Effectiveness of 12 step Mutual Help Groups: the Latest Research

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Addiction self-help organizations are an international phenomenon

- Austria: Blue Cross
- France: Vie Libre
- Hong Kong: SAARDA
- Japan: Danshukai
- Poland: Abstainer's Clubs
- Sweden: The Links
- Iran: Narcotics Anonymous

Source: Humphreys, K., (2004) Circles of Recovery. Cambridge University Press

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Background on AA, The Prototypic Self-Help Organization

- Founded in Midwestern U.S. in 1935
- Sole purpose: To help "alcoholics" become sober
- Offers meetings, sponsorship, literature, 12 steps
- "Disease" model
- Explosive growth in U.S. and world
- Influenced professionals substantially
- Most widely sought source of help for alcohol

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Common AA Beliefs

- Alcoholism is core to the self
- Alcoholism is like pregnancy (yes/no)
- Not curable, but can be arrested
- Abstinence is necessary, but not sufficient

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But does it work?

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Veterans Affairs RCT on AA/NA referral for outpatients

- 345 VA outpatients randomized to standard or intensive 12-step group referral
- 81.4% FU at 6 months
- Higher rates of 12-step involvement in intensive condition
- 60%+ greater improvement in outcomes in intensive referral condition

Source: Timko, C. (2006). Intensive referral to 12-step self-help groups and 6-month substance use disorder outcomes. Addiction, 101, 678-688.

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Changing network support for drinking trial (n= 210)

- Patients Randomized to Case Management or Network Support Approaches
- Network approaches produce higher AA involvement, 20% more abstaining days

Mark D. Litt, Ronald M. Kadden, Elise Kabela-Cormier, and Nancy Petry (2007). Changing Network Support for Drinking: Initial Findings From the Network Support Project. Journal of Consulting and Clinical Psychology, 71, 118-128.

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Integration of federally funded 12-step facilitation trials

- Instrumental variables analysis of over 2,300 alcohol use disorder patients in six trials
- Used randomization as instrument to test impact of AA free of selection bias
- AA effective in 5 of 6 trials

Citation: Humphreys, K., Blodgett, J. & Wagner, T. (2014). Alcoholism Clinical and Experimental Research, 38, 2688-2694.

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Impact of 12 step mutual help groups on drug use disorder patients across six clinical trials

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Funded by NIDA Clinical Trials Network through Western States Node

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Regression Findings

Both Fixed and Random Effect Models showed 12-step group Involvement predict decreased ASI drug and alcohol scores

But even with many controls, risk of bias

Drug Composite	
Person Random Effect	
Attendance (number)	−0.0002**
95 % CI	(0.0001)
Observations	4656
Number of Subjects	1456
Person Fixed Effect	
Attendance (number)	−0.0003**
	(0.0001)
Observations	4715
Number of Subjects	1485
Alcohol Composite	
Person Random Effect	
Attendance (number)	−0.0004***
95 % CI	(0.0001)
Observations	4657
Number of Subjects	1456
Person Fixed Effect	
Attendance (number)	−0.0006***
95 % CI	(0.0002)
Observations	4717
Number of Subjects	1485

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Heath Care Cost Implications

Source: Humphreys, K., & Moos, R. Alcoholism: Clinical and Experimental Research, 25, 711-716.

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Quasi-Experimental Design, I

- Follow-up study of over 1700 patients (100% male, 46% African-American) receiving one of two types of care:
- 5 programs heavily based on 12-step
- 5 programs with little 12-step focus

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Quasi-Experimental Design, II

- Nearest programs hundreds of miles apart
- Patients matched on prior mental health/SUD care utilization
- No baseline differences in marriage, employment, comorbid psychiatric disorder, current substance use, service utilization or self-help group involvement
- 100% follow-up on utilization outcomes, 84% on other outcomes

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Self-help group participation at 1-year follow-up was higher after 12 step oriented treatment

- 36% of 12-step program patients had a sponsor, over double the rate of cognitive-behavioral program patients
- 60% of 12-step program patients were attending self-help groups, compared with slightly less than half of cognitive-behavioral program patients

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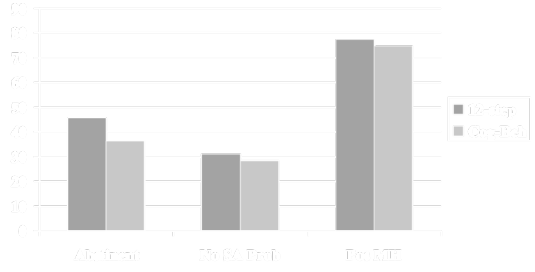
1-Year Clinical Outcomes (%)



Note: Abstinence higher in 12-step, p< .001

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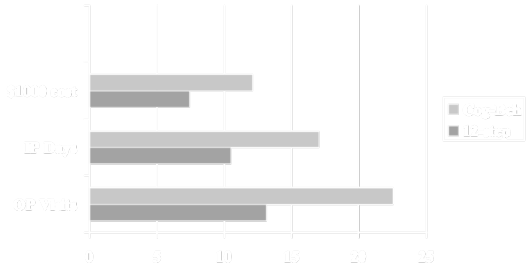
1-Year Treatment Costs, Inpatient Days and Outpatient visits



Note: All differences significant at p <.001

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2-year follow-up of same sample

- 50% to 100% higher self-help group involvement measures favoring 12-step
- Abstinence difference increased: 49.5% in 12-step versus 37.0% in CB
- A *further* $3,600 health care cost reduction (total for two years ~ $12k in 2021 USD)

Source: Humphreys, K., & Moos, R. (2007). Encouraging posttreatment self-help group involvement to reduce demand for continuing care services: Two-year clinical and utilization. Alcoholism: Clinical & Experimental Research, 31, 64-68

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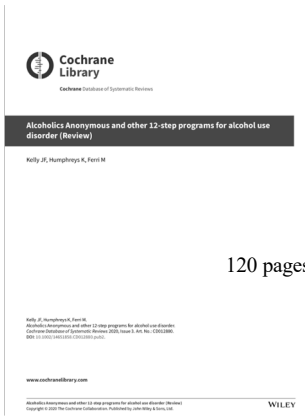

Cochrane Systematic Review on AA/TSF (2020)

- Kelly, JF
- Humphreys, K
- Ferri, M

120 pages!

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Selection Criteria

- We included randomized controlled trials (RCTs), quasi-RCTs, and non-randomized studies that compared AA/TSF with other interventions such as motivational enhancement therapy (MET) or cognitive-behavioral therapy (CBT), TSF treatment variants, or no treatment.
- Health care cost-offset (economic) studies were also included.
- Participants were non-coerced male and female adults with AUD.

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Search Methods

Cochrane Drugs and Alcohol Group Specialized Register (via CRSLive), Cochrane Central Register of Controlled Trials (CENTRAL), PubMed, Embase, CINAHL and PsycINFO from inception to August 2019.

Also searched for ongoing and unpublished studies via ClinicalTrials.gov (www.clinicaltrials.gov) and WHO International Clinical Trials Registry Platform (ICTRP) (apps.who.int/trialsearch/).

All searches included non-English language literature. We hand searched references of topic-related systematic reviews and included studies.

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Included Studies (n participants)

- A total of 27 primary studies containing N=10,565 participants were included (21 RCTs/quasi-RCTs, 5 non-randomized, and 1 purely economic study) that reported follow-up results across 36 reports.

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Outcomes

Abstinence

- **Proportion of Patients Completely Abstinent:** 16 studies (n participants = 8,153)
- **Percent Days Abstinent (PDA):** 16 studies (n participants = 4,244)
- **Longest Period of Abstinence:** 2 studies (n participants = 148)

Drinking Intensity

- **Drinks per drinking day (DDD):** 8 studies (n participants = 2,650).
- **Percent Days Heavy Drinking (PDHD):** 3 studies (n participants = 648).

Alcohol-Related Consequences

- 8 studies (n participants = 3,281)

Alcohol Addiction Severity

- 7 studies (n participants = 1,616)

Economic Analyses

- 4 studies (n participants = 2,657)

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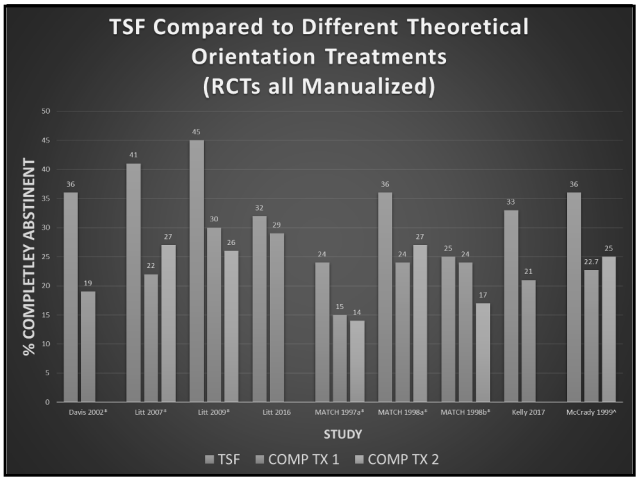

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AA/TSF Findings Summary

For alcohol-related outcomes other than complete abstinence, AA and professionally-delivered TSF interventions are at least as effective as other well-established treatments.

For abstinence outcomes, AA and TSF interventions are as effective or better than other well-established treatments.

Implementing AA and TSF also appear to produce substantial health care cost savings.

Mediational analyses demonstrate clinically delivered TSF produces its benefits largely through its ability to foster increased AA participation during and, importantly, following the end of formal treatment.

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The New York Times

TheUpshot

THE NEW HEALTH CARE

Alcoholics Anonymous vs. Other Approaches: The Evidence Is Now In

An updated review shows it performs better than some other common treatments and is less expensive.

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What mediates these benefits?

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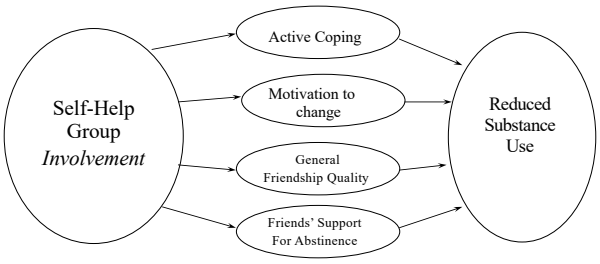
Structural equation modeling results from over 2,000 patients assessed at intake, 1-year, 2-year



Note.

All paths significant at p<.05. Goodness of Fit Index = .950, Annals of Behavioral Medicine, 21: 54-60

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Partial mediators of 12-step groups' effect on substance use identified in research

- Increased self-efficacy
- Strengthened commitment to abstinence
- More active coping
- Enhanced social support
- Greater spiritual and altruistic behavior
- Replacement of substance-using friends with abstinent friends

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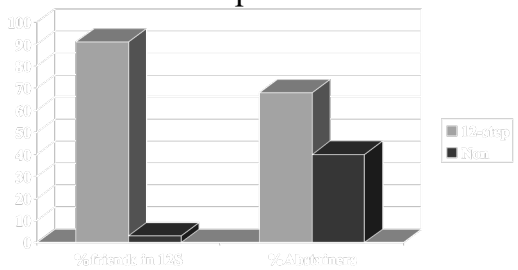
12-step vs. non-12 step based friendship networks of 1,932 treated SUD patients



Source: Humphreys, K., & Noke, J. (1997). The influence of posttreatment mutual help group participation on the friendship networks of substance abuse patients. American J of Community Psychology, 25, 1-16.

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Clinical and Policy Implications

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Intreatment preparation for AA produces better outcomes

- ON/OFF design with 508 patients
- Experimental received "Making Alcoholics Anonymous Easier" (MAAEZ) training
- At 12 months, 1.85 higher odds for alcohol abstinence, 2.21 for drug abstinence for those receiving MAAEZ

Source: Kaskutas, L.A., et al. (2009). Journal of Substance Abuse Treatment, 37, 228-239.

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"We do that already: Normal referral processes are ineffective

Sample:	20 alcohol outpatients
Design:	Outpatients randomly assigned to standard 12-step self-help group referral (list of meetings and therapist encouragement to attend) or intensive referral (in-session phone call to active 12-step group member)
Results:	Attendance rate after intensive referral: 100% Attendance rate after standard referral: 0%
Source:	Sisson, P.W., & Mallams, J.H. (1981). The use of systematic encouragement and community access procedures to increase attendance at AA meetings. Am J Drug Alc Abuse, 8, 371-376.

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Self-help referral can be beneficial in non-specialty settings

	Control	BI	BI+Peer
6-month abstinence	36%	51%	64%
TX/AA Initiation	9%	15%	49%

Source: Study by Rick Blondell, M.D. of 140 patients hospitalized For alcohol-related injuries, J Fam Practice, 50

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UK SMART expansion project

- Partnership between DoH, Alcohol Concern and SMART Recovery UK
- Developed training, local champions, referral processes in 6 sites in England
- Established 18 groups in 4 regions (12 original, 6 spinoffs)
- Raised profile of SMART with professionals and public

Source: Macgregor, S., & Herring, R. (2010). The Alcohol Concern SMART Recovery pilot project final evaluation report. Middlesex University.

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Conclusions

- 12-step group participation significantly reduces substance use and health care costs.
- Benefits of 12-step groups mediated both by psychological and social changes.
- We need more research on and support for non-12 step alternatives.
- Investment in mutual-help supportive infrastructure may benefit public health and reduce health care cost.

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