

# **12-step participation among polysubstance users**

**Longitudinal patterns, effectiveness, and  
(some) mechanisms of action**

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# Background

- The bulk of 12-step research thus far has focused on alcohol dependent persons, most of whom were recruited in treatment or were treatment seekers
- Millions of 12-step members worldwide continue attending meetings, some for multiple years after achieving abstinence, yet the effectiveness of this practice has not been empirically examined
- Most of this presentation centers on *assessing the effectiveness of 12-step attendance and involvement in sustaining abstinence from polysubstance use*
- We will also briefly address some mechanisms of action, patterns of attendance and one possible strategy to enhance affiliation.

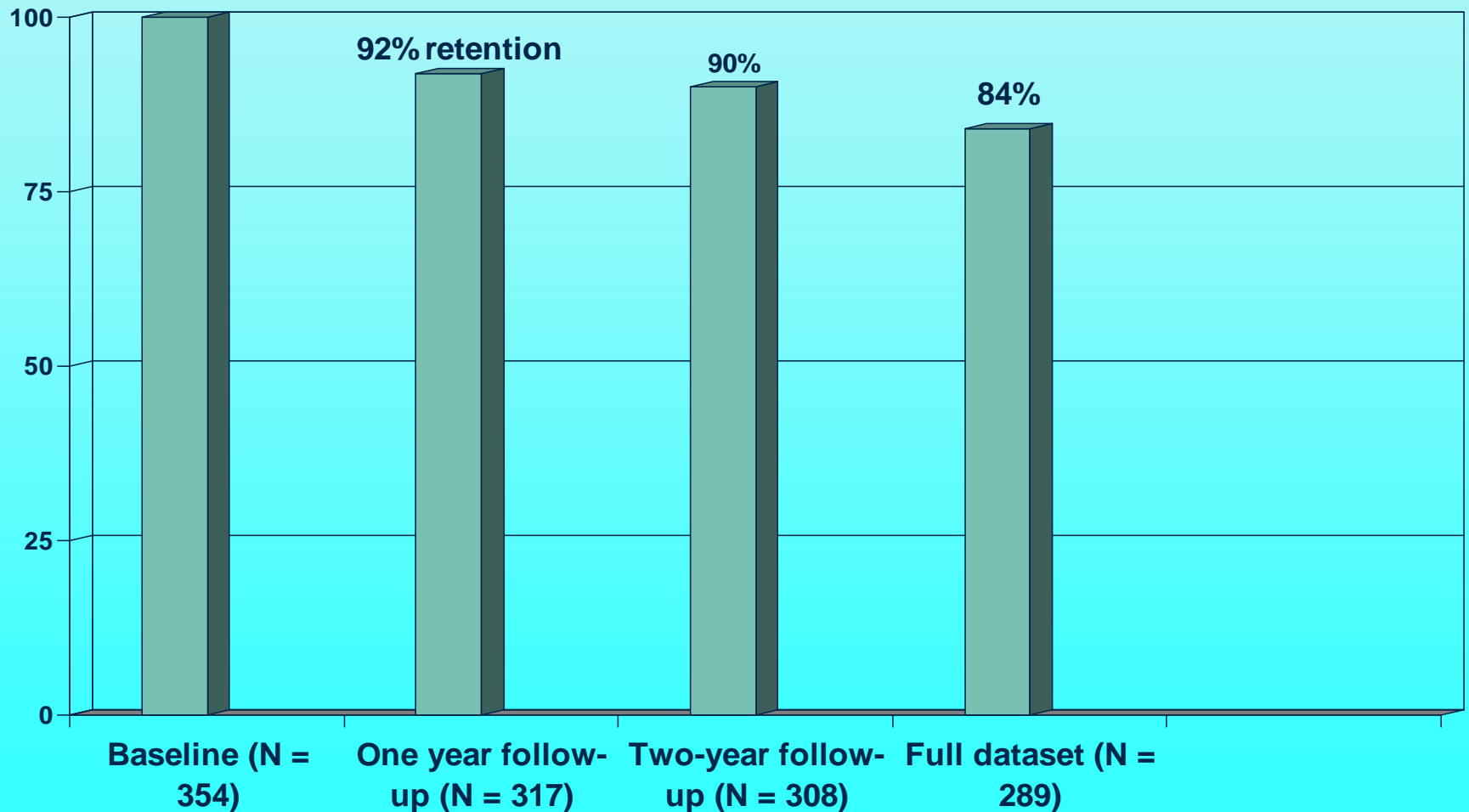
# The Pathways project : Summary

- **A five year NIH-funded investigation of factors associated with sustained abstinence over time**
- **Media recruited formerly substance dependent persons in NYC (N= 354)**
- **Eligibility criteria: (1) self-reported abstinence of one month or longer; and (2) not currently in residential treatment**
- **Naturalistic prospective design: four yearly in-person interviews**
- **Computer-assisted semi-structured interviews**
- **Biological corroboration of self-reported drug use (hair or saliva) @ follow-ups (concordance 84-87%)**

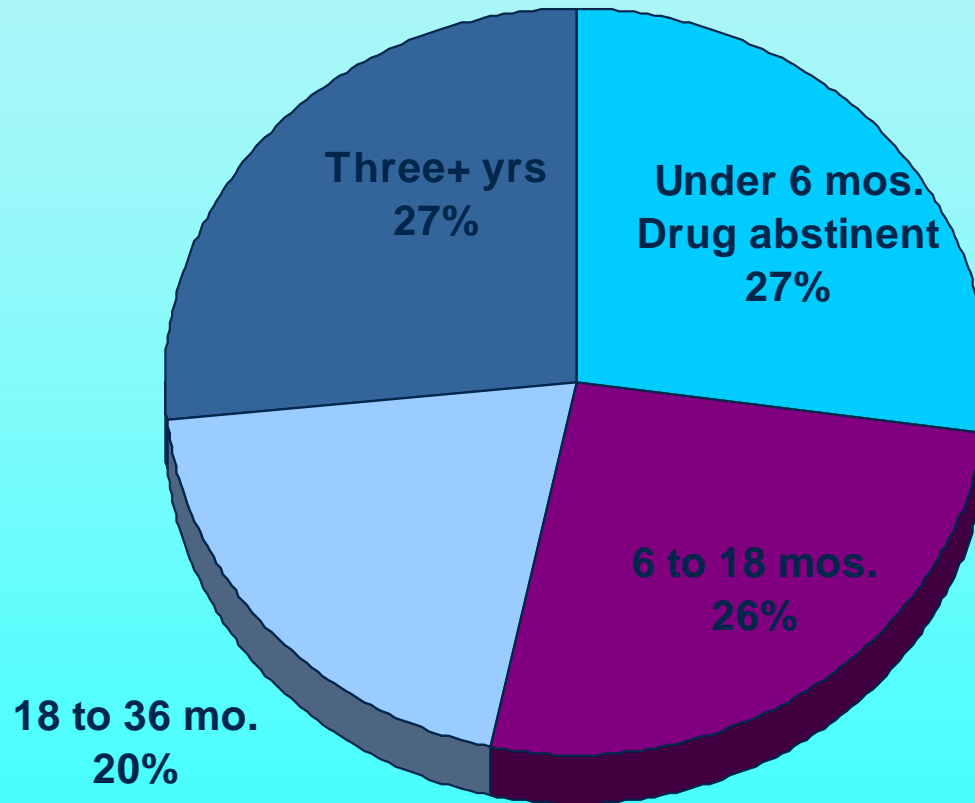
# The Pathways Sample: Summary

- Primarily members of inner-city ethnic, under-served minorities
- Long & severe history of (primarily) crack and/or heroin dependence
- Almost all polysubstance users
- Abstinent from one month to 10+ years at baseline
- 31% HepC+ and 24% HIV+
- Almost all have used formal addiction treatment services and 12-step fellowships

# Pathways dataset: Summary (N = 354)



# Pathways participants were classified by baseline abstinence duration



# **12-Step as Aftercare project : Summary**

- **A four-year NIH-funded investigation of predictors and effectiveness of post-treatment 12-step affiliation among polysubstance users in NYC**
- **314 consecutive admissions recruited at two large publicly funded outpatient programs**
- **36 clients remained in treatment < 30 days and were dropped from the study**
- **250 clients re-interviewed at treatment end (90% re-contact) who constitute the prospective study cohort**
- **Follow-up interviews 3-, 6- and 12-months post treatment end**
- **Computer-assisted semi-structured interviews**
- **Full dataset on 219 participants ( 87.6% retention)**

# ACT ONE: Does it work?



# Measures



# Measures of 12-step affiliation

In all our studies we operationalize 12-step affiliation thus:

- **Meeting Attendance:** Number of AA + NA meetings attended during the target period (looked at Cocaine Anonymous, few if any attend)
- **12-step Involvement:** Sum score of participation in nine 12-step suggested activities:
  - Having a sponsor
  - Sponsoring someone
  - Reading recovery literature
  - Having a home group
  - Considering oneself a 12-step member
  - Doing service
  - Working the steps
  - Contacting 12-step members outside of meetings; and
  - Socializing with other members outside of meetings.

# Measures of substance use outcomes

In all our studies we operationalize abstinence as *No self-reported use of drugs or alcohol during the target period*, obtained as follows:

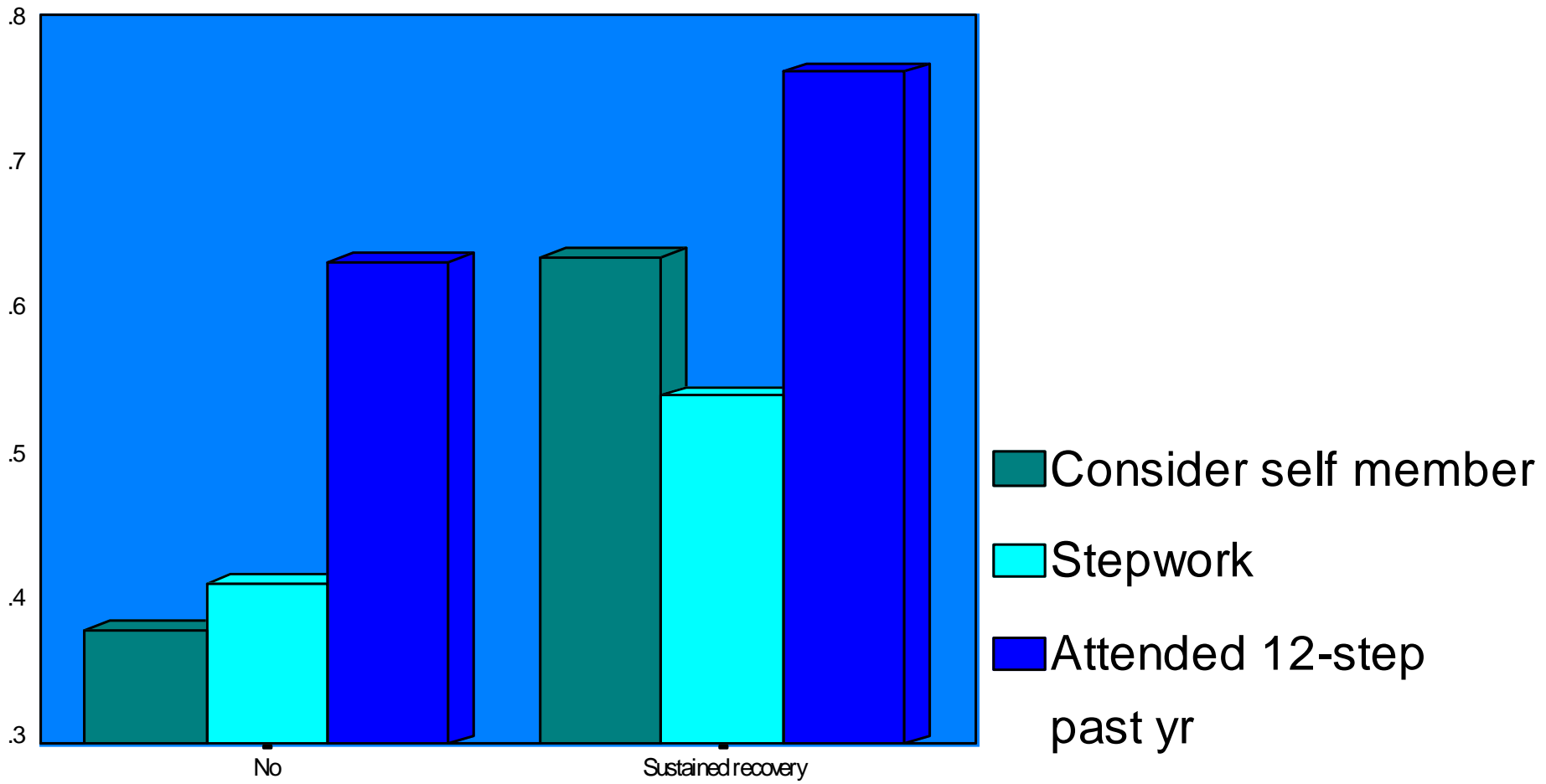
- 'Ever use' 13 ASI substances?
- For each 'ever used' once or more: Last date of use?
- Compute abstinence duration for each substance
- Participant's abstinence period = Shortest period of any substance
  
- For analyses requiring dichotomous variable:  
IF shortest abstinent period > target study period  
THEN participants' abstinence status = YES
  
- For multiple periods: continuous abstinence =  
[abstinent past year @ F1 & abstinent past year @ F2 etc...]

# Effectiveness of Twelve-step fellowships

Most research has examined single substance outcome - e.g., alcohol, cocaine

# **Twelve-step fellowships foster abstinence from polysubstance use**

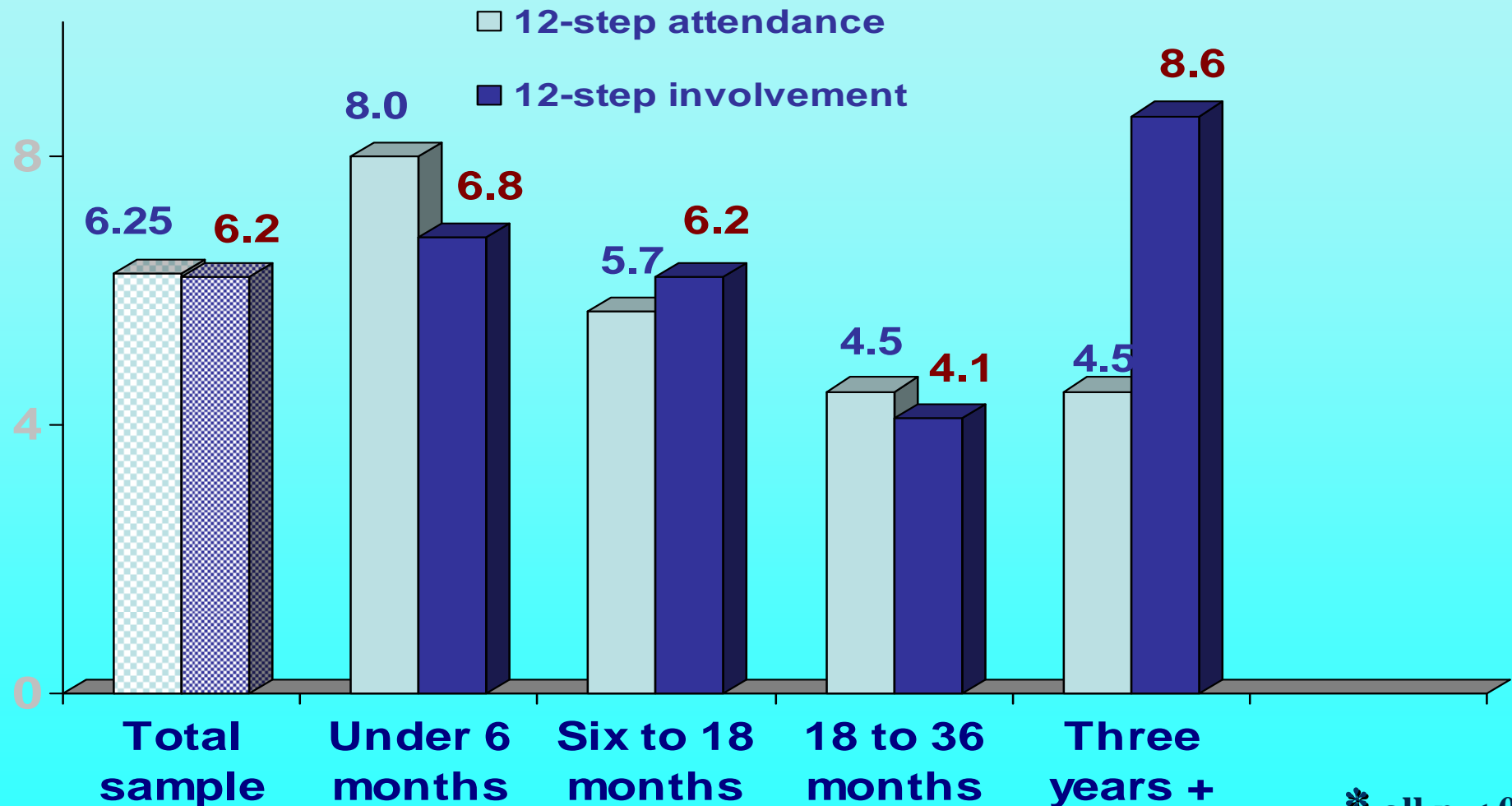
# Sustained abstinence at F1 as a function of baseline level of 12-step attendance and affiliation\*



Sustained abstinent recovery at F1

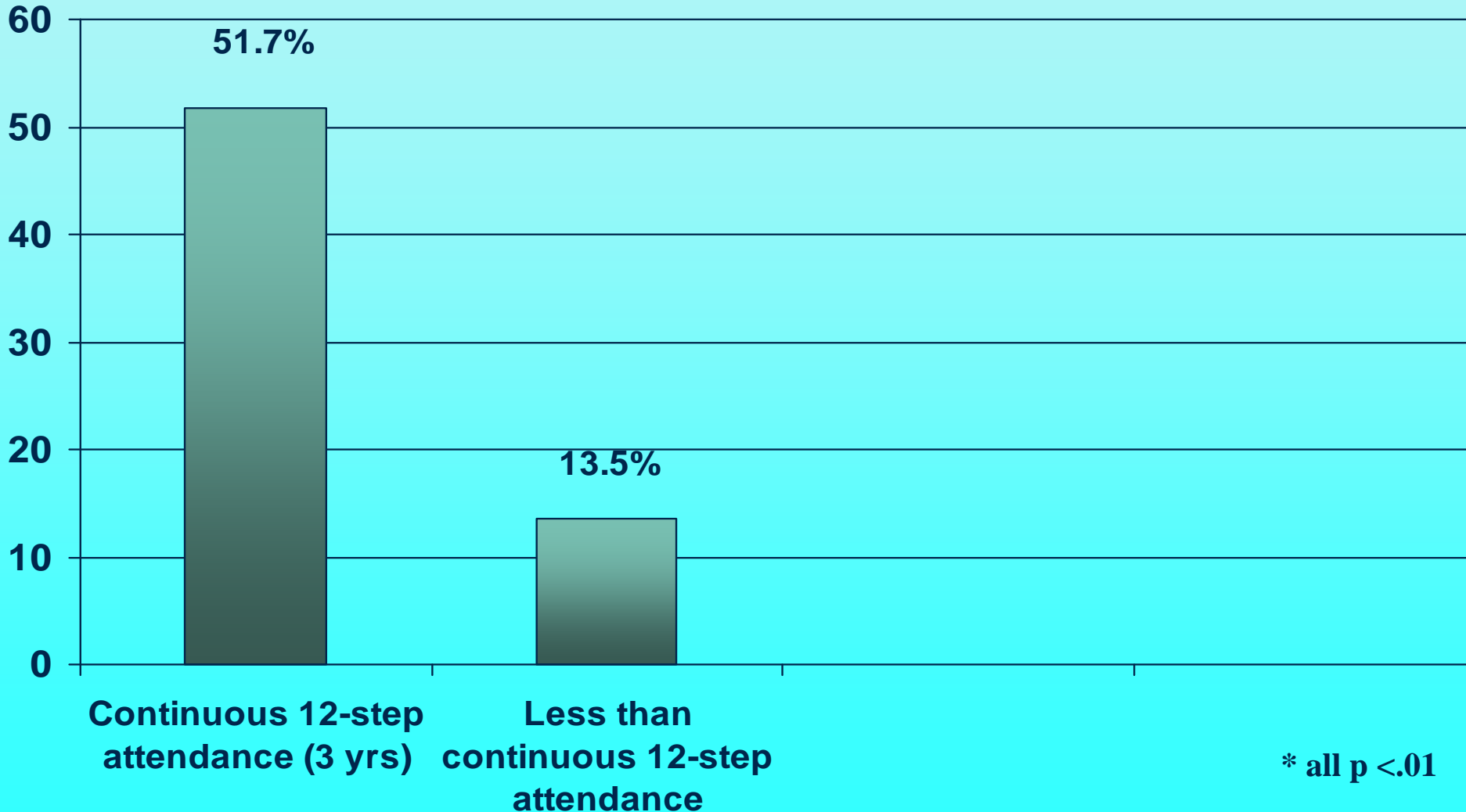
\* all p <.05

# Role of continuous 12-step attendance and involvement over 3 years on odds of sustained remission at F2\*



\* all p < .05

# Sustained abstinence over three years at F3 as a function of continuous 12-step attendance\*





# ACT TWO: How does it work?



# **Twelve-step fellowships: Mechanisms of action [example]**

# Twelve-step participation enhances Life Meaning and Purpose



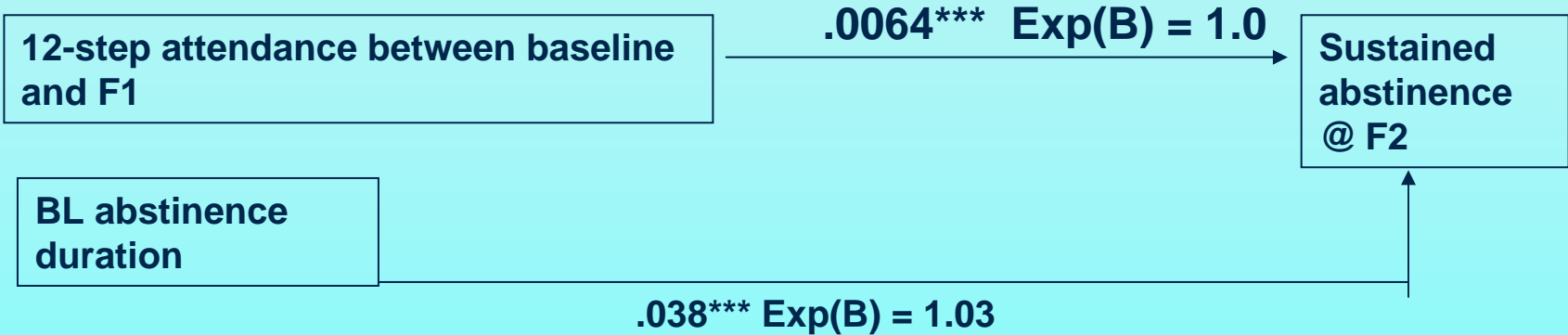
# Life meaning and recovery

- **Meaning provides essential context to understand and successfully cope with life's difficulties.**
- **Qualitative work suggests that many who have found purpose in life - a reason to 'get up in the morning,' a reason to sustain recovery in challenging times - do not necessarily consider themselves spiritual.**
- ***I need to have a reason to stay sober.... I asked myself the question, "Why am I here? Just to drink?" No, a sense of purpose gives me something to work with. Everybody don't go to meetings or to church or believe in a higher power. You've got to have a purpose, something that you believe in."***

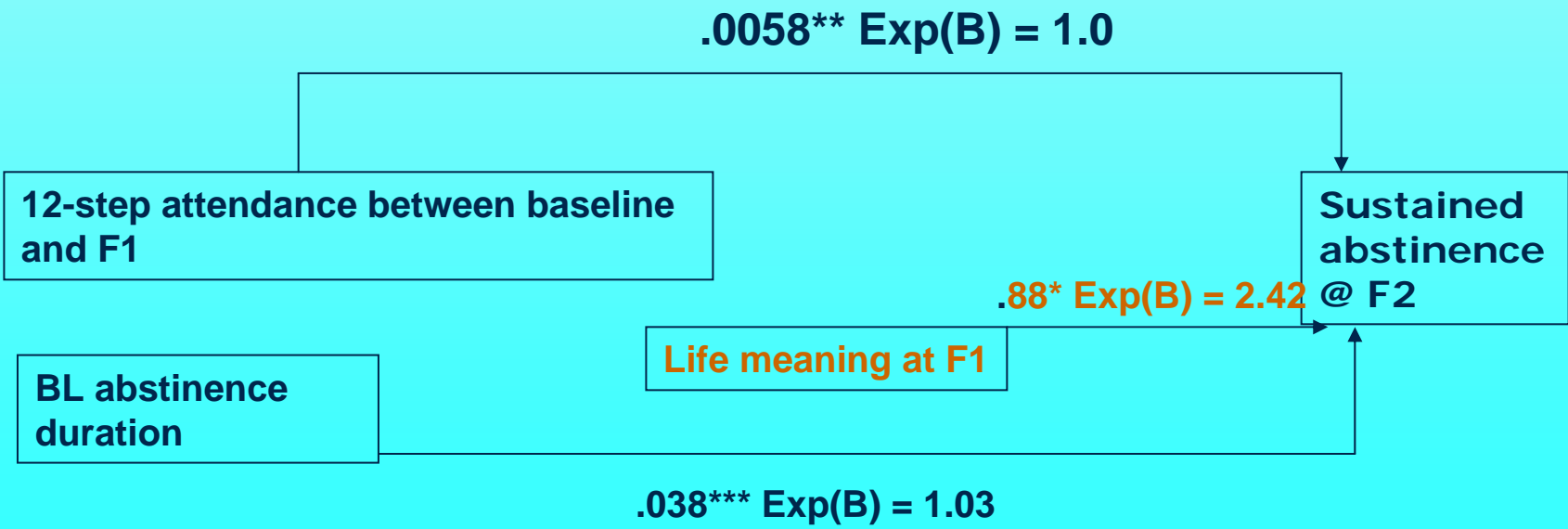
**Life Meaning mediates the effect of  
12-step participation on sustained  
abstinence**

# 12-step attendance predicts sustained abstinence

Effect of 12-step attendance on abstinence partially mediated by Life meaning

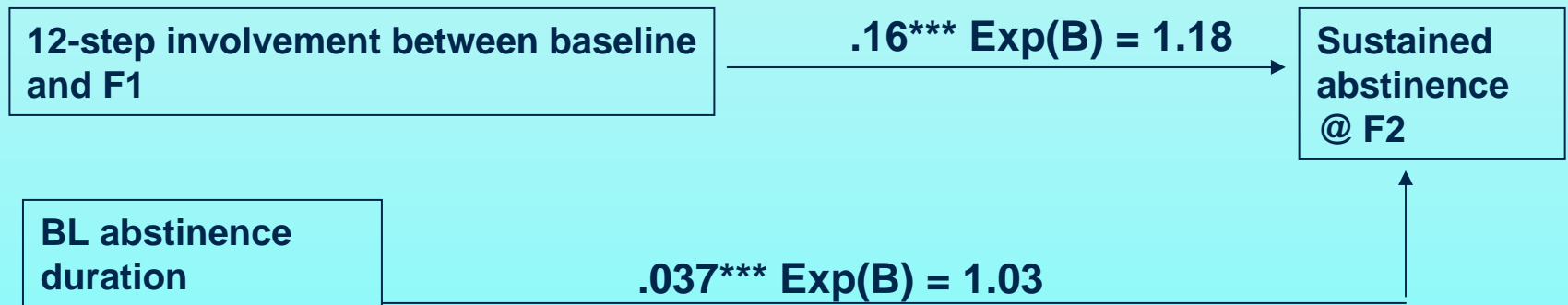


## MEDIATION MODEL FOR 12-STEP ATTENDANCE

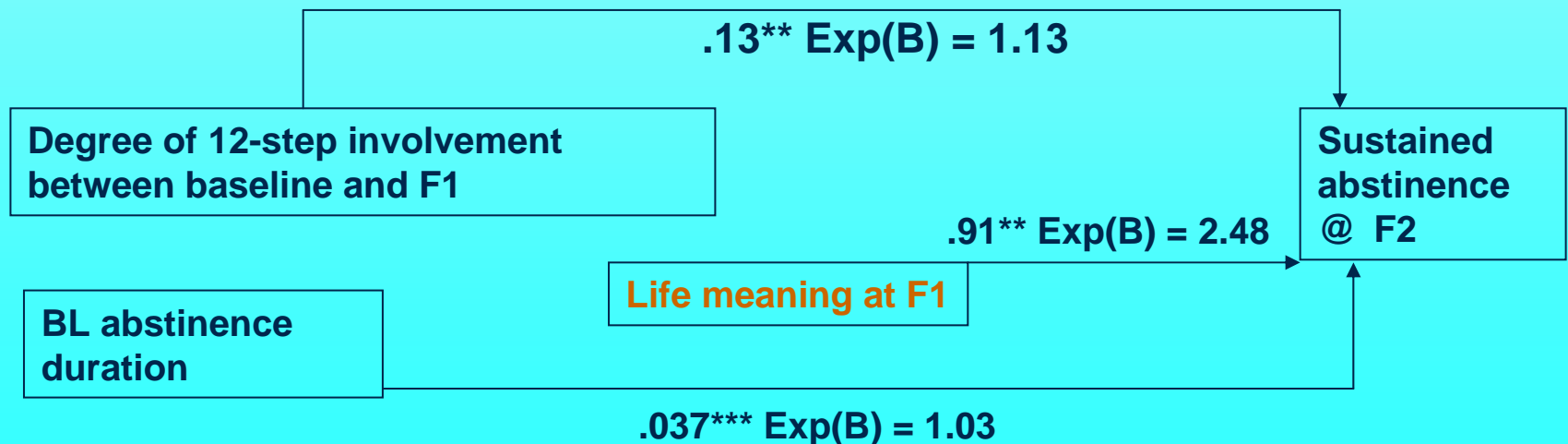


# 12-step involvement predicts sustained abstinence

Effect of 12-step involvement on sustained abstinence partially mediated by Life meaning (19%)



## MEDIATION MODEL FOR 12-STEP INVOLVEMENT



# Deconstructing 12-step involvement





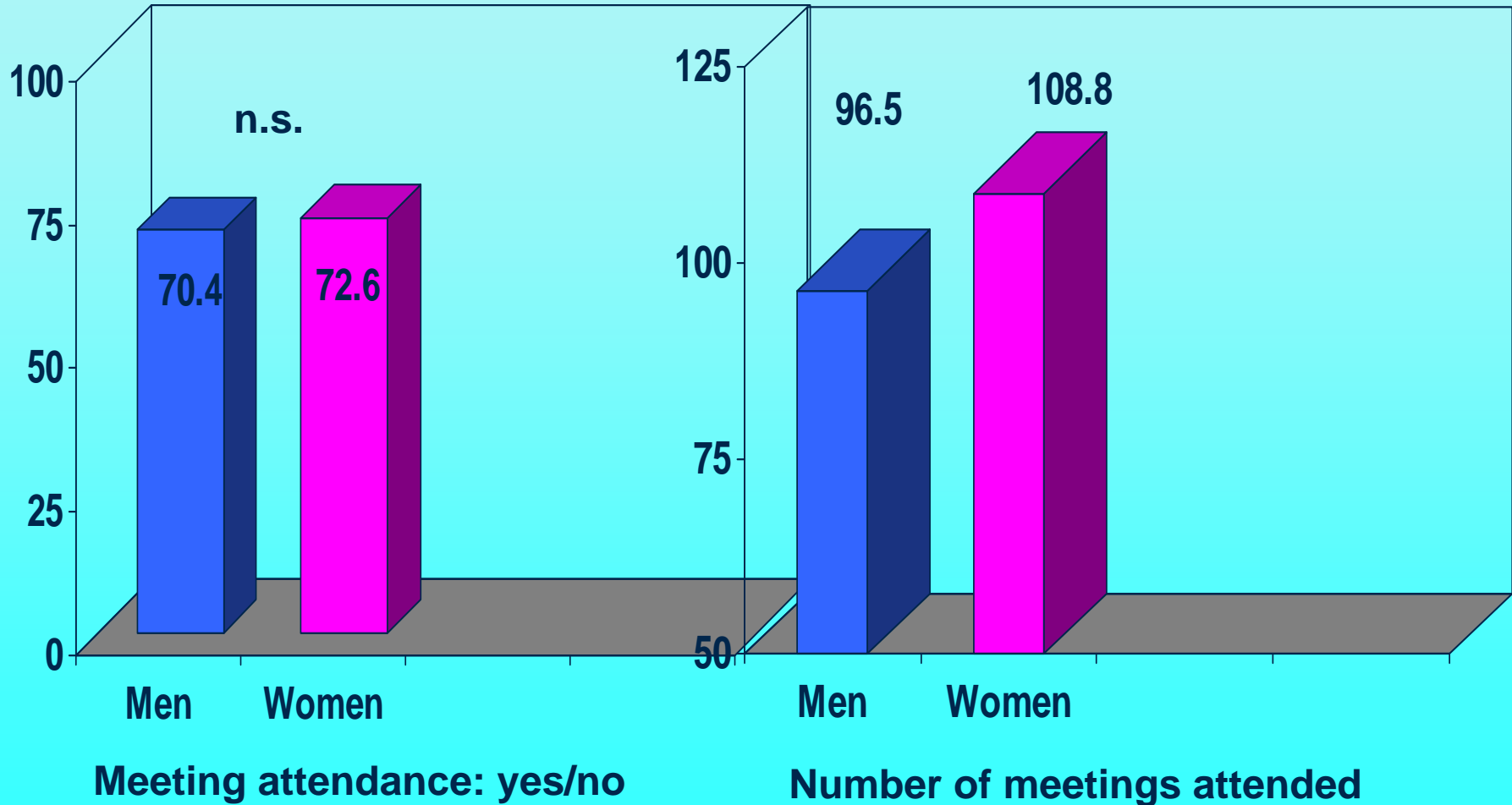
# Deconstructing 12-step involvement

- Many substance users choose not to attend 12-step meetings or they drop out after a short period of attendance.
- *Involvement* in 12-step activities (e.g., reading recovery literature, having a sponsor) enhances the likelihood of abstinence independently of meeting attendance among treatment-seeking persons.
- There is a need to specify the elements of 12-step involvement that underlie its benefits and may be helpful independently of meeting attendance or even outside of the 12-step context.

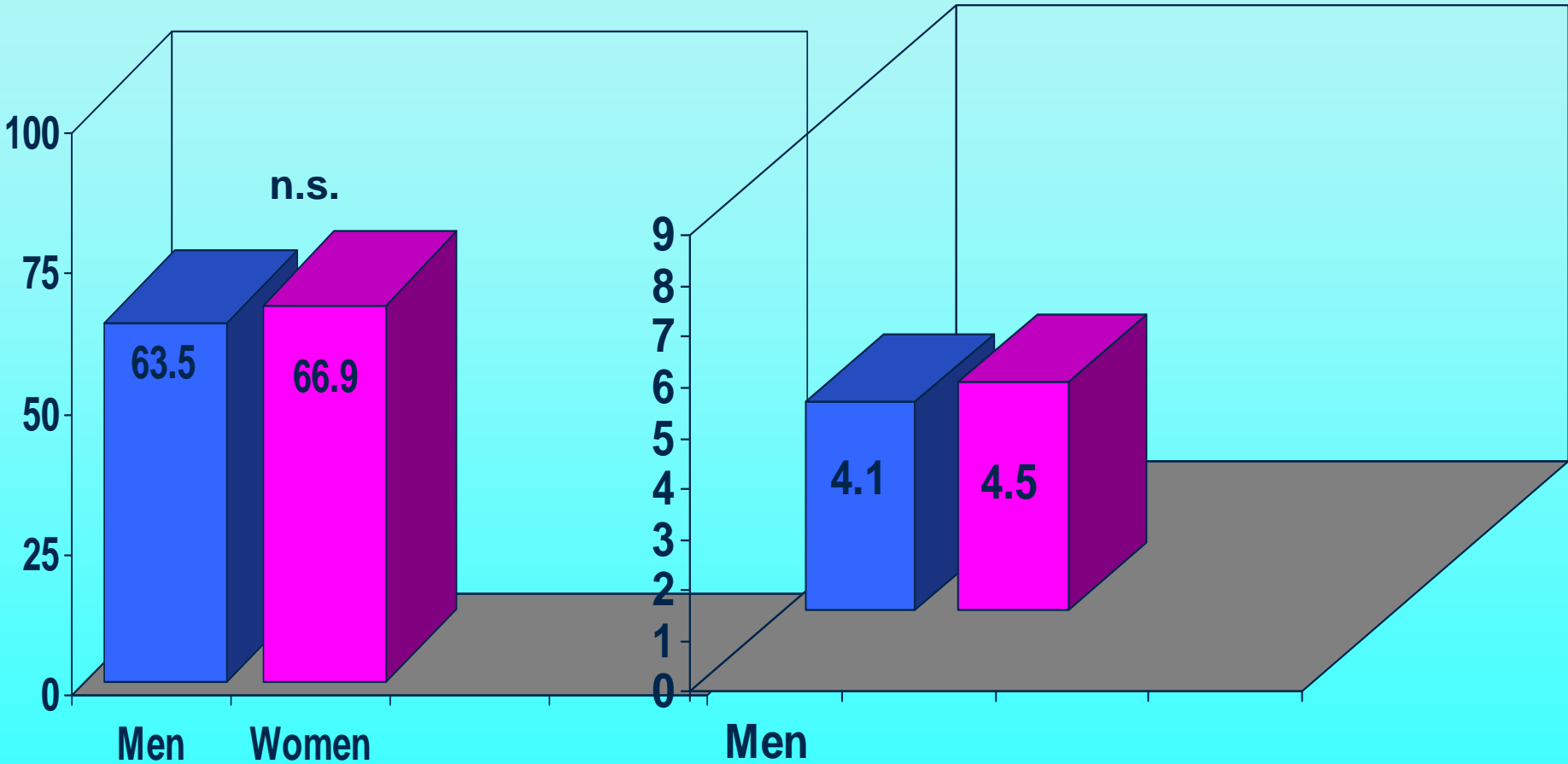
We examine:

- The role of overall 12-step involvement level in predicting *continuous abstinence sustained over three years* independently of meeting attendance; and
- Gender differences in these processes.

# Past year 12-step attendance @ BL and Number of meetings attended (among attendees)

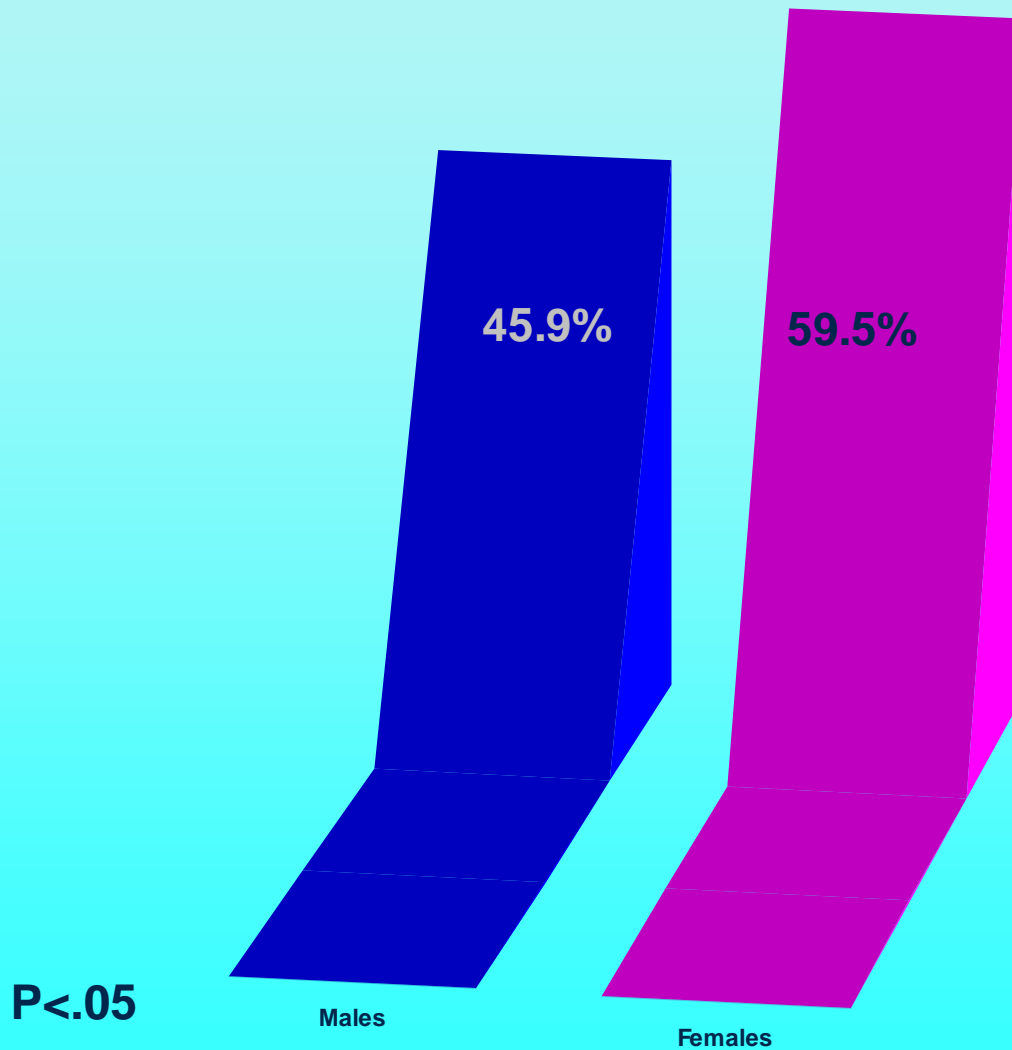


# 'Any' 12-step involvement past year at baseline and involvement level

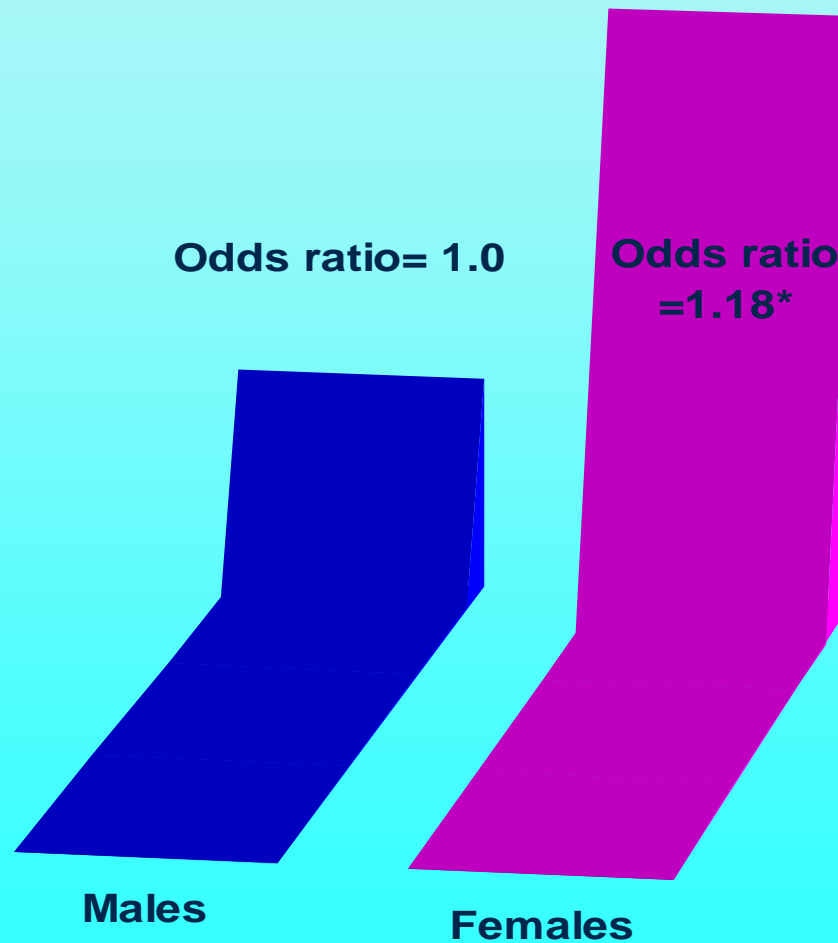


Scale range = 0 to 9

# Sustained continuous drug abstinence over three years

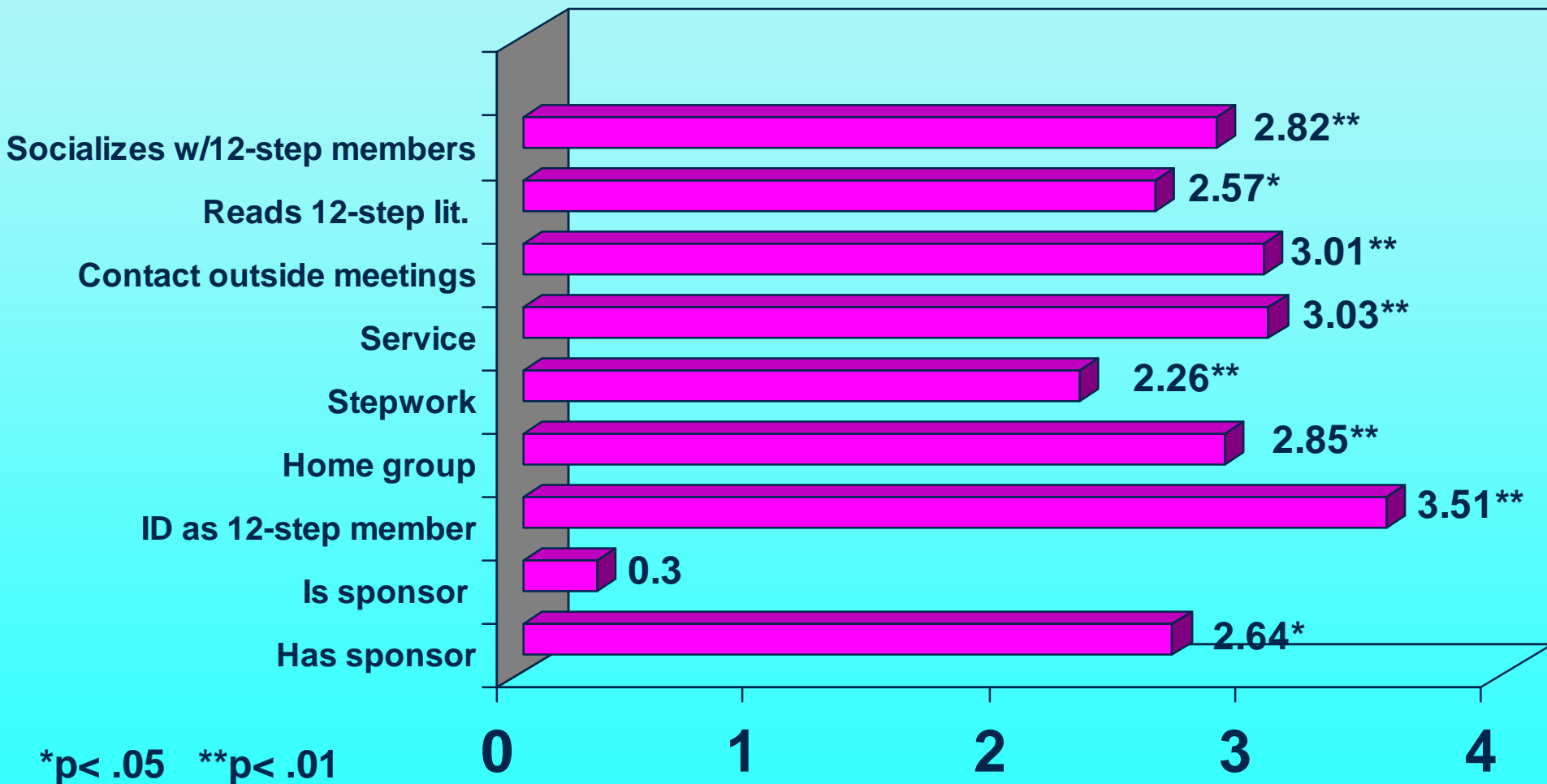


# Odds of sustained abstinence over 3 years as a function of baseline 12-step involvement *controlling for baseline abstinence duration and 12-step meeting attendance*

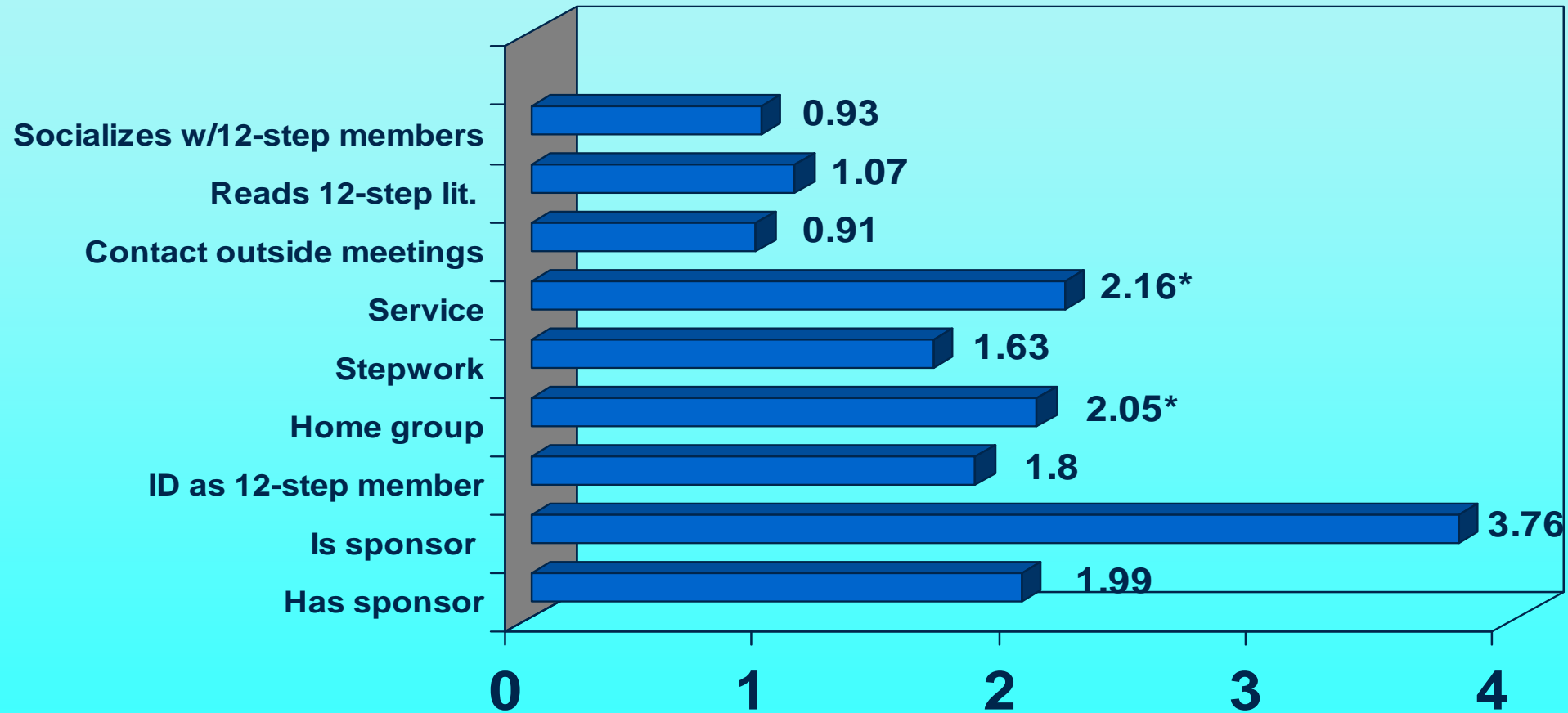


\* $p < .05$

# Odds of sustained abstinence over 3 years for individual 12-step activities @ BL controlling for baseline abstinence duration: **AMONG WOMEN**



# Odds of sustained abstinence over 3 years for individual 12-step activities @ BL controlling for baseline abstinence duration: **AMONG MEN**



\*p < .05    \*\*p < .01

# Deconstructing 12-step involvement: Implications

- AT BASELINE, no gender differences in substance use history, prior exposure to treatment (not shown), 12-step attendance or involvement in this formerly severely drug-dependent sample.
- Yet women were significantly more likely than men to sustain abstinence over three years.
- BL 12-step involvement level significantly predicted continuously sustained drug abstinence over three years independently of meeting attendance *among women but not among men*.
- Some of the individual 12-step activities associated with sustained abstinence among women are specific to the 12-step context (Identifying as a 12-step member, having a sponsor and a home group).
- Others may be “translated” outside of 12-step recovery for persons who select not to affiliate with 12-step
  - Doing service = volunteering,
  - Spending time with other persons in recovery regardless of 12-step affiliation
- More research is needed to determine the benefits of such activities outside of the 12-step context in sustaining abstinence and promoting sustained recovery.

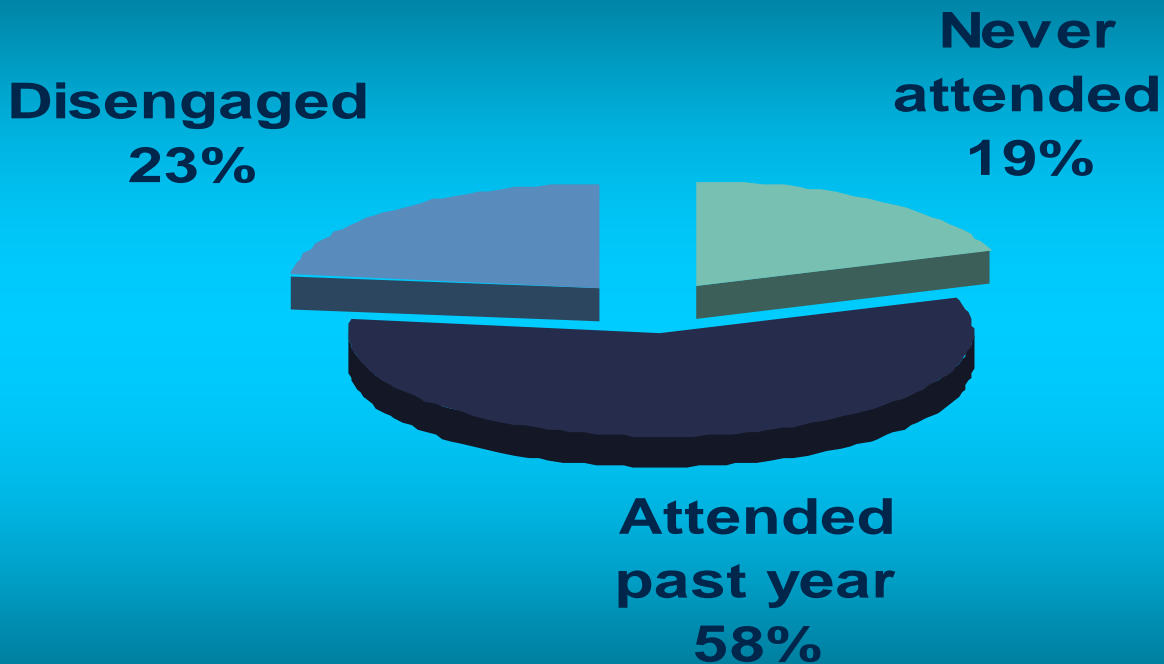


**ACT THREE:**  
**Are 12-step underutilized? Why?**

# 12-step attendance patterns

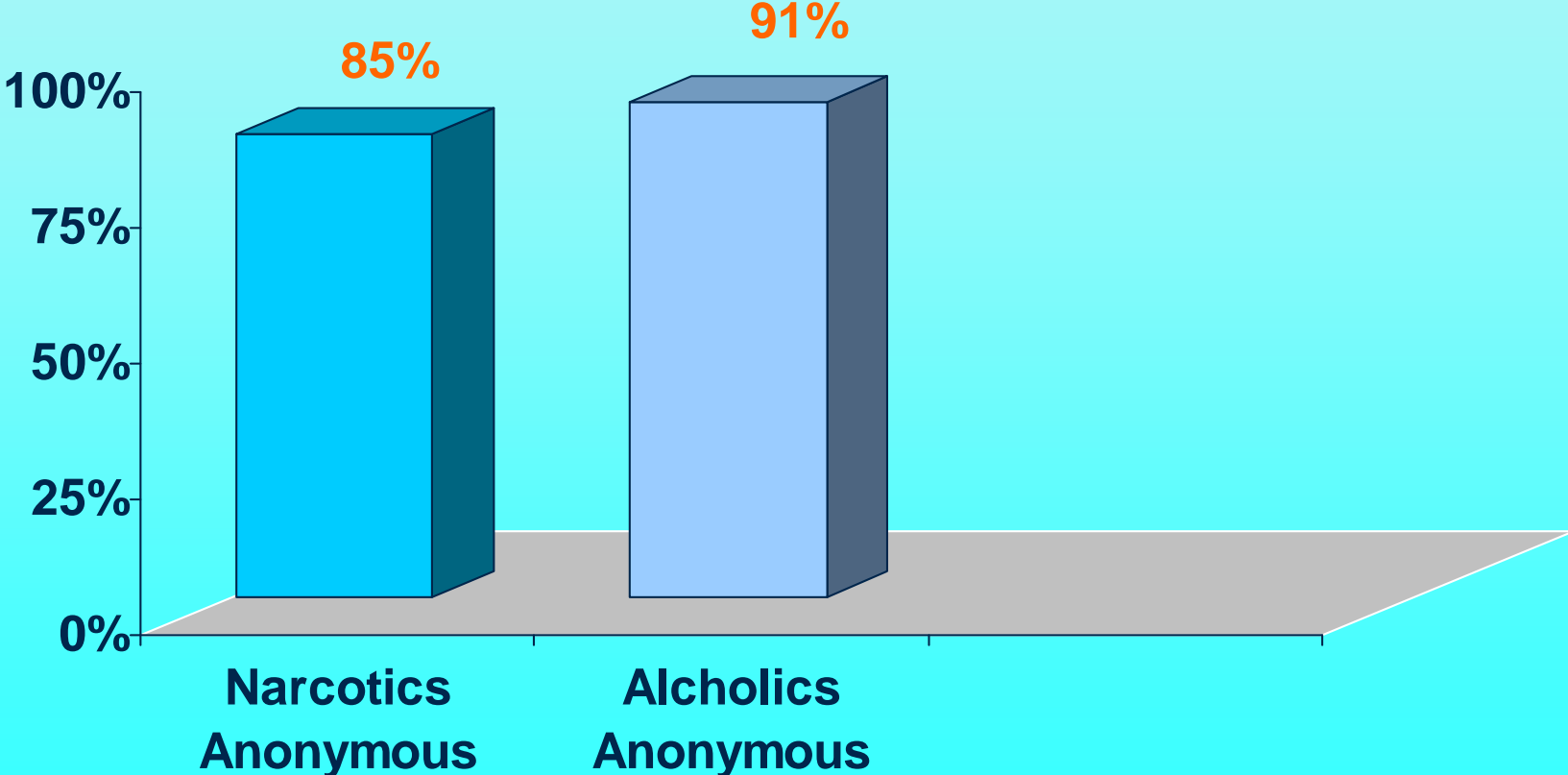


# 12-step Attendance patterns at treatment admission (N = 314)



# 12-step attrition: Ever dropped out?

*Since you first started attending, have you ever stopped attending for one month or longer? (yes)\**



\* Other than being in a closed institution: Among current attenders

# 12-step Participation Patterns mirror 'treatment career:' Multiple episodes and dropping out

*How many different times did you stop attending for a month or longer since you began attending meetings?*

Narcotics Anonymous-mean (SD) 6.1 (13.2)

Alcoholics Anonymous 6.4 (12.1)

*How long was the longest interruption in attendance? (in months)*

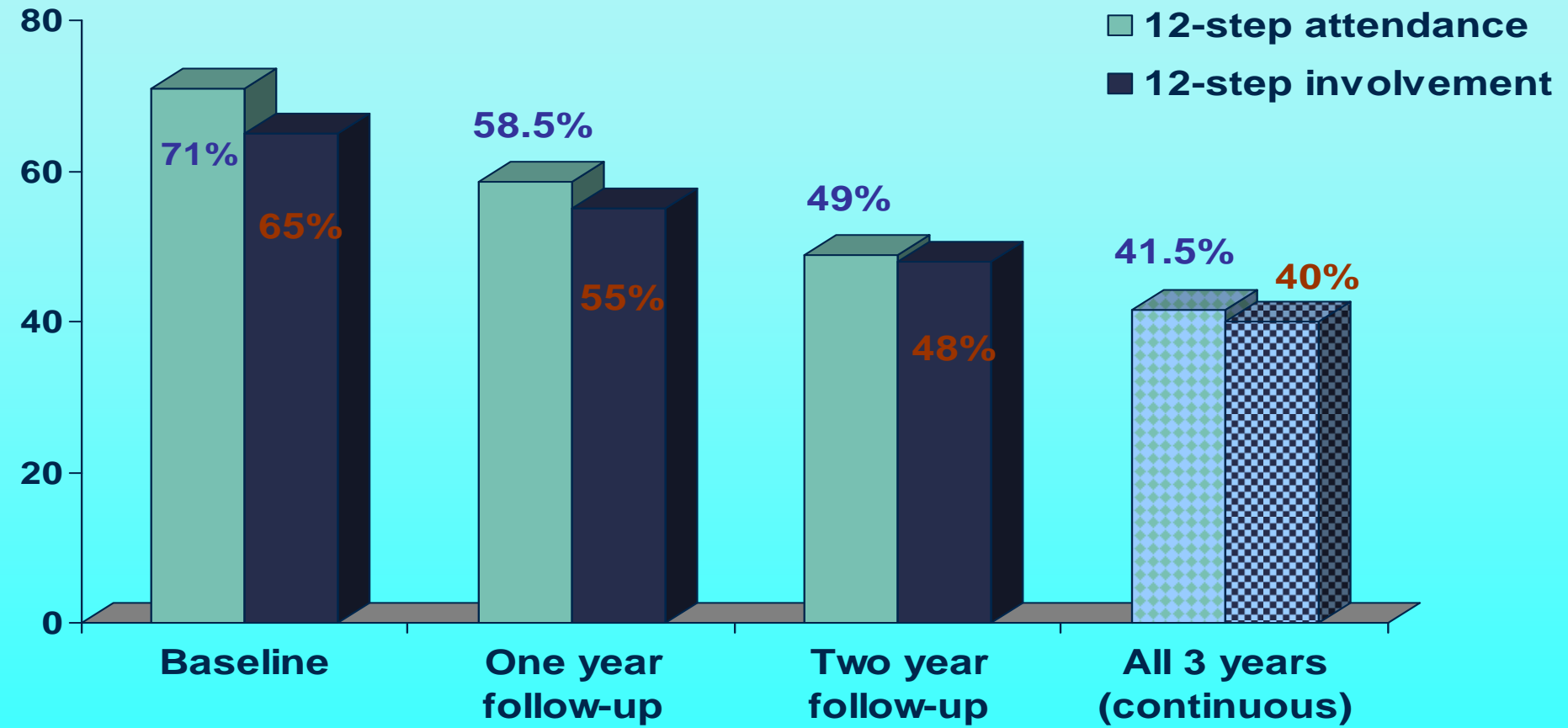
Narcotics Anonymous- mean (SD) 29.8 (27.7)

Alcoholics Anonymous 29.9 (30.8)

**12-STEP CAREER LIKE TREATMENT CAREER, CONSISTS OF MULTIPLE INTERRUPTED EPISODES OF PARTICIPATION**

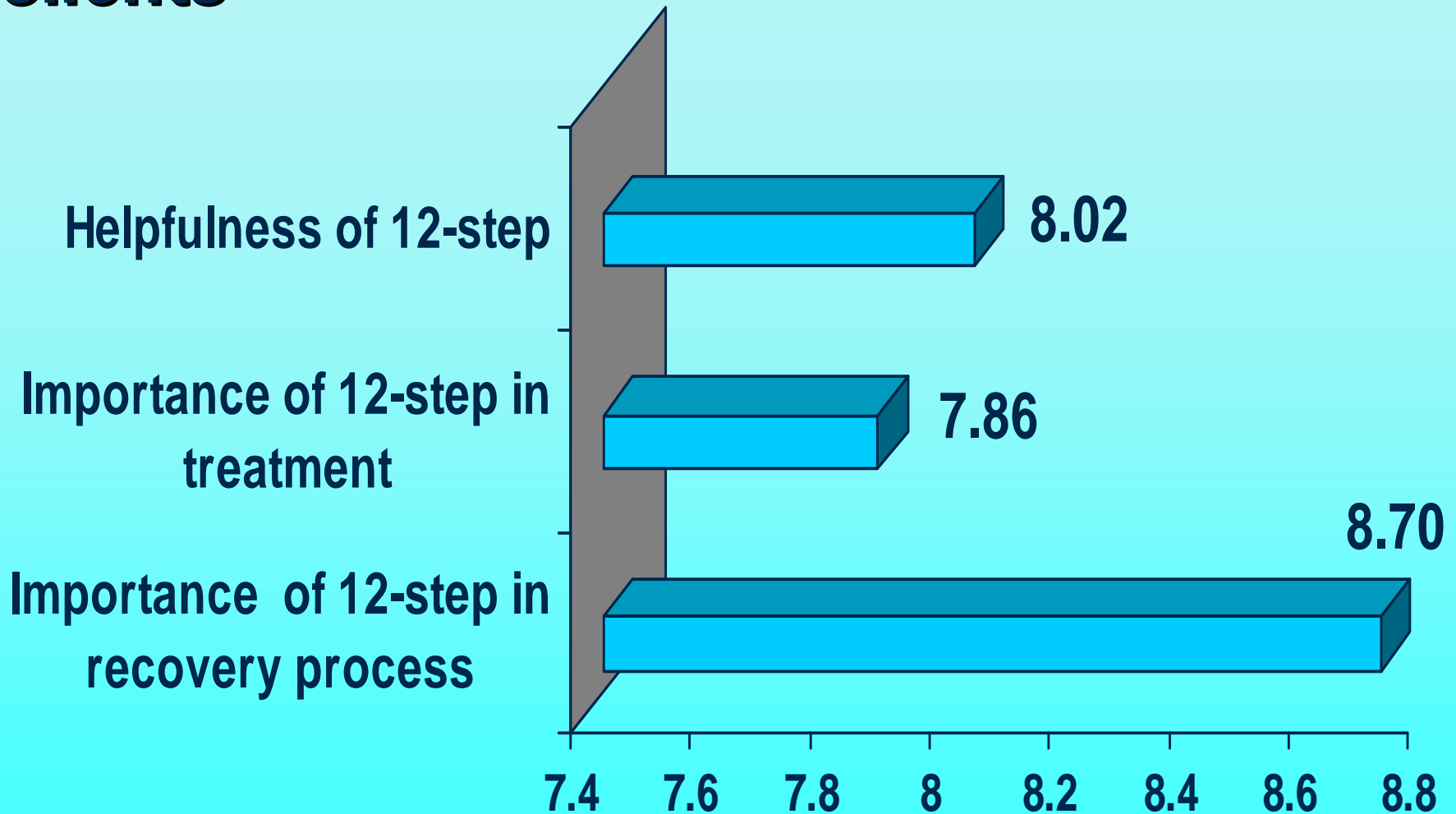
# Pathways: Three-year Patterns of 12-step affiliation

**12-STEP ATTENDANCE AND INVOLVEMENT DECREASE OVER TIME....**



(N = 289)

# Attitudes about 12-step among Outpatient Clients <sup>a</sup>



<sup>a</sup> Scale range from 0 to 10

# Reasons for Attending NA and AA among polysubstance users\*

NARCOTICS  
ANONYMOUS  
(N=150)

ALCOHOLICS  
ANONYMOUS  
(N=88)

Promotes recovery/sobriety	59%	41%
Support/acceptance/fellowship	33%	58%
None (did not get anything out of it)	18%	10%
Mandated/pressured	11%	6%
To make friends, to check it out	4%	4%
Step work, spirituality	3%	8%

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\* Among 'ever' attenders; total >100% b/c up to 3 answers coded



# **Obstacles to 12-step affiliation and reasons for non-attendance**

# Reasons for 12-step attrition\*

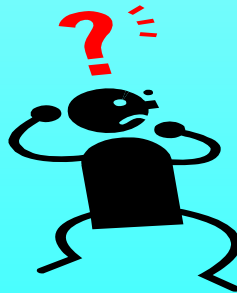
*Why did you stop attending? (longest interrupted period)*

	NARCOTICS ANONYMOUS (N=120)	ALCOHOLICS ANONYMOUS (N=72)
Using/not ready to stop	27%	33%
Didn't like it/tired of it	26%	19%
Didn't need it/I can recover on my own	25%	0%
Limited to drug or alcohol/no identification	0%	15%
Not helpful	13%	1%
Went to alternative fellowship	6%	8%
Time/location fellowship	8%	15%
Not comfortable sharing	5%	0%
Not required	0%	4%
No reason	3%	13%

\* Among those reporting disengagement, total >100% b/c up to 3 answers coded

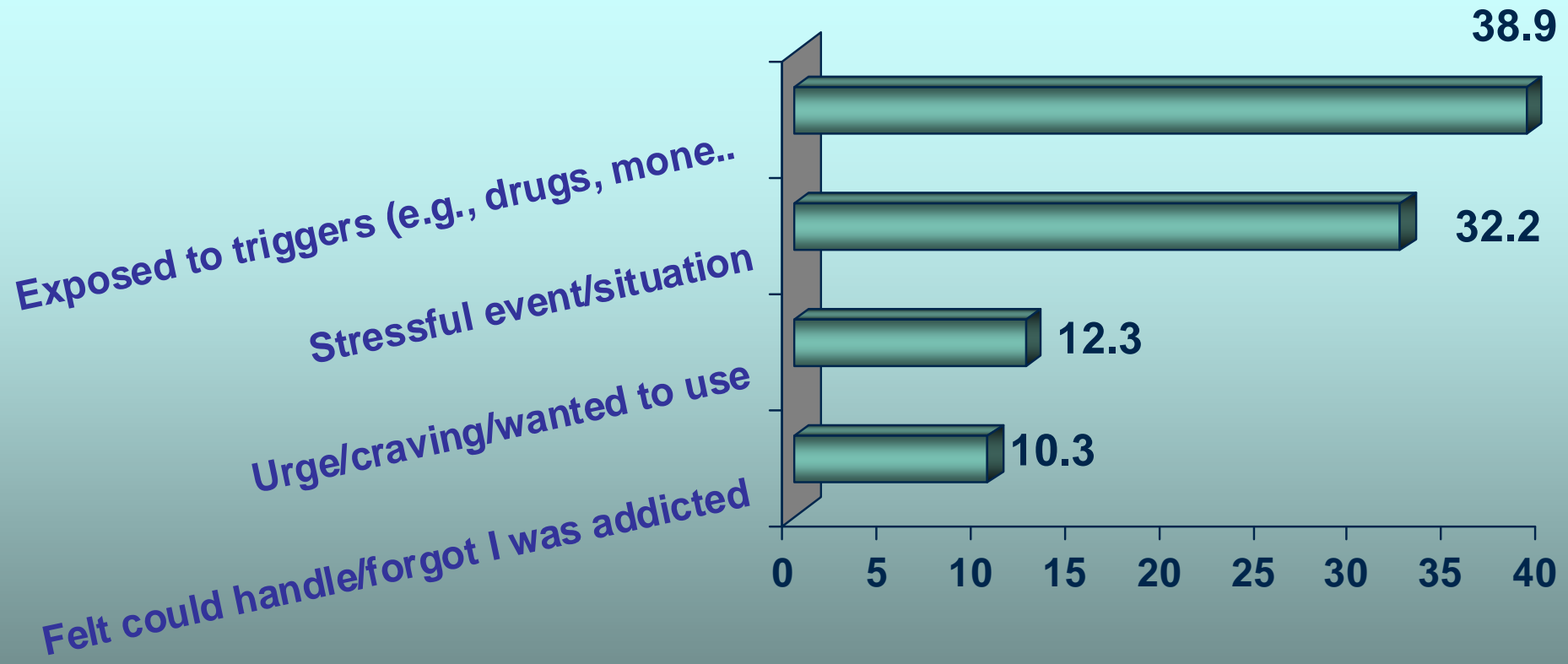
**Hmmm....**

**This sounds familiar...**



# Attributions of Relapse <sup>b</sup>

*What got you back to using? Top answers (<10%)*

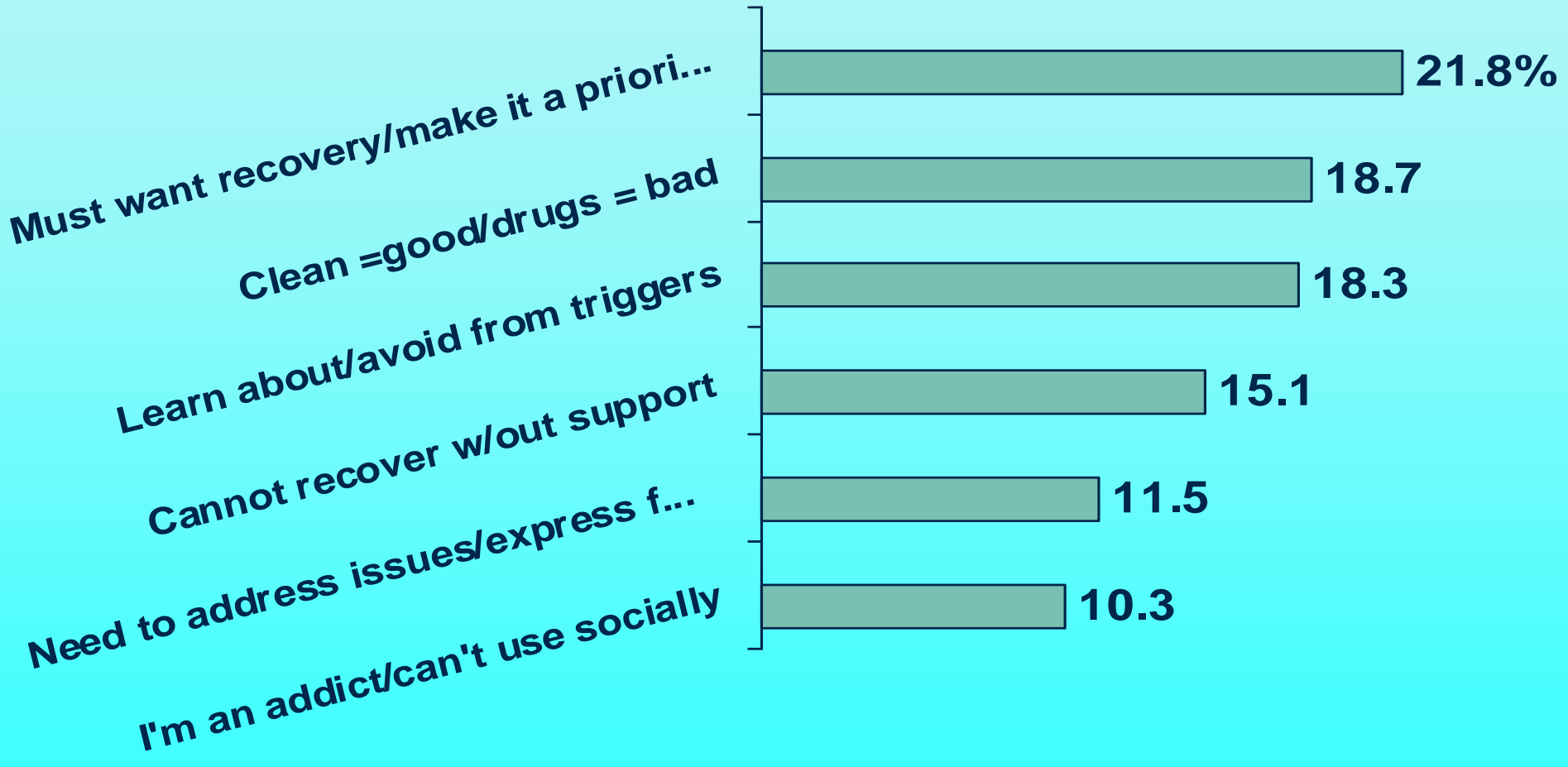


<sup>B</sup> Among those who report one or more such periods: N=253

# Lessons learnt from Relapse <sup>b</sup>

Top answers (<10%)

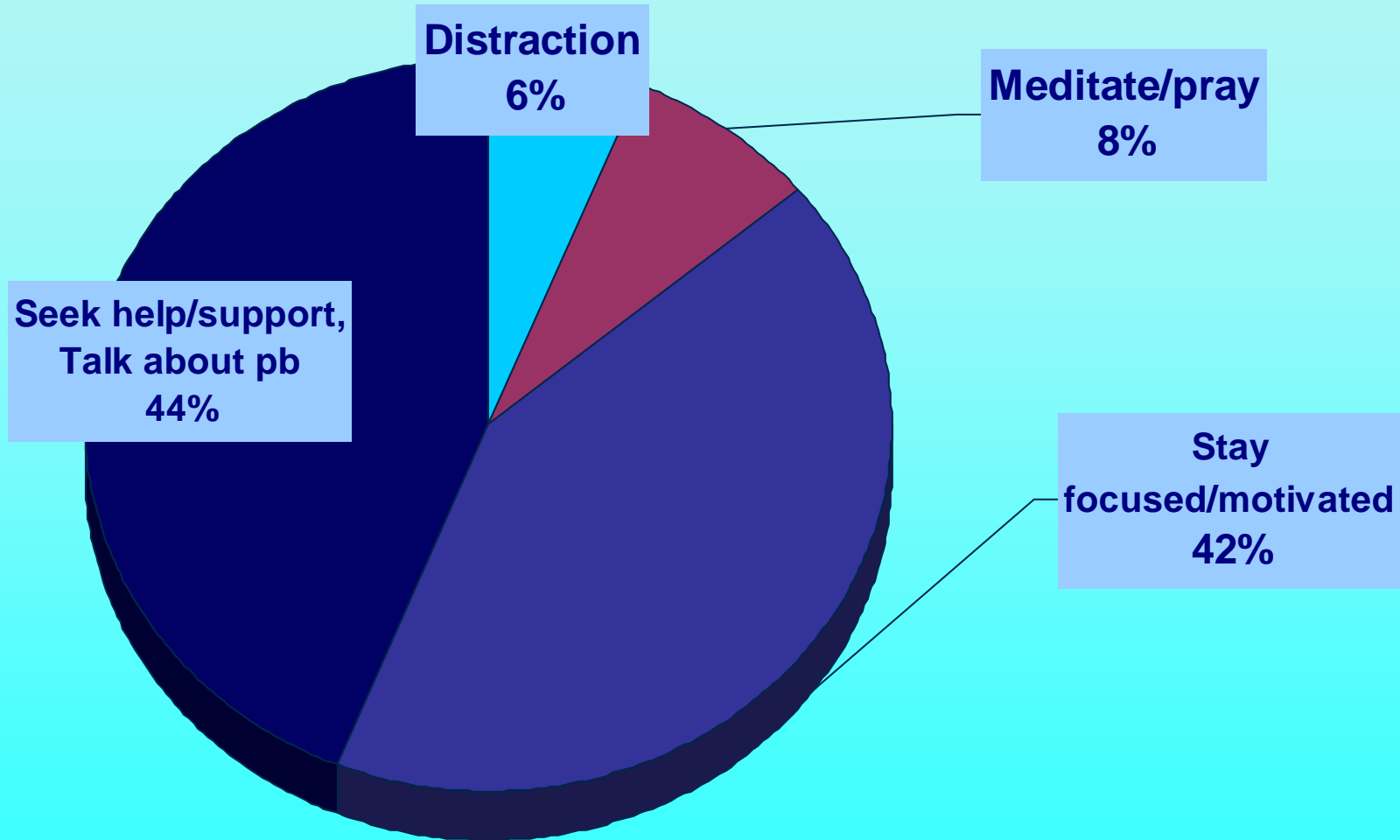
*What if anything have you learnt from the relapse experience?*



<sup>B</sup> Among those who report one or more such periods: N=253

# Strategies to deal with threats to abstinence

## Seeking support and staying motivated



**C** Among those who report a challenge

# Observation and clinical hint...

- Lessons learnt from relapse about what it takes to recover:
  - **Must want to recover/stay focused**
  - **Cannot do it alone**
- Reasons for not going to 12-step:
  - Not ready to recover (motivation)
  - I can do it on my own (don't need support)
- Moral of the story:
  - **MOTIVATION ENHANCEMENT and**
  - **ACCEPTING/SEEKING HELP and SUPPORT**

**The usual suspect as  
Predictor of 12-step  
attendance: Severity**



# 12- Step attendance by Dependence Severity and Alcohol Among Problem Substances

	Ever %	Dependence Severity Mean <sup>a</sup>	Alcohol among problem substances	
			No	Yes
Neither NA or NA	21.6	5.5	25.9	12.3*
NA only	35.3	7.8*	43.2	18.5***
AA only	5.4	8.2	1.4	13.8***
Both AA and NA	37.7	8.6*	29.5	55.4

**GREATER SEVERITY MORE LIKELY TO HAVE ATTENDED BOTH FELLOWSHIPS**

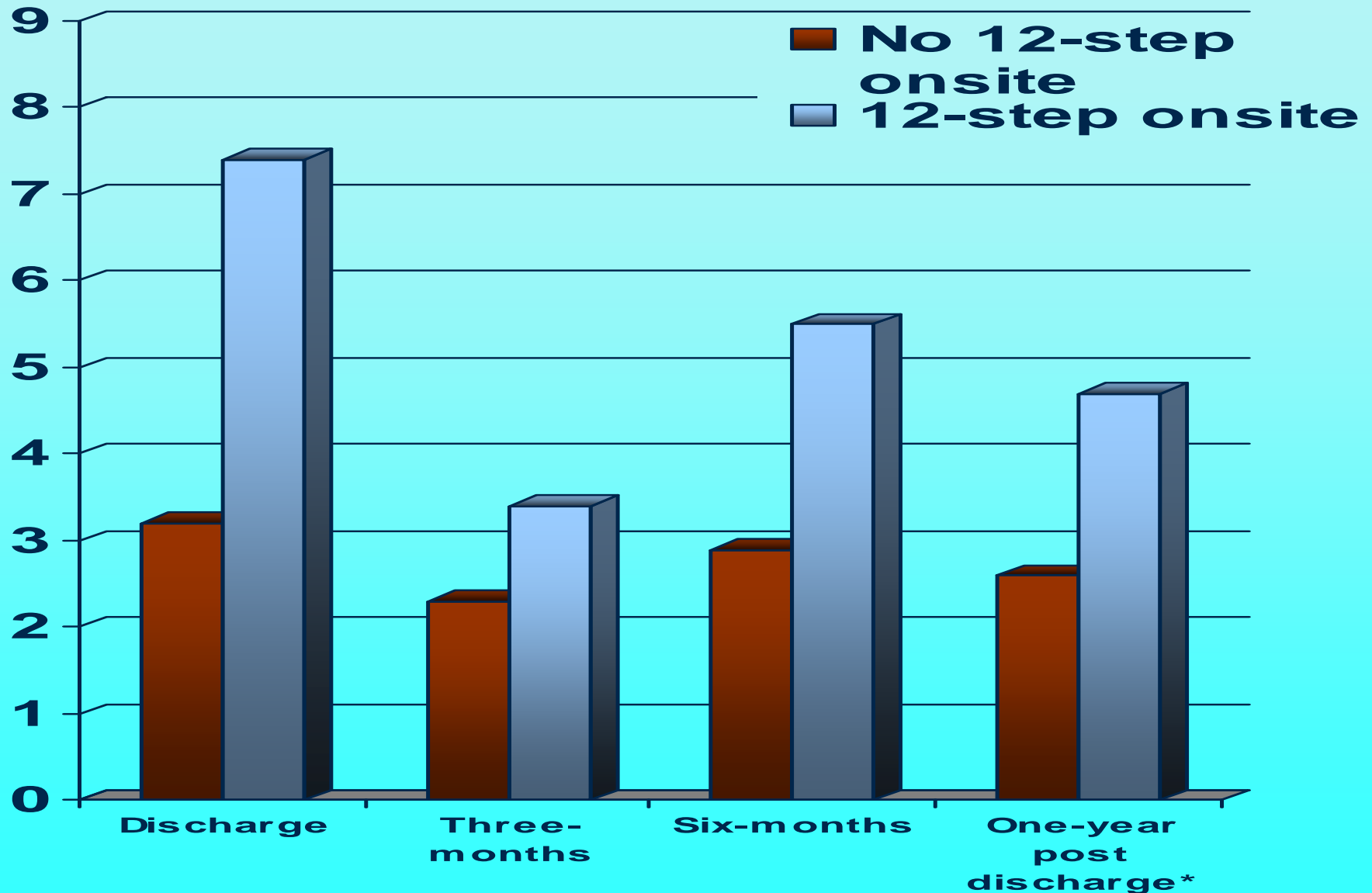
<sup>a</sup> scale range 0 -14

## **ACT FOUR:**

# **Strategy to promote 12-step affiliation**

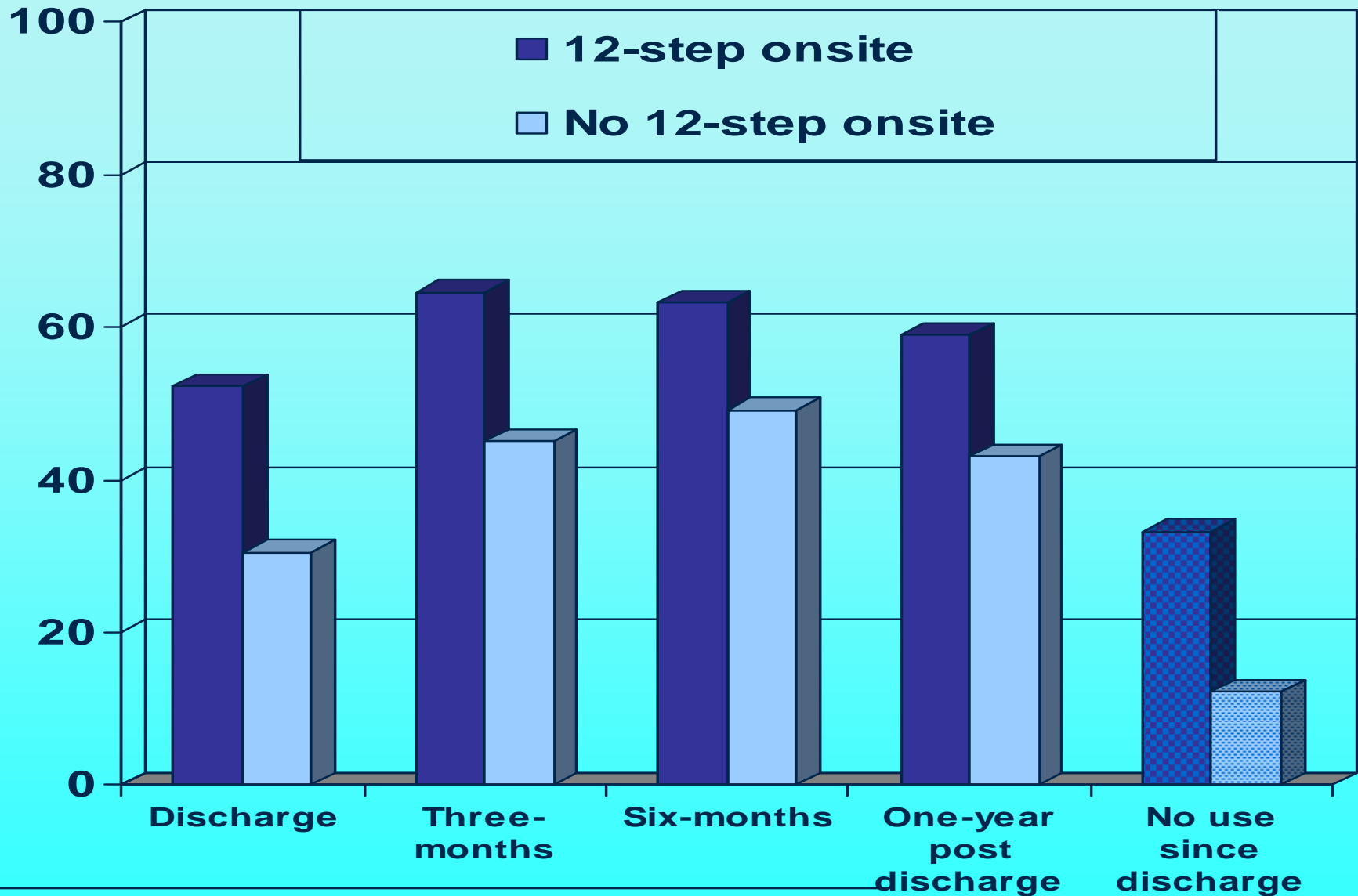
# **Treatment-level predictor of 12-step participation: Onsite meetings**

# Number of 12-step meetings past month as a function of 12-step meeting onsite during treatment



All  $p < .05$  except where noted; \* trend:  $p = .069$ . Laudet et al. Evaluation Review, 31(6), 613-646, 2007

# % did not use drugs or alcohol since prior interview as a function of 12-step meeting onsite during treatment



# All you need is...



+



The will to call H&I, a room and a coffee pot (*resentment optional, cookies a plus*)

**ACT FIVE:**

*so what?*

**Integration of Findings**



# Integration of Findings [1]

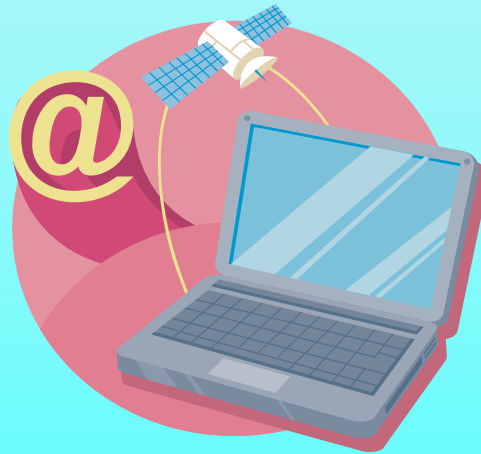
- Twelve-step attendance and involvement significantly enhance the odds of sustaining abstinence among formerly polysubstance dependent persons
- This extends in scope and in time the empirical knowledge base on the effectiveness of 12-step affiliation for addressing substance use disorders:
  - To community-based polysubstance users
  - To *maintaining* abstinence from substance use
- 12-step *involvement* is especially beneficial among persons with several years of abstinence
- 12-step involvement appears particularly important for women
- Several components of 12-step involvement can be translated outside the 12-step context



# Integration of Findings [2]

- Twelve step attendance patterns mirror addiction and treatment 'careers' (multiple interrupted episodes).
- 12-step attendance declines over time, possibly mitigating its usefulness
- In addition, a substantial minority of substance users choose not to participate in 12-step
- Though reasons for not attending vary, a number of factors cited echo perceived reasons for returning to active substance use:
  - Wanting to use/not motivated to stop
  - Low problem recognition
  - Low recognition of need to seek/accept help
- Treatment programs can easily enhance the likelihood of post treatment 12-step participation and abstinence by holding a meeting onsite

**Want more findings on 12-step and on recovery?**



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<http://www.ndri.org/ctrs/cstar.html>

