10). Međutim, iako je depresija dobro prepoznata i opsežno dokumentirana klinička značajka kod osoba s HB, psihološki utjecaj na njihove neformalne njegovatelje (medicinski neprofesionalne osobe koje kontinuirano brinu o oboljelom članu obitelji) i dalje je značajno nedovoljno istražen. Ovaj istraživački jaz posebno je vidljiv u Hrvatskoj, gdje, prema našim saznanjima, do danas nema dostupnih istraživanja takve vrste. Stoga je glavni cilj ovog istraživanja bio istražiti subjektivno iskustvo neformalnih njegovatelja. Konkretno, ova studija imala je za cilj odgovoriti na sljedeće istraživačko pitanje: Je li stupanj depresije veći kod neformalnih njegovatelja osoba s HB u usporedbi s onim kod njegovatelja osoba s HB u općoj populaciji?

lives, making it difficult for them to maintain a balanced personal life (3). Consequently, informal caregivers experience a high level of burden and responsibility, exhaustion, both physical and emotional, social isolation, and a general decline in quality of life. Some commonly reported experiences include depression, anxiety, loneliness, and frustration, along with financial strain, limited access to healthcare services, and sometimes insufficient support and information from health professionals (8).

Furthermore, HD can disrupt family cohesion and communication by becoming a source of conflict, contributing to feelings of stigma and embarrassment. This often results in informal caregivers, especially children of affected individuals, experiencing social isolation and difficulties in maintaining peer relationships (9).

RESEARCH AIM

Psychiatric symptoms are a core feature of HD, and among them, depression is exceptionally prevalent. It occurs in approximately one-third to three-quarters of both pre-manifest and manifest individuals with HD, a number staggeringly higher than the prevalence found in the general population (10). However, although depression is a well-recognized and extensively documented clinical feature in people with HD, the psychological impact of it on their informal caregivers (non-medically professional individuals who continuously care for an affected family member) remains significantly under-researched. This research gap is especially evident in Croatia, where, to the best of our knowledge, no such research is available to date. Therefore, the main objective of this study was to explore the subjective experiences of informal caregivers. More specifically, this study aimed to answer the following research question: Is the degree of depression greater in informal caregivers of persons with HD than in the general population (i.e., those who are not informal caregivers of persons with HD)?

redbi s općom populacijom (tj. onima koji nisu neformalni njegovatelji osoba s HB)?

METODE

Ispitanici i postupak

U istraživanju je sudjelovalo 28 ispitanika, ženskog i muškog spola, u dobi između 25 i 74 godina. Uzorak je bio podijeljen u 2 skupine: neformalne njegovatelje (N=14) i kontrolnu skupinu (N=14) koju su činili pojedinci bez iskustva pružanja skrbi osobi s HB ili nekom drugom kroničnom bolesti. U skupini neformalnih njegovatelja bilo je 9 žena i 5 muškaraca, a u kontrolnoj skupini 8 žena i 6 muškaraca. Kriterij uključivanja sudionika u skupinu neformalnih njegovatelja bio je da su njegovatelji osoba s HB, dok je kriterij uključivanja u kontrolnu skupinu bio da nisu njegovatelji osoba s HB ili drugom kroničnom bolesti. Podatci su prikupljeni korištenjem tiskanog upitnika koji su ispitanicima podjeljeni uživo od istraživača, educiranog za popunjavanje upitnika. Uzorkovanje za skupinu neformalnih njegovatelja bilo je namjerno, a činili su je neformalni njegovatelji pacijenata s HB koji se nalaze na liječenju kod liječnika-istraživača. U skupini opće populacije korišten je prigodni uzorak, a ispitanici su prikupljeni kombinacijom osobnih kontakata i metode snježne grude. Educirani istraživač (uz odobrenje nositelja autorskih prava za hrvatsku verziju upitnika) anketirao je ispitanike obje ispitivane skupine o stupnju depresivnosti. Korišteni su BDI-II upitnici kupljeni kod ovlaštenog nakladnika, te su standardizirani i valorizirani na hrvatski jezik. Svi su ispitanici neformalni njegovatelji detaljno informirani o ispitivanju, njihovi su podatci anonimizirani te im ni po čemu nije moguće znati identitet. Prihvatili su da ih ispitivač anketira i popuni upitnik, te su potpisali informirani pristanak. Ispitanici kontrolne skupine su informirani da će se rezultati njihovih upitnika koristiti za usporedbu s ispi-

METHODS

Participants and Procedure

A total of 28 persons, both female and male, aged 25 to 74, participated in the study. The sample was divided into two groups: informal caregivers (N=14) and a control group (N=14), including individuals with no experience in providing care to a person with HD or another chronic illness. The informal caregiver group consisted of 9 women and 5 men, while the control group included 8 women and 6 men. The inclusion criterion for the informal caregiver group was that they were informal caregivers for persons with HD, while the inclusion criterion for the control group was that they were not informal caregivers for persons with HD or other chronic illnesses. Data were collected using a printed questionnaire distributed to the participants in person by a researcher trained to complete the questionnaire. The informal caregiver group was recruited through purposive sampling, consisting of informal caregivers of patients with HD treated by the physician-researcher. A convenience sample was used for the control group, and participants were recruited through a combination of personal contacts and the snowball method. A trained researcher (with the permission of the copyright holder for the Croatian version of the questionnaire) surveyed respondents from both study groups regarding their depression levels. BDI-II questionnaires were purchased from an authorized publisher and standardized and validated in the Croatian language. All informal caregivers were informed in detail about the study, their data were anonymized, and it is not possible to identify them in any way. They accepted that the researcher would interview them and fill out the questionnaire, and they signed an informed consent form. The subjects of the control group were informed that the results of their questionnaires would be used for comparison with a study group involving a spe-

tivanom skupinom u jednoj neurodegenerativnoj bolesti, da se u upitniku navodio samo spol i godine života (bez imena, prezimena i ostalih osobnih podataka), da podaci nisu bili dostupni nikome, osim istraživačima te su svi dragovoljno pristali na popunjavanje upitnika.

Instrumenti

Za procjenu stupnja depresivnosti koristili smo upitnik *Beck Depression Inventory-II* (BDI-II). Beckov inventar depresije (BDI) jedna je od najpopularnijih mjera depresivnih simptoma u svijetu. BDI-II, objavljen 1996. je revizija starije verzije, BDI-IA. Četiri stavke BDI-IA koje su se pokazale manje osjetljivima za identifikaciju tipičnih simptoma teške depresije - gubitak težine, iskrivljena slika tijela, somatska preokupacija i nemogućnost rada - izostavljene su i zamijenjene uznemirenošću, bezvrijednošću, poteškoćama s koncentracijom i gubitkom energije kako bi se procijenio poseban stupanj intenziteta depresije. Osim toga, stavke o apetitu i promjeni kvalitete sna izmijenjene su kako bi se procijenila dinamika ovih ponašanja povezanih s depresijom (11,12). Ispitanici su odgovarali na 21 pitanje s ponuđenim odgovorima o tome kako su se osjećali u posljednja dva tjedna. Bodovanje se vrši zbrajanjem brojeva pokraj pojedine tvrdnje za svih 21 stavki. Ukupan rezultat može se kretati u rasponu od 0 do 63 pri čemu viši rezultat ukazuje na višu razinu depresivnosti. Ukupan skor zatim se upotrebljava za kategorizaciju u jednu od moguće četiri razine depresivnosti. Predložene smjernice za interpretaciju rezultata su ove: minimalni raspon = 0–13, blaga depresija = 14–19, umjerena depresija = 20–28 i teška depresija = 29–63 (11).

REZULTATI

Rezultati otkrivaju da postoji izražena razlika u razini depresivnosti između promatranih skupina (tablica 1). Kontrolna skupina (N = 14) ostvarila je prosječni rezultat od 5,64 (SD = 5,27), što se

cific neurodegenerative disease, that the questionnaire stated only gender and age (without first name, last name, and other personal information), that the data would not be available to anyone except the researchers, and that they all voluntarily agreed to fill out the questionnaire.

Instruments

To assess the degree of depression, we used the Beck Depression Inventory-II (BDI-II). The Beck Depression Inventory (BDI) is one of the most widely used measures of depressive symptoms worldwide. The BDI-II, published in 1996, is a revision of the older version, the BDI-IA. Four items from the BDI-IA that proved less sensitive in identifying typical symptoms of severe depression – weight loss, body image distortion, somatic preoccupation, and work inhibition – were removed and replaced with agitation, worthlessness, concentration difficulty, and loss of energy to better assess the specific intensity of depression. Additionally, items regarding appetite and changes in sleep patterns were modified to assess the dynamics of these depression-related behaviors (11,12). Participants answered 21 multiple-choice questions about how they had been feeling over the past two weeks. Scoring is performed by summing the values assigned to each of the 21 items. The total score can range from 0 to 63, with higher scores indicating a higher level of depression. The total score is then used for categorization into one of four possible degrees of depression. The suggested guidelines for interpretation are as follows: minimal range = 0–13, mild depression = 14–19, moderate depression = 20–28, and severe depression = 29–63 (11).

RESULTS

The results revealed a significant difference in depression levels between the observed groups (Table 1). The control group (N = 14) achieved an average score of 5.64 (SD = 5.27), which, ac-

TABLICA 1. Deskriptivni statistički pokazatelji rezultata na Beckovom inventaru depresije (BDI-II) za kontrolnu skupinu i skupinu neformalnih njegovatelja.
TABLE 1. Descriptive statistics of Beck Depression Inventory (BDI-II) scores for the control group and the informal caregiver group.

	BDI-II rezultati/ BDI-II results	
	1 – kontrolna skupina / control group	2 – skupina neformalnih njegovatelja / informal caregiver group
Broj ispitanika / Number of participants	14	14
Aritmetička sredina / Mean	5,64	23,07
Standardna devijacija / Standard Deviation	5,27	13,24
Minimum / Minimum	0,00	8,00
Maksimum / Maximum	16,00	45,00

prema kliničkim kriterijima BDI-II upitnika klasificira kao minimalna razina depresije. Nasuprot tome, skupina neformalnih njegovatelja (N = 14) postigla je značajno viši prosječni rezultat od 23,07 (SD = 13,24), što ukazuje na umjerenu do tešku razinu simptoma. Također, uočena je i znatno veća varijabilnost u odgovorima neformalnih njegovatelja (minimalni rezultat = 8, maksimalni rezultat = 45), što upućuje na heterogenost psihološkog opterećenja unutar te skupine.

Prvi korak u obradi podataka obuhvatio je provjeru normalnosti distribucije rezultata BDI-II upitnika. Iako je Shapiro-Wilkov test za svaku skupinu zasebno pokazao vrijednosti iznad granice značajnosti (opća populacija p = 0,065; neformalni njegovatelji p = 0,071), analiza ukupnog uzorka pokazala je značajno odstupanje od normalne distribucije (p = 0,002).

S obzirom na mali broj ispitanika (N = 14 za obje skupine) napravili smo i vizualnu inspekciju podataka pomoću prikaza raspodjele podataka (slika 1), čime smo potvrdili da distribucija ne prati normalnu krivulju.

Nadalje, koristili smo Mann-Whitneyev test za usporedbu dviju skupina (tablica 2).

Usporedba rezultata BDI-II upitnika između dvije skupine – skupine neformalnih njegovatelja i kontrolne skupine – pokazala je da je različita razina depresivnosti statistički značajna (U=14,50; p<0.001). Kao mjera veličine učinka korištena je *rank-biserial* korelacija koja iznosi 0,852, čime smo potvrdili da se razine depre-

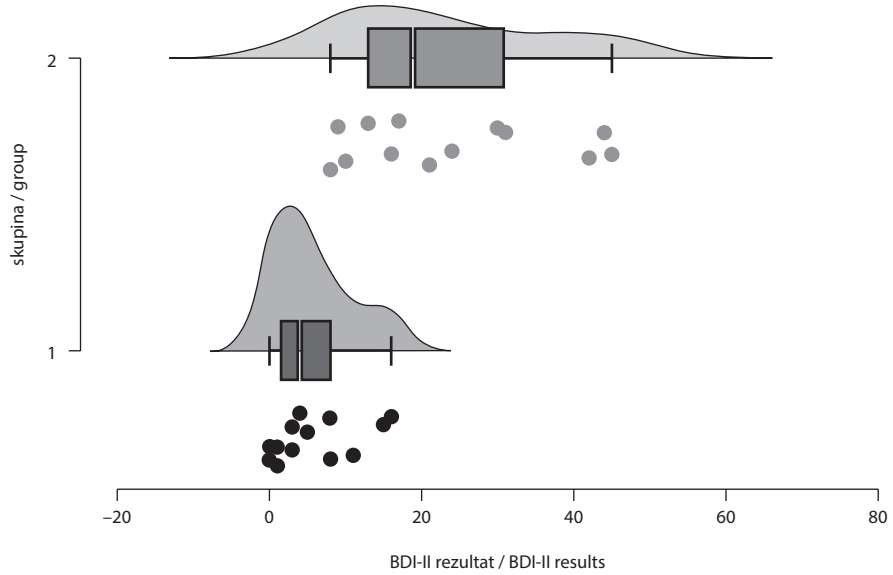
cording to the BDI-II clinical criteria, is classified as a minimal level of depression. In contrast, the informal caregiver group (N = 14) scored significantly higher, with an average of 23.07 (SD = 13.24), indicating moderate to severe depressive symptoms. Furthermore, a considerably higher variability in responses was observed among informal caregivers (minimum score = 8, maximum score = 45), suggesting great heterogeneity in the psychological burden within this group.

The first step in the data analysis involved testing the normality of the distribution of the BDI-II scores. Although the Shapiro-Wilk test showed non-significant values when calculated for each group separately (control group p = 0.065; informal caregivers p = 0.071), the analysis of the total sample indicated a significant deviation from a normal distribution (p = 0.002).

Given the small sample size (N = 14 per group), a visual inspection of the data was also conducted using a raincloud plot (Figure 1), which confirmed that the distribution does not follow a normal curve.

Furthermore, the Mann-Whitney U test was used to compare the two groups (Table 2).

A comparison of BDI-II scores between the two groups – caregivers and the control group – revealed that the difference in depression levels is statistically significant (U = 14.50; p < .001). As a measure of effect size, the rank-biserial correlation was used, producing a value of 0.852, which confirms that the depression levels of



SLIKA 1. Razlike u distribuciji rezultata na BDI-II upitniku između kontrolne skupine (1) i skupine neformalnih njegovatelja (2).
FIGURE 1. Raincloud plot of BDI-II scores for the control group (1) and the informal caregiver group (2).

TABLICA 2. Rezultati Mann-Whitney U testa.
TABLE 2. Mann-Whitney U test results.

	U	p	*Rank-biserial* korelacija / Rank-Biserial Correlation	SE *rank-biserial* korelacija / SE Rank-Biserial Correlation
BDI-II	14,50	< ,001	0,852	0,219

sivnosti neformalnih njegovatelja i kontrolne skupine gotovo uopće ne preklapaju.

Budući da se istraživane skupine značajno razlikuju u prosječnoj dobi, povezanost između dobi i razine depresivnosti ispitana je primjenom Spearmanovog koeficijenta korelacije (ρ) zasebno za svaku skupinu (tablica 3). Ovakvim pristupom nastojalo se eliminirati utjecaj dobi kao potencijalnog posredujućeg čimbenika koji bi mogao iskriviti interpretaciju rezultata na ukupnom uzorku.

Rezultati analiza ukazuju na to da ni u jednoj skupini ne postoji statistički značajna povezanost između dobi ispitanika i njihovog rezultata na BDI-II ljestvici. U kontrolnoj skupini

the caregivers and the control group show almost no overlap.

Since the participating groups differ significantly in their average age, the association between age and depression levels was examined using Spearman's correlation coefficient (ρ) separately for each group (Table 3). This approach aimed to eliminate the influence of age as a potential confounding factor that could mislead the interpretation of the results in the total sample.

The analysis results indicate that there is no statistically significant correlation between the participants' age and their BDI-II scores in either group. In the control group, a low and statistically non-significant negative correlation was

TABLICA 3. Rezultati korelacijske analize.
TABLE 3. Correlation analysis results.

Skupina / Group	N	Spearmanov ρ / Spearman's ρ	p-vrijednost / p-value
Kontrolna skupina / Control group	14	-0,147	0,617
Skupina neformalnih njegovatelja / Informal caregiver group	14	0,068	0,817

zabilježena je niska i statistički beznačajna negativna korelacija (ρ = -0,147; p = 0,617), dok je u skupini neformalnih njegovatelja korelacija bila gotovo nepostojeća (ρ = 0,068; p = 0,817).

Dakle, iako su ispitanici unutar skupineneformalnih njegovatelja u prosjeku stariji od ispitanika unutar kontrolne skupine, korelacijska analiza unutar pojedine skupine pokazala je da dob nije značajno povezana s razinom depresivnosti. Na temelju navedenog možemo pretpostaviti da su povišeni rezultati BDI-II upitnika kod skupine neformalnih njegovatelja primarno odraz psihološkog tereta skrbi i specifične životne situacije, a ne kronološke dobi ispitanika.

Unutar skupine neformalnih njegovatelja provedena je i deskriptivna analiza s obzirom na srodstvo s oboljelom osobom (tablica 4). Najviše rezultate na BDI-II ljestvici ostvarile su majke (M = 28) i supruge (M = 37). S obzirom na to da su određene podskupine (npr. otac, kćer) zastupljene samo s jednim ispitanikom, ovi nalazi su isključivo eksploratorne prirode i ne dopuštaju statističko poopćavanje, ali ukazuju na potencijalno veće opterećenje roditelja i bračnih partnera.

recorded (ρ = -0.147; p = 0.617), whereas in the informal caregiver group, the correlation was practically non-existent (ρ = 0.068; p = 0.817).

Therefore, although participants in the informal caregiver group are, on average, older than those in the control group, the correlation within the group analysis demonstrated that age is not significantly associated with depression levels. Based on these findings, it can be hypothesized that the elevated BDI-II scores in the informal caregiver group primarily reflect the psychological burden of care and the specific life situation rather than the chronological age of the participants.

A descriptive analysis of the relationship with the affected person with HD was also conducted within the informal caregiver group (Table 4). The highest BDI-II scores were recorded among mothers (M = 28) and wives (M = 37). Given that certain subgroups (e.g., fathers and daughters) were represented by only one participant, these findings are strictly exploratory in nature and do not allow for statistical generalization; however, they point toward a potentially higher burden on parents and spouses.

RASPRAVA

Cilj ovog istraživanja bio je ispitati razliku u stupnju depresivnosti između neformalnih njegovatelja osoba oboljelih od HB i opće po-

DISCUSSION

The aim of this study was to examine the difference in depression levels between informal caregivers of people with HD and those in the gen-

TABLICA 4. Deskriptivni parametri BDI-II rezultata prema srodstvu.
TABLE 4. Descriptive statistics of BDI-II results according to relationship type with the care recipient.

	BDI-II rezultati / BDI-II results					
	Kćer / Daughter	**Majka / Mother**	**Otac / Father**	**Sestra / Sister**	**Suprug / Husband**	**Supruga / Wife**
Broj ispitanika / Number of participants	1	4	1	2	4	2
Aritmetička sredina / Mean	13,00	28,00	31,00	14,50	16,00	37,00
Standardna devijacija / Standard deviation		18,17		9,19	6,06	9,89
Minimum / Minimum	13,00	9,00	31,00	8,00	10,00	30,00
Maksimum / Maximum	13,00	45,00	31,00	21,00	24,00	44,00

pulacije. Glavni nalaz istraživanja ukazuje na statistički značajnu i klinički alarmantnu razliku između ove dvije skupine. Prosječni rezultat neformalnih njegovatelja na BDI-II ljestvici iznosi 23,07, što ih svrstava u kategoriju umjerene depresije, dok rezultat kontrolne skupine od 5,64 ukazuje na minimalnu razinu simptoma koji su unutar granica normale.

Ovi su nalazi u skladu s prijašnjim istraživanjima koja su pokazala da neformalni njegovatelji osoba s HB pokazuju značajne stope kliničke depresije i anksioznosti (13). Uspoređujući s literaturom (7,10), vidljivo je da su simptomi poput gubitka energije i poteškoća s koncentracijom (koje BDI-II mjeri) izravna posljedica iscrpljujućeg 24-satnog nadzora. Dok se kod drugih demencija (poput Alzheimerove) fokus najviše stavlja na kognitivni gubitak, kod HBneformalni njegovatelji se moraju nositi i s hiperkinetskim pokretima i nepredvidivim psihijatrijskim epizodama, što objašnjava zašto su rezultati na BDI-II ljestvici kod ove skupine često viši nego kod neformalnih njegovatelja u drugim neurološkim stanjima. Nadalje, emocionalni teret kod HB često je pogoršan rizičnom tjeskobom i dubokom krivnjom, posebno među supružnicima, u vezi s nasljednim prijenosom bolesti i iznimno teškom odgovornošću informiranja svoje djece o njihovom genetskom riziku (14).

Za razliku od nekih ranijih pretpostavki, ovo istraživanje je pokazalo da dob ispitanika nije značajno povezana s razinom depresivnosti. Korelacijska analiza pokazala je gotovo nepostojeću povezanost u skupini neformalnih njegovatelja, što ukazuje da psihološki teret ne ovisi o njihovoj kronološkoj dobi. Povišeni rezultati na BDI-II skali stoga su primarno odraz same uloge neformalnih njegovatelja i težine životne situacije, a ne dobi. Eksploratorna analiza s obzirom na srodstvo, iako na malom uzorku, ukazuje na to da su supruge i majke pod najvećim rizikom od teške depresije. Ovi nalazi ukazuju da primarni članovi obitelji koji

eral population. The main finding of this study indicates a statistically significant and clinically alarming difference between these two groups. The average score of informal caregivers on the BDI-II scale is 23.07, which places them in the category of moderate depression, while the control group's score of 5.64 indicates a minimal level of symptoms that are within normal limits.

These findings are consistent with those of previous studies that have shown that informal caregivers of people with HD show significant rates of clinical depression and anxiety (13). Comparing with the literature (7,10), it is evident that symptoms such as loss of energy and difficulty concentrating (measured by the BDI-II) are a direct consequence of the exhausting 24-hour supervision. While other dementias (such as Alzheimer's) focus primarily on cognitive decline, informal caregivers of HD also have to cope with hyperkinetic movements and unpredictable psychiatric episodes, which explains why BDI-II scores are often higher in this group than in informal caregivers of other neurological conditions. Furthermore, the emotional burden in HD is often exacerbated by risk anxiety and deep guilt, especially among spouses, regarding the hereditary transmission of the disease and the distressing responsibility of informing their children of their genetic risk (14).

Contrary to some previous assumptions, this study found that the age of the subjects was not significantly associated with depression levels. Correlation analysis showed almost no association in the informal caregiver group, suggesting that the psychological burden is not dependent on the chronological age of the informal caregiver. Therefore, elevated BDI-II scores primarily reflect the informal caregiver's role and the severity of the life situation rather than age. Exploratory analyses of kinship, although in a small sample, indicate that wives and mothers are at the highest risk for major depression. These findings suggest that primary family members living in the same household as the patient bear

žive u istom kućanstvu s bolesnikom nose najveći dio tereta, što često dovodi do zapuštanja vlastitog zdravlja i socijalne izolacije.

VAŽNOST REZULTATA I KLINIČKE IMPLIKACIJE

Važnost ovog istraživanja je činjenica da pruža prve kvantitativne dokaze o razini depresije kod neformalnih njegovatelja osoba s HB u Hrvatskoj. Iz rezultata proizlazi zaključak da bi klinički pristup pacijentu s HB morao biti holistički. U tom smislu, standardizirane kliničke smjernice su neizostavan alat za osiguravanje dosljedne i visokokvalitetne skrbi za ove pacijente. Nadalje, upravo zbog zamršene raznolikosti neuroloških i fizičkih simptoma nužno je implementirati integrirani pristup koji povezuje više medicinskih specijalnosti i terapeuta (15). Uz praćenje napredovanja bolesti pacijenta liječnici bi trebali procijeniti i mentalno stanje neformalnih njegovatelja. Također, javlja se potreba za sustavima podrške kako za osobe s HB, tako i za njihove neformalne njegovatelje. Maksimalni rezultat od 45 bodova u skupini neformalnih njegovatelja alarmantna je brojka koja ukazuje na postojanje osoba koje pate od teške depresije, a koje sustav možda ne prepoznaje. Postoji hitna potreba za programima privremene skrbi i psihološkim savjetovanjem posebno prilagođenim genetskim bolestima.

OGRANIČENJA ISTRAŽIVANJA

Iako su rezultati statistički jasni ($p < 0,001$) s visokom mjerom veličine učinka (0,852), potreban je oprez pri generalizaciji zbog malog uzorka ($N = 28$). Manji uzorak posljedica je i činjenice da je HB u skupini rijetkih bolesti.

Način uzorkovanja korišten u ovom istraživanju je metodološko ograničenje. Skupina neformalnih njegovatelja odabrana je namjernim uzorkovanjem osoba povezanih s liječnikom

the greatest burden, often leading to neglect of their own health and social isolation.

SIGNIFICANCE OF THE RESULTS AND CLINICAL IMPLICATIONS

The importance of this study lies in the fact that it provides the first quantitative evidence on the level of depression in informal caregivers of people with HD in Croatia. The results suggest that the clinical approach to a patient with HD should be holistic. In this regard, standardized clinical guidelines represent an irreplaceable tool for ensuring consistent and high-quality care for these patients. Furthermore, due to the complex diversity of neurological and physical symptoms, it is necessary to implement an integrated approach that links multiple medical specialties and therapists (15). In addition to monitoring the progression of the patient's disease, neurologists should also assess the mental state of the informal caregiver. There is also a need for support systems. The maximum score of 45 points in the informal caregiver group is an alarming figure that indicates the existence of people suffering from severe depression who may not be recognized by the system. There is an urgent need for temporary care programs and psychological counseling specifically tailored to genetic diseases.

LIMITATIONS OF THE STUDY

Although the results are statistically significant ($p < 0.001$) with a high effect size (0.852), caution is warranted in generalizing due to the small sample size ($N = 28$). The smaller sample is also a consequence of the fact that HD is in the group of rare diseases.

Furthermore, the sampling strategy used in this study has a methodological limitation. The informal caregiver group was selected through purposive sampling of individuals connected to

specijalistom, dok je kontrolna skupina prikupljena prigodnim uzorkovanjem i metodom snježne grude. Budući da su obje skupine formirane nenasumičnim metodama, postoji mogućnost selekcijske pristranosti. Posljedično, uzorak možda nije u potpunosti reprezentativan za širu populaciju neformalnih njegovatelja niti za opću populaciju.

IMPLIKACIJE ZA BUDUĆA ISTRAŽIVANJA

Ovaj rad postavlja temelje za buduće studije koje bi trebale još detaljnije istražiti ovu temu. Mogli bi se uvesti intervjui s neformalnim njegovateljima kako bi se razumjelo koji specifični aspekti bolesti (npr. financijski teret vs. agresivno ponašanje bolesnika) najviše pridonose depresiji. Također, buduća istraživanja u Hrvatskoj trebala bi izravno usporediti neformalne njegovatelje osoba s HB s onima koji brinu o osobama s nekom drugom neurodegenerativnom bolesti, kako bi se izolirala specifičnost HBa. I za kraj, trebalo bi uzeti u obzir utjecaj genetskog statusa i ispitati razlikuje li se depresivnost kod onih koji znaju da su nositelji gena za HB od onih koji su negativni ili se ne žele testirati.

ZAKLJUČAK

Rezultati ovog istraživanja daju jasan odgovor na primarno istraživačko pitanje: neformalni njegovatelji osoba s HB pokazuju značajno višu razinu depresivnosti u usporedbi s općom populacijom. Dok je kontrolna skupina pokazala tek minimalne simptome, skupina neformalnih njegovatelja postigla je prosječne rezultate koji upućuju na umjerenu do tešku razinu depresivnosti. Nasuprot početnim pretpostavkama, istraživanje je pokazalo da dob ispitanika nije značajno povezana s intenzitetom depresivnih simptoma, što sugerira da psihološki teret pri-

the treating physician, whereas the control group was recruited via convenience and snowball sampling methods. Because both groups were formed using non-probability sampling, selection bias remains a possibility. Consequently, the sample may not be fully representative of the broader informal caregiver population or the general public.

IMPLICATIONS FOR FUTURE RESEARCH

This study lays the foundation for future studies that should explore this topic in more detail. Interviews with informal caregivers could be introduced to understand which specific aspects of the disease (e.g., financial burden vs. aggressive patient behavior) contribute most to depression. Future research in Croatia should also directly compare informal caregivers of people with HD with those caring for people with other neurodegenerative diseases to isolate the specificity of HD. Finally, the influence of genetic status should be taken into account, and whether depression differs in those who know they carry the HD gene from those who are negative or do not want to be tested.

CONCLUSION

The results of this study provide a clear answer to the primary research question: informal caregivers of people with HD show significantly higher levels of depression compared to the general population. While the control group showed only minimal symptoms, the informal caregiver group achieved average scores, indicating moderate to severe levels of depression. Contrary to initial assumptions, the study showed that the age of the subjects was not significantly associated with the intensity of depressive symptoms, suggesting that the psychological burden primarily stems from the nature and complexity of caregiving, rather than from the chronological

marno proizlazi iz same prirode i zahtjevnosti skrbi, a ne iz kronološke dobi neformalnih njegovatelja. Eksploratorni nalazi dodatno ukazuju na to da su supruge i majke oboljelih potencijalno najranjivija podskupina unutar sustava obiteljske skrbi. Zaključno, ovo istraživanje ističe da utjecajHBdaleko nadilazi motorički i kognitivni pad samog pacijenta. Pronađene visoke razine depresije naglašavaju hitnu potrebu za uvođenjem sustavne psihološke podrške i programa pomoći u kući kako bi se olakšao teret onima koji brinu o oboljelima. Prepoznavanje neformalnih njegovatelja kao ravnopravnih sudionika u procesu liječenja ključno je za poboljšanje kvalitete života cijele obitelji pogođene ovom progresivnom bolešću.

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age of the informal caregiver. Exploratory findings further indicate that wives and mothers of patients are potentially the most vulnerable subgroups within the family caregiving system. In conclusion, this study highlights that the impact of HD goes far beyond the motor and cognitive decline of the patient himself. The high levels of depression found highlight the urgent need to introduce systematic psychological support and home care programs to ease the burden on those who care for the affected. Recognizing informal caregivers as equal participants in the treatment process is crucial for improving the quality of life of the entire family affected by this progressive disease.

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LITERATURA / *REFERENCES*

1. Jiang A, Handley RR, Lehnert K, Snell RG. From Pathogenesis to Therapeutics: A Review of 150 Years of Huntington's Disease Research. Int J Mol Sci 2023;24(16):13021. doi:10.3390/ijms241613021 PubMed PMID: 37629202; PubMed Central PMCID: PMC10455900.
2. Hećimović S, Klepac N, Vlašić J, Vojta A, Janko D, Škarpa-Prpić I et al. Genetic background of Huntington disease in Croatia: Molecular analysis of CAG, CCG, and Δ2642 (E2642del) polymorphisms. Human Mutation 2002;20(3):233–233. doi:10.1002/humu.9055
3. Van Baar C, Kalkers K, Bolt S, Roos R, Gobbens R. A Scoping Review of the Lived Experiences of Individuals With Huntington's Disease, Their Informal Caregivers and Offspring. J Adv Nurs 2026;82(2):1105–23. doi:10.1111/jan.17024 PubMed PMID: 40344608; PubMed Central PMCID: PMC12810605.
4. Pogledić I, Relja M. Huntingon's disease. Lijec Vjesn. 2012;134(11–12):0–0.
5. Bayen E, de Langavant LC, Youssov K, Bachoud-Lévi AC. Informal care in Huntington's disease: Assessment of objective-subjective burden and its associated risk and protective factors. Ann Physical Rehabilitation Med 2023;66(4):101703. doi:10.1016/j.rehab.2022.101703.
6. Aubeeluck A, Stupple EJN, Schofield MB et al. An International Validation of a Clinical Tool to Assess Carers' Quality of Life in Huntington's Disease. Front Psychol 2019;10:1658. doi:10.3389/fpsyg.2019.01658 PubMed PMID: 31402885; PubMed Central PMCID: PMC6676956.
7. Carney S, Pender N, Rogers E. Huntington's disease caregivers: A qualitative exploration of caregivers experience. J Health Psychol 2026;31(1):82–96. doi:10.1177/13591053251328934 PubMed PMID: 40243099; PubMed Central PMCID: PMC12881155.
8. Domaradzki J. Caring for patients with Huntington disease – A survey of caregivers' experiences and views. J Pre Clin Clin Res 2015;49(2):133–9. doi:10.5604/18982395.1186494
9. Domaradzki J. The Impact of Huntington Disease on Family Carers: a Literature Overview. Psychiatr Pol 2015;49(5):931–44. doi:10.12740/PP/34496 PubMed PMID: 26688844.
10. Hannan AJ. Chorea me a river: depression in Huntington's disease as an exemplar of precision medicine. Brain Commun 2022;4(6):fcac294. doi:10.1093/braincomms/fcac294 PubMed PMID: 36440099; PubMed Central PMCID: PMC9683389.

11. Smarr KL, Keefer AL. Measures of depression and depressive symptoms: Beck Depression Inventory-II (BDI-II), Center for Epidemiologic Studies Depression Scale (CES-D), Geriatric Depression Scale (GDS), Hospital Anxiety and Depression Scale (HADS), and Patient Health Questionnaire-9 (PHQ-9). Arthritis Care Res (Hoboken). 2011 ;63 Suppl 11:454-466. doi:10.1002/acr.20556 PubMed PMID: 22588766.
12. Wang YP, Gorenstein C. Psychometric properties of the Beck Depression Inventory-II: a comprehensive review. Braz J Psychiatry 2013;35:416–31. doi:https://doi.org/10.1590/1516-4446-2012-1048.
13. Exuzides A, Matos JE, Patel AM, Martin AA, Ricker B, Bega D. Understanding the Burdens Associated with Huntington's Disease in Manifest Patients and Care Partners-Comparing to Parkinson's Disease and the General Population. Brain Sci. 2022;12(2):161. doi:10.3390/brainsci12020161 PubMed PMID: 35203927; PubMed Central PMCID: PMC8869871.
14. Banaszkiewicz K, Sitek EJ, Rudzińska M, Sołtan W, Sławek J, Szczudlik A. Huntington's disease from the patient, caregiver and physician's perspectives: three sides of the same coin? J Neural Transm 2012;119(11):1361–5. doi:10.1007/s00702-012-0787-x
15. Poljak LA, Bis S. Zdravstvena njega bolesnika oboljelog od Huntingtonove bolesti. Zdravstveni glasnik 2024,10(2):170–7. doi:10.47960/2303-8616.2024.2.10.170.

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/ *Contribution of Group, Professional, and Family Factors to Recovery Assessment Among Members of Clubs of Treated Alcoholics in Bosnia and Herzegovina*

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Pozadina istraživanja: Klubovi liječenih alkoholičara (KLA) su u Bosni i Hercegovini osnovni oblik poslijebolničkog tretmana kod ovisnosti o alkoholu. Tretman u KLA se temelji na stručnom vođenju, doprinosu grupe i podrške obitelji s ciljem cjelovitog oporavka osobe. U nedostatku istraživanja o obilježjima i učincima KLA u BIH provedeno je prvo cjelovito istraživanje. *Cilj i uzorak*: Cilj istraživanja je utvrditi doprinos pohađanja KLA, odnosa sa stručnim djelatnikom, obiteljskog funkcioniranja i percipirane socijalne podrške na procjenu sljedećih dimenzija osobnog oporavka: Samopouzdanje i pozitivna očekivanja, Upravljanje oporavkom i oslanjanje na druge osobe, Orijentacija k uspjehu i ciljevima i Nadilaženje simptoma ovisnosti. U istraživanju je sudjelovalo 163 ispitanika koji su članovi KLA u Bosni i Hercegovini. Anketno istraživanje metodom grupnog anketiranja je provedeno u ukupno 11 KLA na prigodnom uzorku.

Rezultati: Podatci su analizirani hijerarhijskom regresijskom analizom. Uvođenjem svakog prediktorskog bloka statistički značajno se unaprijedilo objašnjenje varijance kriterija za sve četiri dimenzija osobnog oporavka. Od individualnih čimbenika dosljedno se značajnom pokazuje varijabla Razina uključenosti u rad KLA za objašnjenje svih dimenzija oporavka., Odnosi s obitelji i socijalna podrška značajni su prediktori za objašnjenje dvije dimenzije oporavka. *Zaključak*: Rezultati istraživanja podupiru holistički pristup, no potrebna su daljnja longitudinalna i evaluacijska istraživanja radi unaprjeđenja modela KLA.

/ Background: *In Bosnia and Herzegovina, Clubs of Treated Alcoholics (CTA) are the principal form of posthospital treatment for alcohol addiction. Treatment in CTA rests on professional leadership, the contribution of the group, and family support, with the aim of the person's comprehensive recovery. Given the absence of research on the characteristics and effects of CTA in Bosnia and Herzegovina, the first comprehensive study was conducted. Aim and sample: The aim of the study is to determine the contribution of CTA attendance, the relationship with the professional, family functioning, and perceived social support to the assessment of the following dimensions of personal recovery: Self-confidence and positive expectations, Managing recovery and reliance on others, Orientation toward success and goals, and Overcoming*

symptoms of addiction. A total of 163 participants who were members of CTA in Bosnia and Herzegovina participated in the study. The survey was administered in group format across 11 CTA using a convenience sample.

/ Results: *Data were analyzed using hierarchical regression analysis. The introduction of each predictor block significantly improved the explanation of criterion variance for all four dimensions of personal recovery. Among individual factors, the variable Level of involvement in CTA activities emerges as consistently significant in explaining all dimensions of recovery. Family relationships and social support are significant predictors of two dimensions of recovery. Conclusion: The findings support a holistic approach; however, further longitudinal and evaluative research is required to improve the CTA model.*

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UVOD

Danas je uvriježeno multidimenzionalno shvaćanje bolesti ovisnosti o alkoholu kao medicinskog, ali i socijalnog problema (1,2). Razmatrajući etiologiju bolesti, čimbenici koji doprinose pojavi ovisnosti o alkoholu se pronalaze u individualnim karakteristikama (genetskim, neurobiološkim i psihičkim), ali i karakteristikama okruženja (2-4). Temeljem takvog shvaćanja, najbolji pristup liječenju je onaj koji je cjelovit te uključuje pacijente, članove njihove obitelji ili šire okoline. Na tim se principima razvio sustav klubova liječenih alkoholičara (dalje u tekstu: KLA) kao svojevrsni nastavak psihijatrijskog liječenja te je rezultat neprekinute tradicije koja je uspostavljena u zemljama bivše Jugoslavije, pa tako i Bosne i Hercegovine. KLA su dio pristupa koji je ranije u literaturi označen kao Hudolinov kompleksni socijalnopsihijatrijski postupak Zagrebačke škole alkohologije koji se sastoji od grupne psihoterapije, edukacije, obiteljske terapije, terapijske zajednice, medikamentnog liječenja i KLA (5).

INTRODUCTION

A multidimensional understanding of the disease of alcohol addiction as a medical but also a social problem is well established today (1,2). Considered in terms of etiology, the factors contributing to the emergence of alcohol addiction are found in individual characteristics (genetic, neurobiological, and psychological) but also in the characteristics of the environment (2-4). Based on this understanding, the best approach to treatment is one that is comprehensive and includes patients, their family members, or their wider environment. It was on these principles that the system of Clubs of Treated Alcoholics (hereinafter: CTA) developed, as a continuation of psychiatric treatment of a kind, and it is the product of an unbroken tradition established in the countries of the former Yugoslavia, and thus in Bosnia and Herzegovina as well. CTA form part of what the literature has termed Hudolin's complex social psychiatric approach of the Zagreb School of Alcohology, which comprises group psychotherapy, education, family therapy, a therapeutic community, pharmacological treatment, and CTA (5).

Kod korisnika KLA oporavak je rezultat istovremenog djelovanja na sljedeće aspekte života: uspostavljanje apstinencije, osobni psihički i fizički oporavak, oporavak obiteljskih odnosa i izgradnja nove socijalne mreže čemu pridonosi i podrška koju osoba dobiva iz grupnog rada. Stoga je poželjno da se osoba uključi u KLA u svom neposrednom okruženju (5). S obzirom da liječenje ima kompleksne ciljeve, čimbenici koji doprinose uspješnosti liječenja tiču se odnosa samog pacijenta prema liječenju, podrške koju dobiva od obitelji te podrške koju dobiva od stručnog djelatnika i članova grupe.

Na razini individualnih čimbenika, uspješnosti liječenja pridonosi duljina te spremnost osobe da prihvati ciljeve tretmana (6) odnosno spremnost na promjenu (7). Spremnost na promjenu definirana je uvjerenjem o nužnosti promjene i namjerom da se promjena provede temeljem kapaciteta koji osoba posjeduje (8). Spremnost na promjenu temelji se na postojanju motivacije za promjenom što je osobito važna tema stručnim djelatnicima (9). Motivacija za promjenom je višedimenzionalna pa se prema Milleru i Rollnicku (10) sastoji od percepcije važnosti promijenjenog stanja, doživljaju sposobnosti da se iznese promjena te spremnosti na provedbi aktivnosti koje će dovesti do promjene. Pritom se navedene komponente motivacije mogu mijenjati tijekom tretmana. Važno je provjeriti i razumiju li stručnjak i korisnik jednako postavljene ciljeve, primjerice govore li oboje o potpunoj apstinenciji, ili korisnik više razmišlja o smanjenju upotrebe alkohola, ali ne još o apstinenciji (11). Danas se smatra da će motivacija korisnika biti više potaknuta postojanjem vizije pozitivnih ishoda u životu (12), negoli strahom ili potrebom da se smanje negativni učinci bolest (13). Osim motivacijom, spremnost na promjenu iskazuje se bihevioralno. Članovi KLA se trebaju pridržavati određenih pravila, a poglavito je važna redovitost i točnost dolazaka (14).

Among CTA clients, recovery is the result of simultaneous action on the following aspects of life: establishing abstinence, personal psychological and physical recovery, recovery of family relationships, and building a new social network, to which the support the person receives from group work also contributes. Therefore, it is desirable for the person to become involved in a CTA in their immediate environment (5). Given that treatment has complex goals, the factors contributing to the success of treatment concern the patient's own relationship to treatment, the support the patient receives from the family, and the support the patient receives from the professional and the members of the group.

At the level of individual factors, the success of treatment is aided by duration and by the person's readiness to accept the goals of treatment (6), that is, by their readiness to change (7). Readiness to change is defined by the conviction that change is necessary and by the intention to carry out change based on the capacities the person possesses (8). Readiness to change rests on the presence of motivation for change, a topic of particular importance to professionals (9). Motivation for change is multidimensional and, according to Miller and Rollnick (10), consists of the perception of the importance of the changed state, the sense of being able to bring about change, and readiness to carry out the activities that will lead to change. These motivational components may shift over the course of treatment. It is also important to establish whether the professional and the client understand the goals that have been set in the same way — whether, for example, both are speaking of complete abstinence, or the client is thinking more about reducing alcohol use but not yet about abstinence (11). Today, client motivation is believed to be prompted more by a vision of positive outcomes in life (12) than by fear or the need to reduce the negative effects of the disease (13). Beyond motivation, readiness to change is expressed behaviorally. CTA members are required to observe certain rules, and regularity and punctuality of attendance are of particular importance (14).

Značenje obitelji u procesu liječenja i oporavka polazi od postavki da je obitelj aktivan sustav koji svojom unutarnjom dinamikom, identitetom, komunikacijom, učenjem i prijenosom vrijednosti i obrazaca ponašanja oblikuje pojedinca, ali i da pojedinac svojim ponašanjem aktivno stvara i mijenja obiteljski sustav i druge članove (15-17). Zato obitelj može biti okvir međugeneracijskog prijenosa ovisnosti, ali i okvir za oporavak pojedinca (18,19). Uključivanjem obitelji u KLA nastoje se ostvariti ciljevi oporavka ovisnika, potom drugog člana obitelji (20, 21), ali i obitelji u cjelini koja treba biti spremna na promjenu (22). Ovisnost o alkoholu je visoki stresor koji kontinuirano pogađa obiteljski sustav, no obiteljski sustav se može naći u krizi i tijekom liječenja jer dolazi do promjene unutarnje dinamike (23). Stoga je uključivanje obitelji u liječenje važno da se pomogne obitelji prebroditi nastalu krizu te pružiti podršku kako bi se oslobodili unutarnji resursi, ojačao doživljaj kompetentnosti. Stečenim iskustvom obitelj se kapacitira za suočavanje s budućim izazovima (24).

KLA se temelji na grupnom radu gdje proces oporavka facilitira stručnjak koji provodi strukturirani tretmanski rad, educira članove i izravno intervenira u situacijama kriza i recidiva (25). Uz stručnjaka, sama grupa koju čine osobe na liječenju od ovisnosti o alkoholu i članovi njihovih obitelji ljekovit je medij koji pomaže osobi izgraditi nove i drugačije socijalne mreže. Boravak u grupi doprinosi tome da se posredstvom grupne podrške i pritiska kod člana redefinira pogled na društvenu stvarnost i u nekoj mjeri rekonstruira vlastiti identitet (26). Tako se mogu dekonstruirati neka uvriježena sociokulturna stajališta koja doprinose kulturi pijenja. Grupa je i pogodno okruženje za razrješenje srama jer, uz podršku i empatiju voditelja osoba može izgraditi novi promijenjeni *self*. Grupa je pritom socijalizacijski okvir koja reflektira funkcioniranje

The significance of the family in the process of treatment and recovery proceeds from the premise that the family is an active system that shapes the individual through its internal dynamics, identity, communication, learning, and transmission of values and patterns of behavior, but also that the individual, through their own behavior, actively creates and changes the family system and other members (15-17). The family can therefore be a framework for the intergenerational transmission of addiction, but also a framework for the individual's recovery (18,19). Involving the family in CTA seeks to achieve the recovery goals of the person with alcohol addiction, then of another family member (20,21), and also of the family as a whole, which needs to be ready to change (22). Alcohol addiction is a major stressor that continuously affects the family system, but the family system may also find itself in crisis during treatment, because the internal dynamics change (23). Involving the family in treatment is therefore important in order to help the family overcome the crisis that has arisen and to provide support so that internal resources are released and the sense of competence is strengthened. Through the experience gained, the family builds the capacity to face future challenges (24).

CTA are based on group work, in which the recovery process is facilitated by a professional who carries out structured treatment work, educates members, and intervenes directly in situations of crisis and relapse (25). Alongside the professional, the group itself, made up of persons in treatment for alcohol addiction and members of their families, is a healing medium that helps the person build new and different social networks. Time spent in the group contributes, through group support and pressure, to members redefining their view of social reality and, to some extent, reconstructing their own identity (26). Certain entrenched sociocultural attitudes that contribute to the drinking culture can thereby be deconstructed. The group is also a suitable setting for the resolution of shame because, with the support and empathy of the leader, the person can build a new, changed *self*. Thus, the group is a socialization framework that reflects the functioning of the changed identity in the social environment (27).

promijenjenog identiteta u socijalnom okruženju (27). Novi članovi iskustvima i primjerima mogu ojačati uvjerenje da je promjena moguća te vizualizirati promjenu na temelju iskustva druge osobe koja uspješno prolazi proces oporavka. Kako član dulje boravi u KLA, tako se osnažuje osjećaj odgovornosti i kapacitet da brine o drugim članovima grupe (28). Kombinirajući podršku osobi na liječenju od ovisnosti, podršku obitelji i podršku grupnim radom, KLA se opetovano potvrđuje kao uspješan model rada u postizanju ciljeva osobnog oporavka na istraživanjima rađenima u Hrvatskoj (29-33). S obzirom da sličnih istraživanja nedostaje u Bosni i Hercegovini, provedeno je ovo istraživanje kako bi se utvrdili čimbenici koji doprinose oporavku osoba ovisnih o alkoholu.

CILJ ISTRAŽIVANJA

Cilj rada jest utvrditi čimbenike koji doprinose pojedinim dimenzijama osobnog oporavka, a tiču se odnosa prema KLA, odnosa sa stručnim djelatnikom (terapeutom), obiteljskog funkcioniranja i percipirane socijalne podrške.

U skladu sa istraživačkim ciljem postavljene su dvije hipoteze:

H1. Duže članstvo u KLA, viša razina uključenosti u KLA, pozitivnije procjene odnosa sa stručnim djelatnikom, više procjene u domenama obiteljskog funkcioniranja te viša razina socijalne podrške značajno će doprinijeti objašnjenju sljedećih dimenzija osobnog oporavka: Upravljanje oporavkom i oslanjanje na druge osobe i Nadilaženje simptoma ovisnosti

H2. Pozitivnije procjene odnosa sa stručnim djelatnikom i više procjene u domenama obiteljskog funkcioniranja značajno će doprinijeti objašnjenju sljedećih dimenzija osobnog oporavka: Orijentacija k uspjehu i ciljevima te Samopouzdanje i pozitivna očekivanja

Through experiences and examples, new members can strengthen their conviction that change is possible and can visualize change based on the experience of another person who is successfully going through the recovery process. The longer a member remains in a CTA, the stronger their sense of responsibility and capacity to care for other members of the group (28). By combining support for the person in treatment for addiction, support for the family, and support through group work, CTA are repeatedly confirmed as an effective model for achieving the goals of personal recovery in studies conducted in Croatia (29-33). Given that comparable research is lacking in Bosnia and Herzegovina, the present study was conducted in order to determine the factors that contribute to the recovery of persons addicted to alcohol.

AIM OF THE STUDY

The aim of the paper is to determine the factors that contribute to particular dimensions of personal recovery and that concern the relationship to CTA, the relationship with the professional (therapist), family functioning, and perceived social support.

In line with the research aim, two hypotheses were formulated:

H1. Longer membership in CTA, a higher level of involvement in CTA, more positive assessments of the relationship with the professional, higher assessments in the domains of family functioning, and a higher level of social support will contribute significantly to the explanation of the following dimensions of personal recovery: Managing recovery and reliance on others and Overcoming symptoms of addiction

H2. More positive assessments of the relationship with the professional and higher assessments in the domains of family functioning will contribute significantly to the explanation of the following dimensions of personal recovery: Orientation toward success and goals and Self-confidence and positive expectations

METODE

Uzorak

U istraživanju je sudjelovalo 163 ispitanika koji su članovi KLA u Bosni i Hercegovini. Istraživanje je provedeno u ukupno 11 KLA. KLA su odabrani strategijom prigodnog uzorkovanja na temelju saznanja istraživača kliničkog praktičara o tome jesu li aktivni i postojanja ranijeg kontakta s voditeljima KLA. Upitnik su ispunjavali članovi KLA s bolesti ovisnosti o alkoholu, dok su iz istraživanja isključeni članovi obitelji koji su dolazili kao pratnja u KLA. Ispitanici su većinom muškarci (N = 133, 82 %)dok je žena 30 (18 %). Ispitanici su gotovo jednako raspoređeni u trima dobnim skupinama: 56 ispitanika je od 35 do 45 godina (34 %), 54 je dobi 45 do 55 godina (33 %), a 53 ispitanika je starije od 55 godina (33 %). Većina ispitanika je oženjeno (N = 96 – 59 %), 30 – 18 % ih je neoženjeno, 10 ispitanika (6 %) su udovci/ice dok je 17 % - 27 ispitanika razvedeno. U duljini apstinencije je očekivano veliki varijabilitet (minimalno manje od 1 mjesec do maksimalno 15 godina), no u prosjeku ispitanici apstiniraju nešto manje od 3 godina (M = 32,31 mjesec, SD = 35,86). Slično je i s duljinom članstva u KLA (M = 32,82 mjeseci, SD = 34,576). Na pitanje o recidivu nisu dobiveni pouzdani podatci jer čak 24 % (39 ispitanika) nije dalo odgovor na ovo pitanje. Od onih koji su odgovorili, 54 (33 %) je imalo recidiv, a 70 (43%) nije imalo recidiv u dosadašnjoj apstinenciji. Osim alkoholizma, 44 ispitanika (27 %) ima dijagnosticiranu i drugu psihičku bolest.

Postupak istraživanja i instrumentarij

Istraživanje je provedeno metodom anketiranja od siječnja do prosinca 2021. godine. Kako se radilo o razdoblju pandemije COVID-a 19, KLA nisu redovito održavali sastanke pa se tijekom provedbe čekalo primjereno vrijeme za prikupljanje podataka ili se iznimno za korisnike KLA koji djeluju u bolničkom sustavu organiziralo individualno ispunjavanje upitnika. Za

METHODS

Sample

A total of 163 participants who were members of CTA in Bosnia and Herzegovina participated in the study. The study was conducted in a total of 11 CTA. CTA were selected using a convenience sampling strategy based on the clinician-researcher's knowledge of whether they were active and the existence of prior contact with club leaders. The questionnaire was completed by CTA members with the disease of alcohol addiction, while family members who came to CTA as companions were excluded from the study. The participants were mostly men (N = 133, 82 %), while there were 30 women (18 %). The participants were almost equally distributed across three age groups: 56 participants were aged 35 to 45 (34 %), 54 were aged 45 to 55 (33 %), and 53 participants were older than 55 (33 %). Most participants were married (N = 96 – 59 %), 30 – 18 % were unmarried, 10 participants (6 %) were widowed, while 17 % – 27 participants were divorced. As expected, there was considerable variability in the length of abstinence (from a minimum of less than 1 month to a maximum of 15 years), but on average, participants had been abstinent for somewhat less than 3 years (M = 32,31 months, SD = 35,86). The same was true of the length of membership in CTA (M = 32,82 months, SD = 34,576). Reliable data were not obtained on the question of relapse, since as many as 24 % (39 participants) did not answer it. Of those who answered, 54 (33 %) had a relapse, and 70 (43 %) had not had a relapse during their abstinence to date. In addition to alcoholism, 44 participants (27 %) had a diagnosis of another mental illness.

Study Procedure and Instruments

The study was conducted using a survey from January to December 2021. Since this was the period of the COVID-19 pandemic, CTA were not holding meetings regularly, so that during implementation a suitable time for data collection was awaited, or, exceptionally, individual completion

istraživanje je dobivena suglasnost Pravnog fakulteta Sveučilišta u Zagrebu i Univerzitetskog kliničkog centra Tuzla. Istraživanje je provodio glavni istraživač uz pomoć drugog istraživača, a oba imaju iskustvo rada s osobama oboljelima od ovisnosti o alkoholu. Glavni istraživač je pisanim putem voditelju KLA objasnio svrhu istraživanja, a potom proveo prikupljanje podataka u dogovorenom terminu. Ispitanici članovi KLA su osobno ispunjavali upitnik uz prisutnost istraživača nakon održanog sastanka KLA. Kod manjeg broja ispitanika upitnici su popunjavani individualno u klinici s obzirom da nije bilo grupnih susreta zbog protupandemijskih mjera.

Za potrebe ovog znanstvenog rada obrađeni su podatci prikupljeni sljedećim instrumentarijem:

Ljestvica za procjenu oporavka, (34) s 24 tvrdnje, a odgovori se daju na bodovnoj ljestvici od 1 do 6. Na ovom uzorku dobivena su četiri faktora a sve podljestvice definirane pojedinim faktorom imaju visoku pouzdanost: Samopouzdanje i pozitivna očekivanja (Cronbachov alpha = 0,921); Upravljanje oporavkom i oslanjanje na druge osobe (Cronbachov alpha = 0,910); Orijentacija k uspjehu i ciljevima (Cronbachov alpha = 0,886) i Nadilaženje simptoma (Cronbachov alpha = 0,806).

Upitnik pomažućeg saveza, verzija za pacijente (35) sa 14 tvrdnji, a odgovori se daju na bodovnoj ljestvici od 1 do 6. U ovom istraživanju dobivena su dva faktora: Povjerenje i razumijevanje s terapeutom; Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana. Podljestvica definirana faktorom Povjerenje i razumijevanje s terapeutom ima visoku pouzdanost (Cronbachov alpha = 0,95); dok je pouzdanost podljestvice definirane faktorom Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana niža, no zadovoljavajuća (Cronbachov alpha = 0,74);

Ljestvica obiteljskog funkcioniranja (36) sastoji se od 30 tvrdnji s mogućnošću davanja odgovora na ljestvici od 1 do 6. Faktorskom analizom dobivena su četiri fakora. Podljestvica definiof the questionnaire was arranged for CTA clients treated within the hospital system. Ethical approval for the study was obtained from Faculty of Law, University of Zagreb and from the University Clinical Center Tuzla. The study was carried out by the principal researcher with the assistance of a second researcher, both of whom have experience of working with persons suffering from alcohol addiction. The principal researcher explained the purpose of the study in writing to the club leader and then carried out the data collection at an agreed time. Participants who were CTA members completed the questionnaire in person, in the presence of the researcher, after a CTA meeting had been held. For a smaller number of participants, the questionnaires were completed individually at the clinic, given that there were no group meetings because of antipandemic measures.

For the purposes of this scientific paper, the data collected with the following instruments were processed: The Recovery Assessment Scale (34) has 24 items, and responses are given on a rating scale from 1 to 6. Four factors were obtained in this sample, and all the subscales defined by a particular factor have high reliability: Self-confidence and positive expectations (Cronbach α = 0,921); Managing recovery and reliance on others (Cronbach α = 0,910); Orientation toward success and goals (Cronbach α = 0,886) and Overcoming symptoms (Cronbach α = 0,806).

The Helping Alliance Questionnaire, patient version (35), has 14 items, and responses are given on a rating scale from 1 to 6. Two factors were obtained in this study: Trust and understanding with the therapist; Shared focus of client and therapist on treatment goals. The subscale defined by the factor Trust and understanding with the therapist has high reliability (Cronbach α = 0,95), while the reliability of the subscale defined by the factor Shared focus of client and therapist on treatment goals is lower, though satisfactory (Cronbach α = 0,74).

The Family Functioning Scale (36) consists of 30 items, with responses given on a scale from 1 to 6. Four factors were obtained through factor analysis. The subscale defined by the factor

rana faktorom Privrženost korisnika drugim članovima obitelji ima najvišu pouzdanost (Cronbachov alpha=0,961), kao i podljestvica definirana faktorom Funkcionalnost unutar obiteljskih odnosa (Cronbachov alpha=0,892). Nešto je niža pouzdanost podljestice definirane faktorom Neusklađenost u odnosima unutar obitelji (Cronbachov alpha = 0,849), dok je najniža, ali zadovoljavajuća pouzdanost podljestvice definirane faktorom Rigidnost članova obitelji (Cronbachov alpha = 0,741).

Upitnik o razini grupne uključenosti (37). Korištena je kraća verzija ljestvice od 7 tvrdnji, a odgovore je moguće dati na ljestvici od 1 do 5. Dobivena je jednofaktorska struktura te ljestvica ima visoku pouzdanost (Cronbachov alpha = 0,915).

Višedimenzionalna ljestica percipirane socijalne podrške (38) koja se sastoji od 12 čestica, a odgovori se daju na bodovnoj ljestvici od 1 do 7. Izvorno ljestvica ima tro-faktorsku strukturu s percipiranom podrškom obitelji, prijatelja i značajne druge osobe. Međutim, na ovom uzorku dobivena je dvo-faktorska struktura bez dostatnog razlikovanja podrške obitelji od druge značajne osobe. Obje podljestvice definirane dvama faktorima imaju visoke koeficijente pouzdanosti. Podljestvica koja se odnosi na percipiranu podršku obitelji ima pouzdanost α= 0,95, dok Podljestvica koja se odnosi na percipiranu podršku prijatelja α=0,96.

Ukupni rezultat na svakoj ljestvici izračunat je kao srednja vrijednost odgovora na svim tvrdnjama ljestvice.

Niti jedan od mjernih instrumenata nije standardiziran na nacionalnom uzorku u Bosni i Hercegovini. Koliko je poznato temeljem baze *Google Scholar*, niti jedno drugo istraživanje u BIH nije koristilo instrumente Upitnik pomažućeg saveza, Ljesvicu obiteljskog funkcioniranja i Upitnik o razini grupne uključenosti.

Ljestvica za procjenu oporavka korištena je u istraživanju Mahmutović (39) te je na uzorku od 200 ispitanika s iskustvom psihičke bolesti dobivena faktorska struktura od pet faktora s

Client's attachment to other family members has the highest reliability (Cronbach α = 0,961), as does the subscale defined by the factor Functioning within family relationships (Cronbach α = 0,892). The reliability of the subscale defined by the factor Discord in family relationships is somewhat lower (Cronbach α = 0,849), while the lowest, though satisfactory, reliability is that of the subscale defined by the factor Rigidity of family members (Cronbach α = 0,741).

The Group Engagement Measure (37). A shorter version of the scale, with 7 items, was used, and responses can be given on a scale from 1 to 5. A single-factor structure was obtained, and the scale has high reliability (Cronbach α = 0,915).

The Multidimensional Scale of Perceived Social Support (38) consists of 12 items, and responses are given on a rating scale from 1 to 7. The scale originally has a three-factor structure, with perceived support from family, from friends, and from a significant other. However, in this sample, a two-factor structure was obtained, without sufficient differentiation of support from family from that of a significant other. Both subscales defined by the two factors have high reliability coefficients. The subscale relating to perceived support from family has a reliability of α = 0,95, while the subscale relating to perceived support from friends has α = 0,96.

The total score on each scale was calculated as the mean of the responses to all the items on the scale.

None of the measurement instruments has been standardized on a national sample in Bosnia and Herzegovina. To the best of our knowledge, based on the Google Scholar database, no other study in Bosnia and Herzegovina has used the Helping Alliance Questionnaire, the Family Functioning Scale, or the Group Engagement Measure.

The Recovery Assessment Scale was used in the study by Mahmutović (39), and in a sample of 200 participants with experience of mental illness, a five-factor structure was obtained, with high reliability coefficients: personal confidence and hope (α = 0,87), willingness to ask for help (α = ,99), goal and success orientation (α = 0,94),

visokim koeficijentima pouzdanosti: osobno samopouzdanje i nada (α = 0,87), spremnost na traženje pomoći (α = ,99), usmjerenost na cilj i uspjeh (α = 0,94), oslanjanje na druge (α = 0,86) i nedominiranje simtpoma (α = 0,89).

Višedimenzionalna ljestvica percipirane socijalne podrške korištena je u više istraživanja u BIH. U spomenutom istraživanju Mahmutović (39) dobivena je tro-faktorska sa visokim koeficijentom pouzdanosti: Podrška – značajni drugi (α = 0,96), Podrška – prijatelji (α = 0,96), Podrška – obitelj (α = 0,97). I na drugim uzorcima potvrđena je trofaktorska struktura s visokim koeficijentom pouzdanosti za sve faktore (između 0,85 i 0,95) pri čemu je najniži koeficijent pouzdanosti za podršku značajnih drugih. Uzorci su bili osobe s invaliditetom (40), studenti (41), starije osobe (42).

Pored standardiziranih instrumenata, za potrebe ovog rada korištene su dodatne dvije varijable mjerene po jednim pitanjem: ukupna duljina članstva u KLA (u mjesecima), čestina dolaska na sastanke KLA (raspon 1-jednom tjedno, 4-jednom godišnje).

Rezultati su obrađeni u programskom paketu IBM SPSS *Statistics for Windows,* 27.0 (43). Gotovo svi podatci prikupljeni su prethodno navedenim standardiziranim instrumenatima. Osnovna analiza podataka bila je hijerarhijska regresijska analiza s uvođenjem varijabli u tri bloka: (1) odnos prema KLA, (2) odnos sa stručnim djelatnikom, (3) obiteljsko funkcioniranje i socijalna podrška. Osim toga korištena je metoda analize glavnih komponenti za provjeru faktorske strukture upitnika, korelacija i mjere deskriptivne statistike (aritmetička sredina, standardna devijacija).

reliance on others (α = 0,86), and no domination by symptoms (α = 0,89).

The Multidimensional Scale of Perceived Social Support has been used in several studies in Bosnia and Herzegovina. In the study by Mahmutović mentioned above (39), a three-factor structure was obtained with a high reliability coefficient: Support – significant others (α = 0,96), Support – friends (α = 0,96), Support – family (α = 0,97). The three-factor structure has also been confirmed on other samples, with a high reliability coefficient for all factors (between 0,85 and 0,95), the lowest reliability coefficient being that for support from significant others. The samples were persons with disabilities (40), students (41), and older persons (42).

In addition to the standardized instruments, two further variables measured by a single question each were used for the purposes of this paper: total length of membership in CTA (in months), and frequency of attendance at CTA meetings (range 1 – once a week, 4 – once a year).

The results were processed in the software package IBM SPSS *Statistics for Windows*, 27.0 (43). Almost all data were collected using the standardized instruments listed above. The principal data analysis was hierarchical regression analysis with the introduction of variables in three blocks: (1) relationship to CTA, (2) relationship with the professional, and (3) family functioning and social support. In addition, principal component analysis was used to examine the factor structure of the questionnaires, along with correlations and measures of descriptive statistics (mean, standard deviation).

REZULTATI

Deskriptivni rezultati za prediktorske i kriterijske varijable

Prije prikazivanja rezultata hijerarhijske regresijske analize prikazat će se deskriptivni rezultati za prediktorske i kriterijske varijable

RESULTS

Descriptive Results for Predictor and Criterion Variables

Before the results of the hierarchical regression analysis are presented, the descriptive results for the predictor and criterion variables (Table 1) and

(tablica 1) te korelacija između prediktorskih i kriterijskih varijabli (tablica 2).

Prosječni odgovori ispitanika ukazuju na pomaknutost distribucija prema višim vrijednostima i dobroj procjeni aspekata rada KLA: vlastite uključenosti (M=4,31), povjerenje i razumijevanje s terapeutom (M = 5,3) koje je nešto više u odnosu na zajedničku usmjerenost na ciljeve tretmana (M = 5,01). Prosječni odgovori za prediktore vezane uz obitelj i socijalnu podršku ukazuju na niže zadovoljstvo tim aspektima života u odnosu na vrednovanje KLA i stručnjaka, no i dalje su odgovori između srednjih i viših vrijednosti. Ispitanici višom ocjenjuju percipiranu podršku obitelji (M = 5,53) u odnosu na podršku prijatelja (M = 5,32). U dimenzijama obiteljskog funkcioniranja na ljestvici od 1 do 6 najvišim je

the correlations between the predictor and criterion variables (Table 2) are presented.

The participants' mean responses indicate that the distributions are shifted toward higher values and that the aspects of CTA activity are assessed favorably: their own involvement (M = 4,31), trust and understanding with the therapist (M = 5,3), which is somewhat higher than shared focus on treatment goals (M = 5,01). The mean responses for the predictors relating to family and social support indicate lower satisfaction with these aspects of life than with the evaluation of CTA and the professional, but the responses still lie between the middle and higher values. Participants rate perceived support from family (M = 5,53) higher than support from friends (M = 5,32). Among the dimensions of family functioning, on a scale from 1 to 6, functioning within

TABLICA 1. Deskriptivna statistika za prediktorske i kriterijske varijable
TABLE 1. Descriptive statistics for predictor and criterion variables

	N	Min	Maks. / Max.	M	SD
PREDIKTORI / PREDICTORS					
Duljina dolaska na sastanke klubova liječenih alkoholičara (u mjesecima) / Length of attendance at Clubs of Treated Alcoholics meetings (in months)	163	0	180	32,82	34,576
Čestina dolaska na sastanke KLA (1-jednom tjedno, 4-jednom godišnje) / Frequency of attendance at CTA meetings (1 – once a week, 4 – once a year)	162	1	4	1,18	0,472
Razina uključenosti u rad KLA / Level of involvement in CTA activities	163	1,00	5,00	4,31	0,739
Povjerenje i razumijevanje s terapeutom / Trust and understanding with the therapist	163	1,80	6,00	5,3	,7699
Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana / Shared focus of client and therapist on treatment goals	163	2,75	6,00	5,01	,8099
Privrženost korisnika drugim članovima obitelji / Client's attachment to other family members	163	1,36	6,00	4,39	1,074
Neusklađenost u odnosima unutar obitelji / Discord in family relationships	163	1,00	6,00	3,46	1,164
Funkcionalnost unutar obiteljskih odnosa / Functioning within family relationships	163	1,00	6,00	4,66	1,161
Rigidnost članova obiteljii / Rigidity of family members	163	1,00	6,00	3,77	1,183
Percipirana podrška obitelji / Perceived support from family	163	1,00	7,00	5,53	1,319
Percipirana podrška prijatelja / Perceived support from friends	163	1,00	7,00	5,32	1,488
KRITERIJI / CRITERIA					
Samopouzdanje i pozitivna očekivanja / Self-confidence and positive expectations	163	1,75	5,00	4,23	0,681
Upravljanje oporavkom i oslanjanje na druge osobe / Managing recovery and reliance on others	163	2,50	5,00	4,21	0,67
Orijentacija ka uspjehu i ciljevima / Orientation toward success and goals	163	1,75	5,00	4,27	0,685
Nadilaženje simptoma ovisnosti / Overcoming symptoms of addiction	163	1,00	5,00	4,06	0,839

Bilješka: Min = minimalna vrijednost; Maks = maksimalna vrijednost; M = aritmetička sredina; SD = standardna devijacija
/ Note: Min = minimum value; Max = maximum value; M = mean; SD = standard deviation

TABLICA 2. Korelacija prediktorskih i kriterijskih varijabli (N=163)
TABLE 2. Correlation of predictor and criterion variables (N = 163)

		Samopouzdanje i pozitivna očekivanja / Self-confidence and positive expectations	Upravljanje oporavkom i oslanjanje na druge osobe / Managing recovery and reliance on others	Orijentacija ka uspjehu i ciljevima / Orientation toward success and goals
Duljina dolaska na sastanke klubova liječenih alkoholičara (u mjesecima) / Length of attendance at Clubs of Treated Alcoholics meetings (in months)	r	,009	,156*	,035
	p	,913	,047	,658
Čestina dolaska na sastanke KLA (1-jednom tjedno, 4-jednom godišnje) / Frequency of attendance at CTA meetings (1 – once a week, 4 – once a year)	r	,083	-,002	-,031
	p	,297	,983	,694
Razina uključenosti u rad KLA / Level of involvement in CTA activities	r	,521**	,511**	,419**
	p	,000	,000	,000
Povjerenje i razumijevanje s terapeutom / Trust and understanding with the therapist	r	,477**	,378**	,245**
	p	,000	,000	,002
Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana / Shared focus of client and therapist on treatment goals	r	,459**	,361**	,344**
	p	,000	,000	,000
Privrženost korisnika drugim članovima obitelji / Client's attachment to other family members	r	,443**	,524**	,485**
	p	,000	,000	,000
Neusklađenost u odnosima unutar obitelji / Discord in family relationships	r	-,087	-,014	,025
	p	,269	,864	,750
Funkcionalnost unutar obiteljskih odnosa / Functioning within family relationships	r	,428**	,453**	,417**
	p	,000	,000	,000
Rigidnost članova obiteljii / Rigidity of family members	r	,147	,170*	,270**
	p	,061	,030	,000
Percipirana podrška obitelji / Perceived support from family	r	,477**	,534**	,455**
	p	,000	,000	,000
Percipirana podrška prijatelja / Perceived support from friends	r	,402**	,537**	,408**
	p	,000	,000	,000

Bilješka: r= Pearsonov koeficijent korelacije, **p < 0,001
/ Note: r = Pearson correlation coefficient, **p < 0,001

ocijenjena funkcionalnost unutar obiteljskih odnosa (M = 4,66), potom Privrženost (M = 4,39), dok su niže procjene na dimenziji rigidnosti (M = 3,77) i neusklađenosti (M = 3,46).

Što se tiče dimenzija oporavka kao kriterijskih varijabli, i ovdje su procjene pomaknute prema višim vrijednostima. Ispitanici najvišim procjenjuju orijentaciju k uspjehu i ciljevima (M = 4,27), potom samopouzdanje i pozitivna očekivanja (M = 4,23), upravljanje oporavkom (M = 4,21), a nešto niže procjenjuju da su prevladali simptome ovisnosti (M = 4,06).

family relationships was rated highest (M = 4,66), followed by Attachment (M = 4,39), while assessments are lower on the dimensions of rigidity (M = 3,77) and discord (M = 3,46).

As for the dimensions of recovery as criterion variables, here too the assessments are shifted toward higher values. Participants rate orientation toward success and goals highest (M = 4,27), followed by self-confidence and positive expectations (M = 4,23) and managing recovery (M = 4,21), while they rate having overcome the symptoms of addiction somewhat lower (M = 4,06).

S obzirom da varijable Čestina dolaska na sastanke KLA i dimenzija obiteljskog funkcioniranja Neusklađenost u odnosima unutar obitelji ne koreliraju značajno ni s jednim kriterijem, izostavljene su iz daljnjih analiza. Varijabla Duljina dolaska na sastanke KLA (u mjesecima) zadržana je u modelu samo za kriterij Upravljanje oporavkom i oslanjanje na druge osobe.

Rezultati hijerarhijske regresijske analize

Varijable su uvedene u blokovima koji se odnose redom na *odnos članova prema grupi* (Razina uključenosti u rad KLA te u jednom kriteriju Duljina dolaska na sastanke KLA), *odnos sa stručnim djelatnikom* (Povjerenje i razumijevanje s terapeutom, Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana), *bliski odnosi u okruženju* koji uključuju obiteljsko funkcioniranje (Privrženost korisnika drugim članovima obitelji, Funkcionalnost unutar obiteljskih odnosa, Rigidnost članova obiteljii) i *socijalnu podršku* (Percipirana podrška obitelji, Percipirana podrška prijatelja).

U prvoj analizi kriterijska varijabla bila je Samopouzdanje i pozitivna očekivanja (tablica 3).

Odabranim modelom objašnjeno je 42 % kriterijske varijable Samopouzdanje i pozitivna očekivanja pri čemu je svaki blok varijabli značajno doprinio objašnjenju kriterijske varijable. Od pojedinačnih prediktora u posljednjem koraku značajnim se pokazao jedino prediktor razine uključenosti u rad KLA ((β) = 0,299).

U drugoj analizi kriterijska varijabla bila je Upravljanje oporavkom i oslanjanje na druge osobe (tablica 4).

Uvođenjem sva tri bloka varijabli objašnjeno je ukupno 47 % varijance kriterija Upravljanje oporavkom i oslanjanje na druge osobe. Sva tri bloka varijabli su značajno doprinijeli objašnjenju kriterijske varijable. Što se tiče pojedinačnih prediktora, nekoliko ih se u posljed-

Since the variable Frequency of attendance at CTA meetings and the family functioning dimension Discord in family relationships do not correlate significantly with any of the criteria, they were omitted from further analyses. The variable Length of attendance at CTA meetings (in months) was retained in the model only for the criterion Managing recovery and reliance on others.

Results of the Hierarchical Regression Analysis

The variables were entered in blocks relating, in order, to *members' relationship to the group* (Level of involvement in CTA activities and, for one criterion, Length of attendance at CTA meetings), *the relationship with the professional* (Trust and understanding with the therapist, Shared focus of client and therapist on treatment goals), and *close relationships in the person's environment*, comprising family functioning (Client's attachment to other family members, Functioning within family relationships, Rigidity of family members) and *social support* (Perceived support from family, Perceived support from friends).

In the first analysis, the criterion variable was Self-confidence and positive expectations (Table 3).

The selected model explained 42 % of the criterion variable Self-confidence and positive expectations, with each block of variables contributing significantly to the explanation of the criterion variable. Among the individual predictors in the final step, only the predictor level of involvement in CTA activities proved significant ((β) = 0,299).

In the second analysis, the criterion variable was Managing recovery and reliance on others (Table 4).

The introduction of all three blocks of variables explained a total of 47 % of the variance of the criterion Managing recovery and reliance on others. All three blocks of variables contributed significantly to the explanation of the criterion variable. Regarding the individual predictors, several

TABLICA 3. Rezultati hijerarhijske regresijske analize za kriterij Samopouzdanje i pozitivna očekivanja
TABLE 3. Results of the hierarchical regression analysis for the criterion Self-confidence and positive expectations

Model		β	(β).
1	(Konstanta) / (Constant)	2,161	
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,480	,521***
	R=0,521; R^2 = 0,271; R^2corr = 0,267, ΔR=0,271, p=0,000		
2	(Konstanta) / (Constant)	,968	
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,347	,377***
	Povjerenje i razumijevanje s terapeutom / Trust and understanding with the therapist	,156	,176*
	Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana / Shared focus of client and therapist on treatment goals	,187	,223**
	R=0,619; R^2 = 0,383; R^2corr = 0,371, ΔR=0,111, p=0,000		
3	(Konstanta) / (Constant)	,714	
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,276	,299***
	Povjerenje i razumijevanje s terapeutom / Trust and understanding with the therapist	,122	,138
	Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana / Shared focus of client and therapist on treatment goals	,125	,148
	Privrženost korisnika drugim članovima obitelji / Client's attachment to other family members	,064	,101
	Funkcionalnost unutar obiteljskih odnosa / Functioning within family relationships	,024	,042
	Rigidnost članova obiteljii / Rigidity of family members	,028	,048
	Percipirana podrška obitelji / Perceived support from family	,082	,158
	Percipirana podrška prijatelja / Perceived support from friends	,020	,044
	R=0,673; R^2 = 0,452; R^2corr = 0,424, ΔR=0,070, p=0,002		

Bilješka / Note: *p < 0,05, **p < 0,01, ***p < 0,001 β – β-koeficijent, (β) – β-koeficijent u završnom koraku / β – β-coefficient, (β) – β-coefficient in the final step

njem bloku pokazalo statistički značajnima u objašnjenju kriterijske varijable. To su Razina uključenosti u rad KLA ((β) = 0,294), Privrženost korisnika drugim članovima obitelji ((β) = 0,196) i Percipirana podrška prijatelja ((β) = 0,250).

Treća kriterijska varijabla kao dimenzija procjene oporavka je Orijentacija k uspjehu i ciljevima (tablica 5).

Uvedena tri bloka prediktorskih varijabli u posljednjem koraku objašnjavaju 36 % varijance kriterija Orijentacija k uspjehu i ciljevima te su sva tri bloka statistički značajno doprinijela objašnjenju kriterijske varijable. U posljednjem koraku prediktori koji statistički značajno objašnjavaju kriterijsku varijablu su Razina uključenosti u rad KLA ((β) = 0,249), Privrže-

proved statistically significant in the final block in explaining the criterion variable. These are Level of involvement in CTA activities ((β) = 0,294), Client's attachment to other family members ((β) = 0,196), and Perceived support from friends ((β) = 0,250).

The third criterion variable, as a dimension of recovery assessment, is Orientation toward success and goals (Table 5).

The three blocks of predictor variables entered in the final step explain 36 % of the variance of the criterion Orientation toward success and goals, and all three blocks contributed statistically significantly to the explanation of the criterion variable. In the final step, the predictors that statistically significantly explain the criterion variable are Level of involvement in CTA activities ((β) = 0,249), Client's attachment to other family mem-

TABLICA 4. Rezultati hijerarhijske regresijske analize za kriterij Upravljanje oporavkom i oslanjanje na druge osobe
TABLE 4. Results of the hierarchical regression analysis for the criterion Managing recovery and reliance on others

Model		β	(β).
1	(Konstanta) / (Constant)	2,218	
	Duljina dolaska na sastanke Klubova liječenih alkoholičara / Length of attendance at Clubs of Treated Alcoholics meetings	,001	,062
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,453	,499***
	R=0,515; R^2 = 0,265; R^2corr = 0,256, ΔR=0,265, p=0,000		
2	(Konstanta) / (Constant)	1,453	
	Duljina dolaska na sastanke Klubova liječenih alkoholičara / Length of attendance at Clubs of Treated Alcoholics meetings	,001	,072
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,369	,406***
	Povjerenje i razumijevanje s terapeutom / Trust and understanding with the therapist	,072	,082
	Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana / Shared focus of client and therapist on treatment goals	,148	,179
	R=0,561; R^2 = 0,314; R^2corr = 0,297, ΔR=0,050, p=0,004		
3	(Konstanta) / (Constant)	1,088	
	Duljina dolaska na sastanke Klubova liječenih alkoholičara / Length of attendance at Clubs of Treated Alcoholics meetings	,001	,069
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,267	,294***
	Povjerenje i razumijevanje s terapeutom / Trust and understanding with the therapist	,015	,018
	Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana / Shared focus of client and therapist on treatment goals	,057	,069
	Privrženost korisnika drugim članovima obitelji / Client's attachment to other family members	,122	,196*
	Funkcionalnost unutar obiteljskih odnosa / Functioning within family relationships	,000	,000
	Rigidnost članova obiteljii / Rigidity of family members	,033	,058
	Percipirana podrška obitelji / Perceived support from family	,055	,108
	Percipirana podrška prijatelja / Perceived support from friends	,113	,250**
	R=0,705; R^2 = 0,496; R^2corr = 0,467, ΔR=0,182, p=0,000		

Bilješka / Note: *p < 0,05, **p < 0,01, ***p < 0,001 β – β-koeficijent, (β) – β-koeficijent u završnom koraku / β – β-coefficient, (β) – β-coefficient in the final step

nost korisnika drugim članovima obitelji ((β) = 0,213) i Rigidnost članova obitelji ((β) = 0,145).

Posljednja dimenzija procjene oporavka koja je korištena kao kriterijska varijabla je Nadilaženje simptoma ovisnosti (tablica 6).

Sva tri bloka varijabli objašnjavaju tek 25 % varijance kriterija nadilaženje simptoma ovisnosti pri čemu su sva tri bloka svojim uvođenjem statistički značajno doprinijela objašnjenju kriterijske varijable. U posljednjem bloku samo prediktor Razina uključenosti u rad KLA ((β) = 0,260) pojedinačno statistički značajno doprinosi objašnjenju kriterijske varijable.

bers ((β) = 0,213), and Rigidity of family members ((β) = 0,145).

The last dimension of recovery assessment used as a criterion variable is Overcoming symptoms of addiction (Table 6).

All three blocks of variables explain only 25 % of the variance of the criterion overcoming symptoms of addiction, with all three blocks, through their introduction, contributing statistically significantly to the explanation of the criterion variable. In the final block, only the predictor Level of involvement in CTA activities ((β) = 0,260) individually contributes statistically significantly to the explanation of the criterion variable.

TABLICA 5. Rezultati hijerarhijske regresijske analize za kriterij Orijentacija k uspjehu i ciljevima
TABLE 5. Results of the hierarchical regression analysis for the criterion Orientation toward success and goals

Model		β	(β).
1	(Konstanta) / (Constant)	2,601	
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,388	,419***
	R=0,419; R^2 = 0,175; R^2corr = 0,170, ΔR=0,175, p=0,000		
2	(Konstanta) / (Constant)	2,036	
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,338	,365***
	Povjerenje i razumijevanje s terapeutom / Trust and understanding with the therapist	-,083	-,093
	Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana / Shared focus of client and therapist on treatment goals	,243	,288**
	R=0,478; R^2 = 0,229; R^2corr = 0,214, ΔR=0,054, p=0,005		
3	(Konstanta) / (Constant)	1,540	
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,231	,249**
	Povjerenje i razumijevanje s terapeutom / Trust and understanding with the therapist	-,115	-,129
	Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana / Shared focus of client and therapist on treatment goals	,145	,171
	Privrženost korisnika drugim članovima obitelji / Client's attachment to other family members	,136	,213*
	Funkcionalnost unutar obiteljskih odnosa / Functioning within family relationships	,006	,010
	Rigidnost članova obiteljii / Rigidity of family members	,084	,145*
	Percipirana podrška obitelji / Perceived support from family	,079	,153
	Percipirana podrška prijatelja / Perceived support from friends	,045	,098
	R=0,623; R^2 = 0,388; R^2corr = 0,356, ΔR=0,159, p=0,000		

Bilješka / Note: *p < 0,05, **p < 0,01, ***p < 0,001 β – β-koeficijent, (β) – β-koeficijent u završnom koraku / β – β-coefficient, (β) – β-coefficient in the final step

RASPRAVA

Provedeno istraživanje u najvećoj mjeri podupire holistički pristup doprinosa individualnih, obiteljskih, socijalnih i grupnih čimbenika na procjenu osobnog oporavka kod osoba oboljelih od ovisnosti o alkoholu. Tako se uvođenjem svakog prediktorskog bloka statistički značajno unaprijedilo objašnjenje varijance kriterija dimenzija osobnog oporavka. Najviše je varijance kriterija objašnjeno za dimenzije Upravljanje oporavkom i oslanjanje na druge osobe (47 % i Samopouzdanje i pozitivna očekivanja (42 %). Manje je varijance objašnjeno za one dimenzije oporavka koje se tiču ostvarenja konkretnih ciljeva tretmana, a to su Orijentacija k uspjehu i ciljevima (35 %) i Nadilaženje simptoma ovisnosti (svega 25 %).

Od individualnih čimbenika dosljedno se značajnom pokazuje varijabla Razina uključenosti

DISCUSSION

The study conducted largely supports a holistic approach to the contribution of individual, family, social, and group factors to the assessment of personal recovery among persons suffering from alcohol addiction. The introduction of each predictor block thus significantly improved the explanation of the criterion variance for the dimensions of personal recovery. The greatest proportion of criterion variance was explained for the dimensions Managing recovery and reliance on others (47 %) and Self-confidence and positive expectations (42 %). Less variance was explained for those dimensions of recovery that concern the achievement of concrete treatment goals, namely Orientation toward success and goals (35 %) and Overcoming symptoms of addiction (only 25 %).

Among the individual factors, the variable Level of involvement in CTA activities emerges as con-

TABLICA 6. Rezultati hijerarhijske regresijske analize za kriterij Nadilaženje simptoma ovisnosti
TABLE 6. Results of the hierarchical regression analysis for the criterion Overcoming symptoms of addiction

Model		β	(β).
1	(Konstanta) / (Constant)	2,071	
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,461	,406***
	R=0,406; R^2 = 0,165; R^2corr = 0,160, ΔR=0,165, p=0,000		
2	(Konstanta) / (Constant)	1,376	
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,394	,347***
	Povjerenje i razumijevanje s terapeutom / Trust and understanding with the therapist	-,035	-,032
	Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana / Shared focus of client and therapist on treatment goals	,233	,225*
	R=0,451; R^2 = 0,204; R^2corr = 0,189, ΔR=0,039, p=0,023		
3	(Konstanta) / (Constant)	,938	
	Razina uključenosti u rad KLA / Level of involvement in CTA activities	,296	,260**
	Povjerenje i razumijevanje s terapeutom / Trust and understanding with the therapist	-,055	-,051
	Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana / Shared focus of client and therapist on treatment goals	,125	,121
	Privrženost korisnika drugim članovima obitelji / Client's attachment to other family members	,023	,030
	Funkcionalnost unutar obiteljskih odnosa / Functioning within family relationships	,065	,090
	Rigidnost članova obiteljii / Rigidity of family members	,085	,119
	Percipirana podrška obitelji / Perceived support from family	,084	,131
	Percipirana podrška prijatelja / Perceived support from friends	,062	,109
	R=0,538; R^2 = 0,290; R^2corr = 0,253, ΔR=0,086, p=0,003		

Bilješka / Note: *p < 0,05, **p < 0,01, ***p < 0,001 β – β-koeficijent, (β) – β-koeficijent u završnom koraku / β – β-coefficient, (β) – β-coefficient in the final step

u rad KLA za objašnjenje svih dimenzija oporavka. Uvođenjem bloka varijabli koje se odnose na odnos sa stručnjakom u KLA značajno se doprinijelo objašnjenju varijance kriterija za sve četiri dimenzije oporavka. Za objašnjenje pojedinih dimenzija oporavka (Samopouzdanje i pozitivna očekivanja, Orijentacija k uspjehu i ciljevima, Nadilaženje simptoma ovisnosti) je u drugom koraku analize bio značajan prediktor Zajednička usmjerenost korisnika s terapeutom na ciljeve tretmana što je važno za razumijevanje spremnosti na promjenu (11). Ipak, u posljednjem koraku niti jedna od dimenzija odnosa sa stručnjakom nije ostala pojedinačno značajni prediktor procjene oporavka. Značajnim su se pokazali odnosi s obitelji i socijalna podrška za objašnjenje dviju dimenzija oporavka. Za objašnjenje dimenzije Upravljanje oporavkom i oslanjanje na druge osobe značajni su

sistently significant in explaining all the dimensions of recovery. The introduction of the block of variables relating to the relationship with the professional in CTA contributed significantly to the explanation of the criterion variance for all four dimensions of recovery. For the explanation of particular dimensions of recovery (Self-confidence and positive expectations, Orientation toward success and goals, Overcoming symptoms of addiction), Shared focus of client and therapist on treatment goals was a significant predictor in the second step of the analysis, which is important for understanding readiness to change (11). In the final step, however, none of the dimensions of the relationship with the professional remained an individually significant predictor of recovery assessment. Family relationships and social support proved significant in explaining two dimensions of recovery. For the explanation of the dimension Managing recovery and reliance on

prediktori Privrženost korisnika drugim članovima obitelji i Percipirana podrška prijatelja. Za dimenziju Orijentacija ka uspjehu i ciljevima značajni prediktori su Privrženost korisnika drugim članovima obitelji i zanimljivo Rigidnost članova obitelji koja je u ovom slučaju zaštitni čimbenik koji je relevantan za ustrajnost u postavljenim apstinencijskim ciljevima i ciljevima oporavka.

Obje hipoteze su djelomično potvrđene gdje je potvrđen ukupni doprinos modela objašnjenju dimenzija oporavka te pojedinačni doprinos više razine uključenosti u KLA i nekih dimenzija obiteljskog funkcioniranja za objašnjenje dimenzija oporavka. Suprotno očekivanjima, nije se potvrdio pojedinačni doprinos odnosa sa stručnjakom kao statistički značajnog za objašnjenje dimenzija oporavka.

Rezultati provedenog istraživanja ukazuju u prilog djelovanju KLA u Bosni i Hercegovini s obzirom da su ispitanici visoko procijenili sve dimenzije osobnog oporavka. To je u skladu s istraživanjima koja ukazuju na pozitivne učinke KLA i u Republici Hrvatskoj (29-32,44). Rezultati istraživanja podupiru višedimenzionalni pristup liječenju na kojemu se temelji model KLA (2,33,45).

Razina osobne uključenosti se pokazala višestruko važnom, a pokazatelj je individualne spremnosti na angažman ili bihevioralni pokazatelj motiviranosti i discipline koja je važna u radu KLA (14). U budućim istraživanjem valjalo bi podrobnije operacionalizirati spremnost na promjenu te ispitati učinke pozitivno ili negativno uvjetovane motivacije za promjenom (8-10,12,13).

U ovom istraživanju se nije potvrdilo očekivano značenje stručnog djelatnika u onoj mjeri u kojoj je to potvrđeno na uzorku članova KLA u Republici Hrvatskoj (46). Moguće je da navedene razlike proizlaze iz različitog ustrojstva i brojnosti članova KLA u BIH u odnosu na Hrvatsku. U budućim bi istraživanjima

others, the significant predictors are Client's attachment to other family members and Perceived support from friends. For the dimension Orientation toward success and goals, the significant predictors are Client's attachment to other family members and, interestingly, Rigidity of family members, which in this case is a protective factor relevant to persistence in the abstinence and recovery goals that have been set.

Both hypotheses were partially confirmed, in that the overall contribution of the model to the explanation of the dimensions of recovery was confirmed, as was the individual contribution of a higher level of involvement in CTA and some dimensions of family functioning to the explanation of the dimensions of recovery. Contrary to expectations, the individual contribution of the relationship with the professional as statistically significant for the explanation of the dimensions of recovery was not confirmed.

The results of the study conducted speak in favor of the work of CTA in Bosnia and Herzegovina, given that participants rated all the dimensions of personal recovery highly. This is consistent with studies pointing to the positive effects of CTA in the Republic of Croatia as well (29-32,44). The results of the study support the multidimensional approach to treatment on which the CTA model is based (2,33,45).

The level of personal involvement proved important in several respects and is an indicator of individual readiness to engage or a behavioral indicator of the motivation and discipline that are important in the work of CTA (14). In future research, readiness to change should be operationalized in more detail, and the effects of positively or negatively conditioned motivation for change should be examined (8-10,12,13).

In this study, the significance of the professional was not confirmed to the extent to which it was confirmed in a sample of CTA members in the Republic of Croatia (46), contrary to expectation. It is possible that these differences arise from the different structure and size of CTA membership in Bosnia and Herzegovina compared with

trebalo posebnu pozornost obratiti ispitivanju učinaka grupe što uključuje istraživanje odnosa sa stručnjakom, ali i odnose s drugim članovima.

Obiteljski čimbenici su značajni za objašnjenje dvije od četiri dimenzije oporavka pri čemu je osim očekivano pozitivnih (funkcionalnost i podrška), značajnim za jednu dimenziju i rigidnost u obitelji. Brojni autori naglašavaju ulogu obitelji za uspješno liječenje (5,47) no nije sasvim jasno koji su obiteljski mehanizmi ključni u toj podršci. Prema obiteljskoj sistemskoj terapiji kod obitelji koje su pogođene ovisnosti o alkoholu važno je reducirati razinu tjeskobe u obitelji, ali i promovirati emocionalnu diferencijaciju kod svih članova obitelji (48). Kako je riječ o naoko suprotstavljenim tendencijama zbližavanja i odvajanja, možda je upravo rješenje u kombinaciji podrške i rigidnosti u smislu držanja obiteljskih pravila da se ustraje u ciljevima liječenja. Potrebno je u budućnosti provesti daljnja istraživanja o utvrđivanju specifičnih mehanizama koji doprinose cjelovitom oporavku osoba oboljelih od ovisnosti o alkoholu.

Provedeno istraživanje prva je cjelovita evaluacija sustava KLA u Bosni i Hercegovini iz perspektive procjene dimenzije oporavka. U istraživanju su korišteni standardizirani instrumenti, od kojih neki po prvi puta u Bosni i Hercegovini što daje dobru osnovu za doradu instrumentarija i daljnje korištenje sa ovom populacijom. U istraživanju je ostvaren neposredan kontakt i podrška ispitanicima od istraživača koji su i iskusni praktičari, a jedna od jakosti istraživanja jest da je ono uopće provedeno u KLA koji su vrlo rijetko imali iskustvo provedbe istraživanja.

Od ograničenja istraživanja valja istaknuti da je vrijeme provedbe tijekom službenog trajanja pandemije COVID-a 19 koja je dovela do drugačije dinamike rada KLA, možebitno i do samo-selekcije uzorka na najustrajnije i zdravstveno najmanje ugrožene članove, ali i

Croatia. In future research, particular attention should be paid to examining the effects of the group, which includes research on the relationship with the professional, but also relationships with other members.

Family factors are significant for the explanation of two of the four dimensions of recovery, and besides the expectedly positive ones (functioning and support), rigidity in the family is also significant for one dimension. Numerous authors emphasize the role of the family in successful treatment (5,47), but it is not entirely clear which family mechanisms are crucial in that support. According to family systems therapy, in families affected by alcohol addiction, it is important to reduce the level of anxiety in the family, but also to promote emotional differentiation in all family members (48). Since these are seemingly opposed tendencies of drawing closer and separating, the solution may lie precisely in a combination of support and rigidity, in the sense of holding to family rules so that the goals of treatment are persisted in. Further research is needed in the future to determine the specific mechanisms that contribute to the comprehensive recovery of persons suffering from alcohol addiction.

The study conducted is the first comprehensive evaluation of the CTA system in Bosnia and Herzegovina from the perspective of the assessment of the dimension of recovery. Standardized instruments were used in the study, some of which were used for the first time in Bosnia and Herzegovina, providing a good basis for refining the instruments and for their further use with this population. Direct contact with and support for the participants was established in the study by researchers who are also experienced practitioners. One of the strengths of the study is that it was carried out in CTA, which have rarely had experience of research being conducted in them.

Among the limitations of the study, it should be noted that the period of implementation fell within the official duration of the COVID-19 pandemic, which led to different dynamics in the work of CTA, possibly also to self-selection of the sample toward

do postojanja drugih stresora u njihovom životu. Uzorak je prigodni jer su nacionalne evidencije o radu KLA nepotpune pa mnogi KLA ne rade redovito, nisu dostupni ili su zbog protupandemijskih mjera bili teže dostupni. Ograničenje istraživanja leži u kvantitativnom načinu prikupljanja podataka s opsežnim instrumentarijem koji je mogao utjecati na motivaciju ili na razumijevanje ispitanika. No zbog važnosti KLA u ukupnom tretmanu kod ovisnosti kao i potrebe za znanstveno utemeljenim spoznajama o učinkovitosti rada KLA, važno je u budućnosti poticati istraživanja, kombinirati istraživačke pristupe i razviti protokole za longitudinalna i evaluacijska istraživanja.

ZAKLJUČCI

Ovaj rad proizašao je iz šireg istraživanja o doprinosu KLA u Bosni i Hercegovini kojemu je cilj bio utvrditi razinu procjene oporavka te doprinos različitih individualnih, obiteljskih, socijalnih i grupnih čimbenika na procjenu oporavka. Doprinos rada je u znanstvenim spoznajama koje podupiru holistički pristup (kombinirani učinak vlastitog angažmana, stručnog rada, grupnog efekta i podrške obitelji) u poslijebolničkom tretmanu. Najkonzistentniji je doprinos osobne uključenosti, a doprinos stručnjaka, grupe i obiteljskih mehanizama zahtijevaju daljnje analize. U budućnosti je potrebno poticati daljnja istraživanja koristeći komparativne, longitudinalne, evaluacijske i mješovite istraživačke pristupe radi unaprjeđenja i održivosti KLA kao etabliranog i vrijednog pristupa psihosocijalnom tretmanu ovisnosti o alkoholu.

Potrebna su daljnja istraživanja bilo nacionalnog i komparativnog karaktera da se podrobnije istraže obiteljski mehanizmi koji doprinose oporavku kao i učinak grupe ili stručnog rada te kako bi se ukupno nadograđivao model KLA.

the most persistent members and those least at risk in terms of health, and also to the presence of other stressors in their lives. The sample is a convenience sample, since national records of the work of CTA are incomplete, so that many CTA do not operate regularly, are not accessible, or were less accessible because of antipandemic measures. A limitation of the study lies in the quantitative manner of data collection with an extensive set of instruments, which may have affected participants' motivation or understanding. However, given the importance of CTA in the overall treatment of addiction, as well as the need for scientifically grounded knowledge about the effectiveness of the work of CTA, it is important in the future to encourage research, combine research approaches, and develop protocols for longitudinal and evaluation studies.

CONCLUSIONS

This paper arose from a broader study of the contribution of CTA in Bosnia and Herzegovina, which aimed to determine the level of recovery assessment and the contribution of various individual, family, social, and group factors to recovery assessment. The contribution of the paper lies in scientific knowledge supporting a holistic approach (the combined effect of the person's own engagement, professional work, the group effect, and family support) in posthospital treatment. The most consistent contribution is that of personal involvement, while the contribution of professional, group, and family mechanisms requires further analysis. In the future, it is necessary to encourage further research using comparative, longitudinal, evaluation, and mixed research approaches, in order to improve and sustain CTA as an established and valuable approach to the psychosocial treatment of alcohol addiction.

Further research of both a national and comparative character is needed, in order to examine in more detail the family mechanisms that contribute to recovery, as well as the effect of the group or professional work, and to build on the CTA model as a whole.

LITERATURA / *REFERENCES*

1. Hudolin V, Hudolin V. Obiteljsko liječenje. Zagreb: Školska knjiga, 1986.
2. Hudolin V. Alkohološki priručnik. Zagreb: Medicinska naklada, 1991.
3. Karlović D. Socijalna/ekološka psihijatrija i organizacija psihijatrijske službe. U: Karlović D. Psihijatrija. Zagreb: Naklada slap: Zagreb, 2019, 354-64.
4. Matošić A, Marušić S, Vidrih B, Kovak-Mufić A, Čičin-Šain L. Neurobiološke osnove ovisnosti o alkoholu. Acta Clin Croat 2016; 55(1), 150-150. https://doi.org/10.20471/acc.2016.55.01.19
5. Pintarić S. Terapija alkoholičara – u izvanbolničkim uvjetima. U: Golik Gruber V (ur.) Zbornik stručnih radova alkohološkog glasnika. Zagreb: Hrvatski savez klubova liječenih alkoholičara, 2003.
6. Turner B, Deane FP. Length of stay as a predictor of reliable change in psychological recovery and well being following residential substance abuse treatment. Ther Communities 2016;37(3): 112–20.DOI:10.1108/TC-09-2015-0022
7. Gavrilov-Jerković V. Profil spremnosti klijenta za promjenu i preferencija tipičnih proces promjene. Psihologija 2004; 7(1):89-108.
8. Rafferty AE, Jimmieson NL, Armenakis AA. Change Readiness: A Multilevel Review. J Manag 2013;39(1):110-35. https://doi.org/10.1177/0149206312457417.
9. McMahon J, Jones BT. Social drinkers' negative alcohol expectancy relates to their satisfaction with current consumption: measuring motivation for change with the NAEQ. Alcohol Alcohol 1994;29(6): 687–60.https://doi.org/10.1093/oxfordjournals.alcalc.a045604.
10. Miller WR, Rollnick S. Motivational interviewing: Preparing people for change. New York: The Guilford Press, 2002.
11. Connors GJ, Di Clemente CC, Marden Velasquez M, Donovan, DD. Substance Abuse treatment and the stages of change. Selecting and Planning Interventions. London: The Guilford Press, 2013.
12. Bagarić A, Bagarić M, Paštar Z. Obrambeni mehanizmi ovisnika. Soc Psihijat 2018;46(2): 142-60.
13. Schalast N. Suchtgkranke Rechtsbrecher. In: Kröber HL, Dölling D, Leygraf N, Sass H. (ed.) Handbuch der Forensischen Psychiatrie Band 3. Psychiatrische Kriminalprognose und Kriminalthera. Darmstadt: Steinkopff, 2006, 326-349.
14. Monti PM, Kadden RM, Rohsenow DJ, Cooney NL, Abrams DB. Treating alcohol dependence: A coping skills training guide. New York: Guilford Press, 2002.
15. Dragišić-Labaš S. Application of Dyadic Adjustment Scale in the Systemic Family Therapy for Alcoholism. Social Sciences 20018;20(3), 293-312.
16. Galvin KM, Bylund, CL, Brommel B. Family Communication, Cohesion and Change. Upper Saddle River, New Jersey: Pearson Education, 2012.
17. Nastasić P. Porodica sa zavisnikom od alkohola: sistemski pristup. U: Đukić Dejanović S, Nastasić P (ur.) Bolesti zavisnosti. Savremena dostignuća u prevenciji, lečenju i rehabilitaciji. Beograd: Evropski centar za mir i razvoj (ECPD), Univerziteta za mir Ujedinjenih nacija, 2004, 108-31.
18. Minuchin P. Families and Individual Development: Provocations from the Field of Family Therapy. Child Dev 1985;56(2):289–302.https://doi.org/10.2307/1129720.
19. Vidanović I. Terapijski modeli socijalnog rada. Beograd: Fakultet političkih nauka, 2003.
20. Huremović V, Mahmutović S. Uloga i značaj Klubova liječenih alkoholičara u kontinuiranom održavanju apstinencije i postignutih rezultata oporavka od alkohola. DHS 2022;3(20):429-452. DOI 10.51558/2490-3647.2022.7.3.429.
21. Pennington DC. Osnove socijalne psihologije. Zagreb: Naklada Slap, 2004.
22. Gašević-Ratkajec G, Dodig-Hundrić D, Mihić J. Spremnost na promjenu ponašanja od individualne prema obiteljskoj paradigmi. Kriminol Soc Integr 2016;24(1):50-83.https://doi.org/10.31299/ksi.24.1.3.
23. Steinglass P, Bennett LA, Wolin SJ, Reiss D. The Alcoholic Family. New York: Basic Books, 1987.
24. Garrett J, Landau J. Family Motivation to Change. A major factor in engaging alcoholics in treatment. Alcohol Treat Q 2007 24(1/2):65-83. https://doi.org/10.1300/J020v25n01_05.
25. Ramić L. Udruženje KLA zajednica koja aktivno pomaže svojim članovima. Magazin Doktor. Glasilo Liječničke komore kantona Sarajevo, 2012.
26. Best D, Beckwith M, Haslam K, Haslam AS, Jetten J, Mawson E et al. Overcoming alcohol and other drug addiction as a process of social identity transition: the social identity model of recovery. Addict Res Theory 2016;24(2):111-23. https://doi.org/10.3109/16066359.2015.1075980.
27. Kovačić Petrović Z, Peraica T, Kozarić-Kovačić D. Dinamika srama u psihoterapiji osoba ovisnih o alkoholu . Soc Psihijat 2019; 47(4):497-524. https://doi.org/10.24869/spsih.2019.497.
28. Burton G, Kaplan HM. Group Counseling in Conflicted Marriages Where Alcoholism Is Present: Clients' Evaluation of Effectiveness. J Marriage Fam 1986;30(1):74–79.https://doi.org/10.2307/350224.
29. Bodor D. Usporedba psihosocijalnog funkcioniranja osoba koje se liječe zbog ovisnosti o kockanju i alkoholu. Doktorska disertacija. Zagreb: Sveučilište u Zagrebu, Stomatološki fakultet, 2018.
30. Brlek I, Berc G, Milić-Babić M. Primjena savjetovanja kao metode pomoći u klubovima liječenih alkoholičara iz perspektive socijalnih radnika. Soc Psihijat 2014;42(1), 62–70.
31. Maloić S. Udruga kao sudionik lokalne zajednice u prevladavanju društvenih problema – klub liječenih alkoholičara „Kašina-Centar". Kriminol Soc Integr 2007;15(1):55- 66.

32. Opačić A, Oreb T, Radat K. Obilježja klubova liječenih alkoholičara u Hrvatskoj. Soc Psihijat 2019;47(2):145-67.https://doi.org/10.24869/spsih.2019.145.
33. Zoričić Z, Ivančić I, Matošić A. Importance of the Club of Treated Alcoholics. Alcohol Psychiatry Res 2006;42(1):35-42.
34. Corrigan PW, Salzer M, Ralph RO, Sangster Y, Keck L. Examining the factor structure of the Recovery Assessment Scale. Schizophr Bull 2004;30(4):1035-1.https://doi.org/10.1093/oxfordjournals.schbul.a007118
35. Leslie A, Luborsky L. The Penn Helping Alliance Scales. In: Greenberg LS (ed.) The Psychotherapeutic Process. A Research Handbook. New York: The Guildford Press, 1986, 325-66.
36. Noller P. ICPS Family Functioning Scales. St Lucia: University of Queensland 1988. Preuzeto 15.10.2020. https://doi.org/10.1037/t26345-000.
37. Macgowan MR. The Group Engagement, Measure. J Groups Addict Recover 2006;1(2):33-52. https://doi.org/10.1300/J384v01n02_04.
38. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The multidimensional scale of perceived social support. J Pers Assess 1988;52(1): 30–41. https://doi.org/10.1207/s15327752jpa5201_2
39. Mahmutović S.Oporavak i pozitivno mentalno zdravlje osoba koje boluju od psihičke bolesti. Doktorskadisertacija. Sveučilište u Zagrebu, Pravnifakultet, 2023.
40. Mehmedinović S, Sitarević M, Sarajlić E, Krdžić Osmić S. Psychometric properties of the Multidimensional scale of perceived social support among persons with disabilities in Bosnia and Herzegovina. RER 2024;7(2). https://rer.ba/index.php/rer/article/view/212.
41. Salihović A, Pašalić A, Branković S, Ovčina A, Pindžo E, Smječanin E et al. The relationship between perceived social support and positive mental health among students at the University of Sarajevo - Faculty of Health Studies – A cross-sectional study. JHSCI 2025;15(3):119-24. https://www.jhsci.ba/ojs/index.php/jhsci/article/view/2864.
42. Mahmutović J, Duhović D, Salihović A, Branković S, Jaganjac A, Bojičić S. The importance of social support for elderly people. JHSCI 2024;14(1):39-43. https://www.jhsci.ba/ojs/index.php/jhsci/article/view/2531.
43. IBM Corp. IBM SPSS Statistics for Windows, Version 27.0 [computer software]. Armonk, NY: IBM Corp.; 2020.
44. Oreb T, Opačić A, Radat K. Characteristics and significance of professional–led support groups in the treatment of alcoholism. Alcohol Treat Q 2017;35(4):359-71. https://doi.org/10.1080/07347324.2017.1350541.
45. Zoričić Z. Ovisnosti-prevencija, liječenje i oporavak. Zagreb: Školska knjiga, 2018.
46. Oreb T, Opačić, A, Radat, K. Perspektive članova obitelji o djelovanju klubova liječenih alkoholičara. Ljetop Soc Rada 2018;25(1):131-57. https://doi.org/10.3935/ljsr.v25i1.168.
47. Nastasić P. Prevencija bolesti zavisnosti. Beograd: Institut za mentalno zdravlje, 2005.
48. Chan JG. An examination of family-involved approaches to alcoholism treatment. Fam J 2003;11(2):129-38. https://doi.org/10.1177/1066480702250149.

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Elektrostimulacijska terapija mozga u dječjoj i adolescentnoj psihijatriji: narativni pregled literature i hrvatska iskustva

/ Electrostimulation Therapy of the Brain in Child and Adolescent Psychiatry: A Narrative Literature Review and Croatian Experiences

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Elektrostimulacijska terapija mozga (ESTM), poznata i kao elektrokonvulzivna terapija (EKT), medicinski je postupak u kojem se električnom strujom inducira kontrolirani epileptički napadaj. U dječjoj i adolescentnoj psihijatriji primjenjuje se od 1940-ih godina. Iako su slučajevi primjene ESTM-a u djece opisivani u literaturi, danas su nedovoljno zastupljeni i često zanemareni, a sama primjena ostaje kontroverzna, osobito u pedijatrijskoj populaciji. Cilj ovoga narativnog preglednog rada je prikazati dostupnu literaturu o učinkovitosti i sigurnosti ESTM-a u djece i adolescenata, uz prikaz jednog slučaja. Pretraga baze PubMed provedena je u studenom 2025.godine za razdoblje od 2015. do 2025. godine. Uključeno je 16 istraživanja različitog dizajna koji su izvještavali o primjeni i učinkovitosti ESTM-a u pedijatrijskoj populaciji. Većina radova imala je opservacijski dizajn, uz jedan sustavni pregled i dva randomizirana kontrolirana ispitivanja, što je novost ovog pregleda. Rezultati dosljedno ukazuju na visoku učinkovitost i klinički pozitivan odgovor ESTM-a u liječenju poremećaja raspoloženja i katatonije, gdje se često postiže brzo i klinički značajno poboljšanje, osobito u hitnim stanjima. U psihotičnim poremećajima bilježe se umjerene, ali relevantne stope odgovora. Međutim, većina dostupnih istraživanja ima metodološka ograničenja, uključujući nedostatak randomiziranih i longitudinalnih istraživanja, što otežava procjenu dugoročnih ishoda. U Hrvatskoj se ESTM trenutačno primjenjuje samo u odraslih, dok se u maloljetnika ne provodi zbog čega je u ovom radu prikazan slučaj mlađe punoljetne osobe.

/ Electrostimulation therapy of the brain (ESTB), also known as electroconvulsive therapy (ECT), is a medical procedure in which a controlled epileptic seizure is induced by an electrical current, and it has been used in child and adolescent psychiatry since the 1940s. Although cases of ESTB use in children are present in the literature, they are currently underrepresented and often neglected, and its application remains controversial, particularly in the pediatric population.

Therefore, this narrative review aims to present the available literature on the efficacy and safety of ESTB in children and adolescents, along with a case report. A search of the PubMed database was conducted in November 2025 for the period from 2015 to 2025. Sixteen studies of various designs that reported on the use and efficacy of ESTB in the pediatric population were included. The majority of the studies had an observational design, with one systematic review and two randomized controlled trials, which represents a novelty of this review. The results consistently indicate high efficacy and a clinically positive response to ESTB in the treatment of mood disorders and catatonia, where rapid and clinically significant improvement is often achieved, particularly in emergency conditions. In psychotic disorders, moderate but relevant response rates are reported. However, most of the available studies have methodological limitations, including the lack of randomized and longitudinal research, which complicates the assessment of long-term outcomes. In Croatia, ESTB is currently applied only in adults and not performed in minors; therefore, this paper presents the case of a younger adult.

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UVOD

Uvodni aspekti

Elektrokonvulzivna terapija mozga medicinski je i psihijatrijski postupak u kojem se primjenom električne struje izaziva kontrolirani generalizirani epileptički napadaj; postupak se provodi pod općom anestezijom (1-4). U angloameričkoj literaturi ovaj se postupak najčešće označava terminom *electroconvulsive therapy* (ECT), odnosno elektrokonvulzivna terapija (EKT), što je i danas dominantan naziv u međunarodnim znanstvenim bazama podataka (3,5). Iako primjena EKT-a u djece i adolescenata nije nova i povijesno je dobro dokumentirana, čini se da su takvi prikazi u suvremenoj međunarodnoj literaturi relativno rijetki i nedovoljno zastupljeni, osobito u obliku sustavnih i metodološki snažnih istraživanja (6,7).

INTRODUCTION

Introductory Aspects

Electroconvulsive therapy of the brain is a medical and psychiatric procedure in which a controlled generalized epileptic seizure is induced by the application of electrical current; the procedure is performed under general anesthesia (1,2,3,4). In Anglo-American literature, this procedure is most commonly referred to as electroconvulsive therapy (ECT), which remains the dominant term in international scientific databases (3,5). Although the use of ECT in children and adolescents is not new and is historically well-documented, such reports appear to be relatively rare and insufficiently represented in contemporary international literature, particularly in the form of systematic and methodologically robust studies (6,7).

Povijesno gledano, elektrokonvulzivnu terapiju uveli su Ugo Cerletti i Lucio Bini 1938. godine kao metodu izazivanja konvulzija električnom strujom nakon čega se postupak postupno počeo primjenjivati i u pedijatrijskoj populaciji (1,4). U hrvatskom jeziku, slijedom suvremenih jezičnih preporuka i analogije s terminima poput elektrostimulacije srca ili mišića, prikladnijim se smatra naziv elektrostimulacijska terapija mozga (ESTM) koji jasnije opisuje mehanizam djelovanja ove terapijske metode (4,8). Sukladno tome u ovom se radu koristi naziv ESTM, dok su pri pretraživanju literature korišteni i termini EKT, u skladu s međunarodnom terminologijom.

Prva zabilježena primjena ESTM-a u djeteta datira iz 1941. godine u Bristolu kod trogodišnjeg pacijenta s terapijski rezistentnom epilepsijom. U narednim godinama zabilježena je šira primjena ove metode u djece i adolescenata uključujući radove Laurette Bender, koja je primijenila EKT u 98 djece mlađe od 12 godina, kao i istraživanja Heuyera i suradnika koji su 1943. godine opisali primjenu u 40 maloljetnika u Parizu uz dobru učinkovitost u melankoliji i djelomičnu u maniji, ali bez učinka u shizofreniji (5,9). Međutim, od 1960-ih godina, pojavom antipsihijatrijskog pokreta, razvojem psihofarmakoterapije i psihosocijalnih intervencija te povećanom sviješću o potencijalnim nuspojavama ESTM-a dolazi do značajnog smanjenja njezine primjene u djece i adolescenata (5,9,10). Navedeni povijesni čimbenici, zakonske restrikcije u pojedinim zemljama, etičke dileme, nedostatak edukacije te dvojbe o učinkovitosti i sigurnost dodatno su pridonijeli rijetkoj primjeni ESTM-a u pedijatrijskoj populaciji, što i danas ostaje kontroverzno pitanje (5,6,9,11,12). Prema dostupnim europskim podatcima, svega oko 2 od 1.000 pacijenata koji primaju ESTM mlađi su od 18 godina, dok je vjerojatnost primjene ove terapije u odraslih 20 do 200 puta veća nego u maloljetnika (11).

Unatoč rijetkoj kliničkoj primjeni dosadašnji su pregledni radovi ukazali na potencijalnu učinko-

Historically, electroconvulsive therapy was introduced by Ugo Cerletti and Lucio Bini in 1938 as a method of inducing convulsions using electrical current, after which the procedure gradually began to be applied in the pediatric population as well (1,4). In the Croatian language, following contemporary linguistic recommendations and by analogy with terms such as cardiac or muscle electrostimulation, the term electrostimulation therapy of the brain (ESTB) is considered more appropriate, as it more clearly describes the mechanism of action of this therapeutic method (4,8). Accordingly, this paper uses the term ESTB, while the term ECT was also used during the literature search, in accordance with international terminology.

The first recorded use of ESTB in a child dates back to 1941 in Bristol, in a three-year-old patient with treatment-resistant epilepsy. In the following years, a broader application of this method in children and adolescents was recorded, including the work of Lauretta Bender, who applied ECT in 98 children under 12 years of age, as well as research by Heuyer and collaborators, who in 1943 described its use in 40 minors in Paris, with good efficacy in melancholia and partial efficacy in mania, but without effect in schizophrenia (5,9). However, since the 1960s, with the emergence of the anti-psychiatry movement, the development of psychopharmacotherapy and psychosocial interventions, and increased awareness of the potential adverse effects of ESTB, a significant decline in its use in children and adolescents has occurred (5,9,10). These historical factors, legal restrictions in certain countries, ethical dilemmas, lack of education, and doubts regarding efficacy and safety have further contributed to the rare use of ESTB in the pediatric population, which remains a controversial issue to this day (5,6,9,11,12). According to available European data, only approximately 2 out of 1,000 patients receiving ESTB are younger than 18 years, while the likelihood of receiving this therapy in adults is 20 to 200 times higher than that in minors (11).

Despite its rare clinical application, previous review papers have indicated the potential efficacy

vitost ESTM-a u liječenju terapijski rezistentnih psihijatrijskih poremećaja u adolescenata. Međutim, jedan od najopsežnijih sustavnih pregleda objavljen je prije gotovo tri desetljeća i temeljio se ponajprije na prikazima slučajeva (5). Noviji pregledni radovi potvrdili su učinkovitost ESTM-a u liječenju terapijski rezistentnih psihijatrijskih poremećaja u adolescenata, no istodobno su naglasili da se postojeća baza dokaza pretežito temelji na serijama slučajeva i opservacijskim studijama. Autori ističu manjak visokokvalitetnih dokaza, osobito randomiziranih kontroliranih istraživanja te studija s objektivnim mjerama ishoda i dugoročnim praćenjem (6,12,13). Noviji pregled o primjeni ESTM-a u europskim zemljama ukazao je na rijetku primjenu ESTM-a i znatne razlike u kliničkoj praksi među europskim zemljama (11). S obzirom na nedostatak suvremenih sustavnih pregleda, trajne kontroverze vezane uz primjenu ESTM-a kod djece i adolescenata te općenito ograničene terapijske mogućnosti u liječenju terapijski rezistentnih psihijatrijskih poremećaja u djece i adolescenata, postoji jasna potreba za ažuriranim i metodološki utemeljenim pregledom dostupne literature. Stoga ovaj narativni pregled donosi sustavan prikaz istraživanja objavljenih tijekom posljednjih deset godina s naglaskom na učinkovitost i profil nuspojava ESTM-a u djece i adolescenata.

Mehanizam djelovanja ESTM-a i učinci – prethodna znanstvena saznanja

Iako su opisani brojni mehanizmi djelovanja ESTM-a na mozak, još uvijek nije jasno koji od njih izravno uzrokuje terapijski učinak, a koji su tek popratni fenomeni. Usprkos tome, klinički je uočen pretežno povoljan terapijski učinak. Nekoliko teorija nastoji objasniti mehanizam djelovanja ESTM-a. Jedna teorija je djelovanje na neurotransmitore serotonin, noradrenalin, dopamin, glutamat i gama-aminomaslačna kiselina (GABA). ESTM djeluje na serotoninski sustav modulirajući aktivnost njegovih receptora,

of ESTB in the treatment of treatment-resistant psychiatric disorders in adolescents. However, one of the most comprehensive systematic reviews was published almost three decades ago and was primarily based on case reports (5). More recent review papers have confirmed the efficacy of ESTB in the treatment of treatment-resistant psychiatric disorders in adolescents, but at the same time have emphasized that the existing evidence base is predominantly based on case series and observational studies. The authors highlight the lack of high-quality evidence, particularly randomized controlled trials and studies with objective outcome measures and long-term follow-up (6,12,13). A recent review of the use of ESTB in European countries indicated its rare application and considerable differences in clinical practice among European countries (11). Given the lack of contemporary systematic reviews, the ongoing controversies related to the use of ESTB in children and adolescents, and the generally limited therapeutic options for the treatment of treatment-resistant psychiatric disorders in children and adolescents, there is a clear need for an updated and methodologically grounded review of the available literature. Therefore, this narrative review provides a systematic presentation of research published over the past ten years, with an emphasis on the efficacy and adverse effect profile of ESTB in children and adolescents.

Mechanism of Action of ESTB and Effects – Previous Scientific Knowledge

Although numerous mechanisms of action of ESTB on the brain have been described, it is still unclear which of them directly cause the therapeutic effect and which are merely accompanying phenomena. Despite this, a predominantly favorable therapeutic effect has been clinically observed. Several theories attempt to explain the mechanism of action of ESTB. One theory involves its effect on the neurotransmitters serotonin, noradrenaline, dopamine, glutamate, and gamma-aminobutyric acid (GABA). ESTB

zabilježena je povećana osjetljivost 5-HT1A receptora i moguće naknadno smanjenje 5-HT2A receptora, što pridonosi njegovom antidepresivnom učinku. ESTM ima modulatorni učinak na glutamatni sustav te tako smanjuje disfunkciju glutamatnog sustava koja je prisutna kod shizofrenije. Dodatno, primjena ESTM-a povisuje i serumske koncentracije GABA-e, koje su snižene u oboljelih od depresije (4). Jedna od teorija koja osporava ranije uvjerenje da ESTM oštećuje mozak jest neuroplastična i neurotrofna hipoteza. Neuroplastične promjene uključuju sinaptogenezu, neurogenezu, dendrogenezu, angiogenezu i gliogenezu. Poznato je da ESTM poboljšava integritet bijele tvari te doprinosi boljoj povezanosti između različitih regija mozga. Također, ESTM uzrokuje strukturne promjene u mozgu, istraživanja pokazuju povećanje volumena hipokampusa, kao i povećanje debljine korteksa, posebno u temporalnim režnjevima. Osim toga, studije sugeriraju da ESTM poboljšava povezanost temporalnog režnja i kortikalno-limbičkih mreža, što bi moglo biti ključni mehanizam uspješnog antidepresivnog odgovora na ESTM (4,14). ESTM uzrokuje i porast koncentracije moždanog neurotrofnog čimbenika (engl. *Brain-derived neurotrophic fact*or, BDNF) koji ima ima važnu ulogu u neuroplastičnosti, a istraživanja su pokazala i da ESTM povećava ekspresiju gena za BDNF. Predložena je i epigenetska teorija o djelovanju ESTM-a prema kojoj ESTM dovodi do povećanja ekspresije određenih gena, a smanjenja ekspresije drugih gena. Neuroinflamatorna teorija navodi da dolazi do privremenog povećanja ekspresije određenih gena za upalne citokine. Međutim, višestruki tretmani dovode do smanjenja razine upalnih medijatora. Elektrokonvulzije dovode i do aktivacije hipotalamičko-hipofizno-adrenalne osi i oslobađanje hormona prije svega prolaktina, vazopresina i moguće oksitocina u cirkulaciju. Povišena razina prolaktina ukazuje na smanjenu aktivnost dopamina u hipotalamusu, što moguće doprinosi antipsihotičnom učinku (4,14). Čini se da u početku ESTM povećava aktivnost osi hipotalamus-hipofiza-nadbubrežna žlijezda, a tijekom daljnjih

acts on the serotonergic system by modulating the activity of its receptors; increased sensitivity of 5-HT1A receptors and a possible subsequent reduction of 5-HT2A receptors have been recorded, which contribute to its antidepressant effect. ESTB has a modulatory effect on the glutamatergic system, thereby reducing glutamatergic dysfunction present in schizophrenia. Additionally, the administration of ESTB increases serum concentrations of GABA, which are reduced in individuals with depression (4). One of the theories that challenges the earlier belief that ESTB damages the brain is the neuroplastic and neurotrophic hypothesis. Neuroplastic changes include synaptogenesis, neurogenesis, dendrogenesis, angiogenesis, and gliogenesis. It is known that ESTB improves the integrity of white matter and contributes to better connectivity between different brain regions. ESTB also causes structural changes in the brain; studies show an increase in hippocampal volume and cortical thickness, particularly in the temporal lobes. In addition, studies suggest that ESTB improves the connectivity of the temporal lobe and cortico-limbic networks, which could represent a key mechanism of a successful antidepressant response to ESTB (4,14). It also causes an increase in the concentration of brain-derived neurotrophic factor (BDNF), which plays an important role in neuroplasticity. Studies have also shown that ESTB increases the expression of the gene for BDNF. An epigenetic theory of the action of ESTB has also been proposed, according to which ESTB leads to increased expression of certain genes and decreased expression of other genes. The neuroinflammatory theory states that there is a temporary increase in the expression of certain genes for inflammatory cytokines. However, multiple treatments lead to a reduction in the levels of inflammatory mediators. Electroconvulsions also lead to activation of the hypothalamic–pituitary–adrenal axis and the release of hormones, primarily prolactin, vasopressin, and possibly oxytocin into the circulation. Elevated prolactin levels indicate reduced dopamine activity in the hypothalamus,

aplikacija ju normalizira te dolazi do snižavanja vrijednosti kortizola pa na taj način ESTM smanjuje inhibiciju neuroplastičnosti izazvanu kortizolom koja se događa u depresiji (4,15).

Pregled smjernica za primjenu ESTM-a kod djece i adolescenata prema međunarodnim stručnim udruženjima, indikacije

U Hrvatskoj trenutačno ne postoje specifične smjernice za primjenu ESTM terapije u djece i adolescenata već su dostupne smjernice izrađene za odraslu populaciju Hrvatskog psihijatrijskog društva (16). Stoga se u ovom radu prikazuju preporuke relevantnih međunarodnih stručnih društava, uključujući Američku akademiju za dječju i adolescentnu psihijatriju (*The American Academy of Child and Adolescent Psychiatry,* AACAP), Nacionalni institut za zdravlje i kliničku izvrsnost (*National Institute for Health and Care Excellence,* NICE) te Kraljevski koledž psihijatara (*Royal College of Psychiatrists,* RCPSYCH) **(**17,18,19).

AACAP je 2004. godine objavila kliničke smjernice za korištenje ESTM-a kod adolescenata. Prema tim smjernicama, da bi se adolescent razmatrao za primjenu ESTM-a, mora ispuniti tri kriterija:

1. Dijagnoza: Teška, trajna depresija ili manija, sa psihotični, obilježjima ili bez njih, shizoafektivni poremećaj, shizofrenija, katatonija i maligni neuroleptički sindrom.
2. Težina simptoma: Simptomi pacijenta moraju biti ozbiljni, dugotrajni i značajno onesposobljavajući uključujući životno ugrožavajuće simptome poput odbijanja hrane i pića, ozbiljnu suicidalnost, nekontroliranu maniju i izraženu psihozu.
3. Nedostatak odgovora na liječenje: Neuspjeh u odgovoru na barem dva adekvatna pokušaja liječenja odgovarajućim psihofarmakološkim sredstvima, uz primjenu drugih prikladnih terapijskih metoda.

which may contribute to the antipsychotic effect (4,14). It appears that ESTB initially increases the activity of the hypothalamic–pituitary–adrenal axis, and during further applications, it normalizes it, leading to decreased cortisol levels. In this way, ESTB reduces cortisol-induced inhibition of neuroplasticity that occurs in depression (4,15).

Overview of Guidelines for the Use of ESTB in Children and Adolescents According to International Professional Associations, Indications

In Croatia, there are currently no specific guidelines for the use of ESTB therapy in children and adolescents; instead, guidelines developed for the adult population by the Croatian Psychiatric Association are available (16). Therefore, this paper presents the recommendations of relevant international professional associations, including the American Academy of Child and Adolescent Psychiatry (AACAP), the National Institute for Health and Care Excellence (NICE), and the Royal College of Psychiatrists (RCPSYCH) (17,18,19).

In 2004, the AACAP published clinical guidelines for the use of ESTB in adolescents. According to these guidelines, for an adolescent to be considered for ESTB, three criteria must be met:

1. Diagnosis: Severe, persistent depression or mania, with or without psychotic features, schizoaffective disorder, schizophrenia, catatonia, and malignant neuroleptic syndrome.
2. Severity of symptoms: The patient's symptoms must be severe, prolonged, and significantly disabling, including life-threatening symptoms such as refusal of food and fluids, severe suicidality, uncontrolled mania, and pronounced psychosis.
3. Lack of response to treatment: Failure to respond to at least two adequate treatment trials with appropriate psychopharmacological agents, in conjunction with the application of other suitable therapeutic methods.

ESTM se može razmotriti i ranije u slučajevima kada nije moguće provesti odgovarajuće pokušaje liječenja psihosocijalnim metodama i lijekovima zbog netolerancije pacijenta na psihofarmakološku terapiju, adolescent je u tolikoj mjeri onesposobljen da ne može uzimati lijekove ili čekanje na odgovor na psihofarmakološko liječenje može ugroziti život adolescenata (17). Nakon ovih smjernica AACAP je objavio dodatno smjernice o korištenju ESTM-a kod bipolarnog poremećaja, depresije, shizofrenije i smjernice povezane s etičkim dilemama za korištenje ESTM-a kod djece i adolescenata (17,20-23). NICE smjernice (2003., ažurirane 2009.) preporučuju ESTM isključivo za brzo, kratkotrajno ublažavanje teških simptoma nakon neuspjeha drugih (pretežno psihosocijalnih) terapija ili u životno ugrožavajućim stanjima, osobito u katatoniji i teškoj maniji, uz naglašeni oprez zbog mogućih povećanih rizika u djece i adolescenata (18). RCPSYCH u priručniku o ESTM-u uglavnom slijedi AACAP preporuke te ističe manjak visokokvalitetnih dokaza, budući da su dostupne studije pretežno prikazi slučajeva i retrospektivne analize. Također navodi da teško samoozljeđujuće ponašanje u sklopu intelektualnih teškoća i autizma trenutačno nije preporučena indikacija (19).

CILJEVI

Opći i specifični ciljevi

Primjena ESTM-a i danas je predmet rasprava u međunarodnoj literaturi, kako u odrasloj populaciji, tako i osobito u djece i adolescenata, zbog čega proizlazi i cilj ovog narativnog preglednog rada uz prikaz jednog slučaja (12,24,25). Cilj ovog narativnog pregleda jest sintetizirati dostupne znanstvene dokaze o učinkovitosti i sigurnosti ESTM-a u liječenju psihičkih poremećaja kod djece i adolescenata. Specifični ciljevi uključuju:

1. analizu i usporedbu dostupnih kliničkih studija o primjeni ESTM-a u depresivnim, bipolarnim i psihotičnim poremećajima,

ESTB may also be considered earlier in cases where it is not possible to conduct appropriate treatment trials with psychosocial methods and medications, due to the patient's intolerance to psychopharmacological therapy, if the adolescent is so severely impaired that they are unable to take medication, or if waiting for a response to psychopharmacological treatment may endanger the adolescent's life (17). Following these guidelines, AACAP additionally published guidelines on the use of ESTB in bipolar disorder, depression, schizophrenia, as well as guidelines addressing ethical dilemmas related to the use of ESTB in children and adolescents (17,20,21,22,23). The NICE guidelines (2003, updated 2009) recommend ESTB exclusively for rapid, short-term alleviation of severe symptoms after the failure of other (predominantly psychosocial) therapies or in life-threatening conditions, particularly in catatonia and severe mania, with emphasized caution due to potentially increased risks in children and adolescents (18). In its handbook on ESTB, the RCPSYCH largely follows the AACAP recommendations and highlights the lack of high-quality evidence, as the available studies predominantly consist of case reports and retrospective analyses. It also states that severe self-injurious behavior in the context of intellectual disabilities and autism is currently not a recommended indication (19).

OBJECTIVES

General and Specific Objectives

The use of ESTB remains a subject of debate in the international literature, both in the adult population and particularly in children and adolescents, which constitutes the rationale for this narrative review with the presentation of one case (12,24,25). This narrative review aims to synthesize the available scientific evidence on the efficacy and safety of ESTB in the treatment of psychiatric disorders in children and adolescents. The specific objectives include:

shizofreniji, katatoniji i neuroleptičkom malignom sindromu;

2. prikaz sigurnosnog profila i nuspojava ESTM-a u djece i adolescenata na temelju recentnih podataka;
3. identifikaciju metodoloških ograničenja postojećih istraživanja;
4. osvrt na zakonski, etički i organizacijski okvir te praktične izazove u kliničkoj implementaciji ESTM-a u maloljetničkoj dobi u Hrvatskoj.

MATERIJALI I METODE

Ovaj narativni pregled je pregled originalnih znanstvenih studija i sustavnih pregleda koji su istraživali učinkovitost i sigurnost ESTM-a u dječjoj i adolescentnoj populaciji. U pregled su uključene opservacijske studije, randomizirana kontrolirana ispitivanja te sustavni pregledi, a proces pretraživanja i selekcije radova proveden je u skladu s PuBMed bazom podataka. Dijagram toka prikazan je na slici 1.

Izvori podataka i strategija pretraživanja

Sustavno je pretražena baza podataka PubMed (MEDLINE), a u pregled su uključeni radovi objavljeni do 9. studenoga 2025. godine. Analizirani su radovi objavljeni u razdoblju od studenog 2015. do studenoga 2025. godine. Pretraživanje je provedeno korištenjem kombinacije MeSH termina i ključnih riječi na engleskom jeziku koje su se odnosile na elektrokonvulzivnu terapiju, ciljne dijagnostičke skupine te dječju i adolescentnu populaciju. Za elektrokonvulzivnu terapiju korišteni su pojmovi "*Electroconvulsive therapy"* i "ECT". Dijagnostičke skupine obuhvaćene su terminima: "*Depressive Disorder*", "*major depressive disorder"*, *"bipolar disorder"*, *"psychotic disorders"*, *"schizophrenia"*, *"catatonia"*, *"neuroleptic malignant syndrome"*. Pedijatrijska populacija definirana je pojmovima "*Child*" i "*Adolescent*",

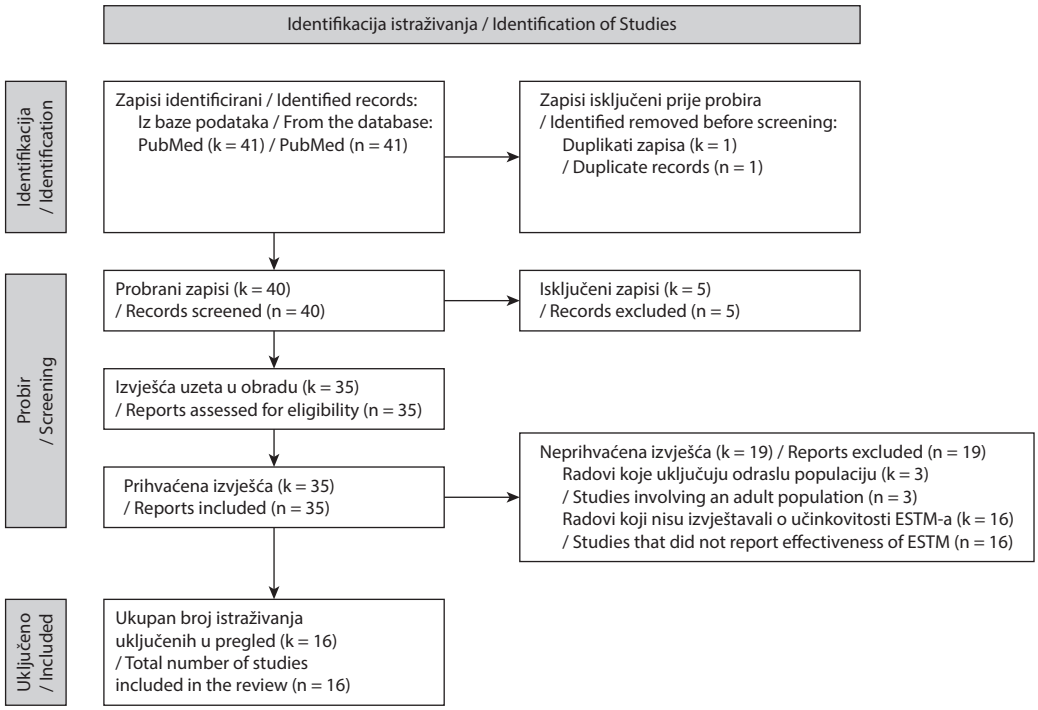
1. Analysis and comparison of available clinical studies on the use of ESTB in depressive, bipolar, and psychotic disorders, schizophrenia, catatonia, and neuroleptic malignant syndrome.
2. Presentation of the safety profile and adverse effects of ESTB in children and adolescents based on recent data.
3. Identification of methodological limitations of existing research.
4. Review of the legal, ethical, and organizational frameworks, as well as practical challenges in the clinical implementation of ESTB in minors in Croatia.

MATERIALS AND METHODS

This narrative review presents an overview of original scientific studies and systematic reviews that investigated the efficacy and safety of ESTB in the child and adolescent population. The review included observational studies, randomized controlled trials, and systematic reviews, and the process of searching and selecting studies was conducted in accordance with the PubMed database. The flow diagram is presented in Figure 1.

Data Sources and Search Strategy

The PubMed (MEDLINE) database was systematically searched, and papers published up to November 9, 2025, were included in the review. Studies published between November 2015 and November 2025 were analyzed. The search was conducted using a combination of MeSH terms and English-language keywords referring to electroconvulsive therapy, target diagnostic groups, and the child and adolescent population. For electroconvulsive therapy, the terms "electroconvulsive therapy" and "ECT" were used. Diagnostic groups were covered by the terms: "depressive disorder," "major depressive disorder," "bipolar disorder," "psychotic disorders," "schizophrenia," "catatonia," and "neuroleptic malignant



SLIKA 1. Dijagram toka pretraživanja
FIGURE 1. Search flow diagram

uz isključenje odrasle populacije:"*Adult*", *"Aged"*, *"Middle Aged*". Primijenjeni su filtri za vrstu studije, uključujući klinička ispitivanja, randomizirana kontrolirana istraživanja, opservacijske studije, kohortne i retrospektivne studije, meta-analize, sustavne preglede i pregledne radove, dok su prikazi slučajeva isključeni. Dodatno su primijenjeni filtri za jezik (engleski) i razdoblje objave (studeni 2015. – studeni 2025).

Uključni i isključni kriteriji

U pregled su uvrštene studije koja su zadovoljila sve sljedeće uvjete: a) objavljena u recenziranim znanstvenim časopisima u razdoblju od studenoga 2015.godine do studenoga 2025.godine, b) izvorna istraživanja (klinička ispitivanja, kohortne i retrospektivne/opservacijske studije) ili sustavni pregledi/meta-analize, c) isključivo se odnose na djecu i adolescente (≤19 godina), d) ispitivale ESTM kao glavnu intervenciju, e) obuhvatile dijagnoze: depresivni poremećaj, bipolarni poremećaj, psihotični poremećaji, shizofrenija, katatonija i maligni neuroleptički

syndrome." The pediatric population was defined using the terms "child" and "adolescent," with exclusion of the adult population: "adult," "Aged," and "middle aged." Filters were applied for study type, including clinical trials, randomized controlled trials, observational studies, cohort and retrospective studies, meta-analyses, systematic reviews, and review articles, while case reports were excluded. Additional filters were applied for language (English) and publication period (November 2015 – November 2025).

Inclusion and Exclusion Criteria

Studies were included in the review if they met all of the following criteria: a) published in peer-reviewed scientific journals between November 2015 and November 2025; b) original research (clinical trials, cohort, and retrospective/observational studies) or systematic reviews/meta-analyses; c) exclusively referred to children and adolescents (≤19 years); d) examined ESTB as the main intervention; e) included the following diagnoses: depressive disorder, bipolar

sindrom (MNS), f) prikazivale kvantitativne podatke o učinkovitosti i/ili sigurnosti ESMT-a, g) imale dostupne cjelovite tekstove na engleskom jeziku. Iz analize su isključeni: a) prikazi slučaja te narativni pregledi bez kvantitativnih podataka, b) radovi koji nisu izvještavali o ishodima učinkovitosti ESTM-a, c) radovi kojima nije bilo moguće pristupiti u cjelovitom tekstu (ograničenja pristupa), d) radovi koji se odnose isključivo na odraslu populaciju, f) duplikati publikacija. Jedan sustavni pregled literature uključen je radi kontekstualne usporedbe s ranijim dokazima (6), ali nije uključen u tablični prikaz rezultata koji se odnosi isključivo na originalne studije.

Odabir i selekcija

Nakon uklanjanja duplikata provedeno je inicijalno pregledavanje naslova i sažetaka. U drugom koraku su u cijelosti pročitani radovi koji su potencijalno zadovoljavali kriterije. Konačno je u pregled uključeno šesnaest radova koji su ispunjaval sve zadane uvjete.

REZULTATI

Uvodni aspekti

Pretraživanjem baze podataka PubMed identificiran je ukupno 41 rad. Nakon uklanjanja duplikata svi su radovi pregledani najprije prema naslovu i sažetku, a zatim čitanjem cjelovitih tekstova. Nakon toga su uvidom u cjelovite tekstove procijenjeni kriteriji uključivanja i isključivanja. Ukupno je u pregledni rad uključeno 16 radova (6,26-40). Rezultati originalnih istraživanja prikazani su u tablicama 1-3. Studije su razvrstane prema dizajnu istraživanja i dijagnostičkim skupinama, a unutar svake skupine poredane kronološki prema godini objave, od recentnijih prema starijima, kako bi se omogućio detaljniji prikaz učinkovitosti ESTM-a u pojedinim poremećajima. Prema dizajnu studija, od šesnaest radova uključenih u ovaj pregled dvije su bile randomizirana kontrolirana ispitivanja (26,27),

disorder, psychotic disorders, schizophrenia, catatonia, and neuroleptic malignant syndrome (NMS); f) presented quantitative data on the efficacy and/or safety of ESTB; and g) had full texts available in English. The following were excluded from the analysis:

a) case reports and narrative reviews without quantitative data; b) studies that did not report on ESTB efficacy outcomes; c) studies for which full-text access was not available (access restrictions); d) studies referring exclusively to the adult population; and e) duplicate publications. One systematic review was included for contextual comparison with earlier evidence (6); however, it was not included in the tabular presentation of results, which refers exclusively to original studies.

Selection and Screening

After the removal of duplicates, an initial screening of the titles and abstracts was conducted. In the second step, the full texts of studies that potentially met the criteria were reviewed. Finally, sixteen studies that fulfilled all the predefined criteria were included in the review.

RESULTS

Introductory Aspects

A total of 41 papers were identified through the PubMed database search. After the removal of duplicates, all papers were screened first by title and abstract and subsequently by full-text reading. The inclusion and exclusion criteria were then assessed based on the full texts. In total, 16 papers were included in the review (6, 26–40). The results of the original studies are presented in Tables 1–3. The studies were categorized according to study design and diagnostic groups, and within each group arranged chronologically by year of publication, from more recent to older, in order to provide a more detailed overview of the efficacy of ESTB in specific disorders. According to

dok je trinaest studija imalo opservacijski dizajn (28-40) uključujući retrospektivne analize medicinske dokumentacije, nerandomizirane kohortne studije i prospektivne promatračke kohorte. Jedan rad bio je sustavni pregled literature (6), uključen radi kontekstualne usporedbe s postojećim dokazima, ali nije uključen u tablični prikaz rezultata te je razmatran u raspravi.

Učinkovitost ESTM-a u liječenju poremećaji raspoloženja, pozitivni klinički učinci

Od ukupno šesnaest radova uključenih u ovaj pregled, učinkovitost ESTM-a samo u poremećajima raspoloženja (uključujući unipolarnu depresiju i bipolarni poremećaj) istraživana je u deset (26-35). Od tih deset radova dva su randomizirana kontrolirana ispitivanja koja su ispitivala učinkovitost ESTM-a u djece i adolescenata s poremećajima raspoloženja te su sažeta u tablici 1 (26,27).

Dvostruko slijepo randomizirano istraživanje Du i sur. usporedilo je ESTM niske doze (40 % prilagođeno dobi) i standardne doze (80 % doze prilagođeno dobi) kod adolescenta s velikim depresivnim poremećajem i suicidalnim idejama. Oba protokola dovela su do značajnih i usporedivih smanjenja na Hamiltonovoj ocjenskoj ljestvici za depresiju čime je potvrđena neinferiornost niže doze i snažan akutni antidepresivni učinak ESTM-a. Niža doza ESTM-a bila je jednako učinkovita kao i standardna doza, postižući slična smanjenja depresivnih simptoma uz bolju sigurnost (26). U kliničkom ispitivanju koje je uspoređivalo modificirani ESTM (MESTM) i terapiju induciranim magnetskim napadajima (MST), pokazano je da su obje su metode bile visoko učinkovite, pri čemu je MST doveo do sličnog smanjenja depresivnih simptoma, ali uz manje kognitivnih smetnji (27).

Osam radova koji su ispitivali učinkovitost ESTM-a samo u poremećajima raspoloženja imale su opservacijski dizajn i prikazani su u tablici 2 (28-35). Dodatno, dvije studije koje su uključivale pacijente s poremećajima raspoloženja i

the study design, of the sixteen papers included in this review, two were randomized controlled trials (26,27), while thirteen had an observational design (28–40), including retrospective medical record analyses, non-randomized cohort studies, and prospective observational cohorts. One paper was a systematic literature review (6), included for contextual comparison with existing evidence, but it was not included in the tabular presentation of results and was considered in the discussion.

Efficacy of ESTB in the Treatment of Mood Disorders, Positive Clinical Effects

Of the total sixteen papers included in this review, the efficacy of ESTB exclusively in mood disorders (including unipolar depression and bipolar disorder) was investigated in ten (26–35). Of these ten papers, two were randomized controlled trials examining the efficacy of ESTB in children and adolescents with mood disorders and are summarized in Table 1 (26,27).

A double-blind randomized study by Du et al. compared low-dose ESTB (40% age-adjusted dose) and standard-dose ESTB (80% age-adjusted dose) in adolescents with major depressive disorder and suicidal ideation. Both protocols led to significant and comparable reductions on the Hamilton Rating Scale for Depression, confirming the non-inferiority of the lower dose and the strong acute antidepressant effect of ESTB. The lower ESTB dose was equally effective as the standard dose, achieving similar reductions in depressive symptoms with better safety (26). In a clinical trial comparing modified ESTB (MESTB) and magnetic seizure therapy (MST), both methods were highly effective; MST led to a similar reduction in depressive symptoms but with fewer cognitive adverse effects (27).

Eight studies that examined the efficacy of ESTB exclusively in mood disorders had an observational design and are presented in Table 2 (28–35). Additionally, two studies that included patients

TABLICA 1. Randomizirana kontrolirana ispitivanja učinkovitosti ESTM-a u djece i adolescenata s poremećajima raspoloženja (kronološki poredano od recentnijih prema starijim)
TABLE 1. Randomized controlled trials on the effectiveness of ESTM in children and adolescents with mood disorders (ordered chronologically from most recent to oldest).

Randomizirana klinička istraživanja / Randomized clinical trials							
	Autori i godina / Authors and year	Dizajn istaživanja i ciljevi istraživanja / Study design and research objectives	Ispitanici dob i broj / Participants: age and number	Dijagnoza / Diagnosis	Skale / Assessment scales	Način primjene ESTM-a / Method of ESTM administration	Rezultati / Results
1.	**Du i sur., 2025 (26) / Du et al., 2025 (26)**	Dvostruko slijepo randomizirano kliničko istraživanje. Ispitati je li niska doza ESTM-a (40 % doze prema dobi) inferiorna u odnosu na standardnu dozu (80 % doze prema dobi) u liječenju depresivnih simptoma i kognitivne sigurnosti kod adolescenata s velikim depresivnim poremećajem i suicidalnim ideacijama. / Double-blind randomized clinical trial. To examine whether a low dose of ESTM (40% of the age-based dose) is non-inferior to the standard dose (80% of the age-based dose) in treating depressive symptoms and in terms of cognitive safety in adolescents with major depressive disorder and suicidal ideation.	13-18 godina (prosjek ≈ 15,5 godina) 143 sudionika (40 % doze n = 72; 80 % doze n = 71) / 13-18 years (mean ≈ 15.5 years) 143 participants (40% dose: n = 72; 80% dose: n = 71)	Veliki depresivni poremećaj sa suicidalnim ideacijama / Major depressive disorder with suicidal ideation.	HDRS-17, SIOSS, MCCB	Bilateralno temporalno postavljene elektrode, 8 sesija ukupno, svaki drugi dan / Bilaterally placed temporal electrodes, 8 sessions in total, every other day.	Obje doze ESTM-a su značajno smanjile depresivnost, a niska doza ESTM-a nije bila inferiorna. Na skali za praćenje suicidalnosti, suicidalnost je bila više smanjena kod visoke doze, no niža doza pokazala je bolju očuvanost vizualnog učenja i socijalne kognicije, uz manji pad verbalnog učenja. U skupini visoke doze zabilježena je jedna blaga manična epizoda. / Both ESTM doses significantly reduced depressive symptoms, and the low-dose ESTM was not inferior. On the suicidality assessment scale, suicidality decreased more in the high-dose group; however, the lower dose showed better preservation of visual learning and social cognition, with a smaller decline in verbal learning. One mild manic episode was recorded in the high-dose group.
2.	**Wang i sur., 2025 (27) / Wang et al., 2025 (27)**	Randomizirano kliničko istraživanje. Usporedba magnetne konvulzivne terapije (MST) s modificiranim ESTM-om (MESTM) na kognitivne ishode i suicidalnost kod adolescenata sa velikm depresivnim poremećajem rezistetnim na terapiju. / Randomized clinical trial. Comparison of magnetic seizure therapy (MST) with modified ESTM (MESTM) on cognitive outcomes and suicidality in adolescents with treatment-resistant major depressive disorder.	13-18 godina (prosjek ≈ 15 godina) 120 sudionika (MESTM n = 60; MST n = 60) / 13-18 years (mean ≈ 15 years) 120 participants (MESTM n = 60; MST n = 60)	Terapijski rezistentni veliki depresivni poremećaj / Treatment-resistant major depressive disorder	BDI-II, MoCA	Bilateralno postavljene elektrode, tri puta tjedno, 12-16 sesija, doza temeljena na dobi (dob × 0,7 %), / Bilaterally placed electrodes, three times per week, 12–16 sessions, age-based dosing (age × 0.7%)	MESTM uzrokuje bolje akutno poboljšanje raspoloženja. Odgovor na liječenje bio je viši za MESTM (51,8 %) u usporedbi s MST-om (46,5 %). Nuspojave su bile češće kod MESTM-a (64 %) nego kod MST-a (28,9 %). MST pokazuje bolju očuvanost kognitivnih funkcija. / MESTM produced greater acute improvement in mood. The treatment response rate was higher with MESTM (51.8%) compared with MST (46.5%). Adverse effects were more frequent with MESTM (64%) than with MST (28.9%). MST showed better preservation of cognitive functions.

psihotičnim poremećajima prikazane su u tablici 3 (39,40).

U kanadskom uzorku Zhand i sur. (35) zabilježili su 77 % kliničkog poboljšanja i 23 % potpune remisije u skupini od 13 adolescenata s terapijski rezistentnom depresijom. Slično tome, Karayağmurlu i sur. (40) izvijestili su o ishodima liječenja ESTM-om u Turskoj, uključujući one s bipolarnim poremećajem i velikim depresivnim poremećajem. ESTM je doveo do statistički značajnih poboljšanja na ljestvicama depresije, manije, psihoze i globalne težine simptoma. Poboljšanje simptoma zabilježeno je u 72 % adolescenata s depresijom i čak 93 % onih s manićnim epizodama. Depresivni simptomi u adolescenata s bipolarnom depresijom pokazali bolji terapijski odgovor na ESTM u usporedbi s adolescentima s unipolarnim velikim depresivnim poremećajem (20).

with mood and psychotic disorders are presented in Table 3 (39,40).

In a Canadian sample, Zhand et al. (35) reported 77% clinical improvement and 23% complete remission in a group of 13 adolescents with treatment-resistant depression. Similarly, Karayağmurlu et al. (40) reported outcomes of ESTB treatment in Turkey, including patients with bipolar disorder and major depressive disorder. ESTB led to statistically significant improvements in depression, mania, psychosis, and global severity scales. Symptom improvement was observed in 72% of adolescents with depression and in as many as 93% of those with manic episodes. Depressive symptoms in adolescents with bipolar depression showed a better therapeutic response to ESTB compared to adolescents with unipolar major depressive disorder (20).

TABLICA 2. Opservacijske studije učinkovitosti ESTM-a u djece i adolescenata s poremećajima raspoloženja (kronološki poredano od recentnijih prema starijim)
TABLE 2. Observational studies on the effectiveness of ESTM in children and adolescents with mood disorders (ordered chronologically from most recent to oldest).

Opservacijske studije / Observational studies						
	Autori i godina / Authors and year	**Dizajn istaživanja i ciljevi istraživanja / Study design and research objectives**	**Ispitanici dob i broj / Participants: age and number**	**Dijagnoza / Diagnosis**	**Skale / Assessment scales**	**Način primjene ESTM-a / Method of ESTM administration**	**Rezultati / Results**
1.	**Chen i sur., 2025 (28) / Chen et al., 2025 (28)**	Opservacijska studija (Kina) Istražiti kratkoročne i dugoročne učinke ESMT-a na depresivni poremećaj u adolescenata te povezanost s obiteljskim funkcioniranjem. / Observational study (China). To investigate the short-term and long-term effects of ESTM on depressive disorder in adolescents and its association with family functioning.	13-18 godina (prosjek ≈ 15,0 godina) 65 sudionika (39 je dovršilo procjenu obiteljske funkcije; 36 je dovršilo tromjesečno praćenje) / 13-18 years (mean ≈ 15.0 years) 65 participants (39 completed the family functioning assessment; 36 completed the three-month follow-up)	Veliki depresivni poremećaj / Major depressive disorder	HDRS-24, FAD	Početna doza = dob × 0,7 % ; 6–15 sesija, 2-4 puta tjedno / Initial dose = age × 0.7%; 6-15 sessions, 2-4 times per week	Kratkoročni odgovor iznosio je 64,6 % (T1-dva dana nakon primjene ESTM-a), a dugoročni 22,2 % (T2- 3 mjeseca nakon primjene ESTM-a). Bolje funkcioniranje obitelji predviđalo je dugoročniji terapijski odgovor. ESTM pokazuje snažan kratkoročni antidepresivni učinak, ali ograničenu trajnost te funkcioniranje obitelji značajno utječe na dugoročno održavanje poboljšanja. / The short-term response rate was 64.6% (T1 – two days after ESTM), and the long-term response rate was 22.2% (T2 – three months after ESTM). Better family functioning predicted a more sustained therapeutic response. ESTM showed a strong short-term antidepressant effect but limited durability, and family functioning significantly influenced the long-term maintenance of improvement.
2.	**Hu u sur., 2025 (29) / Hu et al., 2025 (29)**	Prospektivna opservacijska studija (Kina) Procijeniti učinke ESTM-a na kogniciju, depresivne simptome i suicidalne ideje kod adolescenata s velikim depresivnim poremećajem / Prospective observational study (China). To assess the effects of ESTM on cognition, depressive symptoms, and suicidal ideation in adolescents with major depressive disorder.	13-18 godina (prosjek ≈ 15,8 godina) 60 sudionika (54 završila dvotjedno praćenje; 48 završilo praćenje nakon 4 mjeseca) / 13-18 years (mean ≈ 15.8 years) 60 participants (54 completed the two-week follow-up; 48 completed the four-month follow-up)	Veliki depresivni poremećaj sa suicidalnim mislima / suicidalnim ponašanjem / Major depressive disorder with suicidal ideation / suicidal behavior	HAMD-24, BSI, CANTAB	Bifrontalno postavljanje elektrode; prosječno ≈ 10 sesija. / Bifrontal electrode placement; mean ≈ 10 sessions.	Odgovor na ESTM≈ 78 %; remisija ≈ 25 %. Značajno smanjenje suicidalnih misli. Privremeni pad pamćenja (prostornog i verbalnog) povukao se nakon 2 tjedna; radno pamćenje, pažnja i izvršne funkcije poboljšale su se do 4 mjeseca. / The response rate to ESTM was ≈ 78%, and the remission rate was ≈ 25%. There was a significant reduction in suicidal ideation. A temporary decline in memory (spatial and verbal) resolved after two weeks; working memory, attention, and executive functions improved by four months.
3.	**Wang i sur., 2024 (30) / Wang et al., 2024 (30)**	Retrospektivna kohortna studija s uparivanjem prema sklonosti (Kina). Usporediti ESTM s konvencionalnom farmakoterapijom u adolescenata s velikim depresivnim poremećajem uz suicidalne misli ili pokušaj suicida. / Retrospective propensity score–matched cohort study (China). To compare ESTM with conventional pharmacotherapy in adolescents with major depressive disorder and suicidal ideation or suicide attempts.	10-18 godina (prosjek ≈ 15,2 godina) 286 sudionika (ESTM n=143, konvencionalna terapija n=143) / 10–18 years (mean ≈ 15.2 years) 286 participants (ESTM n = 143; conventional therapy n = 143)	Velika depresivna epizoda (jedna ili ponavljana) sa suicidalnim idejama ili pokušajem suicida / Major depressive episode (single or recurrent) with suicidal ideation or suicide attempt	HAMD-24 HAMA CGI-IC-SSRS	Bilateralni ESTM s kratkim pulsom, 2–4 puta tjedno, prosječno oko 9,35 sesija doza = dob × 0,7 %. / Bilateral brief-pulse ESTM, 2–4 times per week, mean ≈ 9.35 sessions; dose = age × 0.7%.	Odgovor je bio viši kod ESTM-a (77,6 % naspram 55,2 % kod konvencionalne farmakoterapije). Suicidalne misli su perzistirale u 18,2 % adolescenata liječenih ESTM-om, naspram 41,3 % u skupini s konvencionalnom farmakoterapijom. Hospitalizacija je bila dulja kod ESTM-a (≈ 19 dana naspram 12 dana kod konvencionalne terapije. / The response rate was higher with ESTM (77.6%) compared with conventional pharmacotherapy (55.2%). Suicidal ideation persisted in 18.2% of adolescents treated with ESTM, compared with 41.3% in the conventional pharmacotherapy group. Hospitalization was longer with ESTM (≈ 19 days vs ≈ 12 days with conventional therapy).
4.	**Cai i sur., 2023 (31) / Cai et al., 2023 (31)**	Nerandomizirano kontrolirano ispitivanje (opservacijsko) (Kina). Ispitati poboljšava li ESTM suicidalne misli i depresivne simptome te kakav je njegov utjecaj na kognitivne funkcije u adolescenata s velikim depresivnim poremećajem i izraženim suicidalnim idejama. / Non-randomized controlled trial (observational) (China). To examine whether ESTM improves suicidal ideation and depressive symptoms and to evaluate its impact on cognitive functions in adolescents with major depressive disorder and severe suicidal ideation.	13–18 godina (prosjek ≈ 15,2 godina) 160 sudionika (ESTM n = 81; kontrola n = 79) / 13–18 years (mean ≈ 15.2 years) 160 participants (ESTM n = 81; control n = 79)	Velika depresivna epizoda s izraženom suicidalnom ideacijom / Major depressive episode with severe suicidal ideation	SIOSS, HAMD-17, RBANS	Modificirani bitemporalni ESTM, 8 ciklusa tijekom 2 tjedna (prvi tjedan svakodnevno, drugi tjedan 3 puta svaki drugi dan). / Modified bitemporal ESTM, 8 sessions over 2 weeks (first week daily; second week 3 times every other day).	Skupina liječena ESTM-om pokazala je veće smanjenje rezultata na SIOSS-u i Hamiltonovoj ocjenskoj ljestvici za depresiju. Kognitivni deficiti (memorija, pažnja, jezik) bili su prolazni i povukli su se do 6. tjedna, nije bilo ozbiljnih nuspojava. / The ESTM-treated group showed greater reductions in SIOSS and Hamilton Depression Rating Scale scores. Cognitive deficits (memory, attention, language) were transient and resolved by week 6, and no serious adverse effects were reported.

TABLICA 2. Opservacijske studije učinkovitosti ESTM-a u djece i adolescenata s poremećajima raspoloženja (kronološki poredano od recentnijih prema starijim) (*nastavak*)
TABLE 2. Observational studies on the effectiveness of ESTM in children and adolescents with mood disorders (ordered chronologically from most recent to oldest). (*continued*)

Opservacijske studije / Observational studies						
	Autori i godina / Authors and year	**Dizajn istaživanja i ciljevi istraživanja / Study design and research objectives**	**Ispitanici dob i broj / Participants: age and number**	**Dijagnoza / Diagnosis**	**Skale / Assessment scales**	**Način primjene ESTM-a / Method of ESTM administration**	**Rezultati / Results**
5.	**Yu i sur., 2023 (32) / Yu et al., 2023 (32)**	Prospektivna intervencijska slikovna studija (Kina). Ispitati promjene moždanog protoka krvi nakon ESTM-a i njihov odnos s kliničkim poboljšanjem u adolescenata s velikim depresivnim poremećajem / Prospective interventional imaging study (China). To examine changes in cerebral blood flow after ESTM and their relationship with clinical improvement in adolescents with major depressive disorder.	12-17 godina (medijan ≈ 15 godina) 52 uključena / 12-17 years (median ≈ 15 years) 52 participants included	Veliki depresivni poremećaj, bez prethodnog liječenja / Major depressive disorder, treatment-naive	HAMD-17	Bifrontotemporalni ESTM ili bilateralni temporalni ESTM. 8 sesija (prve 3 sesije istoga dana, zatim svaka 2 dana) / Bifronto-temporal ESTM or bilateral temporal ESTM. 8 sessions (first 3 sessions on the same day, then every 2 days).	Značajno smanjenje na Hamiltonovoj ocjenskoj ljestvici za depresiju. Rezultati: 22,2 % „značajno učinkovito", 48,2 % „učinkovito", 14,8 % „poboljšanje", 14,8 % „neučinkovito". Veće smanjenje na Hamiltonovoj ocjenskoj ljestvici za depresiju korelralo je s nižim post-ESTM protokom krvi u lijevom orbitalnom donjem frontalnom girusu. / There was a significant reduction in Hamilton Depression Rating Scale scores. Outcomes were: 22.2% "markedly effective," 48.2% "effective," 14.8% "improved," and 14.8% "ineffective." Greater reductions in Hamilton Depression Rating Scale scores were associated with lower post-ESTM cerebral blood flow in the left orbital inferior frontal gyrus.
6.	**Chen i sur., 2022 (33) / Chen et al., 2022 (33)**	Retrospektivna serija slučajeva (Kina). Procijeniti učinkovitost i sigurnost ESTM-a u adolescenata s depresijom i suicidalnim promišljanima, uspoređujući podskupine adolescenta sa suicidalnim mislima i one sa pokušajem suicida / Retrospective case series (China). To evaluate the effectiveness and safety of ESTM in adolescents with depression and suicidal ideation, comparing subgroups of adolescents with suicidal thoughts and those with suicide attempts.	12-17 godina (prosjek ≈ 15,4 godine) 278 sudionika (konačna analiza) / 12-17 years (mean ≈ 15.4 years) 278 participants (final analysis)	Veliki depresivni poremećaj s suicidalnim promišljanjima ili s pokušajem suicida / Major depressive disorder with suicidal ideation or suicide attempt	CGI-S , CGI-I, HDRS-17	Modificirani bitemporalni ESTM. Ukupno 6–12 sesija. Doza = 0,7 × dob % / Modified bitemporal ESTM. Total of 6-12 sessions. Dose = 0.7 × age %	Opći odgovor iznosio je 52 % (49 % u skupini sa suicidalnim promišljanjima, 54 % u skupini s pokušajem suicida). ESTM učinkovito smanjuje depresivne i suicidalne simptome. Podskupina sa pokušajem suicida pokazala je veće poboljšanje. Nuspojave: poteškoće pamćenja 68 %, glavobolja 54 %, delirij 34 % (uglavnom prolazan) / The overall response rate was 52% (49% in the suicidal ideation group, 54% in the suicide attempt group). ESTM effectively reduced depressive and suicidal symptoms. The subgroup with suicide attempts showed greater improvement. Adverse effects included memory difficulties (68%), headache (54%), and delirium (34%), mostly transient.
7.	**Shao i sur., 2022 (34) / Shao et al., 2022 (34)**	Retrospektivna usporedna analiza (Kina). Procijeniti ishode ESTM-a u odnosu na uobičajeno liječenje kod hospitaliziranih adolescenata s velikim depresivnim poremećajem ili bipolarnim poremećajem. / Retrospective comparative analysis (China). To evaluate outcomes of ESTM compared with usual treatment in hospitalized adolescents with major depressive disorder or bipolar disorder.	10-18 godina (prosjek ≈ 16,1 godina) 288 sudionika (ESTM n = 171; uobičajeno liječenje n = 117) / 10-18 years (mean ≈ 16.1 years) 288 participants (ESTM n = 171; usual treatment n = 117)	Veliki depresivan poremećaj (n = 122) i bipolarni poremećaj (n = 166) / Major depressive disorder (n = 122) and bipolar disorder (n = 166)	CGI-S,CGI-I, HAMA, YMRS, PANSS	Mješovito unilateralno ili bilateralno postavljanje; 4 puta tjedno; prosječan broj sesija ≈ 7,6 / Mixed unilateral or bilateral electrode placement; 4 times per week; mean number of sessions ≈ 7.6	Težina simptoma smanjila se u obje skupine. Odgovor na liječenje bio je oko 77 % (ESTM) prema 81 % (uobičajeno liječenje). Remisija je bila viša u ESTM skupini (28,6 % prema 16,2 %), ali je trebalo dulje da se postigne. Nuspojave su bile blage, bez maničnog prijelaza. / Symptom severity decreased in both groups. The treatment response rate was about 77% in the ESTM group compared with 81% in the usual treatment group. Remission was higher in the ESTM group (28.6% vs 16.2%), but it took longer to achieve. Adverse effects were mild, with no manic switch observed.
8.	**Zhand i sur., 2015 (35) / Zhand et al, 2015 (35)**	Serija slučajeva, retrospektivni pregled dokumentacije (Kanada). Opisati primjenu ESTM-a i ishode liječenja kod adolescenata s terapijski rezistentnim depresivnim poremećajima. / Case series, retrospective chart review (Canada). To describe the use of ESTM and treatment outcomes in adolescents with treatment-resistant depressive disorders.	15-18 godina (prosjek ≈ 16,8 godina) 13 sudionika / 15–18 years (mean ≈ 16.8 years) 13 participants	Terapijski rezistentni veliki depresivni poremećaj / Treatment-resistant major depressive disorder	BDI-II , CGI-S AADI MASC-39	Unilateralno, bifrontalno ili bitemporalno postavljene elektrode. Sesije 2-3 x tjedno. / Unilateral, bifrontal, or bitemporal electrode placement. Sessions 2–3 times per week.	77 % je pokazalo pouzdano poboljšanje na BDI-II, dok je 23 % postiglo je potpuni oporavak. Prolazno kognitivno oštećenje zabilježeno je u 85 % ispitanika (uglavnom blago). / 77% showed reliable improvement on the BDI-II, while 23% achieved full recovery. Transient cognitive impairment was observed in 85% of participants (mostly mild).

TABLICA 3. Opservacijske studije učinkovitosti ESTM-a u ostalim psihijatrijskim indikacijama kod djece i adolescenata, pozitivni klinički učinci (kronološki poredano od recentnijih prema starijim)
TABLE 3. Observational studies on the effectiveness of ESTM in other psychiatric indications in children and adolescents, positive clinical effects (ordered chronologically from most recent to oldest).

Opservacijske studije / Observational studies						
	Autori i godina / Authors and year	**Dizajn istaživanja i ciljevi istraživanja / Study design and research objectives**	**Ispitanici dob i broj / Participants: age and number**	**Dijagnoza / Diagnosis**	**Skale / Assessment scales**	**Način primjene ESTM-a / Method of ESTM administration**	**Rezultati / Results**
1.	**Smith i sur., 2024 (36) / Smith et al., 2024 (36)**	Retrospektivna kohortna studija jedne ustanove (SAD). Procijeniti sigurnost i učinkovitost ESTM-a u pedijatrijskoj kohorti, s naglaskom na ishode katatonije. / Retrospective single-center cohort study (USA). To evaluate the safety and effectiveness of ESTM in a pediatric cohort, with a focus on outcomes in catatonia.	≤17 godina (prosječna dob ≈ 15 godina, raspon 10-17 godina) 36 (≥3 sesije ESTM-a) / ≤17 years (mean age ≈ 15 years, range 10-17 years) 36 participants (≥3 ESTM sessions)	Katatonija (n = 22), psihoza (n = 17), suicidalne ideacije (n = 14), rekuretna samoozljeđivanja (n = 10) / Catatonia (n = 22), psychosis (n = 17), suicidal ideation (n = 14), recurrent self-injury (n = 10)	BFCRS, CGI-I	Uglavnom bitemporalno (n=33), desnostrano unilateralno. (n=3). Prosječan broj sesija ≈ 16,4 / Mostly bitemporal electrode placement (n = 33), right unilateral (n = 3). Mean number of sessions ≈ 16.4	Svih 22 pacijentata s katatonijom pokazala su značajno smanjenje u BFCRS rezultatu. Produljeni napadaji uočeni kod 14 pacijenata. / All 22 patients with catatonia showed a significant reduction in BFCRS scores. Prolonged seizures were observed in 14 patients.
2.	**Pal i sur., 2024 (37) / Pal et al., 2024 (37)**	Retrospektivna serija slučajeva (SAD). Opisati ishode ESTM-a kod katatonije i raspraviti parametre liječenja. / Retrospective case series (USA). To describe outcomes of ESTM in catatonia and discuss treatment parameters.	≤17 godina (raspon 10-17 godina) 12 sudionika / ≤17 years (range 10–17 years) 12 participants	Katatonija / Catatonia	BFCRS CGI-I	Uglavnom desnostrano unilateralno postavljanjeelektroda. Prelazak na bilateralno po potrebi. / Mostly right unilateral electrode placement, with switching to bilateral when necessary.	Svi su pacijenti (12/12) postigli remisiju katatonije; 6 ih je odgovorilo na isključivo desnostranu unilateralnu stimulaciju, dok su 4 trebala bilateralnu. Maligna katatonija najčešće je zahtijevala bilateralnu stimulaciju. / All patients (12/12) achieved remission of catatonia; 6 responded to right unilateral stimulation alone, while 4 required bilateral stimulation. Malignant catatonia most often required bilateral stimulation.
3.	**Tuncturk i sur., 2022 (38) / Tuncturk et al., 2022 (38)**	Retrospektivni pregled medicinske dokumentacije (Turska). Usporediti karakteristike i ishode adolescenata koji su primali ESTM u odnosu na one liječene klozapinom u terapijski rezistentne shizofrenije / shizoafektivnog poremećaja. / Retrospective medical record review (Turkey). To compare the characteristics and outcomes of adolescents who received ESTM with those treated with clozapine for treatment-resistant schizophrenia or schizoaffective disorder.	10-18 godina ESTM n = 13; klozapin n = 66 / 10-18 years ESTM n = 13; clozapine n = 66	Terapijski rezistentna shizofrenija ili shizoafektivni poremećaj / Treatment-resistant schizophrenia or schizoaffective disorder	PANSS CGI-S	Bilateralno frontotemporalno postavljanje elektrode; 7–12 sesija, 2–3 puta tjedno / Bilateral frontotemporal electrode placement; 7–12 sessions, 2–3 times per week	Obje su skupine pokazale značajno smanjenje PANSS rezultata. Nije bilo značajne razlike u učinkovitosti. Skupina koja je primala ESTM imala je višu početnu težinu bolesti i više rezultate rezistencije. / Both groups showed a significant reduction in PANSS scores. There was no significant difference in effectiveness. The ESTM group had greater baseline illness severity and higher resistance scores.
4.	**Pierson i sur., 2021 (39) / Pierson et al., 2021 (39)**	Retrospektivni pregled medicinske dokumentacije (SAD). Procijeniti kliničke ishode adolescenata koji primaju ESTM te ispitati početne prediktore odgovora na liječenje, broja tretmana i nuspojava. / Retrospective medical record review (USA). To evaluate clinical outcomes in adolescents receiving ESTM and to examine baseline predictors of treatment response, number of treatments, and adverse effects.	Prosjek 16,5 godina (raspon 10-18 godina) 107 pacijenata / Mean age 16.5 years (range 10–18 years) 107 patients	Veliki depresivni poremećaj, bipolarni poremećaj, psihotični poremećaji i katatonija; / Major depressive disorder, bipolar disorder, psychotic disorders, and catatonia;	CGI-I	Tretmani obično svaki drugi dan, tri puta tjedno; položaj elektroda nije naveden. / Treatments were usually administered every other day, three times per week; electrode placement was not specified.	Stopa odgovora (značajno poboljšanje ili vrlo značajno poboljšanje) za cijelu skupinu iznosila je 77 %. Najčešće prijavljene nuspojave bile su glavobolja (75 %) i poteškoće pamćenja (65 %). / The response rate (much improved or very much improved) for the whole group was 77%. The most reported adverse effects were headache (75%) and memory difficulties (65%).
5.	**Karayağmurlu i sur., 2020 (40) / Karayağmurlu et al., 2020 (40)**	Retrospektivni pregled medicinske dokumentacije (Turska). Izvijestiti o učinkovitosti i sigurnosti ESTM-a u velikom uzorku adolescenata. / Retrospective medical record review (Turkey). To report the effectiveness and safety of ESTM in a large sample of adolescents.	14-18 godina (prosjek ≈ 17,1 godina) 62 sudionika. / 14-18 years (mean ≈ 17.1 years) 62 participants.	Bipolarni poremećaj 53 %, veliki depresivni poremećaj 26 %, shizofrenija 13 %, shizoafektivni poremećaj 8 %. / Bipolar disorder 53%, major depressive disorder 26%, schizophrenia 13%, schizoaffective disorder 8%	CGI-S, HDRS, YMRS, PANSS, BDI-II	Standardni bilateralni ESTM, 3 sesije tjedno, prosječan broj sesija ≈ 7,8. Doza prilagođena dobi. / Standard bilateral ESTM, 3 sessions per week, mean number of sessions ≈ 7.8. Age-adjusted dosing.	Značajno poboljšanje na svim ljestvicama CGI-S, HDRS, YMRS, PANSS nakon ESTM-a. Bipolarna depresija bolje je reagirala nego unipolarna. Komorbiditet je smanjio odgovor, ali je ESTM i dalje bila učinkovita metoda. Nuspojave: subjektivni gubitak pamćenja 85 %, glavobolja 69 %, produljeni napadaj 8 %, manični prijelaz 6 %. / Significant improvement was observed on all scales (CGI-S, HDRS, YMRS, PANSS) after ESTM. Bipolar depression responded better than unipolar depression. Comorbidity reduced the treatment response, but ESTM remained an effective method. Adverse effects included subjective memory loss (85%), headache (69%), prolonged seizure (8%), and manic switch (6%).

Nekoliko opservacijskih studija potvrdilo je ove nalaze u heterogenijim i većim uzorcima. Shao i sur. (34), u studiji koja je obuhvatila 288 hospitaliziranih adolescenata (171 liječenih ESTM-om i 117 standardnim liječenjem), izvijestili su o značajnom smanjenju simptoma u obje skupine. Međutim, ESTM je doveo do više stope remisije (28,6 %) u usporedbi sa standardnim liječenjem (16,2 %). Stopa odgovora iznosila je 76,6 % za ESTM, dok je za uobičajeno liječenje bila 81,2 %. Vrijeme do odgovora bilo je dulje kod ESTM-a nego uz farmakoterapiju (34). Slično tome Wang i sur.su u studiji koja je obuhvatila 286 adolescenata s velikim depresivnim poremećajem i suicidalnošću pokazali stopu odgovora od 77,6 % za skupinu ESTM i farmakoterapiju, u usporedbi s 55,2 % za samu farmakoterapiju. Suicidalna ideacija pri otpustu bila je znatno niža u ESTM skupini (18,2 %) nego u skupini samo s lijekovima (41,3 %) (30).

Nekoliko studija izvijestilo je o povoljnom učinku ESTM-a ne samo na depresivne simptome, već i na smanjenje suicidalnih ideacija. Cai i sur. (31) te Hu i sur. (29) neovisno su pokazali da ESTM dovodi do brzog i izraženog smanjenja depresivnosti i suicidalnih misli, nadmašujući antidepresivnu farmakoterapiju u brzini i intenzitetu učinka. U studiju Cai i sur. skupina liječena ESTM-om i antidepresivima pokazala je veće smanjenje rezultata na SIOSS-u i Hamiltonovoj ocjenskoj ljestvici za depresiju od skupine liječene samo antidepresivima (31). Slično je pokazala i studija Hu i sur. uz odgovor na ESTM ≈ 78 % i remisiju u približno 25 % uz značajno smanjenje suicidalnih misli (29). Učinkovitost ESTM-a kod adolescenata s velikim depresivnim poremećajem i suicidalnošću ispitana je u retrospektivnoj studiji slučajeva, koja je obuhvatila 278 adolescenta s prosječnom dobi 15 ± 1,5 godina s ovom dijagnozom. Rezultati istraživanja pokazali su stopu pozitivnog odgovora od 52 % kod adolescenata s velikim depresivnim poremećajem, 49 % kod onih sa suicidalnim mislima te 54 % kod pacijenata koji su prethodno pokušali suicid (30).

Several observational studies have confirmed these findings in more heterogeneous and larger samples. Shao et al. (34), in a study including 288 hospitalized adolescents (171 treated with ESTB and 117 with standard treatment), reported significant symptom reduction in both groups. However, ESTB led to a higher remission rate (28.6%) compared with standard treatment (16.2%). The response rate was 76.6% for ESTB, while it was 81.2% for the usual treatment. Time to response was longer with ESTB than with pharmacotherapy (34). Similarly, Wang et al. (2024), including 286 adolescents with major depressive disorder and suicidality, demonstrated a response rate of 77.6% for the ESTB plus pharmacotherapy group compared with 55.2% for pharmacotherapy alone. Suicidal ideation at discharge was significantly lower in the ESTB group (18.2%) than in the medication-only group (41.3%) (30).

Several studies reported a favorable effect of ESTB not only on depressive symptoms but also on the reduction of suicidal ideation. Cai et al. (31) and Hu et al. (29) independently showed that ESTB led to rapid and pronounced reductions in depression and suicidal thoughts, surpassing antidepressant pharmacotherapy in both speed and magnitude of effect. In the study by Cai et al., the group treated with ESTB plus antidepressants showed greater reductions on the SIOSS and the Hamilton Rating Scale for Depression compared to the antidepressant-only group (31). Similarly, the study by Hu et al. showed a response rate to ESTB of approximately 78% and remission in approximately 25%, with a significant reduction in suicidal ideation (29). The efficacy of ESTB in adolescents with major depressive disorder and suicidality was also examined in a retrospective case study that included 278 adolescents with a mean age of 15 ± 1.5 years. The results showed a positive response rate of 52% in adolescents with major depressive disorder, 49% in those with suicidal ideation, and 54% in patients who had previously attempted suicide (30).

Overall, these ten studies (17–26) provide consistent evidence that ESTB is a highly effective

Sveukupno, ovih deset studija (17-26) pružaju konzistentne dokaze da je ESTM vrlo učinkovita i često brzo djelujuća intervencija za adolescente s velikim depresivnim poremećajem i bipolarnim poremećajem, osobito kada su simptomi teški, hitni ili rezistentni na lijekove.

Učinkovitost ESTM-a u liječenju ostalih psihijatrijskih poremećaja, pozitivni klinički učinci

Jedna studija je ispitivala isključivo učinkovitost ESTM-a u djece i adolescenata s psihotičnim poremećajima i shizofrenijom (38). Još dvije studije istraživale su primjenu ESTM-a kod katatonije (36,37). Nijedna studija nije izvještavala o učinkovitosti ESTM-a u MNS, osim sustavnog preglednog rada (6).

U usporedbi s poremećajima raspoloženja, čini se da shizofrenija i psihoza u adolescenata ima skromniji odgovor na ESTM te je broj dostupnih studija je ograničen. Ovom pretragom dobivena je samo jedna studija koja je ispitivala isključivo učinkovitost ESTM-a u djece i adolescenata s psihotičnim poremećajima i shizofrenijom (38). Studija je uključivala 13 pacijenata liječenih ESTM-om naspram 66 liječenih klozapinom te su zabilježena velika smanjenja ukupnih i podskupnih PANSS rezultata nakon ciklusa ESTM-a, uz stope odgovora u rasponu od 54 % do 70 %, što je usporedivo s onima postignutima klozapinom. Veća početna težina bolesti (viši PANSS, agresivnost) bila je povezana s odabirom ESTM-a, ali nije predviđala lošiji odgovor na liječenje. Štoviše, pacijenti s izraženijom agitacijom često su pokazivali veće apsolutno poboljšanje (38).

Pregledom literature u zadnjih deset godina ESTM se pokazao učinkovitim u liječenju katatonije u pedijatrijskoj populaciji, neovisno o njezinoj etiologiji (6,36,37). U jednoj seriji slučajeva koja je obuhvatila 12 pacijenata, svih 12 pacijenata postiglo je potpuno povlačenje simptoma (37) Veća retrospektivna analiza 36 djece (od kojih 22 s katatonijom) izvijestila je o srednjoj vjerojatnosti poboljšanja na CGI-I ljestvici od

and often rapidly acting intervention for adolescents with major depressive disorder and bipolar disorder, particularly when symptoms are severe, urgent, or medication-resistant.

Efficacy of ESTB in the Treatment of Other Psychiatric Disorders, Positive Clinical Effects

One study exclusively examined the efficacy of ESTB in children and adolescents with psychotic disorders and schizophrenia (38). Two additional studies investigated the use of ESTB in catatonia (36,37). No study reported on the efficacy of ESTB in NMS, except for the systematic review (6).

Compared to mood disorders, schizophrenia and psychosis in adolescents appear to show a more modest response to ESTB, and the number of available studies is limited. This search identified only one study that exclusively examined the efficacy of ESTB in children and adolescents with psychotic disorders and schizophrenia (38). The study included 13 patients treated with ESTB versus 66 treated with clozapine and reported large reductions in total and subscale PANSS scores after a course of ESTB, with response rates ranging from 54% to 70%, comparable to those achieved with clozapine. Greater baseline severity of illness (higher PANSS scores, aggression) was associated with selection of ESTB but did not predict a poorer treatment response. Moreover, patients with more pronounced agitation often showed greater absolute improvement (38).

A review of the literature over the past ten years indicates that ESTB is effective in the treatment of catatonia in the pediatric population, regardless of its etiology (6,36,37). In one case series including 12 patients, all 12 achieved complete remission of symptoms (37). A larger retrospective analysis of 36 children (22 with catatonia) reported a mean probability of improvement on the CGI-I scale of 85% (36). Benzodiazepines remain the first-line therapy; however, ESTB

85 % (36). Benzodiazepini ostaju terapija prvog izbora, no ESTM pouzdano dovodi do remisije nakon neuspjeha liječenja benzodiazepinima te u malignoj katatoniji. Ponekad je bila potrebna i terapija održavanja ESTM-om kod relapsa katatonije, osobito kod pacijenata s neurorazvojnim poremećajima ili medicinski kompleksnim stanjima (36). Ozbiljnost i trajanje katatonih simptoma utjecali su na brzinu remisije pri čemu su teže kliničke prezentacije ponekad zahtijevale bilateralno postavljanje elektroda (36,37).

ESTM može biti terapija izbora u liječenju NMS-a, no zbog njegove rijetke pojavnosti učinkovitost ESTM-a još uvijek nije dovoljno istražena. Dokazi o primjeni ESTM-a kod pedijatrijskog NMS-a ograničeni su na prikaze slučaja i sustavne preglede (6).

Sigurnost i nuspojave ESTM-a kod adolescenata

U pretraženoj literaturi ESTM je dosljedno opisan kao sigurna metoda liječenja za adolescente s teškim, na liječenje rezistentnim psihijatrijskim poremećajima (6,26-40). Nuspojave povezane s ESTM-om u ovoj populaciji općenito se navode kao blage, prolazne i usporedive s onima koje se javljaju kod odraslih (6,26). Nuspojave i njihova učestalost, u studijama uključenima u ovaj pregled, prikazane su u tablici 4.

Najčešće prijavljene nuspojave su kognitivna oštećena i glavobolje (29,31,33,35,36,39,40). Subjektivno kognitivno oštećenje je među najčešće prijavljena nuspojava, s učestalošću pojavljivanja u literaturi između 13,9 i 85 % pacijenta (33,35,36,40). Prospektivna opservacijska studija koja je uključivala 60 pacijenata pokazala je da je bilateralni ESTM bio povezan s blagim, prolaznim padovima prostornog i verbalnog pamćenja jedan dan nakon tretmana, pri čemu su se ove funkcije vratile na početnu razinu unutar dva tjedna. Ista studija nije pronašla pad radnog pamćenja, pažnje ili izvršnih funkcija. Naprotiv, ove su se domene poboljšale dva tjedna nakon tretmana, a poboljšanje se

reliably leads to remission after benzodiazepine treatment failure and in malignant catatonia. In some cases, maintenance ESTB was required in cases of relapse, particularly in patients with neurodevelopmental disorders or medically complex conditions (36). The severity and duration of catatonic symptoms influenced the speed of remission, with more severe clinical presentations sometimes requiring bilateral electrode placement (36,37).

ESTB may be the treatment of choice in NMS; however, due to its rare occurrence, the efficacy of ESTB has not yet been sufficiently investigated. Evidence regarding the use of ESTB in pediatric NMS is limited to case reports and systematic reviews (6).

Safety and Adverse Effects of ESTB in Adolescents

In the reviewed literature, ESTB is consistently described as a safe treatment method for adolescents with severe, treatment-resistant psychiatric disorders (6,26–40). Adverse effects associated with ESTB in this population are generally reported as mild, transient, and comparable to those observed in adults (6,26). The adverse effects and their frequencies in the studies included in this review are presented in Table 4.

The most frequently reported adverse effects are cognitive impairment and headaches (29,31,33,35,36,39,40). Subjective cognitive impairment is among the most commonly reported adverse effects, with a reported frequency ranging from 13.9% to 85% of patients (33,35,36,40). A prospective observational study including 60 patients showed that bilateral ESTB was associated with mild, transient declines in spatial and verbal memory one day after treatment, with these functions returning to baseline within two weeks. The same study did not find declines in working memory, attention, or executive functions; on the contrary, these domains improved two weeks after treatment, and the improvement persisted at a four-month follow-up. No evidence of long-

TABLICA 4. Učestalost nuspojava ESTM-a kod djece i adolescenta
TABLE 4. Frequency of adverse effects of ESTM in children and adolescents.

Nuspojave / Adverse effects	Učestalost u studijama dobivenim pretragom / Frequency in the studies identified through the search	Studije / Studies
Kognitivno oštećenje / Cognitive impairment	13,9- 85 %	Najčešća nuspojava. Obično prolazna (33,35,36,40). / Most common adverse effect. Usually transient (33,35,36,40).
Glavobolja / Headache	54-77 %	Samoograničavajuća, povlači se unutar 24 h (33,35,40). / Self-limiting, resolves within 24 hours (33,35,40).
Mišićna bol / Muscle pain	10.1-69 %	Prijavljena kao česta nuspojava (33,35). / Reported as a common adverse effect (33,35). (33,35).
Mučnina i povraćanje / Nausea and vomiting	11.2-27.8 %	Prijavljena kao česta nuspojava, prolazna (33,35,36). / Reported as a common adverse effect, transient (33,35,36).
Produženi napadaji / Prolonged seizures	5.9-38.9 %	Učestalost češća u adolescenata nego odraslih Liječi se farmakološki (35,36,40). / More frequent in adolescents than in adults. Treated pharmacologically (35,36,40).
Manični prelazak / Manic switch	2.8 %, 6 %	Rijetka nuspojava kod pacijenata koje se liječe od velikog depresivnog poremećaja (26,40). / Rare adverse effect in patients treated for major depressive disorder (26,40).
Delirij / Delirium	34.2 %	Prijavljen kao nuspojava u jednoj studiji, prolazno (33). / Reported as an adverse effect in one study, transient (33).
Vrtoglavica / Dizziness	8.3 %	Prijavljena kao nuspojava u jednoj studiji (36). / Reported as an adverse effect in one study (36).

zadržalo i na kontrolnom pregledu nakon četiri mjeseca. Nije pronađen nikakav dokaz o dugotrajnim kognitivnim oštećenjima (29). Drugo istraživanje izvijestilo je o prolaznim oštećenjima pamćenja, pažnje i govora, koja su se postupno povukla šest tjedana nakon ESTM-a (31).

U različitim studijama glavobolja je zabilježena u 54 % do 77 % adolescenata te se obično opisuje kao blaga, samoograničavajuća i povlači se unutar 24 sata (33,35,40). Ostale nuspojave uključuju bol u mišićima ili tijelu (10,1 % do 69 %) (33,35), mučninu i/ili povraćanje (11,2 % do 27,8 %) (33,35,36) te vrtoglavicu (učestalost u jednoj studiji 8,3 %) (36). Ovi simptomi obično nestaju unutar jednog dana nakon tretmana (36). Delirij je također zabilježen kod 34,2 % adolescenata u jednoj velikoj retrospektivnoj seriji (33). Poseban oprez pri primjeni ESTM-a u dječjoj i adolescentnoj dobi zahtijevaju produženi napadaji. Produženi napadaji su konvulzivni napadaji koji traju dulje od 180 sekundi nakon primjene električnog impulsa u sklopu ESTM-a. Prijavljene stope u adolescentskim skupinama kreću se od 8 % do 38,9 % pacijenata koji su tijekom terapijskog ciklusa doživjeli barem jedan

term cognitive impairment was found (29). Another study reported transient impairments in memory, attention, and speech, which gradually resolved six weeks after ESTB (31).

Headache was reported in 54% to 77% of adolescents in different studies and was usually described as mild, self-limiting, and resolving within 24 hours (33,35,40). Other adverse effects include muscle or body pain (10.1% to 69%) (33,35), nausea and/or vomiting (11.2% to 27.8%) (33,35,36), and dizziness (8.3% in one study) (36). These symptoms usually resolved within one day after treatment (36). Delirium was also reported in 34.2% of adolescents in one large retrospective series (33). Particular caution is required when using ESTB in children and adolescents with prolonged seizures. Prolonged seizures are convulsive seizures lasting longer than 180 seconds after the administration of the electrical stimulus during ESTB. Reported rates in adolescent groups range from 8% to 38.9% of patients experiencing at least one prolonged seizure during a treatment course (35,36,40). One recommendation to reduce the likelihood of this event is the use of propofol as an alternative anesthetic option to shorten seizure duration (36).

produljeni napadaj (35,36,40). Jedna od preporuka da se smanji vjerojatnost ovog događaja je korištenje propofola kao alternativne opcije anestezije za skraćivanje trajanja napadaja (36). Razvoj maničnih simptoma tijekom ESTM-a primijenjenog zbog depresije je zabilježena kao rijetka nuspojava. Studije su prijavile incidencije od 6 % i 2,8 % u svojim uzorcima (26,40).

PRIKAZ BOLESNIKA

Ova klinička vinjeta opisuje primjenu ESTM kod 19-godišnje pacijentice s dijagnozom shizofrenije s dominantno dezorganiziranim simptomima, rezistentne na dotadašnju terapiju. Pacijentica je bila urednog psihomotornog razvoja, rođena iz uredne trudnoće i poroda. Pacijentica je prvi put pregledana od strane dječjeg i adolescentnog psihijatra u dobi od 15 godina, kada joj je postavljena dijagnoza anoreksije nervoze (bulimično-restriktivni tip) uz umjereno tešku pothranjenost. Opsežna dijagnostička obrada, uključujući psihijatrijski intervju i psihički status, nekoliko psiholoških testiranja, magnetsku rezonanciju (MR), elektroencefalografiju (EEG), višestruke elektrokardiograme (EKG), ehokardiografiju i laboratorijske pretrage, ukazala je na promjene povezane s poremećajem hranjenja i pothranjenošću. Primijenjeno je multimodalno i multidisciplinarno intenzivno dječje psihijatrijsko liječenje, uključujući dominanto psihosocijalno liječenje, kao i rad s roditeljima. Tijekom narednih godina pacijentica je višekratno stacionarno hospitalizirana na psihijatrijskim odjelima za djecu i adolescente, uz dodatno ambulantno liječenje. U dobi od 17 godina dolazi do promjene kliničke slike pri čemu se pojavljuju slušne obmane osjetila, dezorganizirano ponašanje i paranoidne sumanutosti te joj je dijagnosticirana shizofrenija s dominantno dezorganiziranim simptomima. Ponavljaju se opsežne dijagnostičke pretrage uz lumbalnu punkciju i analizu likvora radi potencijalne mogućnosti encefalitisa. Tijekom četiri godine liječenja primijenjeni su različiti psihosocijalni modaliteti

The development of manic symptoms during ESTB administered for depression has been reported as a rare adverse effect. Studies have reported incidences of 6% and 2.8% in their samples (26,40).

CASE REPORT

This clinical vignette describes the use of ESTB in a 19-year-old patient diagnosed with schizophrenia with predominantly disorganized symptoms, resistant to previous therapy. The patient had normal psychomotor development and was born after an uncomplicated pregnancy and delivery. She was first examined by a child and adolescent psychiatrist at the age of 15, when she was diagnosed with anorexia nervosa (bulimic-restrictive type) with moderate to severe malnutrition. An extensive diagnostic work-up, including a psychiatric interview and mental status examination, several psychological assessments, magnetic resonance imaging (MRI), electroencephalography (EEG), multiple electrocardiograms (ECG), echocardiography, and laboratory tests, indicated changes associated with an eating disorder and malnutrition. Multimodal and multidisciplinary intensive child psychiatric treatment was implemented, predominantly psychosocial treatment, as well as work with the parents.

During the following years, the patient was repeatedly hospitalized in inpatient child and adolescent psychiatric units and received outpatient treatment. At the age of 17, a change in the clinical picture occurred, with the emergence of auditory hallucinations, disorganized behavior, and paranoid delusions, and she was diagnosed with schizophrenia with predominantly disorganized symptoms. Extensive diagnostic testing was repeated, including lumbar puncture and cerebrospinal fluid analysis, to exclude possible encephalitis. Over four years of treatment, various multimodal and multidisciplinary psychosocial treatment modalities were applied, including work with the parents, as well as psychopharma-

liječenja, multimodalni i multidisciplinarni, rad s roditeljima, kao i psihofarmakoterapija: antipsihotici i antidepresivi, uključujući risperidon, olanzapin, haloperidol, flufenazin i klozapin, kao monoterapija ili u različitim kombinacijama. S obzirom na neuspjeh liječenja i ozbiljnost simptoma u dobi od 19 godina, donesena je odluka o primjeni ESTM od adultnih psihijatara, uz konzultaciju s dotadašnjim dječjim psihijatrima. Dijagnostička obrada provedena prije ESTM-a uključivala je laboratorijske pretrage, EEG, CT mozga i pregled anesteziologa. Pacijentica je potpisala informirani pristanak, terapiju je odobrilo etičko povjerenstvo, dobiven je i pristanak roditelja. Primijenjen je bilateralni ESTM uz anesteziju i mišićnu relaksaciju. Tretmani su provođeni tri puta tjedno četiri tjedna, ukupno 12 tretmana. Pacijentica je iznosila blage nuspojave u obliku zbunjenosti i glavobolje, koje su se povukle unutar nekoliko sati. Nakon primjene ESTM-a pacijentica je iznosila smanjenje intenziteta slušnih obmana te su paranoidne ideje postale manje izražene. Nakon završetka ciklusa ESTM-a pacijentica je nastavila psihijatrijskim praćenjem te terapijom antipsihoticima, uključujući klozapin i dugodjelujući flufenazin. ESTM se pokazao učinkovitim u ovom slučaju, tako što su se ublažili simptomi i posljedično poboljšala kvaliteta života pacijentice.

Ovaj prikaz bolesnice otvara pitanje vremenskog okvira primjene ESTM-a u adolescenata s teškim i terapijski rezistentnim psihijatrijskim poremećajima, osobito u kontekstu organizacijskih i pravnih ograničenja unutar zdravstvenog sustava.

RASPRAVA

Uvodni aspekti

Ovaj pregled sintetizira dostupne dokaze o učinkovitosti i sigurnosti ESTM-a u djece i adolescenata, uz dodatni prikaz slučaja. Dobiveni rezultati u skladu su s prethodnim pregledima

cotherapy: antipsychotics and antidepressants, including risperidone, olanzapine, haloperidol, fluphenazine, and clozapine, as monotherapy or in different combinations. Due to treatment failure and the severity of symptoms, at the age of 19 a decision was made to administer ESTB by adult psychiatrists, in consultation with the treating child psychiatrists. The diagnostic work-up prior to ESTB included laboratory tests, EEG, brain CT, and an evaluation by an anesthesiologist. The patient signed informed consent, and the therapy was approved by the ethics committee, along with parental consent. Bilateral ESTB was administered under anesthesia and muscle relaxation. Treatments were performed three times per week for four weeks, for a total of 12 sessions. The patient reported mild adverse effects in the form of confusion and headache, which resolved within a few hours. After the administration of ESTB, the patient reported a reduction in the intensity of auditory hallucinations, and paranoid ideas became less pronounced. Upon completion of the ESTB cycle, the patient continued with psychiatric follow-up and antipsychotic therapy, including clozapine and long-acting fluphenazine. ESTB proved effective in this case by alleviating symptoms and consequently improving the patient's quality of life.

This case report raises questions regarding the timing of ESTB administration in adolescents with severe and treatment-resistant psychiatric disorders, particularly in the context of organizational and legal limitations within the healthcare system.

DISCUSSION

Introductory Aspects

This review synthesizes the available evidence on the efficacy and safety of ESTB in children and adolescents, along with an additional case report. The obtained results are consistent with previous literature reviews and confirm that

literature te potvrđuju da je ESTM učinkovita terapijska opcija u liječenju teških i terapijski rezistentnih poremećaja raspoloženja, katatonije, pojedinih psihotičnih poremećaja te neuroleptičkog malignog sindroma (5,6,7,11-13,24).

Poremećaji raspoloženja

Sukladno ranijim pregledima literature o primjeni ESTM-a u djece i adolescenata (5-7,11-13,24) i u okviru ovog pregleda najčvršći i najkonzistentniji dokazi odnose se na poremećaje raspoloženja. U odnosu na većinu ranijih preglednih radova, ovaj pregled uključuje i randomizirana kontrolirana ispitivanja čime se dodatno unapređuje kvaliteta dostupnih dokaza o učinkovitosti ESTM-a u adolescenata. Sustavni pregled Castanede-Ramireza i sur. izvijestio je o stopama odgovora u rasponu od 51 do 92 % pri čemu su veće serije bolesnika pokazale stope odgovora od 70-82 % za depresiju i 87-90 % za manične epizode (13). Døssing i Pagsberg, unatoč niskoj ukupnoj razini dokaza, koja se pretežito temelji na opservacijskim studijama, ističu da ESTM treba razmotriti u teškim i terapijski rezistentnim epizodama raspoloženja u adolescenata, uz prijavljenu učinkovitost od 75 do 100 % za depresivne i bipolarne epizode u pedijatrijskoj populaciji (6).

U skladu s navedenim, rezultati ovog pregleda potvrđuju da je ESTM osobito učinkovita terapijska opcija u adolescenata s terapijski rezistentnom depresijom praćenom izraženim suicidalnim ideacijama ili pokušajima suicida. U više uključenih studija zabilježene su visoke stope kliničkog odgovora i značajno smanjenje suicidalnosti, osobito kada se ESTM primjenjuje u kombinaciji s farmakoterapijom (27,29-31). Međutim, slično kao i u ranijim pregledima, manjak longitudinalnih podataka ograničava procjenu trajnosti smanjenja suicidalnosti nakon završetka ESTM-a, što upućuje na potrebu za daljnjim istraživanjima (13). Pregled literature također upućuje na postojanje čimbenika koji mogu utjecati na terapijski odgovor. Bolji ishod

ESTB is an effective therapeutic option in the treatment of severe and treatment-resistant mood disorders, catatonia, certain psychotic disorders, and neuroleptic malignant syndrome (5,6,7,11,12,13,24).

Mood Disorders

In line with earlier literature reviews on the use of ESTB in children and adolescents (5-7,11-13,24), the strongest and most consistent evidence in this review also relates to mood disorders. Compared with most previous review papers, this review also includes randomized controlled trials, thereby further improving the quality of the available evidence on the efficacy of ESTB in adolescents. The systematic review by Castaneda-Ramirez et al. reported response rates ranging from 51% to 92%, with larger patient series showing response rates of 70–82% for depression and 87–90% for manic episodes (13). Døssing and Pagsberg, despite the overall low level of evidence largely based on observational studies, emphasize that ESTB should be considered in severe and treatment-resistant mood episodes in adolescents, with reported efficacy of 75% to 100% for depressive and bipolar episodes in the pediatric population (6).

Consistent with this, the results of this review confirm that ESTB is a particularly effective therapeutic option in adolescents with treatment-resistant depression accompanied by pronounced suicidal ideation or suicide attempts. Several included studies reported high rates of clinical response and significant reductions in suicidality, especially when ESTB is administered in combination with pharmacotherapy (27,29,30,31). However, similarly to earlier reviews, the lack of longitudinal data limits assessment of the durability of reduced suicidality after completion of ESTB, indicating the need for further research (13). The literature review also indicates the presence of factors that may influence therapeutic response. Better treatment outcomes have been described in adolescents with bipolar disorder compared with unipolar

di liječenja opisani su u adolescenata s bipolarnim poremećajem u usporedbi s unipolarnom depresijom, dok prisutnost komorbiditetnih poremećaja, dulje trajanje bolesti i nepovoljni obiteljski čimbenici smanjuju vjerojatnost odgovora (28,39,40). Nalazi iz literature također upućuju na to da se antidepresivni učinci ESTM-a vremenom mogu smanjiti, što naglašava potrebu za sustavnim strategijama prevencije relapsa, uključujući optimiziranu farmakoterapiju, psihoterapiju i, u odabranim slučajevima, održavajući ESTM (28). Najnovija randomizirana kontrolirana ispitivanja dodatno sugeriraju da je moguće optimizirati primjenu ESTM-a pri čemu niskodozni protokoli postižu neinferiornu kliničku učinkovitost uz povoljniji kognitivni profil, a MST se nameće kao potencijalna alternativa s usporedivim terapijskim učinkom i boljom kognitivnom očuvanošću (26,27).

Ostali psihijatrijski poremećaji

ESTM je indiciran kod poremećaja iz shizofrenog spektra kod adolescenta kada su simptomi teški, postoji značajan rizik za pacijenta ili kada cjelokupno psihosocijalno i farmakološko liječenje nije učinkovito ili nije sigurno za primjenu (41,42). ESTM se posebno preporučuje u slučajevima izraženih katatonih, afektivnih ili pozitivnih simptoma, kao i kod pacijenata s ozbiljnom agitacijom ili odbijanjem hrane (23). U usporedbi s poremećajima raspoloženja i katatonijom, dokazi za primjenu ESTM-a kod adolescenata sa shizofrenim spektrom poremećaja ograničeniji su i upućuju na umjerenije stope odgovora. Sustavni pregled Døssinga i Pagsberga navodi da oko 54 % adolescenata sa shizofrenijom pokazuje odgovor na ESTM kada se primjenjuje kao monoterapija, dok se stopa odgovora povećava na približno 75 % kada se ESTM kombinira s antipsihoticima (6). Ove brojke u skladu su s podatcima iz populacije odraslih i podupiru uobičajenu kliničku praksu primjene ESTM-a kao augmentacijske strategije u terapijski rezistentnoj psihozi, a ne

depression, while the presence of comorbid disorders, longer duration of illness, and adverse family factors reduce the likelihood of response (28,39,40). Findings from the literature also suggest that the antidepressant effects of ESTB may diminish over time, highlighting the need for systematic relapse-prevention strategies, including optimized pharmacotherapy, psychotherapy, and, in selected cases, maintenance ESTB (28). The most recent randomized controlled trials further suggest that it is possible to optimize ESTB administration, with low-dose protocols achieving non-inferior clinical efficacy with a more favorable cognitive profile, and MST emerging as a potential alternative with comparable therapeutic effects and better cognitive preservation (26,27).

Other Psychiatric Disorders

ESTB is indicated in adolescents with schizophrenia spectrum disorders when symptoms are severe, there is significant risk to the patient, or when comprehensive psychosocial and pharmacological treatment is ineffective or unsafe (41,42). ESTB is particularly recommended in cases with prominent catatonic, affective, or positive symptoms, as well as in patients with severe agitation or refusal of food (23). Compared with mood disorders and catatonia, the evidence for the use of ESTB in adolescents with schizophrenia spectrum disorders is more limited and suggests more moderate response rates. The systematic review by Døssing and Pagsberg states that approximately 54% of adolescents with schizophrenia show a response to ESTB when used as monotherapy, while the response rate increases to approximately 75% when ESTB is combined with antipsychotics (6). These figures are consistent with data from the adult population and support the usual clinical practice of applying ESTB as an augmentation strategy in treatment-resistant psychosis rather than as monotherapy (6). ESTB may be a valuable option for severely agitated, aggressive, or profoundly psychotic adolescents, particularly when a rapid therapeutic effect is required or when

kao monoterapije (6). ESTM može biti vrijedna opcija za izrazito agitirane, agresivne ili teško psihotične adolescente, osobito kada je potreban brz terapijski učinak ili su antipsihotici nedjelotvorni ili slabo podnošljivi (38).

Katatonija etiopatogenetski može biti povezana s psihijatrijskim poremećajima, poput bipolarnog i depresivnog poremećaja, psihoze, konverzivnih i neurorazvojnih poremećaja (autizam, intelektualne teškoće), ali i s medicinskim stanjima, uključujući infektivne bolesti središnjeg živčanog sustava, neurološke i degenerativne bolesti, metaboličke poremećaje, sistemske te autoimunosne bolesti (42). Ovaj kompleksni sindrom često ostaje neprepoznat te predstavlja hitno stanje s mogućnošću komplikacija i letalnog ishoda. Rana dijagnoza ključna je za bolje ishode liječenja. Nepravovremeno liječenje katatonije povezane s psihičkim poremećajima može rezultirati razvojem maligne katatonije, ozbiljnim komplikacijama, pa i mogućim smrtnim ishodom (41). Serije slučajeva i retrospektivne kohorte opisuju stope odgovora između 77 % i 100 %, često uz potpuno povlačenje katatoničnih simptoma nakon akutnog ciklusa ESTM-a **(**6). Ovi nalazi u skladu su s literaturom iz odrasle populacije i dodatno podupiru postojeće preporuke da se ESTM razmotri promptno, osobito kada je katatonija po život opasna, maligna ili refraktorna na benzodiazepine (23,43).

Sigurnosni profil

Sigurnosni profil ESTM-a u adolescenata pokazuje se povoljnim većina nuspojava se navode kao blage, prolazne i usporedive s onima koje se javljaju kod odraslih. Novije prospektivne studije koje koriste neuropsihološke procjene dosljedno bilježe kratkotrajna pogoršanja pojedinih domena pamćenja i pažnje neposredno nakon tretmana, uz oporavak unutar nekoliko tjedana. U više radova zabilježena su i poboljšanja radnog pamćenja, izvršnih funkcija te vizualnog i socijalnog učenja u razdoblju praćenja (23,36). Ovi nalazi podudaraju se s nalazima u ranijim radovima,

antipsychotics are ineffective or poorly tolerated (38).

Catatonia may be etiopathogenetically associated with psychiatric disorders such as bipolar and depressive disorders, psychosis, conversion, and neurodevelopmental disorders (autism, intellectual disability), as well as medical conditions, including infectious diseases of the central nervous system, neurological and degenerative diseases, metabolic disorders, and systemic and autoimmune diseases (42). This complex syndrome often remains unrecognized and represents an emergency condition with the possibility of complications and lethal outcomes. Early diagnosis is crucial for better treatment outcomes. Untimely treatment of catatonia associated with psychiatric disorders may result in the development of malignant catatonia, serious complications, and possible fatal outcomes (41). Case series and retrospective cohorts describe response rates between 77% and 100%, often with complete resolution of catatonic symptoms after an acute course of ESTB (6). These findings are consistent with the adult literature and further support existing recommendations that ESTB should be considered promptly, especially when catatonia is life-threatening, malignant, or refractory to benzodiazepines (23,43).

Safety Profile

The safety profile of ESTB in adolescents appears favorable; most adverse effects are reported as mild, transient, and comparable to those observed in adults. More recent prospective studies using neuropsychological assessments consistently record short-term worsening in certain domains of memory and attention immediately after treatment, with recovery within several weeks. Several studies have also reported improvements in working memory, executive functions, and visual and social learning during follow-up (23,36). These findings correspond to results of earlier studies, which found no convincing evidence of persistent cognitive deficits in adolescents (6,12,13,44). Available evidence

koji ne nalaze uvjerljive dokaze o trajnim kognitivnim deficitima kod adolescenata (6,12,13,44). Dostupni dokazi upućuju na to da su kognitivne nuspojave uglavnom prolazne i da se mogu dodatno umanjiti optimizacijom doziranja, izborom jednostrane stimulacije ili primjenom MST-a te sustavnim praćenjem kognitivnog funkcioniranja prije i nakon liječenja (26,27,29,31).

Metodološka ograničenja i kvaliteta

Analiza dizajna uključenih studija upućuje na dominaciju opservacijskih istraživanja, što ograničava razinu dokaza u ovom području. Samo su dvije od uključenih studija bile randomizirana kontrolirana ispitivanja (26,27). Ova raspodjela radova pokazuje da, čak i u posljednjem desetljeću, baza dokaza za korištenje ESTM-a i dalje uvelike ovisi o iskustvima pojedinačnih centara iz opservacijskih istraživanja. Ovi nalazi ukazuju na jasnu potrebu randomiziranih istraživanja. Važno je istaknuti da, za razliku od prethodnih preglednih radova koji su bili ograničeni gotovo isključivo na opservacijske podatke (5,6,7,12,13), ovaj pregled uključuje i dva recentna randomizirana kontrolirana ispitivanja (objavljena 2025. godine) (26,27). Jedno od važnih ograničenja je i veličina uzorka koja je skromna u većini studija, osobito kod poremećaja iz shizofrenog spektra i katatonije, što ograničava mogućnost otkrivanja rijetkih nuspojava te identificiranja pouzdanih prediktora odgovora na liječenje (36,37).

Drugo ograničenje je manjak podataka o praćenju nakon liječenja. Samo četiri (29-31,33) od 16 studija eksplicitno su izvijestile o praćenju nakon tretmana, dok se preostalih dvanaest (26-28,32,34-40) usredotočilo isključivo na akutne ishode mjerene tijekom ili neposredno nakon ESTM ciklusa. Ovakva raspodjela studija otežava procjenu održivosti terapijskih učinaka i potencijalnih kasnih nuspojava te ukazuje na potrebu za longitudinalnim istraživanjima kako

suggests that cognitive adverse effects are generally transient and may be further reduced by optimizing dosing, choosing unilateral stimulation, or using MST, and by systematic monitoring of cognitive functioning before and after treatment (26,27,29,31).

Methodological Limitations and Quality

Analysis of the design of the included studies indicates a predominance of observational research, which limits the level of evidence in this field. Only two of the included studies were randomized controlled trials (26,27). This distribution shows that, even in the past decade, the evidence base for the use of ESTB still largely depends on single-center observational research. These findings indicate a clear need for randomized studies. It is important to note that, unlike previous review papers that were limited almost exclusively to observational data (5,6,7,12,13), this review includes two recent randomized controlled trials (published in 2025) (26,27). One important limitation is also the modest sample size in most studies, particularly for schizophrenia spectrum disorders and catatonia, which limits the ability to detect rare adverse effects and identify reliable predictors of treatment response (36,37).

Another limitation is the lack of follow-up data after treatment. Only four (29,30,31,33) of the 16 studies explicitly reported follow-up after treatment, while the remaining twelve (26–28,32,34–40) focused exclusively on acute outcomes measured during or immediately after the ESTB course. This distribution makes it difficult to assess the sustainability of therapeutic effects and potential late adverse effects and indicates the need for longitudinal research to better understand the long-term benefits and safety profile of ESTB in this population. These limitations are consistent with findings of previous reviews, which also highlight short follow-up duration, lack of control groups, and reliance on non-standardized outcome mea-

bi se bolje razumjeli dugoročni benefiti i sigurnosni profil ESTM-a u ovoj populaciji. Navedena ograničenja u skladu su s nalazima prethodnih preglednih radova, koji također ističu kratko trajanje praćenja, nedostatak kontrolnih skupina i oslanjanje na nestandardizirane mjere ishoda kao ključne slabosti postojeće literature (6,7,13).

UPORABA ESTM-a U DJECE I ADOLESCENATA U HRVATSKOJ

U Hrvatskoj se ESTM primjenjuje od 1960-ih godina, a trenutačno se provodi isključivo u odrasloj populaciji. Postupak se izvodi na Klinici za psihijatriju i psihološku medicinu KBC-a Zagreb, Klinici za psihijatriju KBC-a Sestre milosrdnice, Klinici za psihijatriju KBC-a Split i Klinici za psihijatriju KBC-a Osijek, u skladu sa smjernicama Hrvatskog psihijatrijskog društva (10,16,45,46). Zakon o zaštiti osoba s duševnim smetnjama, koji je na snazi od 1. siječnja 2015., sadrži jasne odredbe o primjeni ESTM-a. Iako se eksplicitno ne zabranjuje primjena ESTM-a u maloljetnika, zahtjev da pisani informirani pristanak daje sam pacijent u praksi ograničava mogućnost njegove primjene u toj dobnoj skupini te ostavlja određenu pravnu nedorečenost (47). Prema dostupnim podatcima ESTM se u Hrvatskoj nije primjenjivao u maloljetničkoj populaciji tijekom posljednjih nekoliko desetljeća, a nema ni objavljenih studija iz našeg konteksta za ovu populaciju. Djelomično se to može objasniti i organizacijskom odvojenošću adultne i dječje psihijatrije, što otežava razvoj zajedničkih protokola. Potencijal za bližu suradnju zasad postoji tek u nekolicini centara među kojima se ističe KBC Zagreb. Prikaz kliničkog slučaja opisan u ovom radu dodatno ilustrira praktične i pravne izazove s kojima se kliničari susreću pri razmatranju primjene ESTM-a u adolescenata u Hrvatskoj. Iako je terapijski postupak proveden nakon navršene punoljetnosti, klinički tijek bolesti i težina simptoma upućuju na potrebu ranijeg razmatranja ove metode u skladu s međunarodnim smjernicama.

sures as key weaknesses of the existing literature (6,7,13).

USE OF ESTB IN CHILDREN AND ADOLESCENTS IN CROATIA

In Croatia, ESTB has been used since the 1960s and is currently performed exclusively in the adult population. The procedure is carried out at the Clinic of Psychiatry and Psychological Medicine of the University Hospital Centre Zagreb, the Clinic of Psychiatry of the University Hospital Centre Sestre milosrdnice, the Clinic of Psychiatry of the University Hospital Centre Split, and the Clinic of Psychiatry of the University Hospital Centre Osijek, in accordance with the guidelines of the Croatian Psychiatric Association (10,16,45,46). The Act on the Protection of Persons with Mental Disorders, which has been in force since January 1, 2015, contains clear provisions regarding the use of ESTB. Although it does not explicitly prohibit the use of ESTB in minors, the requirement that written informed consent be provided by the patients themselves, in practice, limits the possibility of its use in this age group and leaves a degree of legal ambiguity (47). According to available data, ESTB has not been applied in the minor population in Croatia over the past several decades, and there are no published studies from our context for this population. This can partly be explained by the organizational separation of adult and child psychiatry, which hampers the development of joint protocols. The potential for closer cooperation currently exists only in a small number of centers, among which the University Hospital Centre Zagreb stands out. The clinical case described in this paper further illustrates the practical and legal challenges clinicians face when considering the use of ESTB in adolescents in Croatia. Although the therapeutic procedure was performed after the patient reached adulthood, the clinical course of the illness and symptom severity indicate the need for earlier consideration of this method in line with international guidelines.

ZAKLJUČAK

ESTM je učinkovita i sigurna klinički terapijska opcija za odabrane adolescente s teškim, terapijski rezistentnim poremećajima raspoloženja, katatonijom, neuroleptičkim malignim sindromom i pojedinim poremećajima iz shizofrenog spektra. Najdosljedniji i najčvršći dokazi odnose se na poremećaje raspoloženja i katatoniju, u kojima ESTM često dovodi do brzog i izraženog kliničkog poboljšanja, osobito u hitnim i životno ugrožavajućim situacijama. Kod psihotičnih poremećaja učinkovitost je umjerena, ali klinički relevantna, osobito u slučajevima izražene agitacije ili slabog odgovora na antipsihotike. Suvremeni podatci upućuju na povoljan sigurnosni profil ESTM-a pri čemu su kognitivne nuspojave uglavnom blage i prolazne te manje izražene uz primjenu modernih protokola i pažljivo doziranje. Ipak, većina dostupnih studija ima opservacijski dizajn i kratko razdoblje praćenja, što ograničava pouzdanost zaključaka o dugoročnim ishodima liječenja. U Hrvatskoj se ESTM zasad ne primjenjuje u maloljetničkoj populaciji, djelomično zbog pravnih nejasnoća i organizacijskih prepreka. Zato je u ovom pregledu opisan slučaj mlađe punoljetne osobe. U tom kontekstu nalazi ovog pregleda naglašavaju potrebu za razvojem jasnih nacionalnih preporuka i međusobno usklađenih protokola koji bi omogućili pravodobno, etički utemeljeno i klinički opravdano razmatranje primjene ESTM-a u djece i adolescenata. Čest argument protiv primjene ESTM-a kod maloljetnika jest nedostatak kvalitetnih znanstvenih dokaza, što potvrđuju i postojeća istraživanja. Međutim, kod izrazito terapijski rezistentnih pacijenata s ograničenim mogućnostima liječenja taj argument ima manju težinu. U takvim slučajevima randomizirana ispitivanja često nisu medicinski ni etički izvediva, pa se odluke moraju temeljiti na kliničkom iskustvu i dostupnim studijama. Nedostatci dokaza sami po sebi ne opravdavaju potpuno odbacivanje ESTM-a, osobito kada izostanak primjene ESTM može dovesti do dugotrajnih psiholoških, socijalnih i bioloških posljedica.

CONCLUSION

This review shows that ESTB is an effective and safe clinical therapeutic option for selected adolescents with severe, treatment-resistant mood disorders, catatonia, neuroleptic malignant syndrome, and certain schizophrenia spectrum disorders. The most consistent and strongest evidence relates to mood disorders and catatonia, in which ESTB often leads to rapid and pronounced clinical improvement, particularly in emergency and life-threatening situations. In psychotic disorders, efficacy is moderate but clinically relevant, especially in cases of pronounced agitation or poor response to antipsychotics. Contemporary data indicate a favorable safety profile of ESTB, with cognitive adverse effects generally mild and transient and less pronounced with modern protocols and careful dosing. Nevertheless, most available studies have an observational design and a short follow-up period, which limits the reliability of conclusions regarding long-term treatment outcomes. In Croatia, ESTB is not yet used in the minor population, partly due to legal ambiguities and organizational barriers. Therefore, this review describes the case of a younger adult. In this context, the findings of this review emphasize the need to develop clear national recommendations and mutually harmonized protocols that would enable timely, ethically grounded, and clinically justified consideration of ESTB in children and adolescents. A frequent argument against the use of ESTB in minors is the lack of high-quality scientific evidence, which is also confirmed by existing studies. However, this argument carries less weight in highly treatment-resistant patients with limited treatment options. In such cases, randomized trials are often neither medically nor ethically feasible, and decisions must be based on clinical experience and available studies. The limitations of evidence alone do not justify the complete rejection of ESTB, particularly when the absence of ESTB may lead to long-term psychological, social, and biological consequences.

LITERATURA / *REFERENCES*

1. Brečić P. Povijest psihijatrije. U: Begić D. (ur.) Psihijatrija. Zagreb: Medicinska naklada, 2022.
2. Ferrier IN, Waite J. The ECT Handbook. Cambridge University Press, 2019.
3. Sadek J. Electroconvulsive Therapy. U: Clinician's Guide to Psychopharmacology. Cham: Springer International Publishing, 2021.
4. Šagud M, Goluža E, Mihaljević-Peleš A, Kosanović Rajačić B, Bradaš Z, Božičević M. Electroconvulsive therapy: eighty years of Croatian and international experience. Lijecn Vjesn 2020;142:7-8. Dostupno na: https://doi.org/10.26800/LV-142-7-8-415.
5. Rey JM. Half a century of ECT use in young people. Am J Psychiatry 1997;154(5):595-602. Dostupno na: https://doi.org/10.1176/ajp.154.5.595.
6. Døssing E, Pagsberg AK. Electroconvulsive Therapy in Children and Adolescents: A Systematic Review of Current Literature and Guidelines. J ECT 2021;37(3):158-70. Dostupno na:https://doi.org/10.1097/YCT.0000000000000761
7. Singh, A, Singh V. Electroconvulsive therapy for pediatric population. Curr Behav Neurosci Rep 2024;11:14-22. Dostupno na: https://doi.org/10.1007/s40473-023-00269-0.
8. Hrvatski jezični portal. Pristupljeno 1. siječnja 2025. Dostupno na: https://hjp.znanje.hr/.
9. Walter G, Robertson M, Rey JM, Soh N, Malhi GS. Electroconvulsive therapy in young people and the pioneering spirit of Lauretta Bender. Acta Neuropsychiatr 2010;22(5): 253-4.
10. Mihaljević-Peleš A, Bajs Janović M, Stručić A, Šagud M, Skočić Hanžek M, Živković M i sur. Electroconvulsive therapy - general considerations and experience in Croatia. Psychiatr Danub 2018;30(4):188-91. Dostupno na: https://hrcak.srce.hr/262894.
11. Licht C, Weirich S, Reis O, Kölch M, Grözinger M. Electroconvulsive therapy in children and adolescents in Europe-a systematic review of the literature complemented by expert information and guideline recommendations. Eur Child Adolesc Psychiatry 2024;33(10):3389-403. Dostupno na: https://doi.org/10.1007/s00787-023-02248-y.
12. Lima NN, Nascimento VB, Peixoto JA, Moreira MM, Neto ML, Almeida JC *et al.*. Electroconvulsive therapy use in adolescents: a systematic review. Ann Genl Psychiatry. 2013;12(1). Dostupno na: https://doi.org/10.1186/1744-859X-12-17.
13. Castaneda-Ramirez S, Becker TD, Bruges-Boude A, Kellner C, Rice TR. Systematic review: Electroconvulsive therapy for treatment-resistant mood disorders in children and adolescents. Eur Child Adolesc Psychiatry 2023;32(9):1529-60.
14. Leaver AM, Espinoza R, Wade B, Narr KL. Parsing the network mechanisms of electroconvulsive Therapy. Biol Psychiatry 2022;92(3):193-203. Dostupno na: https://doi.org/10.1016/j.biopsych.2021.11.016.
15. Singh A, Kar SK. How electroconvulsive therapy works? Understanding the neurobiological mechanisms. Clin Psychopharmacol Neurosci 2017;15(3):210-21. Dostupno na: https://doi.org/10.9758/cpn.2017.15.3.210.
16. Grubišin J, Rojnić Kuzman M, Degmečić D, Filipčić I, Goluza E, Gubarev N et al. Croatian guidelines for the administration of electroconvulsive therapy (ECT). U: Jukić V, Brečić P, Vidović D. (ur.) Book of Abstracts. 7th Croatian Psychiatric Congress with International Participation, 2018 .
17. Ghaziuddin N, Kutcher SP, Knapp P. Practice parameter for use of electroconvulsive therapy with Adolescents. J Am Acad Child Adolesc Psychiatry 2004;43(12):1521-39. Dostupno na. https://doi.org/10.1097/01.chi.0000142280.87429.68.
18. National Institute for Health and Care Excellence. Guidance on the use of electroconvulsive therapy. NICE, 2003. Preuzeto 3. ožujka 2025. https://www.nice.org.uk/guidance/ta59.
19. Ferrier IN. Electroconvulsive Therapy in Children and Adolescents. U: Ferrier IN, Waite J, (ur.). The ECT Handbook. Cambridge University Press, 2019.
20. McClellan J, Kowatch R, Findling RL. Practice parameter for the assessment and treatment of children and adolescents with bipolar disorder. J Am Acad Child Adolesc Psychiatry. 2007;46(1):107-25. Dostupno na: https://doi.org/10.1097/01.chi.0000242240.69678.c4.
21. Sachs M, Madaan V. Electroconvulsive therapy in children and adolescents: Brief overview and ethical issues. Am Acad Child Adolesc Psychiatry, 1.1.2012.
22. Birmaher B, Brent D. Practice parameter for the assessment and treatment of children and adolescents with depressive disorders. J Am Acad Child Adolesc Psychiatry 2007; 46(11):1503-26. Dostupno na: https://doi.org/10.1097/chi.0b013e318145ae1c.
23. McClellan J, Stock S. Practice parameter for the assessment and treatment of children and adolescents with schizophrenia. J Am Acad Child Adolesc Psychiatry 2013;52(9): 976-90. Dostupno na: https://doi.org/10.1016/j.jaac.2013.02.008.
24. Benson NM, Seiner SJ. Electroconvulsive Therapy in Children and Adolescents: Clinical Indications and Special Considerations. Harvard Rev Psychiatry 2019;7(6):354-8. Dostupno na: https://doi.org/10.1097/HRP.0000000000000236.
25. Gazdag, G, Ungvari, GS. Electroconvulsive therapy: 80 years old and still going strong. World J Psychiatry. 2019;9(1):1-6. Dostupno na: https://doi.org/10.5498/wjp.v9.i1.1.
26. Du R, Zhao S, Zhang X, Li W, Ma Y, Zhang Y i sur. Efficacy and safety of lower dose electroconvulsive therapy for major depression in adolescents with suicide ideation: A non-inferiority randomized controlled trial in China. J Affect Disord 2026;393(Pt A): 120303. Dostupno na: https://doi.org/10.1016/j.jad.2025.120303.
27. Wang W, Lu Y, Mi GL, Li XJ, Zhang DN, Qi SF. Cognitive preservation advantage and efficacy balance of magnetic seizure therapy in adolescent major depressive disorder: a randomized controlled trial revealing efficacy cognition decoupling phenomenon. Riv Psichiatr. 2025;60(5):196-201. Dostupno na: https://doi.org/10.1708/4583.45901.

28. Chen K, Ren L, Yang Y, Liang K, Zhou Y, Lv F, Du L. Effect of electroconvulsive therapy on depression among adolescents and its relationship with family function. Medicine (Baltimore). 2025;104(7):e41607. Dostupno na: https://doi.org/10.1097/MD.0000000000041607.
29. Hu R, Li J, Luo H, Guo Y, Tan J, Li S, Luo Q. Effects of electroconvulsive therapy on cognitive function, depressive symptoms, and suicidal ideation in adolescents with major depressive disorder: A prospective observational study. J Affect Disord 2025;391: 120092. Dostupno na: https://doi.org/10.1016/j.jad.2025.120092.
30. Wang X, Ren H, Zhang Z, Zhong X, Luo Q, Huang Y, Qiu H. The efficacy of electroconvulsive therapy in adolescent major depressive disorder with suicidal ideation: A propensity score-matched, retrospective cohort study. Asian J Psychiatry 2024;95:103998. Dostupno na: https://doi.org/10.1016/j.ajp.2024.103998.
31. Cai H, Du R, Song J, Wang Z, Wang X, Yu Y *et al*. Suicidal ideation and electroconvulsive therapy: outcomes in adolescents with major depressive disorder. 2023;39(3):166-72. Dostupno na: https://doi.org/10.1097/YCT.0000000000000906.
32. Yu RQ, Zhang ZJ, Chen RS, Wang XY, Li X, Dai LQ *et al*. Electroconvulsive therapy-induced neuroimaging alterations measured by cerebral blood flow in adolescents with major depressive disorder. J Affect Disord 2023;327:385-90. Dostupno na: https://doi.org/10.1016/j.jad.2023.02.027.
33. Chen X, Fu Y, Zou Q, Zhang Y, Qin X, Tian Y *et al*. A retrospective case series of electroconvulsive therapy in the management of depression and suicidal symptoms in adolescents. Brain Behav. 2022;12(11):e2795. Dostupno na: https://doi.org/10.1002/brb3.2795.
34. Shao W, Zheng Y, Li Q, Shao K, Zhao F, Guan L *et al*. Evaluation of electroconvulsive therapy in adolescents with major depressive and bipolar disorders: A Retrospective Analysis. J ECT. 2023;39(2):111-16. Dostupno na https://doi.org/10.1097/YCT.0000000000000894.
35. Zhand N, Courtney DB, Flament MF. Use of electroconvulsive therapy in adolescents with treatment-resistant depressive disorders: a case Series. J ECT 2015;31(4):238-45. https://doi.org/10.1097/YCT.0000000000000236.
36. Smith JR, Baldwin I, Termini KA, McGonigle T, Vandekar S, Luccarelli J. use of ect for children with and without catatonia: A single-site retrospective analysis. J ECT 2024; 40(3):154-161. Dostupno na: https://doi.org/10.1097/YCT.0000000000000993.
37. Pal R, Cheng T, Eddington S, Subramanian S, Wenzinger M, Cristancho P. Use of electroconvulsive therapy in children and adolescents with catatonia-a case series. J ECT 2024;40(3):203-6.Dostupno na: https://doi.org/10.1097/YCT.0000000000001052.
38. Tuncturk M, Ermis C, Buyuktaskin D, Turan S, Saglam Y, Alarslan S *et al*.. Electroconvulsive therapy or clozapine for adolescents with treatment-resistant schizophrenia: an explorative analysis on symptom dimensions. Int J Psychiatry Clin Pract 2023;27(3):257-63. Dostupno na: https://doi.org/10.1080/13651501.2022.2160764.
39. Pierson MD, Mickey BJ, Gilley LB, Weeks HR III. Outcomes of youth treated with electroconvulsive therapy: a retrospective cohort study. J Clin Psychiatry 2021;82(2): 19m13164. Dostupno na: https://doi.org/10.4088/JCP.19m13164.
40. Karayağmurlu A, Coşkun M, Elboğa G, Ghaziuddin N, Karayağmurlu E, Gökçen C et al. Efficacy and safety of electroconvulsive therapy in adolescents: a retrospective chart review study from Turkey. J ECT. 2020;36(1):54-9. Dostupno na: https://doi.org/10.1097/YCT.0000000000000602.
41. Begovac I. Shizofreni spektar poremećaja u djece i adolescenata. U: Begovac I. (ur.) Dječja i adolescentna psihijatrija. e-izdanje: Sveučilište u Zagrebu Medicinski fakultet; 2021, 718-734. Preuzeto 3. ožujka 2025. https://urn.nsk.hr/urn:nbn:hr:105:694914.
42. Begovac I. Hitna stanja u dječjoj i adolescentnoj psihijatriji. U: Begovac I. (ur.) Dječja i adolescentna psihijatrija. e-izdanje: Sveučilište u Zagrebu Medicinski fakultet; 2021, str. 366-81. Preuzeto 3. ožujka 2025. https://urn.nsk.hr/urn:nbn:hr:105:694914.
43. Rogers, JP, Oldham MA, Fricchione G, Northoff G, Ellen Wilson J, Mann SC *et al.*. Evidence-based consensus guidelines for the management of catatonia: Recommendations from the British Association for Psychopharmacology. J Psychopharmacol (Oxford, England) 223;37(4)327-69. https://doi.org/10.1177/02698811231158232.
44. Cohen D, Taieb O, Flament M, Benoit, N, Chevret S, Corcos M *et al.*. Absence of cognitive impairment at long-term follow-up in adolescents treated with ECT for severe mood disorder. Am J Psychiatry 2000;157(3):460-2. Dostupno na: https://doi.org/10.1176/appi.ajp.157.3.460.
45. Karlović D. Eighty years of electroconvulsive therapy in Croatia and in Sestre Milosrdnice University hospital centre. Acta Clin Croat 2020;59:489-95. Dostupno na: https://hrcak.srce.hr/247462.
46. Kuzman MR, Pranjkovic T, Degmecic D, Lasic D, Medic A, Gazdag G. Electroconvulsive Therapy in Croatia. J ECT 2014;30(4):42-3. Dostupno na: https://doi.org/10.1097/YCT.0000000000000115.
47. Zakon o zaštiti osoba s duševnim smetnjama. Narodne novine br. 76/2014. Pristupljeno 2. ožujka 2025. Dostupno na: https://narodnenovine.nn.hr/clanci/sluzbeni/2014_06_76_1414.html.

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Važnost trijadne komunikacije između stručnjaka, pacijenta i obitelji kao ključnog čimbenika u poticanju oporavka osoba sa psihozom

/ *Importance of Triadic Communication Between Professionals, Patients, and Families as a Key Factor in Promoting Recovery in Individuals With Psychosis*

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Učinkovita komunikacija između stručnjaka, osoba sa psihozom i članova obitelji povezana je s boljim ishodima liječenja. U ovom radu analizira se pregledna i meta-analitička literatura o dijadnoj i trijadnoj komunikaciji, obiteljskim intervencijama i zajedničkom donošenju odluka (SDM) u liječenju osoba sa psihozom te se ti nalazi sintetiziraju u klinički primjenjive preporuke za unapređenje komunikacije. Provedeno je pretraživanje relevantnih baza podataka, a ključni su nalazi sintetizirani kvalitativnim pristupom. Rezultati potvrđuju da su kvaliteta odnosa terapeut–pacijent, uključenost obitelji i SDM povezani s boljim ishodima liječenja, smanjenim rizikom od recidiv i češćih hospitalizacija, boljom suradnjom u liječenju te poboljšanom dobrobiti članova obitelji. Na temelju ove sinteze iznesene su preporuke, prikazane u tabličnom obliku, koje obuhvaćaju temeljne elemente kvalitetnog terapijskog odnosa, prevenciju i popravljanje narušenog terapijskog saveza, komunikacijske prepreke na razini stručnjaka i obitelji, poteškoće u odnosu pacijent–obitelj te prepreke u provedbi SDM-a. Preporuke su konceptualno usklađene s CHIME modelom osobnog oporavka. Zaključeno je da je sustavno ulaganje u kvalitetnu dijadnu i trijadnu komunikaciju bitno za poticanje oporavka osoba sa psihozom te za prevenciju opterećenja i sagorijevanja članova obitelji.

/ Effective communication among professionals, individuals with psychosis, and family members is associated with better treatment outcomes. This paper reviews narrative, systematic, and meta-analytic literature on dyadic and triadic communication, family interventions, and shared decision-making (SDM) in the treatment of psychosis and synthesises this evidence into clinically applicable recommendations for improving communication. A literature search of major databases was conducted, and the key findings were synthesised using a qualitative approach. The results confirm that the quality of the therapist–patient relationship, family involvement, and SDM are associated with improved clinical

outcomes, reduced relapse and rehospitalisation, enhanced collaboration in treatment, and improved well-being of family members. Based on this synthesis, recommendations were developed and presented in tabular form, addressing the core elements of a high-quality therapeutic relationship, the prevention and repair of alliance ruptures, professional- and family-level communication barriers, patient–family relationship difficulties, and barriers to implementing SDM. The recommendations are conceptually aligned with the CHIME model of personal recovery. This paper concludes that systematic investment in high-quality dyadic and triadic communication is essential for supporting recovery in individuals with psychosis and preventing family burden and burnout.

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UVOD

Terapijski odnos i terapijski savez su terapijski čimbenici koji su sastavni dio procesa liječenja, neovisno o terapijskoj orijentaciji ili kliničkom kontekstu (1). Terapijski odnos može se razumjeti kao suradnički okvir unutar kojega terapeut i pacijent zajednički rade na postizanju korisnih promjena važnih pacijentu (1,2). U psihijatrijskom okruženju terapijski odnos je temeljni interpersonalni okvir liječenja koji se uspostavlja između pacijenta i zdravstvenog djelatnika uključujući psihijatre, medicinske sestre, psihologe i druge članove multidisciplinarnog tima (3,4). Taj odnos obuhvaća način komunikacije, razinu povjerenja i osjećaj sigurnosti, poštivanje profesionalnih i osobnih granica, percipiranu podršku, uvažavanje autonomije pacijenta te iskustvo partnerstva u liječenju i sagledavanja pacijentove perspektive (2,3). Terapijski savez je aspekt terapijskog odnosa koji uključuje suradnički dogovor o ciljevima liječenja, o zadacima ili postupcima te emocionalnu povezanost između sudionika u terapijskom procesu (1). Zadatci su ono što se terapeut i pacijent dogovore da je potrebno uči-

INTRODUCTION

Therapeutic relationships and the therapeutic alliance are integral to the treatment process, regardless of therapeutic orientation or clinical context (1). The therapeutic relationship can be understood as a collaborative framework within which the therapist and the patient work together to achieve meaningful changes that are important to the patient (1,2). In psychiatric settings, the therapeutic relationship constitutes the fundamental interpersonal framework of treatment established between the patient and healthcare professionals, including psychiatrists, nurses, psychologists, and other multidisciplinary team members (3,4). This relationship encompasses communication style, levels of trust and perceived safety, respect for professional and personal boundaries, perceived support, respect for patient autonomy, experience of partnership in treatment, and understanding the patient's perspective (2,3). The therapeutic alliance is a component of the therapeutic relationship that involves a collaborative agreement on treatment goals, tasks, or interventions, as well as the development of an emotional bond between participants in the therapeutic process (1). Tasks are

niti kako bi se postigli pacijentovi ciljevi. Ciljevi su ono što se pacijent nada postići liječenjem svojih poteškoća. Terapijski savez se razvija iz povjerenja i uvjerenja da će dogovoreni postupci približiti pacijenta dogovorenim ciljevima. U psihijatrijskom kontekstu terapijski savez opisuje način na koji pacijent i zdravstveni djelatnik zajednički razumiju, strukturiraju i provode proces liječenja, neovisno o tome uključuje li on formalnu psihoterapiju ili se odvija u okviru farmakološke i druge psihijatrijske skrbi (3, 4).

Utjecaj terapijskog odnosa i saveza na ishod liječenja

Meta-analitički i pregledni nalazi dosljedno pokazuju da je terapijski savez jedan od najpouzdanijih prediktora ishoda liječenja pri čemu njegova kvaliteta predviđa povoljnije ishode neovisno o dijagnozi pacijenata i terapijskom pristupu, (5,6). U psihijatrijskom i farmakološkom kontekstu kvaliteta odnosa između pacijenata i zdravstvenih djelatnika je povezana s boljom suradnjom u uzimanju lijekova, značajnim smanjenjem simptoma bolesti (5), manjom percipiranom prisilom te zadovoljstvom i ishodima liječenja (3,7) Kvaliteta terapijskog saveza u liječenju osoba sa psihozom, doprinosi boljoj suradnji u liječenju, povoljnijim simptomskim ishodima, te osobnom i funkcionalnom oporavku, uključujući veću nadu, osjećaj osnaženosti i napredak u svakodnevnom funkcioniranju (8-10).

Prema opsežnoj meta-analitičkoj sintezi, ključni elementi terapijskog odnosa uključuju zajednički dogovor o ciljevima liječenja, dogovor o zadatcima i intervencijama, te razvoj emocionalne povezanosti obilježene povjerenjem, prihvaćanjem i osjećajem sigurnosti. Slab terapijski savez povezan je s većom vjerojatnošću ranog prekida liječenja (11) sa slabijom suradnjom u liječenju, povećanim rizikom nepovoljnih ishoda te smanjenom učinkovitošću terapijskih intervencija (7,11), povećanom

what the therapist and patient agree should be done to achieve the patient's goals, whereas goals are what the patient hopes to accomplish through treatment. The therapeutic alliance develops from trust and the belief that agreed-upon tasks and interventions will bring the patient closer to their agreed goals. In the psychiatric context, the therapeutic alliance refers to the way in which the patient and healthcare professional jointly understand, structure, and implement the treatment process, regardless of whether it involves formal psychotherapy or occurs within pharmacological and other psychiatric care (3,4).

Impact of the Therapeutic Relationship and Alliance on Treatment Outcomes

Meta-analytic and review findings consistently demonstrate that the therapeutic alliance is one of the most reliable predictors of treatment outcomes, with its quality predicting more favourable outcomes regardless of patient diagnosis or therapeutic approach (5,6). In psychiatric and pharmacological contexts, the quality of the relationship between patients and healthcare professionals is associated with better medication adherence, lower perceived coercion, more favourable subjective and clinical outcomes (3,7), significant reductions in symptom severity (5), and greater treatment satisfaction (3). In the treatment of individuals with psychosis, the quality of the therapeutic alliance contributes to better engagement in treatment, more favourable symptomatic outcomes, and personal and functional recovery, including greater hope, empowerment, and improvement in everyday functioning (8-10).

According to comprehensive meta-analytic syntheses, key elements of the therapeutic relationship include a shared agreement on treatment goals, agreement on tasks and interventions, and the development of an emotional bond characterised by trust, acceptance, and a sense of safety. In psychotherapeutic contexts, a weak therapeutic alliance is associated with a higher likelihood of premature treatment termination and reduced

percepcijom prisile, narušenim povjerenjem te nepovoljnijim kliničkim ishodima (3, 7). Nadalje, kod osoba sa psihozom, slab terapijski odnos i visoka percipirana prisila povezani su s prekidima skrbi i češćim rehospitalizacijama (4,12).

Meta-analitički i pregledni nalazi pokazuju da se rupture terapijskog saveza relativno često javljaju tijekom liječenja te su najčešće povezane s neslaganjem oko ciljeva i zadataka liječenja, percipiranom neempatičnošću ili kontrolirajućim ponašanjem stručnjaka te nerazriješenim interpersonalnim napetostima i poteškoćama pacijenata (13, 14). Dokazi nadalje upućuju na to da neprepoznate i neadresirane rupture imaju značajno negativan učinak na terapijski proces i ishode liječenja (13,14), da rupture same po sebi nisu nužno štetne već da njihov učinak na ishode liječenja uvelike ovisi o tome jesu li pravodobno prepoznate i adekvatno popravljene. Učinkovite intervencije za popravljanje rupture uključuju otvorenu metakomunikaciju o odnosu, validaciju pacijentove perspektive, preuzimanje odgovornosti od stručnjaka te ponovni dogovor oko ciljeva liječenja, pri čemu je uspješno razrješenje rupture povezano sa značajno boljim ishodima liječenja (14). Mnoge rupture mogu se prevenirati sustavnim praćenjem kvalitete terapijskog odnosa, poticanjem povratne informacije od pacijenata te suradničkim i transparentnim pristupom koji smanjuje asimetriju moći u terapijskom procesu (13).

Važnost trijadne komunikacije

U liječenju osoba sa psihozom komunikacija se rijetko odvija isključivo u dijadi stručnjak–pacijent već najčešće u kontekstu koji uključuje i članove obitelji. Suradnja s obitelji u liječenju osoba sa psihozom je preporučeni standard skrbi (15). Kvaliteta komunikacije unutar trijade ima značajne implikacije

patient engagement (11). In broader psychiatric contexts, including pharmacological treatment, poor relationship quality is associated with poorer treatment adherence, increased risk of adverse outcomes, reduced effectiveness of therapeutic interventions (7), increased perceptions of coercion, impaired trust, and less favourable clinical outcomes (3,7). Furthermore, among individuals with psychosis, a weak therapeutic relationship and high perceived coercion are associated with discontinuity of care and more frequent rehospitalisations (4,12).

Meta-analytic and review findings indicate that ruptures in the therapeutic alliance occur relatively frequently during treatment and are most associated with disagreements regarding treatment goals and tasks, perceived lack of empathy or controlling behaviours by clinicians, and unresolved interpersonal tensions and patient difficulties (13,14). Evidence further suggests that unrecognised and unaddressed ruptures significantly negatively impact the therapeutic process and treatment outcomes (13,14). Importantly, ruptures themselves are not necessarily harmful; rather, their impact largely depends on whether they are recognised in a timely manner and adequately repaired. Effective rupture repair interventions include open metacommunication about the relationship, validation of the patient's perspective, clinician responsibility-taking, and renegotiation of treatment goals, with successful rupture resolution being associated with significantly better treatment outcomes (14). Many ruptures can be prevented through systematic monitoring of relationship quality, encouraging patient feedback, and adopting collaborative and transparent approaches that reduce power asymmetries within the therapeutic process (13).

The Importance of Triadic Communication

In the treatment of individuals with psychosis, communication rarely occurs exclusively within the clinician–patient dyad but more commonly occurs in a context that includes family members.

za tijek i ishode liječenja (16,17), međutim u praksi se često izbjegava ili nedovoljno provodi (18,19).

Barijere u trijadnoj komunikaciji

Unatoč jasnim kliničkim smjernicama koje preporučuju sustavno uključivanje obitelji u liječenje osoba sa psihozom, u praksi postoji niz prepreka za njihovu provedbu.

Najčešće barijere uključuju nedostatak znanja i vještina stručnjaka za obiteljski rad, zabrinutost oko povjerljivosti i autonomije pacijenta, strah od pogoršanja terapijskog odnosa, izbjegavanje emocionalno zahtjevnih i konfliktnih situacija, negativne ili ambivalentne stavove prema obiteljima te organizacijska ograničenja poput nedostatka vremena, jasnih uloga i institucionalne podrške (19,20). Stručnjaci često navode organizacijske prepreke, nedostatak vremena, nejasne profesionalne uloge te zabrinutost oko povjerljivosti i odnosa s pacijentom kao ključne razloge ograničene implementacije obiteljskog rada (18,19). S druge strane, prepreke u suradnji od obitelji povezane su s emocionalnim preopterećenjem, osjećajem isključenosti, nepovjerenjem prema sustavu, strahom od stigmatizacije i nejasnim granicama povjerljivosti (20,21).

Za smanjenje barijera na strani stručnjaka preporučuju se intervencije usmjerene na strukturiranu edukaciju i kontinuiranu superviziju stručnjaka, Također se preporuča jasna komunikacija o povjerljivosti, uvođenje timskih i organizacijskih protokola, fleksibilni i stupnjeviti modeli suradnje s obiteljima te transparentna, empatična i suradnička komunikacija, uz snažnu institucionalnu podršku i vodstvo (15,16,19).

Supervizija omogućuje stručnjacima prepoznati i regulirati vlastite reakcije u radu s obiteljima, čime se neizravno smanjuju komunikacijske prepreke koje se pojavljuju od obitelji (16,19).

Collaboration with families in the treatment of psychosis is the recommended standard of care (15). The quality of communication within the triad has significant implications for the course and outcomes of treatment (16,17); however, in practice, it is often avoided or insufficiently implemented (18,19).

Barriers to Triadic Communication

Despite clear clinical guidelines recommending systematic family involvement in the treatment of individuals with psychosis, numerous barriers hinder their implementation in practice.

The most common barriers include a lack of knowledge and skills among professionals for family work, concerns about confidentiality and patient autonomy, fear of damaging the therapeutic relationship, avoidance of emotionally demanding and conflictual situations, negative or ambivalent attitudes toward families, and organisational constraints such as lack of time, unclear roles, and insufficient institutional support (19,20). Clinicians frequently cite organisational barriers, time constraints, unclear professional roles, and concerns about confidentiality and the clinician–patient relationship as key reasons for the limited implementation of family work (18,19). From the family perspective, barriers to collaboration are associated with emotional overload, feelings of exclusion, mistrust toward the system, fear of stigmatisation, and unclear confidentiality boundaries (20,21).

To reduce barriers on the professional side, interventions focused on structured education and continuous supervision are recommended. In addition, clear communication about confidentiality, the introduction of team- and organisation-level protocols, flexible and stepped models of family collaboration, and transparent, empathic, and collaborative communication supported by strong institutional leadership are advised (15,16,19).

Supervision enables professionals to recognise and regulate their own reactions in working with

Meta-analitički nalazi pokazuju da nepovoljna obiteljska emocionalna klima povezana sa izraženim emocijama (EE čimbenik) kao što su kriticizam, hostilnost i emocionalna pretjerana uključenost, pouzdano predviđa veći rizik recidiva i nepovoljniji tijek bolesti u shizofreniji (22, 23). Istodobno, dokazi upućuju da zaštitni aspekti odnosa, poput topline, podrške i pozitivnih primjedbi članova obitelji, doprinose povoljnijim kliničkim ishodima, boljem svakodnevnom funkcioniranju i boljem tijeku bolesti (16,24). Dodatno, sustavni pregledi obiteljskih intervencija potvrđuju da rad usmjeren na poboljšanje odnosa pacijent–obitelj dovodi do smanjenja recidiva i rehospitalizacija te poboljšanja adherencije i angažmana u liječenju čime se dodatno potvrđuje klinička relevantnost obiteljskog odnosa kao ključnog čimbenika ishoda liječenja (16,17).

Intervencije utemeljene na dokazima u radu s obiteljima osoba sa psihozom i njihova zajednička obilježja

Obiteljske intervencije utemeljene na dokazima u radu s osobama sa psihozom uključuju bihevioralne obiteljske intervencije temeljene na modelima izraženih emocija (25,26), obiteljsku psihoedukaciju (27,28), kognitivno-bihevioralne intervencije (29), intervencije koje uključuju rad s više obitelji u grupi (31) te intervencije usmjerene na podršku skrbnicima (31). Učinkovitost ovih modela u smanjenju recidiva i rehospitalizacija te poboljšanju adherencije i funkcioniranja potvrđena je u brojnim sustavnim pregledima i meta-analizama (15-17,29).

Unatoč razlikama u formatu i intenzitetu, navedene intervencije dijele nekoliko zajedničkih obilježja. Prvo, sve se temelje na suradničkom i neokrivljujućem pristupu pri čemu se obitelj ne promatra kao uzrok poremećaja, već kao resurs u procesu liječenja. Drugo, naglašavaju psihoedukaciju o prirodi psihoze, liječenju i ra-

families, thereby indirectly reducing communication barriers arising from the family side (16,19).

Meta-analytic findings demonstrate that an unfavourable family emotional climate characterised by high expressed emotion (EE)—including criticism, hostility, and emotional over-involvement—reliably predicts a higher risk of relapse and a poorer course of schizophrenia (22,23). Simultaneously, evidence indicates that protective relational factors, such as warmth, support, and positive family comments, contribute to more favourable clinical outcomes, better everyday functioning, and a more favourable illness trajectory (16,24). In addition, systematic reviews of family interventions confirm that approaches aimed at improving the patient–family relationship led to reduced relapse and rehospitalisation rates, as well as improved adherence and treatment engagement, further supporting the clinical relevance of family relationships as a key determinant of treatment outcomes (16,17).

Evidence-Based Family Interventions in Psychosis and Their Shared Characteristics

Evidence-based family interventions for individuals with psychosis include behavioural family interventions based on expressed emotion models (25,26), family psychoeducation (27,28), cognitive-behavioural interventions (29), multi-family group interventions (30), and interventions focusing on caregiver support (31). The effectiveness of these models in reducing relapse and rehospitalisation and improving adherence and functioning has been confirmed in numerous systematic reviews and meta-analyses (15-17,29).

Despite differences in format and intensity, these interventions share several common characteristics. First, they are grounded in collaborative, non-blaming approaches, viewing the family not as the cause of the disorder but as a resource in the treatment process. Second, they emphasise psychoeducation about the nature of psychosis, treatment, and early warning signs of relapse,

nim znakovima pogoršanja, čime se smanjuje neizvjesnost i anksioznost obitelji. Treće, fokusiraju se na poboljšanje komunikacije i smanjenje interpersonalnog stresa, osobito radom na kriticizmu, konfliktnim obrascima i emocionalnoj regulaciji. Četvrto, većina modela uključuje strukturirano rješavanje problema i zajedničko definiranje ciljeva, čime se jača osjećaj kompetencije i kontrole kod pacijenata i obitelji. Konačno, učinkovite intervencije karakterizira fleksibilnost i prilagodba potrebama obitelji, uz kontinuiranu profesionalnu podršku i integraciju u širi plan liječenja (15,16,19).

Trijadna komunikacija i zajedničko donošenje odluka u liječenju osoba sa psihozom

Model zajedničkog donošenja odluka (*shared decision-making,* SDM) prepoznat je kao prikladan komunikacijski okvir za liječenje osoba sa psihozom. SDM se definira kao strukturirani, suradnički proces u kojem stručnjaci i pacijenti, uz moguću i često potrebnu uključenost članova obitelji, zajednički razmjenjuju informacije o dostupnim terapijskim opcijama, razmatraju njihove prednosti i rizike te donose odluke o liječenju koje se temelje na preferencijama pacijenta (32, 33). Sustavni pregled studija o SDM-u u shizofreniji pokazuje da je primjena SDM-a povezana s većim zadovoljstvom liječenjem, boljim terapijskim savezom, većim osjećajem autonomije i smanjenom percipiranom prisilom, bez pogoršanja kliničkih ishoda (34). Meta-analitički i pregledni nalazi u području mentalnog zdravlja dodatno upućuju na to da SDM doprinosi većem angažmanu pacijenata i adherenciji na liječenje, što je osobito važno u dugotrajnom liječenju osoba sa psihozom (35,36).

U trijadnom komunikacijskom kontekstu SDM omogućuje strukturirano uključivanje obitelji na način koji istodobno štiti autonomiju pacijenta i prepoznaje legitimnu ulogu obitelji čime

thereby reducing uncertainty and family anxiety. Third, they focus on improving communication and reducing interpersonal stress, particularly by addressing criticism, conflictual patterns, and emotional regulation. Fourth, most models incorporate structured problem-solving and shared goal-setting, thereby strengthening patients' and families' sense of competence and control. Finally, effective interventions are characterized by flexibility and adaptation to family needs, continuous professional support, and integration into the broader treatment plan (15,16,19).

Triadic Communication and Shared Decision-Making in the Treatment of Psychosis

The shared decision-making (SDM) model is recognised as an appropriate communication framework for the treatment of individuals with psychosis. SDM is defined as a structured, collaborative process in which clinicians and patients- often with the necessary involvement of family members- jointly exchange information about available treatment options, consider their benefits and risks, and make treatment decisions based on patient preferences (32,33). A systematic review of studies on SDM in schizophrenia indicates that SDM is associated with greater treatment satisfaction, a stronger therapeutic alliance, greater perceived autonomy, and reduced perceived coercion, without worsening clinical outcomes (34). Meta-analytic and review findings in mental health further suggest that SDM contributes to greater patient engagement and treatment adherence, which is particularly important in the long-term treatment of individuals with psychosis (35,36).

In a triadic communication context, SDM enables structured family involvement while simultaneously safeguarding patient autonomy and recognising the legitimate role of the family, thereby reducing tension, misunderstandings, and feelings of exclusion among all parties involved. Thus, SDM in the treatment of psychosis should be viewed not only as a decision-making

se smanjuju napetosti, nesporazumi i osjećaj isključenosti svih uključenih strana. Time se SDM u liječenju psihoza ne promatra samo kao tehnika donošenja odluka već kao širi relacijski i etički okvir koji je u skladu s oporavkom usmjerenim pristupima, smanjenjem prisile i jačanjem terapijskog saveza u trijadi stručnjak–pacijent–obitelj. Pregledna i sustavna literatura pokazuje da prepreke u ostvarivanju zajedničkog donošenja odluka u liječenju osoba sa psihozom proizlaze iz kombinacije profesionalnih stavova i organizacijskih ograničenja, kliničkih i iskustvenih čimbenika na strani pacijenata te emocionalnih, relacijskih i komunikacijskih izazova na strani obitelji, što dodatno naglašava potrebu za strukturiranim trijadnim komunikacijskim pristupima (20,34,37).

CILJ RADA

Cilj ovog rada bio je pregledati relevantnu preglednu i meta-analitičku literaturu te, na temelju njezine sinteze, razviti preporuke za unaprjeđenje komunikacije između stručnjaka, osoba sa psihozom i članova obitelji, usmjerene na oporavak osoba sa psihozom i prevenciju opterećenja i sagorijevanja obitelji.

METODE

Ovaj rad ima obilježja stručnog, narativnog rada temeljenog na ciljanoj analizi relevantne znanstvene i stručne literature. Proveden je selektivni pregled literature koja se odnosi na terapijski savez u odnosima stručnjak-pacijent, pacijent-obitelj i stručnjak obitelj, prepreke i intervencije u komunikaciji te modele zajedničkog donošenja odluka (*shared decision making,* SDM) u skrbi za osobe sa psihozom.

Literatura je pretraživana u bazama *PubMed/MEDLINE, PsycINFO, Scopus* i *Cochrane Library*, korištenjem kombinacija ključnih pojmova vezanih uz psihozu, terapijski savez, obiteljske

technique but also as a broader relational and ethical framework aligned with recovery-oriented approaches, reduction of coercion, and strengthening of the therapeutic alliance within the clinician–patient–family triad. Review and systematic literature further demonstrate that barriers to shared decision-making in psychosis arise from a combination of professional attitudes and organisational constraints, clinical and experiential factors on the patient side, and emotional, relational, and communication challenges on the family side, underscoring the need for structured triadic communication approaches (20,34,37).

AIM OF THE STUDY

This study aimed to review relevant narrative and meta-analytic literature and, based on its synthesis, to develop recommendations for improving communication between professionals, individuals with psychosis, and family members, with a focus on supporting the recovery of individuals with psychosis and preventing family burden and burnout.

METHODS

This paper is a professional narrative review based on a targeted analysis of the relevant scientific and professional literature. A selective literature review was conducted focusing on the therapeutic alliance in professional–patient, patient–family, and professional–family relationships, barriers to and interventions in communication, and shared decision-making (SDM) models in the care of people with psychosis.

The literature was searched in PubMed/MEDLINE, PsycINFO, Scopus, and the Cochrane Library using combinations of key terms related to psychosis, therapeutic alliance, family interventions, communication, and SDM. Review articles, meta-analyses, randomised controlled trials, and qualitative studies deemed relevant to clinical practice were included. Selected sources were an-

intervencije, komunikaciju i SDM. U analizu su uključeni pregledni radovi, meta-analize, randomizirana kontrolirana istraživanja i kvalitativne studije za koje je procijenjeno da su relevantni za kliničku praksu. Odabrani izvori analizirani su kvalitativnom tematskom sintezom, s ciljem identifikacije ključnih obrazaca, prepreka i intervencija. Nalazi su potom konceptualno organizirani prema relacijskim razinama komunikacije (dijadna i trijadna), te sintetizirani u obliku praktičnih tablica i preporuka usmjerenih na kliničku primjenu.

REZULTATI

Rezultati su predstavljeni u obliku strukturiranih preporuka za poboljšanje komunikacije između stručnjaka, pacijenata i članova obitelji u radu s osobama sa psihozom. Preporuke su razvijene na temelju sustavne sinteze nalaza pregledne i meta-analitičke literature prikazane u uvodnom dijelu rada te integriraju ključne teorijske i empirijske spoznaje o terapijskom odnosu, obiteljskim intervencijama, trijadnoj komunikaciji i zajedničkom donošenju odluka. U tabličnom prikazu objedinjene su intervencije usmjerene na prepoznavanje i prevladavanje prepreka u komunikaciji između stručnjaka, pacijenata i članova obitelji.

Svaka tablica je sinteza konsenzusa literature i ima za cilj olakšati primjenu preporuka u svakodnevnoj kliničkoj praksi u radu s osobama sa psihozom i njihovim obiteljima.

U tablici 1. prikazani su ključni elementi kvalitetnog terapijskog odnosa te tipična ponašanja stručnjaka primjenjiva u psihoterapijskim, psihijatrijskim i farmakološkim kontekstima. Tablica ilustrira kako se temeljne komponente terapijskog odnosa operacionaliziraju konkretnim profesionalnim ponašanjima. Istraživanja upućuju na to da se kvaliteta terapijskog odnosa ne temelji na pojedinačnim tehnikama, već na dosljednoj primjeni svih ključnih elemenata odnosa, osobito empatičnog i suradničkog pristupa.

alyzed using qualitative thematic synthesis, with the aim of identifying key patterns, barriers, and interventions. The findings were then conceptually organised according to the relational levels of communication (dyadic and triadic) and synthesised into practical tables and recommendations oriented toward clinical application.

RESULTS

The results of this paper are presented as structured recommendations for improving communication among professionals, patients, and family members in work with people with psychosis. Recommendations were developed through a systematic synthesis of findings from review and meta-analytic literature presented in the paper's introductory sections and integrate key theoretical and empirical insights on the therapeutic relationship, family interventions, triadic communication, and shared decision-making. The tabular presentation synthesises interventions aimed at identifying and overcoming barriers to communication among professionals, patients, and family members.

Each table represents a synthesis of consensus in the literature and aims to facilitate the application of recommendations in everyday clinical practice when working with people with psychosis and their families.

Table 1 presents the key elements of a high-quality therapeutic relationship and typical professional behaviours applicable to psychotherapeutic, psychiatric, and pharmacological contexts. The table illustrates how the core components of the therapeutic relationship are operationalised through specific professional behaviours. The research presented indicates that the quality of the therapeutic relationship is not determined by individual techniques but by the consistent application of key relational elements, particularly an empathic and collaborative approach.

Table 2 presents the most common situations of therapeutic alliance rupture, the reasons for

TABLICA 1. Obilježja dobrog terapijskog odnosa i poželjna ponašanja stručnjaka
TABLE 1. Characteristics of a good therapeutic relationship and desirable professional behaviours.

Obilježje terapijskog odnosa / Characteristics of the therapeutic relationship	Tipična ponašanja koja ga odražavaju u praksi / Typical behaviours reflecting it in practice
Stvaranje osjećaja sigurnosti i povjerenje / Creating a sense of safety and trust	Davanje dovoljno vremena da osoba kaže ono što želi, pristup bez osuđivanja, dosljednost u ponašanju; poštivanje dogovora; transparentno objašnjavanje odluka i postupaka, prihvaćanje neslaganja bez obrambenog stava / Allowing sufficient time for the person to express themselves; a non-judgmental approach; consistency in behaviour; respecting agreements; transparent explanation of decisions and procedures; accepting disagreement without defensiveness
Aktivno slušanje i Empatija / Active listening and empathy	Pažljivo slušanje onoga što pacijent govori, sažimanje rečenog, provjera je li terapeut dobro razumio pacijenta, poruka razumijevanja emocionalnog iskustva pacijenta i njegovog gledišta, jasna poruka da se želi pomoći / Careful listening to what the patient says; summarizing key points; checking understanding; conveying understanding of the patient's emotional experience and perspective; clearly expressing the intention to help
Validacija osjećaja i perspektive pacijenta / Validation of the patient's feelings and perspective	Prihvaćanje legitimnosti pacijentovih osjećaja bez negiranja normaliziranje osjećaja i ambivalencije u odnosu na situaciju pacijenta / Acknowledging the legitimacy of the patient's feelings without denial, normalizing emotions and ambivalence related to the patient's situation
Emocionalna veza / Emotional connection	Topao, uvažavajući ton; pokazivanje interesa za osobu, a ne samo za simptome / Warm, respectful tone; showing interest in the person, not only in symptoms
Suradnja / Collaboration	Uključivanje pacijenta u donošenje odluka; poticanje pitanja i povratne informacije; zajedničko planiranje liječenja / Involving the patient in decision-making, encouraging questions and feedback, and shared treatment planning
Dogovor o ciljevima / Agreement on goals	Utvrđivanje što je pacijentu važno; povezivanje kliničkih ciljeva s osobnim ciljevima pacijenta / Identifying what is important to the patient; linking clinical goals with the patient's personal goals
Dogovor o zadatcima i intervencijama / Agreement on tasks and interventions	Jasno objašnjavanje svrhe intervencija (npr. lijekova, rehabilitacije, psihoterapije); provjera razumijevanja; individualni plan liječenja / Clearly explaining the purpose of interventions (e.g., medication, rehabilitation, psychotherapy); checking understanding; individualized treatment planning
Poštovanje autonomije / Respect for autonomy	Uvažavanje pacijentovih izbora; izbjegavanje paternalističkog tona; ne donošenje odluke umjesto pacijenta, naglašavanje da pacijent donosi odluku / Respecting the patient's choices; avoiding a paternalistic attitude; not making decisions on behalf of the patient; emphasizing that the patient is the decision-maker
Podrška u sagledavanju različitih perspektiva / Support in considering different perspectives	Pomaganje pacijentu da razmotri alternativne mogućnosti bez nametanja; poticanje refleksije i mentalizacije / Helping the patient consider alternative options without imposing them; encouraging reflection and mentalization
Otvorena komunikacija / Open communication	Jasno, razumljivo i iskreno informiranje; izbjegavanje stručnog žargona; omogućavanje pacijentu da izrazi vlastito viđenje situacije / Clear, understandable, and honest information sharing; avoiding professional jargon; enabling the patient to express their own view of the situation
Emocionalna dostupnost / Emotional availability	Spremnost na razgovor o teškim temama; tolerancija negativnih emocija (ljutnja, strah, nepovjerenje) / Willingness to discuss difficult topics; tolerance of negative emotions (anger, fear, mistrust)
Fleksibilnost / Flexibility	Prilagodba stila rada; spremnost na promjenu pristupa kada nešto ne funkcionira; prilagodba s obzirom na kliničko stanje pacijenta / Adapting working style; willingness to change the approach when something is not effective; adjusting to the patient's clinical condition
Refleksivnost stručnjaka / Professional reflexivity	Samoprovjera vlastitih reakcija; priznanje pogrešaka; korištenje supervizije / Self-reflection on one's own reactions; acknowledging mistakes; use of supervision
Kulturalna osjetljivost / Cultural sensitivity	Uvažavanje kulturnih i osobnih vrijednosti; istraživanje pacijentovih objašnjenja bolesti i liječenja / Respect for cultural and personal values; exploring the patient's explanations of illness and treatment
Kontinuitet i dostupnost / Continuity and availability	Redovitost kontakta; pravovremeni odgovori; pouzdanost u kriznim situacijama / Regular contact; timely responses; reliability in crisis situations

U tablici 2. prikazane su najčešće situacije rupture terapijskog odnosa, razlozi njihova nastanka te intervencije usmjerene na prevenciju i ponovnu uspostavu terapijskog saveza. Tablica je izrađena na temelju konsenzusa preglednih i meta-analitičkih radova (13,14) i

their occurrence, and interventions to prevent and repair the therapeutic alliance. The table is based on consensus from review and meta-analytic studies (13,14) and the recognition of the impact of transference and countertransference processes (38). Research indicates that the dy-

TABLICA 2. Najčešće situacije rupture terapijskog odnosa, razlozi nastanka i intervencije za obnovu odnosa
TABLE 2. Common situations of therapeutic alliance rupture, reasons for their occurrence, and interventions for relationship repair and prevention.

Situacija rupture terapijskog odnosa / Situation of therapeutic alliance rupture	Zašto dolazi do rupture / Why the rupture occurs	Intervencije za obnovu i prevenciju terapijskog odnosa / Interventions for repair and prevention of the therapeutic alliance
Neslaganje oko ciljeva liječenja / Disagreement about treatment goals	Ciljevi nisu zajednički definirani; pacijent ne prepoznaje smisao liječenja; doživljava da se ciljevi nameću / Goals are not jointly defined; the patient does not perceive the meaning of treatment; goals are experienced as imposed	Otvoreno razjasniti očekivanja; ponovno razgovarati o ciljevima; eksplicitno uključiti pacijentove osobne ciljeve u plan liječenja / Openly clarify expectations; revisit treatment goals; explicitly integrate the patient's personal goals into the treatment plan
Neslaganje oko zadataka ili intervencija (npr. lijekovi, hospitalizacija) / Disagreement about tasks or interventions (e.g., medication, hospitalisation)	Nedovoljno objašnjenje intervencija; osjećaj gubitka autonomije; prethodna negativna iskustva / Insufficient explanation of interventions; perceived loss of autonomy; previous negative experiences	Pružiti jasne i razumljive informacije; validirati ambivalentnost; uključiti pacijenta u donošenje odluka / Provide clear and understandable information; validate ambivalence; involve the patient in decision-making
Percepcija stručnjaka kao neempatičnog ili distanciranog / Perception of the professional as unempathic or distant	Nedostatak emocionalne validacije; fokus isključivo na simptome, bez razgovora o okolnostima, nerazmatranje psihosocijalnih čimbenika koji pridonose pojavi simptoma / Lack of emotional validation; exclusive focus on symptoms without discussing context; failure to consider psychosocial factors contributing to symptoms	Eksplicitno priznati pacijentovo iskustvo; pokazati empatiju; reflektirati emocionalni sadržaj razgovora, sagledati sva područja utjecaja na nastanak bolesti / Explicitly acknowledge the patient's experience; demonstrate empathy; reflect the emotional content of the interaction; consider all domains influencing the development of the illness
Osjećaj prisile ili kontrole / Feelings of coercion or control	Asimetrija moći; paternalistički pristup, prisilne mjere; nedostatak izbora / Power asymmetry; paternalistic approach; coercive measures; lack of choice	Imenovati asimetriju moći; objasniti razloge odluka; naglasiti područja u kojima pacijent ima kontrolu, kada god je moguće suradnja i dogovor imaju prednost nad prisilnim mjerama / Acknowledge the power asymmetry; explain the rationale for decisions; emphasize areas in which the patient has control; whenever possible, collaboration and agreement should take precedence over coercive measures
Povlačenje pacijenta (šutnja, pasivnost, izostanci) / Patient withdrawal (silence, passivity, missed appointments)	Neprepoznata frustracija; pacijent ne doživljava da je njegovo mišljenje važno, strah od konflikta zbog ranijih loših iskustava / Unrecognised frustration; the patient does not feel their opinion is valued; fear of conflict due to previous negative experiences	Prepoznati znakove povlačenja; potaknuti povratnu informaciju pacijenta; razgovarati o frustraciji i pronaći rješenje / Recognise signs of withdrawal; invite patient feedback; discuss sources of frustration and jointly seek solutions
Konfrontacija ili otvoreni konflikt / Confrontation or open conflict	Akumulirano nezadovoljstvo; neadresirane ranije rupture / Accumulated dissatisfaction; previously unaddressed ruptures	Ostati smiren; validirati emocije; preuzeti dio odgovornosti; vratiti fokus na odnos putem gradnje povjeranja / Remain calm; validate emotions; take partial responsibility; refocus on the relationship through rebuilding trust
Gubitak povjerenja / Loss of trust	Nedosljednost u komunikaciji; neispunjena očekivanja; prethodna iskustva s prisilom ili stigmatizacijom / Inconsistency in communication; unmet expectations; previous experiences of coercion or stigmatisation	Priznati pogreške; biti transparentan; kontinuirano dosljedno ponašanje / Acknowledge mistakes; maintain transparency; demonstrate consistent behaviour over time
Negativne emocionalne reakcije stručnjaka -neprepoznavanje kontratransfera / Negative emotional reactions of the professional – unrecognised countertransference	Nedostatak refleksije; profesionalni stres; emocionalno zahtjevni pacijenti, neprepoznati kontratransfer / Lack of reflection; professional stress; emotionally demanding patients; unrecognised countertransference	Samorefleksija; supervizija; pridržavanje profesionalnih granica i suradničkog pristupa, ponovi razgovor o ciljevima terapije / Self-reflection; supervision; adherence to professional boundaries and a collaborative approach; revisiting treatment goals
Kulturalni ili vrijednosni nesporazumi / Cultural or value-based misunderstandings	Razlike u uvjerenjima, jeziku ili objašnjenjima bolesti, nametanje svojih stavova pacijentu / Differences in beliefs, language, or illness explanations; imposing the professional's views on the patient	Istražiti pacijentov okvir razumijevanja; poštovati sustav vrijednosti pacijenta, pokazati kulturnu osjetljivost; prilagoditi komunikaciju, poštivati profesionalne granice / Explore the patient's explanatory framework; respect the patient's value system; demonstrate cultural sensitivity; adapt communication while maintaining professional boundaries
Ne prepoznavanje utjecaja transfera / Failure to recognise the impact of transference	Nedostatak praćenja emocionalnog stanja pacijenta, očekivanja i frustracija u odnosu, ne prepoznavanje transfera pacijenta / Insufficient monitoring of the patient's emotional state, expectations, and relational frustrations; failure to recognise patient transference	Redovito praćenje emocionalnog stanja pacijenta i primjerenosti njegovih reakcija realnom ponašanju terapeuta / Regularly monitor the patient's emotional state and assess whether reactions are proportionate to the therapist's actual behaviour

prepoznavanja utjecaja transfera i kontratransfera (38) Istraživanja pokazuju da dinamika transfera i kontratransfera može doprinijeti nastanku ruptura terapijskog saveza te da terapijska svijest o tim procesima i njihovo učinkovito upravljanje smanjuje učestalost i jačinu ruptura i poboljšava njihovo rješavanje.

Tablica 3. prikazuje najčešće identificirane barijere na strani stručnjaka u provedbi suradnje s

namics of transference and countertransference may contribute to ruptures in the therapeutic alliance, and that therapeutic awareness of these processes and their effective management reduce the frequency and intensity of such ruptures and improve their resolution.

Table 3 presents the most frequently identified barriers on the professionals' side in implementing collaboration with families in work with peo-

TABLICA 3. Barijere na strani stručnjaka u provedbi suradnje s obitelji u liječenju osoba sa psihozom i preporučene intervencije
TABLE 3. Professional-level barriers to implementing family collaboration in the treatment of individuals with psychosis and recommended interventions.

Barijera (razina stručnjaka) / Barrier (professional level)	Kako se manifestira u praksi / How it manifests in practice	Preporučene intervencije prema literaturi / Recommended interventions according to the literature
Nedostatak znanja i vještina za obiteljski rad / Lack of knowledge and skills for family work	Nesigurnost u vođenju obiteljskih susreta; izbjegavanje rada s obiteljima; oslanjanje isključivo na dijadni odnos / Insecurity in conducting family meetings; avoidance of working with families; reliance exclusively on a dyadic relationship	Strukturirana edukacija rada s obitelji rada; razvoj komunikacijskih i vještina; kontinuirana supervizija / Structured training in family work; development of communication and facilitation skills; ongoing supervision
Strah od pogoršanja terapijskog odnosa s pacijentom / Fear of deterioration of the therapeutic alliance with the patient	Izbjegavanje uključivanja obitelji radi „zaštite" saveza sa pacijentom / Avoidance of family involvement in order to "protect" the alliance with the patient	Edukacija o trijadnom terapijskom savezu; razgovor s pacijentom o korisnosti uključivanja obitelji, normalizacija obiteljskog rada kao standarda skrbi; refleksija stavova u odnosu na stručne preporuke / Education on the triadic therapeutic alliance; discussion with the patient about the benefits of family involvement; normalization of family work as a standard of care; reflection on professional attitudes in relation to clinical recommendations
Zabrinutost oko povjerljivosti i autonomije pacijenta / Concerns about confidentiality and patient autonomy	Nejasnoće što se smije dijeliti; potpuna isključenost obitelji iz komunikacije / Uncertainty about what information can be shared; complete exclusion of the family from communication	Edukacija o povjerljivosti; razdvajanje općih i osobnih informacija; redovito revidiranje dogovora / Education on confidentiality; differentiation between general and personal information; regular review of agreements
Negativni ili ambivalentni stavovi prema obiteljima / Negative or ambivalent attitudes toward families	Obitelj se doživljava kao prezahtjevna, ometajuća krivi se za bolest pacijenta / Families perceived as overly demanding, disruptive, or blamed for the patient's illness	Timska refleksija i promjena stavova; edukacija o *evidence base* obiteljskim intervencijama / Team reflection and attitude change; education on evidence-based family interventions
Izbjegavanje konflikta i emocionalno zahtjevnih situacija / Avoidance of conflict and emotionally demanding situations	Izbjegavanje susreta s obiteljima u krizi; prekid razgovora kod eskalacije emocija / Avoidance of meetings with families in crisis; termination of conversations when emotions escalate	Edukacija upravljanja konfliktom; razvoj vještina emocionalne regulacije; supervizija i podrška u zahtjevnim slučajevima / Training in conflict management; development of emotional regulation skills; supervision and support in demanding cases
Profesionalna nesigurnost i strah od pogrešaka / Professional insecurity and fear of making mistakes	Odgađanje ili potpuno izbjegavanje obiteljskog rada / Postponement or complete avoidance of family work	Mentorski modeli; jasni klinički protokoli; edukacija o promjeni obiteljskih intervencija, suradnja sa stručnjacima koji provode obiteljske intervencije / Mentoring models; clear clinical protocols; training in family intervention adaptation; collaboration with specialists providing family interventions
Nedostatak jasne profesionalne uloge u radu s obitelji / Lack of a clearly defined professional role in family work	Nejasno tko je odgovoran za obiteljski rad; „prebacivanje" odgovornosti / Uncertainty regarding responsibility for family work; "passing on" responsibility	Jasna podjela uloga unutar tima, tko radi s obitelji ili s kim se surađuje izvan tima / Clear division of roles within the team; designation of responsibility for family work or collaboration with external providers
Fokus isključivo na simptome / Exclusive focus on symptoms	Zanemarivanje psihosocijalnih i obiteljskih aspekata skrbi / Neglect of psychosocial and family aspects of care	Integracija obiteljskog rada u rutinske procjene; edukacija o metodama i učincima rada s obitelji / Integration of family work into routine assessments; education on methods and outcomes of family interventions

obitelji u radu s osobama sa psihozom, zajedno s preporučenim intervencijama. Tablica je utemeljena na sustavnim i preglednim radovima (15,16, 19-21,29). Nalazi upućuju na potrebu razumijevanja rada s obiteljima kao standardnog dijela skrbi, budući da je takav pristup povezan s boljim ishodima liječenja za osobe sa psihozom, ali i s očuvanjem mentalnog i tjelesnog zdravlja članova obitelji, koji su često izloženi visokoj razini opterećenja.

U tablici 4. prikazane su najčešće identificirane prepreke u komunikaciji i suradnji sa strane obitelji te intervencije koje pregledna i sustavna literatura preporučuje za njihovo prevladavanje (15,16,19-21). Tablica naglašava važnost kompetencija stručnjaka za prepoznavanje ovih prepreka te fleksibilnu primjenu intervencija koje su važne za oporavak osobe sa psihozom, ali i za prevenciju sagorijevanja članova obitelji.

U tablici 5. prikazana je sinteza najčešće identificiranih poteškoća u obiteljskom kontekstu osoba sa psihozom te intervencije koje literatura dosljedno preporučuje za njihovo ublažavanje i prevladavanje. Tablica predstavlja sintezu nalaza iz meta-analitičkih, sustavnih i preglednih radova o obiteljskim odnosima i ishodima liječenja osoba sa psihozom (15-17,22). Intervencije prikazane u tablici razvijene su u okviru bihevioralnih obiteljskih intervencija i obiteljske psihoedukacije (25, 27, 28, 29), *multifamily group* modela (30) te intervencija usmjerenih na podršku skrbnicima (31).

Tablica 6. prikazuje najčešće identificirane prepreke u ostvarivanju zajedničkog donošenja odluka u trijadnoj komunikaciji te preporučena rješenja. Preporuke su utemeljene na preglednoj i sustavnoj literaturi o SDM-u, trijadnoj komunikaciji i obiteljskom radu (15,19,20, 33,36) i preglednim radovima koji ukazuju da su stigmatizirajući stavovi psihijatara i drugih stručnjaka prema osobama sa psihozom prisutni te da je nužno sustavno raditi na njihovom prepoznavanju i smanjenju kroz edukaciju, re-

ple with psychosis, together with recommended interventions. The table is grounded in systematic and review studies (15,16,19-21,29). The findings point to the need to understand work with families as a standard component of care, as this approach is associated with better treatment outcomes for people with psychosis as well as with the preservation of the mental and physical health of family members, who are often exposed to high levels of burden.

Table 4 presents the most commonly identified barriers to communication and collaboration among families, along with interventions recommended by reviews and systematic literature to address them (15,16,19-21). The table highlights the importance of professionals' competencies in recognising these barriers and the flexible application of interventions that are important both for the recovery of the person with psychosis and the prevention of family burnout.

Table 5 presents a synthesis of the most frequently identified difficulties within the family context of individuals with psychosis, as well as the interventions that the literature consistently recommends for their reduction and management. The table synthesises findings from meta-analytic, systematic, and review studies on family relationships and treatment outcomes in individuals with psychosis (15–17,23). The interventions presented in the table were developed within the frameworks of behavioural family interventions and family psychoeducation (25,27,28,20), multi-family group models (30), and caregiver-focused support interventions (31).

Table 6 presents the most commonly identified barriers to shared decision-making in triadic communication, along with recommended solutions. Recommendations are based on narrative and systematic literature on shared decision-making (SDM), triadic communication, and family work (15,19,20,33,36), as well as review studies indicating that stigmatising attitudes among psychiatrists and other mental health professionals toward individuals with psychosis are present and that it is necessary to systematically address their

TABLICA 4. Prepreke u komunikaciji i suradnji sa strane obitelji u liječenju osoba sa psihozom i preporučene intervencije
TABLE 4. Family-level barriers to communication and collaboration in the treatment of individuals with psychosis and recommended interventions.

Prepreka (perspektiva obitelji) / Barrier (family perspective)	Kako se očituje u praksi / How it manifests in practice	Mehanizam / pozadina prepreke / Mechanism / underlying factors	Preporučene intervencije (konkretne preporuke) / Recommended interventions (practical recommendations)
Emocionalno preopterećenje i iscrpljenost / Emotional overload and exhaustion	Povlačenje iz komunikacije, burne emocionalne reakcije, otežano donošenje odluka / Withdrawal from communication; intense emotional reactions; impaired decision-making	Dugotrajni stres, strah, osjećaj bespomoćnosti / Prolonged stress, fear, feelings of helplessness	Validacija emocionalnog iskustva; usporavanje tempa komunikacije; fazni pristup (podrška → informacije → planiranje); ponavljanje ključnih informacija / Validation of emotional experience; slowing the pace of communication; phased approach (support → information → planning); repetition of key information
Osjećaj isključenosti iz skrbi / Feeling excluded from care	Frustracija, nepovjerenje, pasivnost ili konfrontacija / Frustration, mistrust, passivity, or confrontation	Iskustvo marginalizacije; komunikacija usmjerena isključivo na pacijenta / Experience of marginalisation; communication focused exclusively on the patient	Proaktivan kontakt s obitelji; eksplicitno imenovanje njihove uloge; redoviti strukturirani obiteljski sastanci / Proactive contact with the family; explicit clarification of their role; regular structured family meetings
Nepovjerenje prema stručnjacima i sustavu / Mistrust toward professionals and the system	Sumnjičavost, osporavanje odluka, odbijanje suradnje / Suspicion, questioning of decisions, refusal to collaborate	Prethodna negativna iskustva, doživljaj prisile ili netransparentnosti / Previous negative experiences; experiences of coercion or lack of transparency	Dosljedna i transparentna komunikacija; objašnjavanje razloga odluka; priznanje ograničenja i pogrešaka / Consistent and transparent communication; explanation of the rationale for decisions; acknowledgment of limitations and mistakes
Strah od okrivljavanja i stigmatizacije / Fear of blame and stigmatisation	Defenzivnost, izbjegavanje kontakta, umanjivanje problema / Defensiveness, avoidance of contact, minimization of problems	Povijesni modeli koji su implicirali krivnju obitelji; društvena stigma / Historical models implying family blame; societal stigma	Psihoedukacija usmjerena na oporavak; tumačenje biopsihosocijalnog modela; korištenje jezika oporavka / Recovery-oriented psychoeducation; explanation of the biopsychosocial model; use of recovery-oriented language
Nejasnoće oko povjerljivosti / Uncertainty regarding confidentiality	Osjećaj isključenosti, ljutnja, konflikt / Feelings of exclusion, anger, conflict	Nerazumijevanje pravnih i etičkih granica / Lack of understanding of legal and ethical boundaries	Rano i kontinuirano objašnjavanje povjerljivosti; razdvajanje općih informacija od osobnih podataka; razgovor uz suglasnost pacijenta / Early and ongoing explanation of confidentiality; differentiation between general information and personal data; discussions with the patient's consent
Različita očekivanja i ciljevi liječenja / Divergent expectations and treatment goals	Nesporazumi, pritisak na stručnjake, konflikt / Misunderstandings, pressure on professionals, conflict	Fokus obitelji na sigurnost i funkcioniranje, a ne samo na simptome / Family focus on safety and functioning rather than symptoms alone	Zajedničko definiranje ciljeva; integracija obiteljskih prioriteta u plan liječenja; redovito revidiranje ciljeva / Joint goal-setting; integration of family priorities into the treatment plan; regular review of goals
Iscrpljenost skrbnika i nedostatak podrške / Caregiver exhaustion and lack of support	Ograničena dostupnost, neredoviti kontakti / Limited availability; irregular contact	Preopterećenost brigom, manjak resursa / Care burden and lack of resources	Ponuda podrške usmjerene na skrbnike; informiranje o dostupnim resursima; fleksibilni termini / Offering caregiver-focused support; providing information about available resources; flexible scheduling
Praktične i logističke prepreke / Practical and logistical barriers	Izostanci, nemogućnost dolaska na sastanke / Missed appointments; inability to attend meetings	Radno vrijeme, udaljenost, financijski i obiteljski tereti / Work schedules; distance; financial and family burdens	Fleksibilni modeli (telefonski/online kontakti); kraći, ciljano strukturirani susreti / Flexible models (telephone/online contacts); shorter, goal-oriented, structured meetings
Konfliktni obiteljski odnosi / Conflictual family relationships	Eskalacije, napetost tijekom susreta / Escalation and tension during meetings	Dugotrajni neriješeni odnosi, visoka emocionalna izraženost (EE) / Long-standing unresolved relational issues; high expressed emotion (EE)	Strukturirani susreti s jasnim pravilima; rad na snižavanju EE korištenjem evedence base intervencija / Structured meetings with clear rules; interventions aimed at reducing EE using evidence-based approaches
Kulturne i vrijednosne razlike / Cultural and value differences	Nerazumijevanje, nepovjerenje / Misunderstanding, mistrust	Različiti modeli razumijevanja bolesti i skrbi / Different explanatory models of illness and care	Kulturalno osjetljiva komunikacija; istraživanje obiteljskog okvira razumijevanja; prilagodba jezika / Culturally sensitive communication; exploration of the family's explanatory framework; adaptation of language

TABLICA 5. Poteškoće u relaciji pacijent–obitelj u liječenju osoba sa psihozom i preporučene intervencije
TABLE 5. Patient–family relationship difficulties in the treatment of individuals with psychosis and recommended interventions.

Poteškoće u relaciji pacijent–obitelj / Patient–family relationship difficulties	Preporučene intervencije utemeljene u literaturi / Recommended interventions based on the literature
Visoka izražena emocija (kriticizam, hostilnost, emocionalna pretjerana uključenost) / High expressed emotion (criticism, hostility, emotional over-involvement)	Bihevioralne obiteljske intervencije; obiteljska psihoedukacija; rad na komunikacijskim obrascima i regulaciji emocionalnih reakcija / Behavioural family interventions; family psychoeducation; work on communication patterns and regulation of emotional responses
Česti konflikti i napetosti u obitelji / Frequent conflicts and family tension	Strukturirani obiteljski susreti uz facilitaciju stručnjaka; postavljanje jasnih pravila komunikacije; višeobiteljske grupne intervencije / Structured family meetings facilitated by a professional; establishment of clear communication rules; multifamily group interventions
Nedostatak emocionalne topline i podrške / Lack of emotional warmth and support	Intervencije usmjerene na jačanje pozitivnih interakcija; poticanje validacije i podržavajuće komunikacije; fokus na snage obitelji / Interventions aimed at strengthening positive interactions; promotion of validation and supportive communication; focus on family strengths
Pretjerana kontrola ili zaštitničko ponašanje / Excessive control or overprotective behaviour	Psihoedukacija o autonomiji, oporavku i granicama; pregovaranje o ulogama i odgovornostima pacijenta i obitelji / Psychoeducation on autonomy, recovery, and boundaries; negotiation of patient and family roles and responsibilities
Povlačenje obitelji i emocionalna distanca / Family withdrawal and emotional distance	Aktivno uključivanje obitelji u liječenje; normalizacija ambivalentnih osjećaja; fleksibilni i fazni oblici kontakta / Active family involvement in treatment; normalization of ambivalent feelings; flexible and phased forms of contact
Nepovjerenje između pacijenta i obitelji / Mistrust between the patient and the family	Transparentna komunikacija; zajednički razgovori uz posredovanje stručnjaka; postupna izgradnja sigurnosti i povjerenja / Transparent communication; joint discussions mediated by a professional; gradual building of safety and trust
Različita očekivanja o liječenju i oporavku / Divergent expectations regarding treatment and recovery	Zajedničko definiranje ciljeva liječenja; usklađivanje očekivanja; redovito revidiranje plana liječenja / Joint definition of treatment goals; alignment of expectations; regular review of the treatment plan
Opterećenost i iscrpljenost skrbnika / Caregiver burden and exhaustion	Intervencije usmjerene na skrbnike (carer-focused interventions); emocionalna podrška; edukacija o samobrizi; povezivanje s resursima i grupama podrške / Carer-focused interventions; emotional support; education on self-care; linkage to resources and support groups
Stigmatizirajuća uvjerenja unutar obitelji / Stigmatising beliefs within the family	Neokrivljujuća psihoedukacija temeljena na biopsihosocijalnom modelu; destigmatizacijski pristup; uključivanje perspektive oporavka / Non-blaming psychoeducation based on the biopsychosocial model; destigmatising approach; integration of a recovery perspective
Loša komunikacija o simptomima i ranim znakovima pogoršanja / Poor communication about symptoms and early warning signs of relapse	Edukacija o ranim znakovima recidiva; zajednički krizni planovi; poticanje otvorene, neokrivljujuće komunikacije / Education on early relapse signs; joint crisis plans; encouragement of open, non-blaming communication

fleksivnu praksu i superviziju (39). Prikazani nalazi ističu važnost trijadnog komunikacijskog okvira u kojem se perspektive pacijenta, obitelji i stručnjaka aktivno integriraju, pri čemu zajedničko donošenje odluka služi kao strukturirani mehanizam za uravnotežavanje autonomije, odgovornosti i poticanja oporavka osoba sa psihozom.

Kako bi se dodatno naglasila povezanost trijadne komunikacije s osobnim oporavkom prikazana je njihova povezanost s ključnim komponentama CHIME modela oporavka (40) u tablici 7. CHIME model naglašava važnost osobnih dimenzija oporavka kao što su povezanost, nada, identitet, smisao i osnaženje.

recognition and reduction through education, reflective practice, and supervision (39). The findings highlight the importance of a triadic communication framework in which the perspectives of patients, families, and professionals are actively integrated, with shared decision-making serving as a structured mechanism for balancing autonomy, responsibility, and the facilitation of recovery in individuals with psychosis.

To further emphasise the relationship between triadic communication and personal recovery, their association with the key components of the CHIME recovery model (40) is presented in Table 7. The CHIME model highlights the importance of personal dimensions of recovery, including connectedness, hope, identity, meaning, and empowerment.

TABLICA 6. Prepreke u ostvarivanju zajedničkog donošenja odluka (SDM) u trijadnoj komunikaciji i preporučena rješenja
TABLE 6. Barriers to shared decision-making (SDM) in triadic communication and recommended solutions.

Prepreke / Barriers	Preporučena rješenja / intervencije / Recommended solutions / interventions
Paternalistički stavovi stručnjaka i sumnja u sposobnost pacijenata sa psihozom za sudjelovanje u odlučivanju / Paternalistic professional attitudes and doubts about the decision-making capacity of individuals with psychosis	Edukacija o SDM-u prilagođenom radu sa osobama sa psihozom ; refleksija profesionalnih stavova; oslobađanje o stigmatizirajućih stavova, supervizija usmjerena na trijadnu komunikaciju / Education on SDM adapted for work with individuals with psychosis; reflection on professional attitudes; reduction of stigmatising beliefs; supervision focused on triadic communication
Nedostatak znanja i vještina stručnjaka za facilitiranje SDM-a / Lack of professional knowledge and skills to facilitate SDM	Strukturirani trening komunikacijskih vještina; korištenje SDM alata i vodiča; kontinuirana supervizija / Structured communication skills training; use of SDM tools and recommendations; ongoing supervision
Strah stručnjaka od povećanja konflikta u trijadi / Professionals' fear of increased conflict within the triad	Jasna struktura SDM razgovora; facilitacija razgovora; postavljanje pravila komunikacije i uloga / Clear structure of SDM conversations; active facilitation; establishment of communication rules and roles
Nedostatak vremena i organizacijskih resursa / Lack of time and organisational resources	Uvođenje SDM-a u rutinske procjene; kratki, strukturirani SDM razgovori; institucionalna podrška i protokoli / Integration of SDM into routine assessments; brief, structured SDM conversations; institutional support and clinical protocols
Akutni simptomi, kognitivne poteškoće i fluktuirajući uvid pacijenata / Acute symptoms, cognitive difficulties, and fluctuating insight in patients	Prilagodba SDM-a kognitivnim mogućnostima; fazni pristup odlučivanju; ponavljanje i vizualna podrška / Adaptation of SDM to cognitive capacities; phased decision-making; repetition and visual supports
Prethodna iskustva prisile kod pacijenata / Patients' previous experiences of coercion	Transparentna komunikacija; priznanje prethodnih iskustava; naglasak na izboru i autonomiji / Transparent communication; acknowledgment of past experiences; emphasis on choice and autonomy
Ambivalentnost pacijenata prema preuzimanju odgovornosti / Patient ambivalence toward assuming responsibility	Normalizacija ambivalentnosti; podržano donošenje odluka (*supported decision-making)*; fleksibilna razina uključenosti / Normalization of ambivalence; supported decision-making; flexible levels of involvement
Različiti ciljevi pacijenta, obitelji i stručnjaka / Divergent goals among patients, families, and professionals	Zajedničko definiranje ciljeva; eksplicitno uvažavanje svih perspektiva; redovito revidiranje odluka / Joint goal-setting; explicit recognition of all perspectives; regular review of decisions
Emocionalno preopterećenje i iscrpljenost obitelji / Family emotional overload and exhaustion	Validacija iskustva obitelji; fazni pristup komunikaciji; ponuda intervencija usmjerenih na skrbnike / Validation of the family's experience; phased communication approach; provision of carer-focused interventions
Nepovjerenje obitelji prema sustavu i stručnjacima / Family mistrust toward professionals and the system	Dosljedna i transparentna komunikacija; uključivanje obitelji u planiranje; izgradnja povjerenja kontinuitetom / Consistent and transparent communication; inclusion of families in planning; trust-building through continuity
Nejasnoće oko povjerljivosti i uloge obitelji / Uncertainty regarding confidentiality and the role of the family	Rano i kontinuirano pregovaranje o povjerljivosti; jasno razdvajanje općih i osobnih informacija / Early and ongoing negotiation of confidentiality; clear distinction between general and personal information
Strah obitelji od relapsa i sigurnosnih rizika / Family fears of relapse and safety risks	Psihoedukacija; zajednički krizni planovi; jasno definirane odgovornosti / Psychoeducation; joint crisis plans; clearly defined responsibilities
Konfliktni obiteljski odnosi / Conflictual family relationships	Strukturirani obiteljski susreti; višeobiteljske grupne intervencije; vještine rješavanja sukoba i problema / Structured family meetings; multifamily group interventions; conflict resolution and problem-solving skills
Stigmatizirajuća uvjerenja u obitelji / Stigmatising beliefs within the family	Neokrivljujuća psihoedukacija; destigmatizacijski pristup; fokus na oporavak / Non-blaming psychoeducation; destigmatising approach; recovery-focused orientation
Nejasna podjela odgovornosti u trijadi / Unclear division of responsibilities within the triad	Jasno definiranje uloga pacijenta, obitelji i stručnjaka u SDM procesu / Clear definition of the roles of the patient, family, and professionals in the SDM process

RASPRAVA

Nalazi ovog rada, temeljeni na sintezi pregledne i meta-analitičke literature, naglašavaju važnost terapijskog odnosa i terapijskog saveza kao aktivnog agensa u liječenju osoba s poteškoćama mentalnog zdravlja, osobito osoba sa psihozom, te potrebu za dosljednom

DISCUSSION

The findings of this paper, based on a synthesis of review and meta-analytic literature, highlight the importance of the therapeutic relationship and therapeutic alliance as active agents in the treatment of individuals with mental health difficulties, particularly those with psychosis, and

TABLICA 7. Povezanost trijadne komunikacije zajedničkog donošenja odluka s CHIME modelom oporavka
TABLE 7. Association of triadic communication and shared decision-making with the CHIME recovery model.

Element CHIME modela / CHIME model element	Kako preporuke za trijadnu komunikaciju potiču oporavak / How recommendations for triadic communication promote recovery
Connectedness (povezanost)	Jačanje terapijskog odnosa stručnjak- osoba sa psihozom; trijadna komunikacija uključivanje obitelji u razmjenu informacija i dogovore o liječenju uz pristanak osobe sa psihozom / Strengthening the therapeutic relationship between the professional and the person with psychosis; triadic communication that involves the family in information sharing and treatment agreements with the consent of the person with psychosis
Hope (nada)	Psihoedukacija o oporavku, promjena stavova o oporavku stručnjaka, pacijenata i obitelji, poticanje optimizma aktivnim sudjelovanjem u oporavku / Recovery-oriented psychoeducation; changing recovery-related attitudes among professionals, patients, and families; fostering optimism through active participation in the recovery process
Identity (identitet)	Uvažavanje osobne perspektive osobe; poštivanje vrijednosti i preferencija osobe, izbjegavanje stigmatizirajućeg jezika i podrška u oslobađanju od stigme, poticanje samopouzdanja i identititeta osobe odvojeno od dijagnoze, izbjegavanje etiketiranja bolesti kao osobnih obilježja / Recognition of the person's subjective perspective; respect for personal values and preferences; avoidance of stigmatising language; support in stigma reduction; promotion of self-confidence and identity separate from the diagnosis; avoidance of labeling illness as a defining personal characteristic
Meaning (smisao)	Usklađivanje odluka o liječenju s onim što je osobi važno u svakodnevnom životu; uključivanje obitelji u razumijevanje onoga što je osobi važno; zajedničko donošenje odluka / Aligning treatment decisions with what is meaningful to the person in everyday life; involving the family in understanding what matters to the person; shared decision-making
Empowerment (osnaživanje)	Poticanje autonomije, fokusiranje na snage osobe, pružanje podrške stručnjaka i obitelji za postizanje oporavka. / Promotion of autonomy; strengths-based focus; professional and family support in achieving recovery goals

primjenom kvalitetnog terapijskog odnosa i terapijskog saveza u svakodnevnoj psihijatrijskoj praksi.

Brojni meta-analitički pregledi potvrđuju da je terapijski savez jedan od najpouzdanijih prediktora ishoda liječenja, neovisno o terapijskom pristupu i dijagnostičkoj skupini, (2,3,5-7). U liječenju osoba sa psihozom, terapijski savez pokazuje se osobito važnim u dugotrajnoj skrbi, gdje je povezan ne samo s kliničkim ishodima, nego i s aspektima osobnog i funkcionalnog oporavka, uključujući nadu, osnaženost i svakodnevno funkcioniranje (9,10). Nalazi ovog pregleda također ističu potrebu za dosljedno uvođenje rada sa obitelji u svakodnevnoj psihijatrijskoj praksi za osobe sa psihozom jer je kvaliteta obiteljske komunikacije, osobito razine izraženih emocija, pouzdano povezana s rizikom relapsa i rehospitalizacija (22,23), te su obiteljske intervencije (15-17) povezane s prevencijom recidiva i sagorijevanja članova obitelji. Zajedničko donošenje odluka pokazuje se, u skladu s preglednom literaturom (34-36) kao prikladan komunikacijski okvir za liječenje osoba sa psihozom koji uključuje i obitelj budući da je potreba za uključivanje obitelji u

emphasise the need for the consistent application of high-quality therapeutic relationships and alliances in everyday psychiatric practice.

Numerous meta-analytic reviews confirm that the therapeutic alliance is one of the most reliable predictors of treatment outcomes, regardless of therapeutic approach or diagnostic group (2,3,5-7). In the treatment of individuals with psychosis, the therapeutic alliance appears particularly important in long-term care, where it is associated not only with clinical outcomes but also with personal and functional recovery, including hope, empowerment, and everyday functioning (9,10). The findings of this review also underscore the need for the consistent integration of family work into routine psychiatric practice for persons with psychosis, as the quality of family communication—particularly levels of expressed emotion—is reliably associated with the risk of relapse and rehospitalisation (22,23), and family interventions (15-17) are associated with the prevention of relapse and burnout among family members. Shared decision-making (SDM), in line with the literature review (34-36), emerges as an appropriate communication framework for the treatment of individuals with psychosis, including the family, given that family involvement in

liječenju osoba sa psihozom više pravilo nego iznimka. U trijadnom kontekstu, SDM omogućuje strukturirano uključivanje obitelji uz očuvanje autonomije pacijenta.

Nalazi ovog rada potvrđuju da su prepreke trijadnoj komunikaciji višerazinske i u velikoj mjeri povezane s profesionalnim stavovima, komunikacijskim kompetencijama stručnjaka i organizacijskim uvjetima skrbi, a ne isključivo s kliničkim obilježjima psihoze. Time se dodatno opravdava fokus rada na razvoj smjernica usmjerenih na promjenjive aspekte prakse.

Nalazi ovog podupiru konceptualizaciju terapijskog odnosa i trijadne komunikacije kao aktivnog terapijskog čimbenika, što implicira primjenu postupaka koji povećavaju kvalitetu dijadne i trijadne komunikacije u praksi.

Na temelju pregledne literature i meta-analiza operacionaliziraju se spoznaje o važnosti dijadnog i trijadnog odnosa u liječenju osoba sa psihozom u komunikacijskim intervencijama u svakodnevnoj psihijatrijskoj praksi.

Ograničenja ovog rada proizlaze iz njegove narativne prirode i oslanjanja na selektivni pregled literature, bez formalne procjene kvalitete uključenih studija ili kvantitativne sinteze učinaka. Nadalje, većina dostupnih istraživanja temelji se na opservacijskim i korelacijskim dizajnima, što ograničava mogućnost donošenja kauzalnih zaključaka. Preporuke predstavljene u ovom radu stoga treba promatrati kao sintezu najboljih dostupnih dokaza, a ne kao normativne ili univerzalno primjenjive protokole.

Implikacije za buduća istraživanja uključuju potrebu za intervencijskim i longitudinalnim studijama koje će ispitati učinke sustavne primjene trijadnih komunikacijskih smjernica na kliničke i oporavku usmjerene ishode, kao i istraživanja organizacijskih čimbenika koji omogućuju njihovu održivu implementaciju u rutinskoj praksi.

the treatment of psychosis is more the rule than the exception. In a triadic context, SDM enables structured family involvement while preserving patient autonomy.

The findings of this paper confirm that barriers to triadic communication are multi-level and largely related to professionals' attitudes, clinicians' communication competencies, and organisational conditions of care, rather than exclusively to the clinical characteristics of psychosis. This further justifies the present work's focus on developing recommendations targeting modifiable aspects of clinical practice.

The results of this review support the conceptualization of the therapeutic relationship and triadic communication as active therapeutic factors, thereby informing the implementation of practices to enhance the quality of dyadic and triadic communication in clinical settings.

The recommendations suggested in this paper, based on reviews and meta-analyses, operationalise evidence on the importance of dyadic and triadic relationships in the treatment of individuals with psychosis into concrete professional behaviours and communication interventions applicable to everyday psychiatric practice.

The limitations of this paper stem from its narrative design and reliance on a selective literature review, without a formal assessment of study quality or a quantitative synthesis of effects. Furthermore, most available studies employ observational or correlational designs, which limit the ability to draw causal conclusions. Therefore, the recommendations presented in this paper should be viewed as a synthesis of the best available evidence rather than normative or universally applicable protocols.

Future research should include interventional and longitudinal studies examining the effects of the systematic application of triadic communication recommendations on clinical and recovery-oriented outcomes, as well as investigations of organisational factors that enable their sustainable implementation in routine practice.

Unatoč navedenim ograničenjima, ovaj rad doprinosi literaturi integracijom teorijskih i empirijskih nalaza iz područja terapijskog saveza, obiteljskih intervencija i zajedničkog donošenja odluka u koherentan, klinički primjenjiv okvir preporuka, čime se premošćuje jaz između znanstvenih dokaza i svakodnevne psihijatrijske prakse.

ZAKLJUČCI

Potvrđeno je da kvaliteta dijadne i trijadne komunikacije značajno utječe na tijek i ishode liječenja osoba sa psihozom. Kvalitetna komunikacija povezana je s boljom suradnjom u liečenju, manjom percipiranom prisilom i povoljnijim oporavkom.

Terapijski odnos i komunikacija trebaju se sustavno prepoznati i razvijati kao sastavni dio standardne psihijatrijske skrbi, a ne kao dodatna ili fakultativna komponenta liječenja. To uključuje dosljednu primjenu suradničkog i empatičnog pristupa, aktivno praćenje kvalitete terapijskog saveza, pravodobno prepoznavanje i popravak ruptura odnosa te strukturirano uključivanje obitelji u proces liječenja. Posebnu vrijednost ima primjena zajedničkog donošenja odluka kao komunikacijskog okvira koji potiče autonomiju pacijenta, odgovornosti stručnjaka i sudjelovanje obitelji uz pristanak pacijenta. Učinkovita implementacija navedenih preporuka zahtijeva organizacijsku podršku jasnim protokolima kontinuiranom edukacijom i supervizijom tručnjaka. Sustavno ulaganje u primjenu kvalitetne trijadne komunikacije i zajedničkog donošenja odluka ključni preduvjet za oporavku usmjerenu, etički osjetljivu i klinički učinkovitu skrb za osobe sa psihozom.

Despite these limitations, this paper contributes to the literature by integrating theoretical and empirical findings from therapeutic alliance, family interventions, and shared decision-making into a coherent, clinically applicable framework of recommendations, thereby bridging the gap between scientific evidence and everyday psychiatric practice.

CONCLUSIONS

This paper synthesises the review and meta-analytic literature on the therapeutic relationship and alliance, family involvement, and triadic communication in the treatment of individuals with psychosis and recommends ways to improve recovery-oriented triadic communication.

The findings confirm that the quality of dyadic and triadic communication significantly influences the course and outcomes of treatment for individuals with psychosis. High-quality communication is associated with better treatment engagement, lower perceived coercion, and more favourable recovery outcomes.

The therapeutic relationship and communication should be systematically recognised and developed as integral components of standard psychiatric care, rather than as additional or optional elements of treatment. This includes consistently applying a collaborative and empathic approach, actively monitoring the quality of the therapeutic alliance, timely identification and repair of alliance ruptures, and structured family involvement in the treatment process. Particular value is placed on shared decision-making as a communication framework that promotes patient autonomy, professional responsibility, and family participation, with the patient's consent. Effective implementation of these recommendations requires organisational support through clear protocols, continuous professional education, and ongoing supervision. Systematic investment in the application of high-quality triadic communication and shared decision-making represents a key prerequisite for recovery-oriented, ethically sensitive, and clinically effective care for individuals with psychosis.

LITERATURA / *REFERENCES*

1. Bordin ES. The generalizability of the psychoanalytic concept of the working alliance. Psychother Theory Res Pract 1979;16(3):252–60.
2. Horvath AO, Symonds BD. Relation between working alliance and outcome in psychotherapy: A meta-analysis. J Couns Psychol 1991;38(2): 139–49.
3. Priebe S, McCabe R. The therapeutic relationship in psychiatric settings. Acta Psychiatr Scand Suppl 2006;113(s429): 69–72.
4. Frank AF, Gunderson JG. The role of the therapeutic alliance in the treatment of schizophrenia: Relationship to course and outcome. Arch Gen Psychiatry 1990; 47(3): 228–36.
5. Flückiger C, Del Re AC, Wampold BE, Horvath AO. The alliance in adult psychotherapy: A meta-analytic synthesis. Psychotherapy (Chic) 2018;55(4):316–40.
6. Martin DJ, Garske JP, Davis MK. Relation of the therapeutic alliance with outcome and other variables: A meta-analytic review. J Consult Clin Psychol 2000;68(3):438–50.
7. Zolnierek KBH, DiMatteo MR. Physician communication and patient adherence to treatment: A meta-analysis. Med Care 2009;47(8):826–34.
8. Roe D, Goldblatt H, Baloush-Kleinman V, Swarbrick M, Davidson L. Why and how people decide to stop psychotropic medication: Exploring the subjective process of choice. Psychiatr Rehabil J 2006;29(1):38–46.
9. Bourke E, Barker C, Fornells-Ambrojo M. Systematic review and meta-analysis of therapeutic alliance, engagement, and outcome in psychological therapies for psychosis. Psychol Psychother 2021;94(3):822-53.
10. Browne J, Wright AC, Berry K, Mueser KT, Cather C, Penn DL et al. The alliance-outcome relationship in individual psychosocial treatment for schizophrenia and early psychosis: A meta-analysis. Schizophr Res 2021;231:154-63.
11. Sharf J, Primavera LH, Diener MJ. Dropout and therapeutic alliance: A meta-analysis of adult individual psychotherapy. Psychotherapy (Chic) 2010;47(4):637–45.
12. McCabe R, Bullenkamp J, Hansson L, Lauber C, Martinez-Leal R, Rossler W et al. The therapeutic relationship and adherence to antipsychotic medication in schizophrenia. PLoS One 2012;7(4):e36080.
13. Safran JD, Muran JC. Negotiating the therapeutic alliance: A relational treatment guide. New York: Guilford Press, 2000.
14. Eubanks CF, Muran JC, Safran JD. Alliance rupture repair: A meta-analysis. Psychotherapy (Chic) 2018;55(4):508–19.
15. National Institute for Health and Care Excellence (NICE). Psychosis and schizophrenia in adults: Prevention and management. NICE guideline CG178. London: NICE, 2014.
16. McFarlane WR. Family interventions for schizophrenia and the psychoses: A review. Fam Process 2016;55(3):460–82.
17. Pharoah F, Mari J, Rathbone J, Wong W. Family intervention for schizophrenia. Cochrane Database Syst Rev 2010;(12):CD000088.
18. Glynn SM, Cohen AN, Dixon LB, Niv N. The potential impact of the recovery movement on family interventions for schizophrenia: opportunities and obstacles. Schizophr Bull 2006;32(3):451-63.
19. Eassom E, Giacco D, Dirik A, Priebe S. Implementing family involvement in the treatment of patients with psychosis: A systematic review of facilitating and hindering factors. BMJ Open 2014;4(10):e006108.
20. Hansson KM, Romøren M, Pedersen R, Weimand B, Hestmark L, Norheim I et al. Barriers and facilitators when implementing family involvement for persons with psychotic disorders in community mental health centres - a nested qualitative study. BMC Health Serv Res 2022;22(1):1153.
21. Lucksted A, McFarlane W, Downing D, Dixon L. Recent developments in family psychoeducation as an evidence-based practice. J Marital Fam Ther 2012;38(1):101–21.
22. Butzlaff RL, Hooley JM. Expressed emotion and psychiatric relapse: A meta-analysis. Arch Gen Psychiatry 1998;55(6):547–52.
23. Cechnicki A, Bielańska A, Hanuszkiewicz I, Daren A. The predictive validity of expressed emotions (EE) in schizophrenia. A 20-year prospective study. J Psychiatr Res 2013;47(2):208-14.
24. O'Brien MP, Gordon JL, Bearden CE, Lopez SR, Kopelowicz A, Cannon TD. Positive family environment predicts improvement in symptoms and social functioning among adolescents at risk for psychosis. Schizophr Res 2006;81(2–3):269–75.
25. Falloon IR, Boyd JL, McGill CW, Williamson M, Razani J, Moss HB, et. al. Family management in the prevention of morbidity of schizophrenia. Clinical outcome of a two-year longitudinal study. Arch Gen Psychiatry 1985;42(9):887-96.
26. Leff J, Vaughn C. Expressed emotion in families. New York: Guilford Press, 1985.
27. Anderson CM, Hogarty GE, Reiss DJ. Family treatment of adult schizophrenic patients: A psycho-educational approach. Schizophr Bull 1986;12(2):257–71.
28. Hogarty GE, Anderson CM, Reiss DJ, Kornblith SJ, Greenwald DP, Ulrich RF, et al. Family psychoeducation, social skills training, and maintenance chemotherapy in the aftercare treatment of schizophrenia. II. Two-year effects of a controlled study on relapse and adjustment. Environmental-Personal Indicators in the Course of Schizophrenia (EPICS) Research Group. Arch Gen Psychiatry 1991;48(4):340-7.
29. Pilling S, Bebbington P, Kuipers E, Garety P, Geddes J, Orbach G et al. Psychological treatments in schizophrenia: I. Meta-analysis of family intervention and cognitive behaviour therapy. Psychol Med 2022;32(5):763-82.
30. McFarlane WR. Multifamily groups in the treatment of severe psychiatric disorders. New York: Guilford Press, 2002.
31. Kuipers E, Onwumere J, Bebbington P. Cognitive model of caregiving in psychosis. Br J Psychiatry 2010;196(4):259–65.

32. Charles C, Gafni A, Whelan T. Shared decision-making in the medical encounter: What does it mean? Soc Sci Med 1997;44(5):681–92.
33. Elwyn G, Frosch D, Thomson R, Joseph-Williams N, Lloyd A, Kinnersley P et al. Shared decision making: A model for clinical practice. J Gen Intern Med 2012;27(10):1361–7.
34. Hamann J, Mendel R, Cohen R, Heres S, Ziegler M, Bühner M, Kissling W. Psychiatrists' use of shared decision making in the treatment of schizophrenia: patient characteristics and decision topics. Psychiatr Serv 2009;60(8):1107-12.
35. Joosten EA, DeFuentes-Merillas L, de Weert GH, Sensky T, van der Staak CP, de Jong CA. Systematic review of the effects of shared decision-making on patient satisfaction, treatment adherence and health status. Psychother Psychosom 2008;77(4):219–26.
36. Shay LA, Lafata JE. Where is the evidence? A systematic review of shared decision making and patient outcomes. Med Decis Making 2015;35(1):114–31.
37. Morant N, Kaminskiy E, Ramon S. Shared decision making for psychiatric medication management: Beyond the micro-social. Health Expect 2016;19(5):1002–14.
38. Tishby O, Wiseman H. Countertransference types and their relation to rupture and repair in the alliance. Psychother Res 2022;32(1):29-44.
39. Valery KM, Prouteau A. Schizophrenia stigma in mental health professionals and associated factors: A systematic review. Psychiatry Res 2020;290:113068.
40. Leamy M, Bird V, Le Boutillier C, Williams J, Slade M. Conceptual framework for personal recovery in mental health: Systematic review and narrative synthesis. Br J Psychiatry 2011;199(6):445–52.

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