
Alcoholism: Success of Long-Term Treatment – a Systematic Review

¹ Martina Smrekar

¹ Snježana Čukljek

¹ Ana Marija Hošnjak

¹ Boris Ilić

¹ Sanja Ledinski Fičko

¹ University of Applied Health Sciences, Department of Nursing, Zagreb

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Author for correspondence:

Martina Smrekar
University of Applied Health Sciences
Mlinarska cesta 38, Zagreb, Croatia
Tel: + 385 91 4595 711
Fax: + 385 1 5495 711
E-mail: martina.smrekar@zvu.hr

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Abstract

Introduction. Alcohol consumption represents a public health problem whose treatment is complex, multi-dimensional and long-term with possible recurrence. Treatment is aimed at achieving long-term abstinence.

Aim. The purpose of this paper is to use a systematic review in order to determine which of the methods of alcoholism treatment has long-term effects on permanent and complete abstinence of an individual. The aim of the systematic review is an analysis of published data and achievements in this area.

Methods. A systematic review of literature that evaluates the success of long-term treatment of alcoholism was conducted using the Medline databases. The keywords used as search terms were: alcoholism, treatment success, long-term abstinence.

Results. Six studies in total were taken into consideration due to the availability of a full text article and years of publication between 2000 and 2017. Treatment of alcoholism includes some of the following interventions: complete abstinence from alcohol, pharmacotherapy, cognitive-behavioral therapy, self-help group attendance, family therapy, individual interventions, combined behavioral interventions and telephone-based interventions. Results have shown that the following interventions had an impact on the increment of abstinence rates: aftercare telephone monitoring, regular medical checkups, participation in self-help groups, pharmacotherapy, attendance of the Outpatient Long-term Intensive Therapy for Al-

coholics (OLITA) (OLITA program includes psychiatric care, cognitive-behavioral therapy, patient-centered psychotherapy and classical addiction therapy). The research shows that people who abstain for 3 to 6 months are more likely to achieve and maintain long-term abstinence.

Conclusion. More long-term research is required in order to estimate the treatment success in the long term. The treatment success depends on the individual and his motivation to accept treatment, on the long-term and comprehensive treatment and self-help group attendance.

Introduction

Problems related to the abuse of alcohol vary widely around the world. Alcohol is an easily accessible, available and cheap substance that causes addiction. Alcoholism is a chronic, recurring condition involving multiple cycles of treatment, abstinence, and relapse (1). It represents a large health, social and economic burden (2). Abuse of alcohol is a risk factor for morbidity, disability and mortality (3). Alcohol abuse disorders include alcohol abuse (drinking problem) and alcohol dependence (alcoholism) (4). Consumption of alcohol and problems related to alcohol represent a public health problem whose treatment is complex and long-term with a possible recurrence causing cost on society. The main importance to public health is the development of successful approaches in treatment and their intense analysis (5). It is necessary to investigate which measures can be implemented in order to protect individuals from the attempt of alcohol use and how to help individuals who were addicted to alcohol to permanently abstain from alcohol use. The protection of the health of populations by preventing and reducing the harmful use of alcohol is a public health priority. One of the objectives of the World Health Organization is to reduce social burden caused by the harmful use of alcohol (3). Often alcohol consumption is a part of the normative culture in certain countries. The significant problem occurs in young people starting with alcohol consumption at an earlier and earlier age. Most of them encounter alcohol for the first time in their family home.

The causes of alcoholism can be numerous. Most often they are associated with disturbances in the biological, social and psychological functioning. Factors that contribute to alcoholism may be age, gender, immediate and wider community, the easy availability of alcohol, economic status, media advertising of drinking alcohol, society's liberal attitude towards drinking alcohol, lack of social support from family and community. The Global Report of the World Health Organization 2014 on the status of alcohol and health states that Europe is the region with the highest consumption of alcohol per capita and that some of its countries have a very high consumption rate (2). The WHO Regional Committee for Europe had adopted The European Action Plan to reduce the harmful use of alcohol 2012-2020. The action plan reflects new evidence concerning public health policies related to alcohol and includes a number of options to reduce the harmful use of alcohol (6).

Treatment of alcohol dependence remains one of the biggest challenges, since only about half of all patients achieve long-term abstinence by the currently available therapies (7). There are many options for the treatment of alcohol use disorders. The treatment is a complex process and it requires a holistic treatment approach. It partly depends on the severity of the patient's drunkenness (4). The individual's task is to make their own decision to stop drinking and to enter the treatment program. With long term treatment and support, some individuals are able to stop drinking and rebuild their lives (8).

Treatment programmes are conducted in hospitals and later rehabilitation through outpatient treatment. Treatment can be divided into three general categories: brief intervention; specialised treatment programmes, and mutual help groups (9). Brief interventions are intended to provide prophylactic treatment before or soon after the onset of alcohol related problems. They are designed to motivate high-risk drinkers to moderate their alcohol consumption, rather than promote total abstinence. They are often simple enough to be delivered by primary care practitioners (9). Four medications are approved for the treatment of alcohol dependence in Europe, that is Naltrexone, Acamprosate, Disulfiram and the most recent Nalmefene (10). Disulfiram which is in common use, interferes with the metabolism of alcohol by inhibiting aldehyde dehydrogenase. It produces flushing, nausea, palpitations, and other severe reactions if drinking occurs (11). In the last years Nalmefene has been pre-

sented as a new medical means to reduce the desire for alcohol but for now there is not enough experience of what will be its lasting effect (12).

Motivational interviewing helps to increase the patient's motivation and commitment to the treatment and the willingness to change behavior. This method of treatment is often used with patients with serious problems or with patients with less serious alcohol problems (13).

Outpatient Long-term Intensive Therapy for Alcoholics (OLITA) is a long-term biopsychosocial outpatient therapeutic approach that is conducted in four steps. It is intended for patients who are heavily dependent on alcohol. The aim of OLITA is to stimulate immediate social reintegration of patients. This approach to treatment includes basic elements of psychiatric care, cognitive-behavioral care, patient-centered psychotherapy and classical addiction therapy (5).

Alcoholics Anonymous is a large and effective organization that deals with the treatment of alcoholics. They have done a lot for the world of alcoholics (14).

The goal in the treatment of alcoholism is to achieve a permanent and total abstinence which can be complex and depends on the individual and his motivation to accept treatment and support from family and community (5).

The purpose of this paper is to use a systematic review in order to determine which of the methods of alcoholism treatment has long-term effects on permanent and complete abstinence of an individual. The aim of the systematic review is an analysis of published data and achievements in this area.

Methods

A systematic review of literature that evaluates the success of long-term treatment of alcoholism was conducted using Medline databases. The keywords used as search terms were: alcoholism, treatment success and long-term abstinence.

Inclusion and exclusion criteria

We included the articles written in the English language, articles with full texts available online, focusing on the years of publication between 2000 and 2017.

The studies with a date of publication before 2000 were excluded.

Papers included in the final analysis

Upon the entry of the keywords into the database, the titles of potential articles were obtained. After analyzing the title of the paper, the second step was the analysis of the abstracts. Only full text articles were taken into account for further analysis. After applying the inclusion and exclusion criteria six papers were included in the study.

In total, six studies were included in this systematic review. Overview of the studies finally included is displayed in Table 1.

Results

The search process yielded 16 articles in total. After applying the inclusion and exclusion criteria, 6 articles relating to long-term alcoholism treatment success were considered eligible for further analysis (as shown in Fig. 1). Overview of the studies finally included is presented as a Prisma 2009 Flow Diagram (15).

Authors Rus-Makovec, Cebasek-Travnik (16) in 2008 tried to determine the factors that affect long-term abstinence. They studied the influence of the following on the abstinence of patients: intensive treatment (the treatment included the detoxification process, psychodynamically oriented group therapy combined with a behavioral-cognitive approach, the principles of motivational enhancement therapy and family therapy, individual interventions) and aftercare telephone monitoring, the week of follow-up. The respondents were divided into two groups; the telephone contact group and no contact group. Respondents were checked after the intensive treatment by the aftercare telephone monitoring. The patients were asked questions about abstinence/

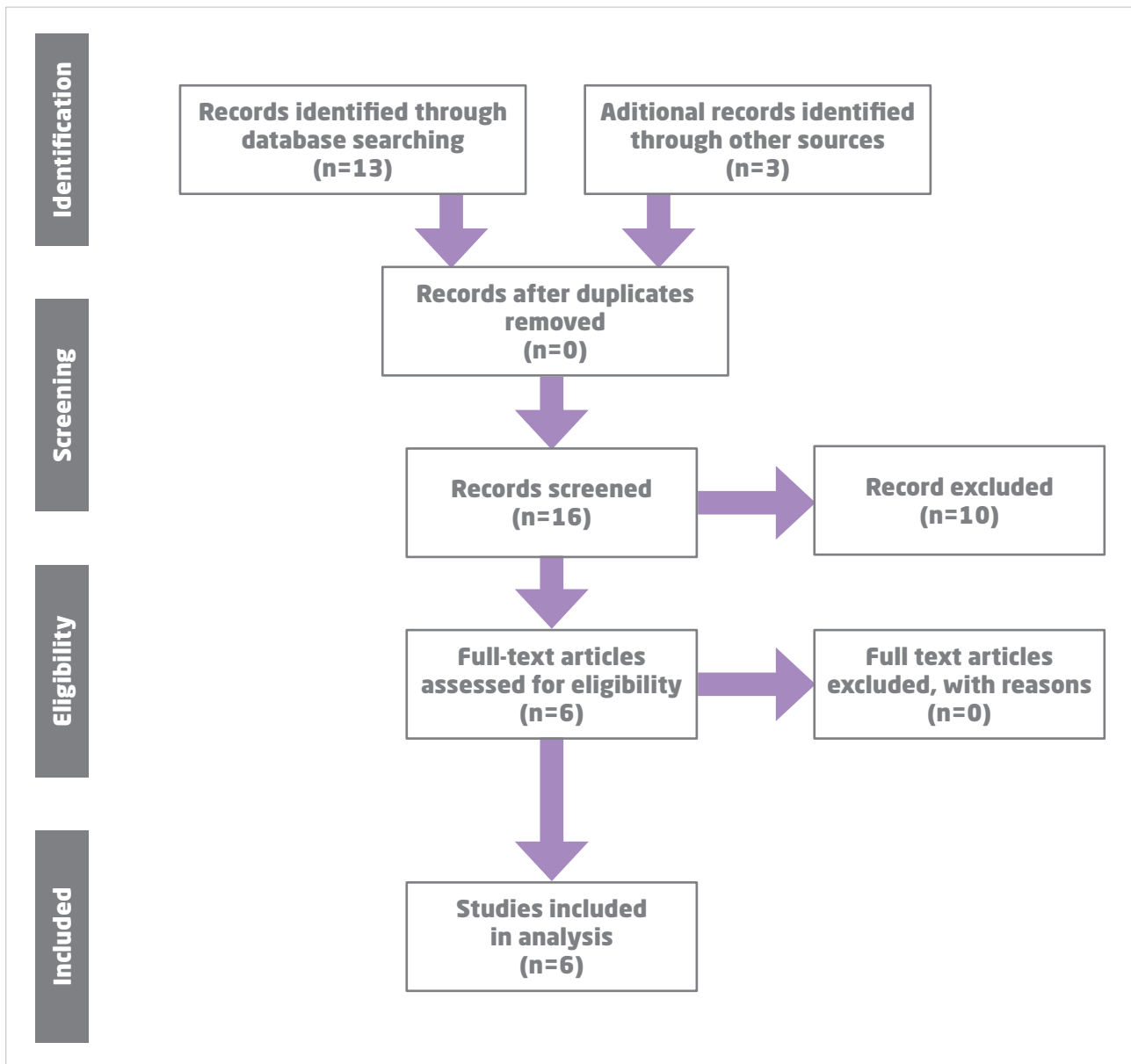


Figure 1. **Flow of information through the different phases of a systematic review**

relapse, participation in after-care recovery, participation of significant others in after-care settings, quantity and quality of relapse, the type of help they received in coping with relapse, changes in marital status/partnership, employment status. The telephone contact group was checked three, six, twelve and twenty-four months after the intensive treatment. The no contact group was checked only at 24 months after the treatment. Results showed that the abstinence rate for telephone contact group was 27.7%, and for no contact group 24.4% (16).

Greenfield, Burgdorf, Chen, Porowski, Roberts, Herrell (17) in 2004 examined the abstinence rate of women involved in residential substance abuse treatment. The results showed that the abstinence rate was 76%-78% for three months and achieved their treatment goals in three to five months abstinence. The abstinence rate for patients who did not complete the treatment was 51%-52% (17).

Authors Weisner, Ray, Mertens, Satre, Moore (18) in 2003 aimed to determine the connection between a six-month treatment outcomes to abstinence 5

Table 1. Overview of the studies finally included

DOCUMENT	AIM	STUDY DESIGN	RESULTS
Rus-Makovec M, Cebasek-Travnik Z (16). Slovenia	Determine the influence of intensive treatment and aftercare telephone contact on abstinence of patients.	Prospective observational study conducted from April 2001 to June 2002. The number of the respondents; telephone contact group (n = 249) no contact group (n = 170)	The telephone contact group were checked three, six, twelve and twenty-four months after the intensive treatment. The no contact group was checked only at 24 months after the treatment. Abstinence rate for aftercare telephone monitoring patients; telephone contact group = 27.7%, and the abstinence rate for no contact group = 24.4%.
Greenfield L, Burgdorf K, Chen X, Porowski A, Roberts T, Herrell J (17) USA	Determine the abstinence rate of women involved in residential substance abuse treatment	Data from the following studies: CSAT's National Treatment Improvement Evaluation Study (NTIES) National Institute on Drug Abuse's Drug Study Drug Abuse's Drug Abuse Treatment Outcomes Study (DATOS).	76%-78% was abstinence rate for clients who remained in treatment for at least three months. Abstinence rate (51%-52% abstinent) compared to those who did not complete treatment
Weisner C, Ray GT, Mertens JR, Satre DD, Moore C (18). USA	Determine the relationship of 6-month treatment outcomes to abstinence 5 years post-treatment, and determine the predictors of abstinence at 5 years	The number of the respondents: 784. Respondents were interviewed at baseline, 6 months, and 5 years	Abstinence at 6 months was an important predictor of abstinence at 5 years
Gueorguieva R, Wu R, Fucito LM, O'Malley SS (19). USA	Determine the abstinence rate of alcoholics involved in COMBINE Study (Combined Pharmacotherapies and Behavioral Interventions for Alcohol Dependence Study)	The number of the respondents: 1383 abstinent alcohol-dependent patients	End-of-treatment outcomes were the strongest predictors of long-term outcome in all analyses
Cho T, Negoro H, Saka Y, Morikawa M, Kishimoto T (20). Japan	Determine the abstinence rate of alcoholics two years after discharge from treatment	Prospective study conducted between November 2007 and August 2008 The number of the respondents: 98	The abstinence rates for patients who utilized 3CGS program were significantly higher than those for patients who did not.
Krampe H, Stawicki S, Hoehe MR, Ehrenreich H. (5) Germany	Determine the abstinence rate of patients with alcohol dependence using Outpatient Long-term Intensive Therapy for Alcoholics (OLITA)	The OLITA pilot study conducted from 1993 till 2003 The number of the respondents: 180	The abstinence rate was over 50%

years post-treatment. Their results showed that an important predictor of abstinence rate at 5 years was the abstinence rate at 6 months. Authors stated that these results strongly support the importance of recovery-oriented social networks for those with good short-term outcomes (18).

Authors Gueorguieva, Wu, Fucito, O'Malley (19) in 2015 showed the results from the Combined Pharmacotherapies and Behavioral Interventions for Alcohol Dependence (COMBINE) Study. The authors aimed to determine which are the predictors of good patient outcome. According to their results the end of treatment outcomes were the strongest predictors of long-term outcome. Authors stated that the results from the study emphasize the importance of optimizing outcomes during treatment and identify potential subgroups of patients who require additional or alternative interventions to achieve good long-term outcome (19).

Authors Cho, Negoro, Saka, Morikawa, Kishimoto in their study 2013 tried to determine the abstinence rate of alcoholics two years after discharge from the treatment. Authors presented the guidelines (3CGS) which are being carried out in Japan. The guidelines (3CGS) imply regular medical checkups, participation in self-help groups, pharmacotherapy with antidipsotropics for patients with alcohol problems. The abstinence rates for patients who followed the guidelines were significantly higher in comparison with patients who did not follow the guidelines (20).

Authors Krampe, Stawicki, Hoehe, Ehrenreich (5) presented the OLITA outpatient therapy program which includes frequent contact with patients, therapist rotation, support of social reintegration and aggressive aftercare, application of alcohol deterrents and supervised intake of alcohol. The treatment procedure consists of a detoxification period followed by the outpatient period that is conducted in four phases. The estimated abstinence rate was over 50% (5).

Discussion

This research shows that people who abstain for 3 to 6 months are more likely to establish and maintain

long-term abstinence. According to Muncie, Yasinian, Oge' (2013) long-term success depends on facilitating the patient's entry into ongoing treatment (21). Authors Benyamina, Reynaud (2016) state that long-term medical surveillance is required in the treatment of alcohol dependence. The success of therapy depends on patient follow-up (phase of initiation with several consultations during 2-4 weeks) and psychosocial and motivational interventions. Patients need to be included in proactive disease management planning and ensure adherence to treatment, change in behavior and new way of life (22).

By analyzing the studies on the success of long-term treatment, the main predictors of treatment success that can be singled out are older age, participation at Alcoholics Anonymous meetings, the severity of addiction, motivation and socioeconomic status (23). This can be linked to greater emotional maturity and existential situation, which can be a significant motive for the success of abstinence.

The environment in which the individual lives, the availability of alcohol, stress to which the individual is exposed, influence the enhanced risk of developing alcoholism. The individual addicted to alcohol has a hard time deciding to start the treatment. Alcoholics cannot be forced into treatment, except in the case of violent behavior. Unfortunately, often only the consequences of alcohol abuse (violence, accidents and opportunistic diseases) force alcoholics into treatment, and by then they had already developed damage to the body and the success of treatment is significantly reduced. Involving the family of the alcoholics in the treatment is not always easy. The family often cannot understand that they need help as well. The circumstance that hinders successful treatment is the stigmatization of the society. This makes long-term treatment and at the same time the return to society more difficult. The final prospect of rehabilitation of individuals is associated with their positive attitude towards life, their history and the future towards which they look with realism but also with hope, which until recently did not even exist. The availability of hospital and outpatient treatment is very important but not sufficient to reduce the rate of alcohol dependence. The treatment includes complete abstinence from alcohol, management of acute medical and psychiatric conditions, attending self-help group programs. Alcoholics Anonymous is a widely used intervention for alcohol use disorders. Many patients find the social support provided by

12-step self-help groups useful in maintenance of abstinence, especially if they have no other social support. Most Western experts for helping alcohol addicts agree that the best chance of recovery and healing are alcoholics who have attended Alcoholics Anonymous meetings long enough and frequently enough as well. From just under 60% of alcoholics who after the completion of treatment continued to attend Alcoholics Anonymous meetings, 41% of them continued stable abstaining (14).

Abuse of alcohol remains a serious public health concern. It takes long-term public health actions directed at the individual, their family and the entire community in order to act on reducing alcohol dependence and prevent possible recurrence. The aim is to prevent damage caused by alcohol, to reduce the risk of problems associated with alcohol, which can occur at various places such as home, workplace or at the premises where alcohol is consumed, and to provide affordable help to people who are at risk of alcoholism.

The goal of public health efforts is to support introduction of effective strategies such as tax increases on alcoholic beverages, controlled access to alcoholic beverages and increasing the age for purchasing them. It is necessary to emphasize the role of primary care physicians in the early assessment of high-risk individuals. For this reason, additional education of health professionals is needed, especially physicians and nurses in primary health care. More long-term research needs to be implemented in order to evaluate the effects of different types of treatment. Literature review revealed that there are not many papers that compare the performance of a treatment between men and women and papers on women and alcoholism in general. Alcoholism in women has recently become a growing problem. The reason for this is that women often due to condemnation from their environment enter treatment later than men, more often drink alone and hide their addiction. The reason for this may be a predisposition to the process of personal change and the possibility of identifying and removing the "cause" where a woman manages to outgrow the illness. In addition to behavioral changes, long-term abstinence demands personality changes as well. Maximum facilitated availability of therapies is extremely important in all phases of the treatment. The broad range of approaches confronts alcoholics with various institutional and professional components. With great motivation any intervention must be culturally acceptable for an individual, which

means that it must respond in part to their expectations and be emotionally and cognitively acceptable. Organizations and institutions that deal with issues of alcoholism have to work together.

Conclusion

More long-term research is required in order to estimate the treatment success in the long-term. The treatment requires a multidisciplinary approach. It depends on the individual and their motivation to accept treatment, long term supervision, social support, long-term and comprehensive treatment and self-help group participation. Family support is very important in all phases of treatment and abstinence process. With long-term treatment and support of family and community many individuals can achieve long term abstinence.

References

1. McKay JR, Hiller-Sturmhöfel S. Treating alcoholism as a chronic disease: approaches to long-term continuing care. *Alcohol Res Health* 2011; 33(4): 356-370. PMID: PMC3625994
2. Meloni JN, Laranjeira R. The social and health burden of alcohol abuse. *Rev Bras Psiquiatr.* 2004 May;26 Suppl 1:57-10. Epub 2005.
3. World Health Organization (WHO): Global status report on alcohol and health. WHO, Geneva, 2014. Available at: http://apps.who.int/iris/bitstream/10665/112736/1/9789240692763_eng.pdf?ua=1
4. University of Maryland Medical Center – Alcohol and Drug Abuse. Available at: <https://www.rehab.com/university-of-mary-land-medical-center-alcohol-and-drug-abuse/5564203-r>
5. Krampe H, Stawicki S, Hoehe MR, Ehrenreich H. Outpatient Long-term Intensive Therapy for Alcoholics (OLITA): a successful biopsychosocial approach to the treatment of alcoholism. *Dialogues Clin Neurosci* 2007; 9(4): 399-412.
6. World Health Organization (WHO): European action plan to reduce the harmful use of alcohol 2012-2020. Copenhagen, WHO Regional Office for Europe, 2012-2020. Available at: http://www.euro.who.int/__data/assets/pdf_file/0008/178163/E96726.pdf.
7. Müller UJ, Sturm V, Voges J, Heinze HJ, Galazky I, Heldmann M, Scheich H, Bogerts B. Successful Treatment of Chronic Resistant Alcoholism by Deep Brain Stimulation of Nucleus Accumbens: First Experience with Three Cases. *Pharmacopsychiatry* 2009; 42: 288 – 292
8. Alcoholism & Long Term Treatment. Long Term Rehab for Alcoholism. Available at: <https://www.burningtree.com/alcoholism-long-term-treatment-2/>
9. Room R, Babor T, Rehm J. Alcohol and public health. *Lancet* 2005; 365: 519-30.
10. Michalak A, Biała G. Alcohol dependence -neurobiology and treatment. *Acta Pol Pharm* 2016;73(1):3-12.
11. Miller PM, Book SW, Stewart SH. Medical Treatment of Alcohol Dependence: A Systematic Review. *Int J Psychiatry Med* 2011 ; 42(3): 227-266.
12. Paille F, Martini H. Nalmefene: a new approach to the treatment of alcohol dependence. *Subst Abuse Rehabil.* 2014; 5: 87-94.
13. Manthou E, Georgakouli K, Fatouros IG, Gianoulakis C, Theodorakis Y, Jamurtas AZ. Role of exercise in the treatment of alcohol use disorders (Review). *Biomed Rep* 2016; 4(5): 535-545.
14. Torre R, Zoričić Z, Katanić K, Škifić B. Anonimni alkoholičari. *Medica Jadertina* 2010; 40: (1-2), 19-25.
15. Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *BMJ* 2009;339:b2535, doi: 10.1136/bmj.b2535
16. Rus-Makovec M, Cebasek-Travnik Z. Long-term abstinence and well-being of alcohol-dependent patients after intensive treatment and aftercare telephone contacts. *Croat Med J.* 2008;49(6):763-71.
17. Greenfield L, Burgdorf K, Chen X, Porowski A, Roberts T, Herrell J. Effectiveness of long-term residential substance abuse treatment for women: findings from three national studies. *Am J Drug Alcohol Abuse* 2004;30(3):537-50.
18. Weisner C, Ray GT, Mertens JR, Satre DD, Moore C. Short-term alcohol and drug treatment outcomes predict long-term outcome. *Drug Alcohol Depend* 2003;71(3):281-94.
19. Gueorguieva R, Wu R, Fucito LM, O'Malley SS. Predictors of Abstinence From Heavy Drinking During Follow-Up in COMBINE. *J Stud Alcohol Drugs* 2015;76(6):935-41.
20. Cho T, Negoro H, Saka Y, Morikawa M, Kishimoto T. Two-year prognosis after residential treatment for patients with alcohol dependence: three chief guidelines for sobriety in Japan. *Neuropsychiatr Dis Treat* 2016;12:1983-91.
21. Muncie HL Jr, Yasinian Y, Oge' L. Outpatient management of alcohol withdrawal syndrome. *Am Fam Physician.* 2013 Nov 1;88(9):589-95.
22. Benyamina A, Reynaud M. Management of alcohol use disorders in ambulatory care: Which follow-up and for how long? *Encephale.* 2016 Feb;42(1):67-73.
23. Krentzman AR et al. How Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) Work: Cross-Disciplinary Perspectives. *Alcohol Treat Q.* 2010 December ; 29(1): 75-84. doi:10.1080/07347324.2011.538318.

ALKOHOLIZAM: USPJEŠNOST DUGOROČNOG LIJEČENJA

Sažetak

Uvod. Konzumacija alkohola predstavlja javnozdravstveni problem čije je liječenje je kompleksno, multidimenzionalno i dugotrajno, s mogućim recidivima. Liječenje ima za cilj postići dugoročnu apstinenciju.

Svrha rada. Sistematičnim pregledom literature utvrditi koja od metoda liječenja alkoholizma ima dugoročne učinke na trajnu i potpunu apstinenciju pojedinca. Cilj je sistematičnog pregleda literature analiza objavljenih podataka i postignuća na tom području.

Metode. Sistematičan pregled literature koja procjenjuje uspješnost dugotrajnog liječenja alkoholizma proveden je s pomoću baze podataka Medline. Pojmovi koji su se upotrebljavali za pretraživanje bili su: alkoholizam, uspješnost liječenja, dugoročna apstinencija.

Rezultati. Ukupno je šest studija uključeno u istraživanje s obzirom na dostupnost cjelovitog teksta i godine objavljivanja između 2000. i 2017. Liječenje alkoholizma obuhvaća neke od sljedećih intervencija: potpunu apstinenciju od alkohola, farmakoterapiju, kognitivno-bihevioralnu terapiju, sudjelovanje u programu grupa samopomoći, obiteljsku terapiju, pojedinačne intervencije, kombinirane bihevioralne intervencije, telefonske intervencije. Rezultati su pokazali da sljedeće intervencije imaju utjecaj na povećanje stope apstinencije: kontinuirani nadzor pacijenata putem telefona; redoviti liječnički pregledi, sudjelovanje u programu grupa samopomoći, farmakoterapija te uključenost u program OLITA (program uključuje psihijatrijsku skrb, kognitivno bihevioralnu skrb, psi-

hoterapiju usmjerenu na pacijenta i klasičnu terapiju). Istraživanja pokazuju da je veća vjerojatnost postizanja dugoročne apstinencije kod osoba koje apstiniraju tri do šest mjeseci.

Zaključak. Potrebno je provesti veći broj istraživanja kako bi se procijenila uspješnost dugoročnog liječenja. Uspješnost liječenja ovisi o pojedincu i njegovoj motivaciji da prihvati liječenje, dugoročnom i sveobuhvatnom liječenju i sudjelovanju u grupama samopomoći.

Ključne riječi: alkoholizam, uspješnost liječenja, dugoročna apstinencija
