Lessons learned from 15 years of NIH-funded 12-step Mechanisms of Behavior Change Research: Implications for treatment and recovery

John F. Kelly, Ph.D. & Robert L. Stout, Ph.D.

RSA, MOBC Satellite, June, 2015
## Disclosure of Relevant Financial Relationships

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Outline

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### TSF Delivery Modes

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<td>Stand alone Independent therapy</td>
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In past 25 years, AA research has gone from contemporaneous correlational research to rigorous RCTs and …
...and lagged moderated multiple mediation studies to elucidate its impact and MOBCs

TSF Delivery Modes

- Stand alone
  Independent therapy
- Integrated into an existing therapy
- Component of a treatment package (e.g., an additional group)
- As Modular appendage linkage component
Facilitating involvement in Alcoholics Anonymous during out-patient treatment: a randomized clinical trial

Kimberly S. Walitzer, Kurt H. Dermen & Christopher Barrick
Research Institute on Addictions/University at Buffalo, The State University of New York, Buffalo, NY, USA

TSF often produces significantly better outcomes relative to active comparison conditions (e.g., CBT)

Although TSF is not “AA”, it’s beneficial effect is explained by AA involvement post-treatment.
Also, state of the art instrumental variables analyses, as well as propensity score matching (Ye and Kaskutas, 2013) that help to remove self-selection biases, indicate AA has a causal impact on enhancing abstinence and remission rates.
Linkage to AA can lead to much higher rates of full sustained remission (Project MATCH, 1997)

Continuous Abstinence Rates during year following treatment (4-15 Months)

Continuous Abstinence Rates past 90 days - 3 Years
Can Encouraging Substance Abuse Patients to Participate in Self-Help Groups Reduce Demand for Health Care? A Quasi-Experimental Study

Keith Humphreys and Rudolf Moos

**Background:** Twelve-step-oriented inpatient treatment programs emphasize 12-step treatment approaches and the importance of ongoing attendance at 12-step self-help groups more than do cognitive-behavioral (CB) inpatient treatment programs. This study evaluated whether this difference in therapeutic approach leads patients who are treated in 12-step programs to rely less on professionally provided services and more on self-help groups after discharge, thereby reducing long-term health care costs.

**Methods:** A prospective, quasi-experimental comparison of 12-step-based (N = 5) and cognitive-behavioral (n = 5) inpatient treatment programs was conducted. These treatments were compared on the degree to which their patients participated in self-help groups, used outpatient and inpatient mental health services, and experienced positive outcomes (e.g., abstinence) in the year following discharge. Using a larger sample from an ongoing research project, 887 male substance-dependent patients from each type of treatment program were matched on pre-intake health care costs (N = 1774). At baseline and 1-year follow-up, patients’ involvement in self-help groups (e.g., Alcoholics Anonymous), utilization and costs of mental health services, and clinical outcomes were assessed.

**Results:** Compared with patients treated in CB programs, patients treated in 12-step programs had significantly greater involvement in self-help groups at follow-up. In contrast, patients treated in CB programs averaged almost twice as many outpatient continuing care visits after discharge (22.5 visits) as patients treated in 12-step treatment programs (13.1 visits), and also received significantly more days of inpatient care (17.0 days in CB versus 10.5 in 12-step), resulting in 64% higher annual costs in CB programs ($4729/patient, p < 0.001). Psychiatric and substance abuse outcomes were comparable across treatments, except that 12-step patients had higher rates of abstinence at follow-up (45.7% versus 36.2% for patients from CB programs, p < 0.001).

**Conclusions:** Professional treatment programs that emphasize self-help approaches increase their patients’ reliance on cost-free self-help groups and thereby lower subsequent health care costs. Such programs therefore represent a cost-effective approach to promoting recovery from substance abuse.

**Key Words:** Aftercare, Self-Help Groups, Health Care Cost-Offsets, Alcoholics Anonymous, Inpatient Treatment.
HEALTH CARE COST OFFSET
CBT VS 12-STEP RESIDENTIAL TREATMENT

Compared to CBT-treated patients, 12-step treated patients more likely to be abstinent, at a $8,000 lower cost per pt over 2 yrs ($10M total savings).

Also, higher remission rates, means decreased disease and deaths, increased quality of life for sufferers and their families.
DOES AA “CAUSE” BETTER OUTCOMES OR IS AA PARTICIPATION AN OUTCOME OF BETTER PROGNOSIS?

The Bradford Hill Criteria

1: Strength of Association. The stronger the relationship between the independent variable and the dependent variable, the less likely it is that the relationship is due to an extraneous variable.

2: Temporality. It is logically necessary that the cause must precede the effect.

3: Consistency. Multiple observations of the relationship in different circumstances and with different methods.

4: Theoretical Plausibility. It is necessary to have a theoretical basis for such a cause-and-effect relationship.

5: Coherence. A cause-and-effect relationship must be consistent with what is known about the phenomenon, not conflict with competing theories or rival hypotheses.

6: Specificity in the causes. In the absence of any prior observation suggesting that an outcome is best explained by other variables, the intervention itself must be specific.

7: Dose Response Relationship. The magnitude of the effect is in proportion to the extent of the intervention (i.e., the independent variable) and the magnitude of the dependent variable.

8: Experimental Evidence. Any experimental evidence that supports the intervention’s causal role.

9: Analogy. Sometimes a common area.

• Using accepted scientific standards (Bradford Hill criteria) and the most rigorous scientific methods (i.e., RCTs, instrumental variables analysis, PS matching), evidence indicates causal therapeutic benefit of AA

• The one exception is “specificity” (e.g., other interventions could also cause these benefits)

• But given AA is available free of charge in practically every US community and that an intervention’s “Impact” is a product of = reach x effectiveness (Glasgow et al, 2003), AA can be considered a clinical and public health ally in ameliorating the prodigious burden of disease attributable to alcohol addiction
Outline

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12-step Specific theoretical mechanisms: Program and Fellowship

- Recovery achieved via a “spiritual awakening” achieved through working through the 12-step program

- Although sometimes manifesting as a quantum change (e.g., Bill W.) it is described broadly as most often of the “educational variety” (Appendix II AA, 2001) emerging gradually leading to “psychic change” that alters view of self, others, and world

A.A. PREAMBLE

Alcoholics Anonymous is a fellowship of men and women who share their experience, strength and hope with each other that they may solve their common problem and help others to recover from alcoholism.

The only requirement for membership is a desire to stop drinking. There are no dues or fees for A.A. membership; we are self-supporting through our own contributions. A.A. is not allied with any sect, denomination, politics, organization or institution; does not wish to engage in any controversy, neither endorses nor opposes any causes. Our primary purpose is to stay sober and help other alcoholics to achieve sobriety.
How do people recover from alcohol dependence?  
A systematic review of the research on mechanisms of behavior change in Alcoholics Anonymous

John Francis Kelly¹, Molly Magill²,  
& Robert Lauren Stout³

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(Received 9 January 2009; accepted 18 January 2009)
Review found n=13 full mediational studies on MOBC and n=6 partial tests

Up until 2009, AA/TSF MOBC fell into three main categories, with most research conducted on/supporting (in descending order):

- **Common factors** (e.g., self-efficacy, motivation for abstinence; coping skills; social network changes)
- **Specific AA practices** (AA behaviors/activities, AA beliefs/cognitions)
- **AA specific processes** (e.g., spirituality)

BUT, since then, more studies conducted supporting AA’s own principal MOBC – spirituality...
Spirituality in Recovery: A Lagged Mediated Analysis of Alcoholics Anonymous’ Principal Theoretical Mechanism of Behavior Change

John F. Kelly, Robert L. Stout, Molly Magill, J. Scott Tonigan, and Maria E. Pagano

**Background:** Evidence indicates Alcoholics Anonymous (AA) can play a valuable role in recovery from alcohol use disorder. While AA itself purports it aids recovery through “spiritual” practices and beliefs, this claim remains contentious and has been only rarely formally investigated. Using a lagged, mediational analysis, with a large, clinical sample of adults with alcohol use disorder, this study examined the relationships among AA, spirituality/religiousness, and alcohol use, and tested whether the observed relation between AA and better alcohol outcomes can be explained by spiritual changes.

**Method:** Adults \( N = 1,726 \) participating in a randomized controlled trial of psychosocial treatments for alcohol use disorder (Project MATCH) were assessed at treatment intake, and 3, 6, 9, 12, and 15 months on their AA attendance, spiritual/religious practices, and alcohol use outcomes using validated measures. General linear modeling (GLM) and controlled lagged mediational analyses were utilized to test for mediational effects.

**Results:** Controlling for a variety of confounding variables, attending AA was associated with increases in spiritual practices, especially for those initially low on this measure at treatment intake. Results revealed AA was also consistently associated with better subsequent alcohol outcomes, which was partially mediated by increases in spirituality. This mediational effect was demonstrated across both outpatient and aftercare samples and both alcohol outcomes (proportion of abstinent days; drinks per drinking day).

**Conclusions:** Findings suggest that AA leads to better alcohol use outcomes, in part, by enhancing individuals’ spiritual practices and provides support for AA’s own emphasis on increasing spiritual practices to facilitate recovery from alcohol use disorder.

**Key Words:** Alcoholics Anonymous, Spirituality, Self-Help Groups, Alcoholism, Alcohol Dependence.
Multiple Dimensions of Spirituality in Recovery:
A Lagged Meditational Analysis of Alcoholics Anonymous’ Principal Theoretical Mechanism of Behavior Change

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ABSTRACT. Alcoholics Anonymous (AA) states that recovery is possible through spiritual experiences and spiritual awakenings. Research examining spirituality as a mediator of AA’s effect on drinking has been mixed. It is unknown whether such findings are due to variations in the operationalization of key constructs, such as AA and spirituality. To answer these questions, the authors used a longitudinal model to test 2 dimensions of AA as focal predictors and 6 dimensions of spirituality as possible mediators of AA’s association with drinking. Data from the first 18 months of a 3-year longitudinal study of 364 alcohol-dependent individuals were analyzed. Structural equation modeling was used to replicate the analyses of Kelly et al. (Alcohol Clin Exp Res. 2011:35:454–463) and to compare AA attendance and AA involvement as focal predictors. Multiple regression analyses were used to determine which spirituality dimensions changed as the result of AA participation. A trimmed, data-driven model was employed to test multiple mediation paths simultaneously. The findings of the Kelly et al. study were replicated. AA involvement was a stronger predictor of drinking outcomes than AA attendance. AA involvement predicted increases in private religious practices, daily spiritual experiences, and forgiveness of others. However, only private religious practices mediated the relationship between AA and drinking.

Keywords: Alcohol use disorders, Alcoholics Anonymous, alcoholism, mechanisms of change, meditation, prayer, spirituality
INTRODUCTION

Many clinicians working in substance user treatment programs in the United States encourage 12-step attendance (Kelly, Yeterian, & Myers, 2008), and sufficient evidence has now accumulated to assert that 12-step referral is an evidence-based practice that helps many, but not all, substance users. Several meta-analyses and numerous prospective studies have now shown that 12-step attendance alone, in combination with, and after treatment, is predictive of reductions in drinking (Emrick, Tonigan, Montgomery, & Little, 1993; Kaskutas, Bond, & Humphreys, 2002; Kelly, Stout, Magill, Tonigan, & Pagano, 2011; Tonigan & Rice, 2010; Tonigan, Toscova, & Miller, 1996) and illicit drug use (Gossop, Stewart, & Marsden, 2007; Timko, Billow, & DeBenedetti, 2006; Timko & Sempel, 2004; Weiss et al., 2005; Witbrodt & Kaskutas, 2005; Worley et al., 2008). It is important to note that long-term investigations into the benefits of 12-step programs are relatively rare, and a majority of studies are limited to 12-month follow-up. Recent work also suggests that sustained 12-step attendance may even serve to off-set relapse to illicit drug use once alcohol use has occurred (Tonigan & Beatty, 2011). Understandably, then, many studies have sought to identify the prescribed

Keywords: spirituality, change mechanism, 12-step, Alcoholics Anonymous

1Treatment can be usefully defined as a unique, planned, goal directed, temporally structured, multidimensional change process, which may be phase structured, of necessary quality, appropriateness and conditions (endogenous and exogenous), implemented under conditions of uncertainty, which is bounded (culture, place, time, etc.), which can be (un)successful (partially and/or totally), as well as being associated with iatrogenic harm and can be categorized into professional-based, tradition-based, mutual-help-based (AA, NA, etc.), and self-help (“natural recovery”) models. Whether or not a treatment technique is indicated or contraindicated, its selection underpinnings (theory-based, empirically based, principle of faith-based, tradition-based, budget-based, etc.) continues to be a generic and key treatment issue. In the West, with the relatively new ideology of
The Twelve Promises of Alcoholics Anonymous: Psychometric measure validation and mediational testing as a 12-step specific mechanism of behavior change

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**ABSTRACT**

Background: Empirical support for the value of Alcoholics Anonymous (AA) features has led to increased investigation of the specific mechanism of behavior change. Recent research has revealed few documented explications of the psychological change that AA members experience and benefit from. This study investigated the potential mechanisms by which members of AA may be influenced.

Method: Young adults (N = 302) were assessed on the Twelve Promises Scale (TPS), a psychometrically sound measure of the Twelve Promises of AA. The Twelve Promises Scale was administered before and after treatment including a 26-item measure of alcohol use, alcohol-related problems, and alcohol cravings. Results: Robust principal axis factor analysis revealed a three-factor solution explaining 45–58% of the variance. The factors included “Freedom from Craving” (17–21%); “Freedom from Guilt” (20–24%); and “Integrity and Honesty” (18–22%). These factors were found to increase in relation to group participation, but only for the Freedom from Craving factor. The Twelve Promises Scale correlated positively with increased abstinence.

Conclusions: The TPS shows potential as a conceptually relevant, and psychometrically sound measure and may be useful in helping elucidate the extent to which the Twelve Promises emerge as an independent benefit of 12-step participation and/or explain SUD remission and recovery.

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AA shown to increase psychological well-being and reduce craving associated with experiencing AA’s 12 Promises, and confer benefit (i.e., increased PDA) by significantly reducing craving.
Negative Affect, Relapse, and Alcoholics Anonymous (AA): Does AA Work by Reducing Anger?*

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ABSTRACT. Objective: Anger and other indices of negative affect have been implicated in a stress-induced pathway to relapse. The Alcoholics Anonymous (AA) literature states that reduction of anger is critical to recovery, yet this proposed mechanism has rarely been investigated. Using lagged, controlled hierarchical linear modeling analyses, this study investigated whether AA attendance mobilized changes in anger and whether such changes explained AA-related benefit. Method: Alcohol-dependent adults (N = 1,706) receiving treatment as part of a clinical trial were assessed at intake and at 3, 6, 9, 12, and 15 months. Results: Findings revealed substantially elevated levels of anger compared with the general population (98th percentile) that decreased over 15-month follow-up but remained high (89th percentile). AA attendance was associated with better drinking outcomes, and higher levels of anger were associated with heavier drinking. However, AA attendance was unrelated to changes in anger. Conclusions: Although support was not found for anger as a mediator, there was strong convergence between AA's explicit emphasis on anger and the present findings: Anger appears to be a serious, enduring problem related to relapse and heavy alcohol consumption. Methodological factors may have contributed to the lack of association between AA and anger, but results suggest that AA attendance alone may be insufficient to alleviate the suffering and alcohol-related risks specifically associated with anger. (J. Stud. Alcohol Drugs, 71, 434-444, 2010)
Do Changes in Selfishness Explain 12-Step Benefit? 
A Prospective Lagged Analysis

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ABSTRACT. 12-Step attendance is associated with increased abstinence. A strong claim made in 12-step literature is that alcoholics are pathologically selfish and that working the 12 steps reduces this selfishness, which, in turn, leads to sustained alcohol abstinence. This study tested this assumption by investigating the linkages between 12-step attendance, pathological narcissism, and drinking. One hundred thirty early Alcohol Anonymous (AA) affiliates with limited AA and treatment histories were recruited from treatment and community-based AA. A majority of the sample was alcohol dependent and reported illicit drug use before recruitment. Participants were interviewed at intake and at 3, 6, and 9 months. A majority of participants attended AA meetings throughout follow-up and such attendance predicted increased abstinence and reduced drinking intensity. 12-Step affiliates were significantly higher on pathological narcissism (PN) relative to general population samples and their PN remained elevated. Contrary to predictions, PN was unrelated to 12-step meeting attendance and did not predict later abstinence or drinking intensity. The findings did not support the hypothesis that reductions in PN explain 12-step benefit. An alternative function for the emphasis placed on pathological selfishness in 12-step programs is discussed and a recommendation is made to use unobtrusive measures of selfishness in future research.

Keywords: AA, mediator, self-help

Adults with alcohol and illicit drug problems frequently seek help by attending community-based 12-step programs and a majority of treatment providers encourage 12-step meeting attendance both during and after treatment (1). Metanisms that are common across different approaches for treating substance misuse. The direct effect of 12-step attendance on later increases in abstinence, for example, have been explained by increased abstinence self-efficacy (10) and social
Mechanisms of behavior change in alcoholics anonymous: does Alcoholics Anonymous lead to better alcohol use outcomes by reducing depression symptoms?

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ABSTRACT

Rationale  Indices of negative affect, such as depression, have been implicated in stress-induced pathways to alcohol relapse. Empirically supported continuing care resources, such as Alcoholics Anonymous (AA), emphasize reducing negative affect to reduce relapse risk, but little research has been conducted to examine putative affective mechanisms of AA’s effects. Methods  Using lagged, controlled, hierarchical linear modeling and mediational analyses this study investigated whether AA participation mobilized changes in depression symptoms and whether such changes explained subsequent reductions in alcohol use. Alcohol-dependent adults (n = 1706), receiving treatment as part of a clinical trial, were assessed at intake, 3, 6, 9, 12 and 15 months. Results  Findings revealed elevated levels of depression compared to the general population, which decreased during treatment and then remained stable over follow-up. Greater AA attendance was associated with better subsequent alcohol use outcomes and decreased depression. Greater depression was associated with heavier and more frequent drinking. Lagged mediation analyses revealed that the effects of AA on alcohol use was mediated partially by reductions in depression symptoms. However, this salutary effect on depression itself appeared to be explained by AA’s proximal effect on reducing concurrent drinking. Conclusions  AA attendance was associated both concurrently and predictively with improved alcohol outcomes. Although AA attendance was associated additionally with subsequent improvements in depression, it did not predict such improvements over and above concurrent alcohol use. AA appears to lead both to improvements in alcohol use and psychological and emotional wellbeing which, in turn, may reinforce further abstinence and recovery-related change.

Keywords  Alcohol dependence, Alcoholics Anonymous, depression, mechanisms, mutual-help groups, self-help groups.
Full length article

The role of Alcoholics Anonymous in mobilizing adaptive social network changes: A prospective lagged mediational analysis

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ABSTRACT

Objective: Many individuals entering treatment are involved in social networks and activities that heighten relapse risk. Consequently, treatment programs facilitate engagement in social recovery resources, such as Alcoholics Anonymous (AA), to provide a low risk network. While it is assumed that AA works partially through this social mechanism, research has been limited in rigor and scope. This study used lagged mediational methods to examine changes in pro-abstinent and pro-drinking network ties and activities.

Method: Adults (N = 1726) participating in a randomized controlled trial of alcohol use disorder treatment were assessed at intake, and 3, 9, and 15 months. Generalized linear modeling (Generalized linear modeling) tested whether changes in pro-abstinent and pro-drinking network ties and drinking and abstinence activities helped to explain AA's effects.

Results: Greater AA attendance facilitated substantial decreases in pro-drinking social ties and significant, but less substantial increases in pro-abstinent ties. Also, AA attendance reduced engagement in drinking-related activities and increased engagement in abstinent activities. Lagged mediational analyses revealed that it was through reductions in pro-drinking network ties and, to a lesser degree, increases in pro-abstinent ties that AA exerted its salutary effect on abstinence, and to a lesser extent, on drinking intensity.

Conclusions: AA appears to facilitate recovery by mobilizing adaptive changes in the social networks of individuals exhibiting a broad range of impairment. Specifically by reducing involvement with pro-drinking ties and increasing involvement with pro-abstinent ties. These changes may aid recovery by decreasing exposure to alcohol-related cues thereby reducing craving, while simultaneously increasing rewarding social relationships.
Alcoholics Anonymous and Reduced Impulsivity: A Novel Mechanism of Change

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ABSTRACT. Reduced impulsivity is a novel, yet plausible, mechanism of change associated with the salutary effects of Alcoholics Anonymous (AA). Here, the authors review their work on links between AA attendance and reduced impulsivity using a 16-year prospective study of men and women with alcohol use disorders (AUDs) who were initially untreated for their drinking problems. Across the study period, there were significant mean-level decreases in impulsivity, and longer AA duration was associated with reductions in impulsivity. In turn, decreases in impulsivity from baseline to Year 1 were associated with fewer legal problems and better drinking and psychosocial outcomes at Year 1, and better psychosocial functioning at Year 8. Decreases in impulsivity mediated associations between longer AA duration and improvements on several Year 1 outcomes, with the indirect effects conditional on participants’ age. Findings are discussed in terms of their potential implications for research on AA and, more broadly, interventions for individuals with AUDs.

Keywords: Alcoholics Anonymous, impulsivity, mechanism of change

Among individuals with alcohol use disorders (AUDs), Alcoholics Anonymous (AA) is linked to improved functioning across a number of domains (1, 2). As the evidence for the effectiveness of AA has accumulated, so too have efforts to identify the mechanisms of change associated with participation in this mutual-help group (3). To our knowledge, however, there have been no efforts to examine links between AA and reductions in impulsivity—a dimension of personality marked by deficits in self-control and self-regulation, and tendencies to take risks and respond to stimuli with minimal forethought.

In this article, we discuss the conceptual rationale for reduced impulsivity as a mechanism of change associated with AA, review our research on links between AA and reduced impulsivity, and discuss potential implications of the findings for future research on AA and, more broadly, interventions for individuals with AUD. To guide this work, we modified a conceptual framework (4), which delineates the context of drinking-related outcomes (Figure 1). This model
Based on prior mediators of AA on outcomes, several fully temporally lagged multiple mediator and moderated multiple mediator analyses have been conducted...


DO MORE AND LESS SEVERELY ALCOHOL DEPENDENT INDIVIDUALS BENEFIT FROM AA IN THE SAME OR DIFFERENT WAYS?

Aftercare (PDA)

- Self-efficacy (NA): 3%
- Dep: 3%
- SocNet: pro-drk.: 24%
- SocNet: pro-abst.: 16%
- Spirit/Relig: 23%
- Self-efficacy (Soc): 34%

Aftercare (DDD)

- Self-efficacy (NA): 16%
- Dep: 11%
- SocNet: pro-drk.: 24%
- SocNet: pro-abst.: 11%
- Self-efficacy (Soc): 21%
- Spirit/Relig: 21%

Outpatient (PDA)

- Self-efficacy (NA): 1%
- Dep: 2%
- Spirit/Relig: 6%
- SocNet: pro-drk.: 33%
- SocNet: pro-abst.: 31%
- Self-efficacy (Soc): 27%

Outpatient (DDD)

- Self-efficacy (NA): 1%
- Dep: 5%
- Spirit/Relig: 9%
- SocNet: pro-drk.: 29%
- SocNet: pro-abst.: 17%
- Self-efficacy (Soc): 39%

Effect of AA on alcohol use for AC was explained by social factors but also by S/R and through boosting NA ASE (DDD only)

Majority of effect of AA on alcohol use for OP was explained by social factors

Do men and women benefit from AA in the same ways?

NA ASE was a MOBC for women but not men - suggests that boosts in NA ASE were available in AA but men didn’t find this aspect relevant.

For men, AA was a way to help them find new sober friends and boost their social ASE much more than women.

Source: Kelly and Hoeppner (2013), *Does Alcoholics Anonymous work differently for men and women? A moderated multiple-mediation analysis in a large clinical sample.* Drug and Alcohol Dependence
Do young adults benefit as much and in the same ways as older adults?

Young people (18-29yrs) benefitted as much as older adults, but these 6 MOBCs explained a much lower proportion of their benefit.

The way AA helped young people differed also - mostly by helping them drop high risk social network members and boosting their social ASE; young people did not find new friends in AA (perhaps due to lack of sober same aged peers) and did not benefit via spirituality as much as older adults.
MODERATED-MECHANISMS: AA EFFECTS MODERATED BY SEVERITY, GENDER, AGE…

CONCLUSIONS

- 6 mediators = about 50% of direct effect of AA on drinking (other 50%?)

- Proportion of direct effect explained even lower among young adults; more research needed on how young people benefit

- Of note, this MOBC research finds that the same entity/intervention (i.e., AA) produces benefits that differ in nature and magnitude between more severely alcohol involved/impaired and less severely alcohol involved/impaired; men and women; and, young adults and adults 30+

- Differences may reflect differing needs based on recovery challenges related to differing symptom profiles, degree of subjective suffering and perceived severity/threat, life-stage based recovery contexts, and gender-based social roles & drinking contexts
“Similar to the common finding that theoretically-distinct professional interventions do not result in differential patient outcomes, AA’s effectiveness may not be due to its specific content or process. Rather, its chief strength may lie in its ability to provide free, long-term, easy access and exposure to recovery-related common therapeutic elements, the dose of which, can be adaptively self-regulated according to perceived need.” (Kelly, Magill, Stout, 2009)
Outline

• Is there a real effect of AA/TSF that needs explaining? Does AA participation (causally) lead to better outcomes?

• What is/are the mechanism/s of interest to the study of AA/TSF?

• What are the implications of AA/TSF MOBC research for direct care to patients and/or programs/service contexts?

• What are the next steps for your work in relation to informing direct care to patients and/or programs/service contexts?
Empirically-supported MOBCs through which AA confers benefit

- Social network
- Spirituality
- Social Abstinence self-efficacy
- Coping skills
- Negative Affect Abstinence self-efficacy
- Recovery motivation
- Impulsivity
- Craving
“Living Sober” vs. “Big Book”

- MOBC research results suggest the way AA works has a closer fit with the pragmatic social, cognitive, and behavioral experiences of how its members stay sober documented in its later publications (*Living Sober*, 1975) than with the *Big Book* (1935; 2001), which was written in 1935 and based on relatively little accumulation of sober experience (i.e., less than one hundred members, most with short lengths of sobriety).
So, how might AA reduce relapse risk and aid recovery?

Cue Induced

Stress Induced

Alcohol Induced

RELAPSE

Social
Psych
Bio-Neuro

AA

Kelly, JF Yeterian, JD In: McCrady and Epstien Addictions: A comprehensive Guidebook, Oxford University Press (2013)
How might AA reduce relapse risk and aid recovery?

**CUES:** AA reduces relapse risks via social network changes that may reduce exposure to triggers and increase active coping and social ASE; AA may also reduce craving and impulsivity;

**STRESS:** AA helps reduce stress induced relapse possibly via increased coping skills and spiritual framework and boosting NA ASE, particularly among women

**ALCOHOL:** AA may reduce alcohol induced relapse via reducing cravings, strong emphasis on abstinence (preventing priming dose exposure), boosting social and NA ASE
Clinical Implications of AA/TSF Research

- To help enhance patients’ outcomes including full remission, a cost-effective clinical recommendation is to **implement TSF procedures**.

- Patients with high network support for drinking are especially likely to benefit from TSF and AA through **AA’s ability to facilitate changes in social networks and boost social ASE**.

- “**Spirituality**” need not be a barrier to participation; although AA ostensibly “spiritual”, the largest part of the effect for facilitating recovery is social (i.e. “fellowship” vs “program”) and otherwise, therapeutically **multifaceted; emphasizing this to patients may help remove this attendance barrier**.
Men use AA more/benefit from AA more by it boosting their social ASE; women use AA more/benefit from AA more by it boosting their NA ASE; Young people benefit through AA helping them reduce high risk social network members and boosting social ASE

Thus, treatments designed to emphasize relapse risks associated with these specific biobehavioral life-stage context realities may improve outcomes

- For men and young adults greater emphasis on social network relapse factors may yield greater dividends; for women, greater clinical attention to negative affect may yield dividends

For more severe patients, spirituality may provide framework giving new meaning and purpose as well self-forgiveness reducing guilt/shame; teach new adaptive ways of reinterpreting and coping with stress; clinicians need to be comfortable broaching and supporting S/R practices as a way potentially to enhance recovery efforts
Outline

• Is there a real effect of AA/TSF that needs explaining? Does AA participation (causally) lead to better outcomes?
• What is/are the mechanism/s of interest to the study of AA/TSF?
• What are the implications of AA/TSF MOBC research for direct care to patients and/or programs/service contexts?
• What are the next steps for this work in relation to informing direct care to patients and/or programs/service contexts?
Next Steps:

- Educate clinicians about empirically supported MOBCs of AA
- New Cochrane Review (Fall, 2015)
- Conduct further MOBC
Thank you for your attention!

RSA, MOBC Satellite, June, 2015