NADA as an aid in treating patients with borderline personality disorder as well as tobacco cessation

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Evidence Basis for NADA: the Research

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Borderline Personality Disorder

Borderline Personality Disorder Etiology

- Multifactorial but extensive research supports the notion that early abuse and neglect is a significant factor
- Early childhood separations, chaotic home environments, insensitivity to the child's feelings and needs, emotional discord in the family and trauma of varying degrees have all been implicated in the etiology

Consequences of Early Childhood Trauma

- The hippocampus is vulnerable to the effects of stress
- Reduced hippocampal volume found in adult patients with borderline personality disorder
- Early trauma may promote hemispheric lateralization and adversely affect integration of the right and left hemispheres

Failure of Hemispheric Integration

- Reflected in “splitting” – major defense mechanism
- Tend to compartmentalize self and object representations into “all good” and “all bad”

Symptoms Include

- Frantic attempts to avoid real or imagined abandonment (reject first before being rejected)
- Highly unstable relationships – over idealizing one minute, devaluing the next
- Rapid mood swings (minute to minute), feelings of emptiness, anger
- Impulsive, self-destructive behavior (risky sex, excessive spending, reckless driving, binge eating, substance abuse)

Borderline Personality Disorder

Many People with BPD need Substance Abuse Treatment

- The most stable predictor of positive treatment outcomes is retention in treatment.
- Prevalence rates of Axis II disorders – 70-80% among drug dependent persons treated inpatient or in residential programs.
- Personality disorders (especially ASPD, BPD) are consistently associated with risk for early drop out from all types of substance abuse treatment.

Personality disorders and retention in therapeutic community for substance dependence

Samuel DB et al. Am J Addictions, 2011;20:555-562

- evaluated the impact of 10 personality disorders on early attrition (within the first 30 days) as well as time to dropout during a 9-month therapeutic community residential treatment program
- BPD was the only personality disorder negatively related to overall program retention.

Impact of borderline personality disorder on residential substance abuse treatment dropout among men (Tull MT & Gratz KL, Drug and Alcohol Dependence 2012;121:97-102)

- Patients with borderline personality disorder (BPD) are significantly more likely to prematurely drop out of substance abuse treatment
- This study focused on males – 159; 34 with BPD
- Found that BPD significantly predicted treatment dropout (38.2% versus 16% of those without BPD)
- Particularly true in center initiated treatment dropouts (26.5% versus 6.4%, $p<0.01$)

Circle Program

- 90-day, inpatient, dual-diagnosis treatment program for men and women, 18-65, treating people who have failed everything else
- 75-80% admitted as Condition of Probation
- Funded by the State of Colorado
- Abstinence based
- Intense, cognitive/behavioral program
- Totally tobacco free since 2000
- Using NADA acudetox since 2000
- Axis II disorders – 75% (includes marked traits)

Outcome Study

- January 2009 – December 2011 – 231 patients admitted
  - 55% male
  - 88% using tobacco daily
  - 74% criminal commitment, 6% civil commitment, 20% voluntary
- 80% completed the three month program
- 86% of the 179 eligible enrolled in the year long follow-up after treatment

Program Completion

- Remain the recommended time in treatment
- Complete all plan of care assignments
- Move up through the level system
- In 2000 the program completion rate was 56%
- In 2011 the program completion rate was 80%
- Being tobacco free improves outcomes
- Addition of alternative treatments like NADA improve retention and ability to cope

Characteristic	Category	Completed Program N = 185 (80%)	Did Not Complete N=46 (20%)	P value
Gender	Male Female	99 (78%) 86 (83%)	28(22%) 18 (17%)	.4104 NS
Race	Caucasian Hispanic African-American Asian	148 (82%) 26 (76%) 9 (64%) 2 (100%)	33 (18%) 8 (24%) 5 (36%) 0 (0%)	.3492 NS
Age	Years ± SD Range	36 ± 11	33 ± 11	.1258 NS
Primary Drug Dependence Diagnosis	Alcohol Polysubstance Methamphetamine Cocaine Opiates Cannabis	65 (84%) 54 (76%) 28 (82%) 20 (83%) 12 (80%) 6 (60%)	12 (16%) 17(24%) 6 (18%) 4 (17%) 3 (20%) 4 (40%)	.4898 NS

Characteristic	Category	Completed Program N = 185 (80%)	Did Not Complete N=46 (20%)	P value
Primary Psychiatric Diagnosis	Bipolar D/O	31 (78%)	9 (22%)	.4834
	Other Affective D/O	42 (82%)	9 (18%)	NS
	PTSD	55 (82%)	12 (18%)	
	Other Anxiety D/O	24 (86%)	4 (14%)	
	Psychotic D/O	13 (59%)	9 (41%)	
	Substance Induced	12 (86%)	2 (14%)	
	Other	8 (89%)	1 (11%)	
Tobacco Use On Admission	Yes	159 (78%)	44 (22%)	.08
	No	26 (93%)	2 (7%)	NS

Characteristic	Category	Completed Program N = 185 (80%)	Did Not Complete N = 46 (20%)	P value
Legal Status	Criminal Commitment	146 (85%)	25 (15%)	.0013
	Civil Commitment	7 (47%)	8 (53%)	
	Voluntary	32 (71%)	13 (29%)	
Tobacco Use in treatment	Yes	36 (67%)	18 (33%)	.0092
	No	149 (84%)	28 (16%)	
Tobacco Use plan for after treatment	Wants to stay quit	143 (93%)	10 (7%)	<.0001
	Plans to use tobacco	32 (48%)	35 (52%)	
	Ambivalent	10 (91%)	1 (9%)	

Characteristic	Category	Completed Program N = 185 (80%)	Did Not Complete N = 46 (20%)	P value
Axis II most prevalent diagnoses	No Axis II	48 (98%)	1 (2%)	<.0001
	Antisocial PD	22 (59%)	15 (41%)	
	Borderline PD	68 (87%)	10 (13%)	
Use of NADA acudetox	Yes	162 (84%)	32 (16%)	.0059
	No	23 (62%)	14 (38%)	

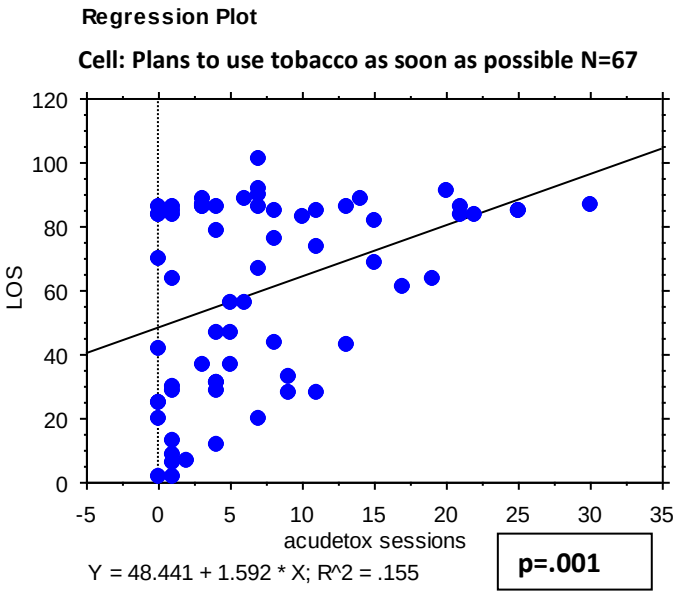
Factors aiding program completion

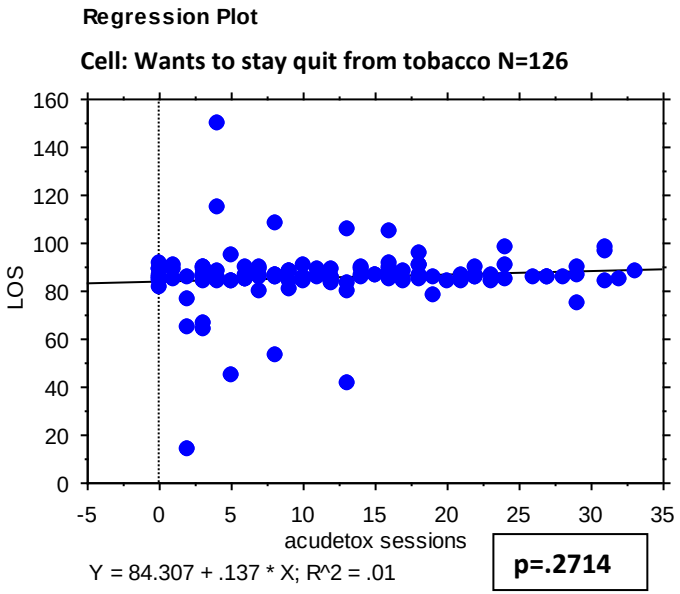
- Having a probation officer and accountability
  - 85% on probation completed
  - 71% of the voluntary patients completed
  - 53% of civil commitments completed
  - p=.0013
- NADA acudetox appears to help with program completion
  - Those completing had 12 ± 9 acudetox sessions
  - Those not completing had 5 ± 5 sessions
  - p<.0001

Patients using tobacco were more likely to remain in treatment longer the more NADA sessions they had

Stuyt EB. Ear acupuncture for co-occurring substance abuse and borderline personality disorder: an aid to encourage treatment retention and tobacco cessation. *Acupunct Med* 2014;32:318-324

Length of stay (LOS) in days in the program by number of acudetox sessions compared with attitude about tobacco use after discharge





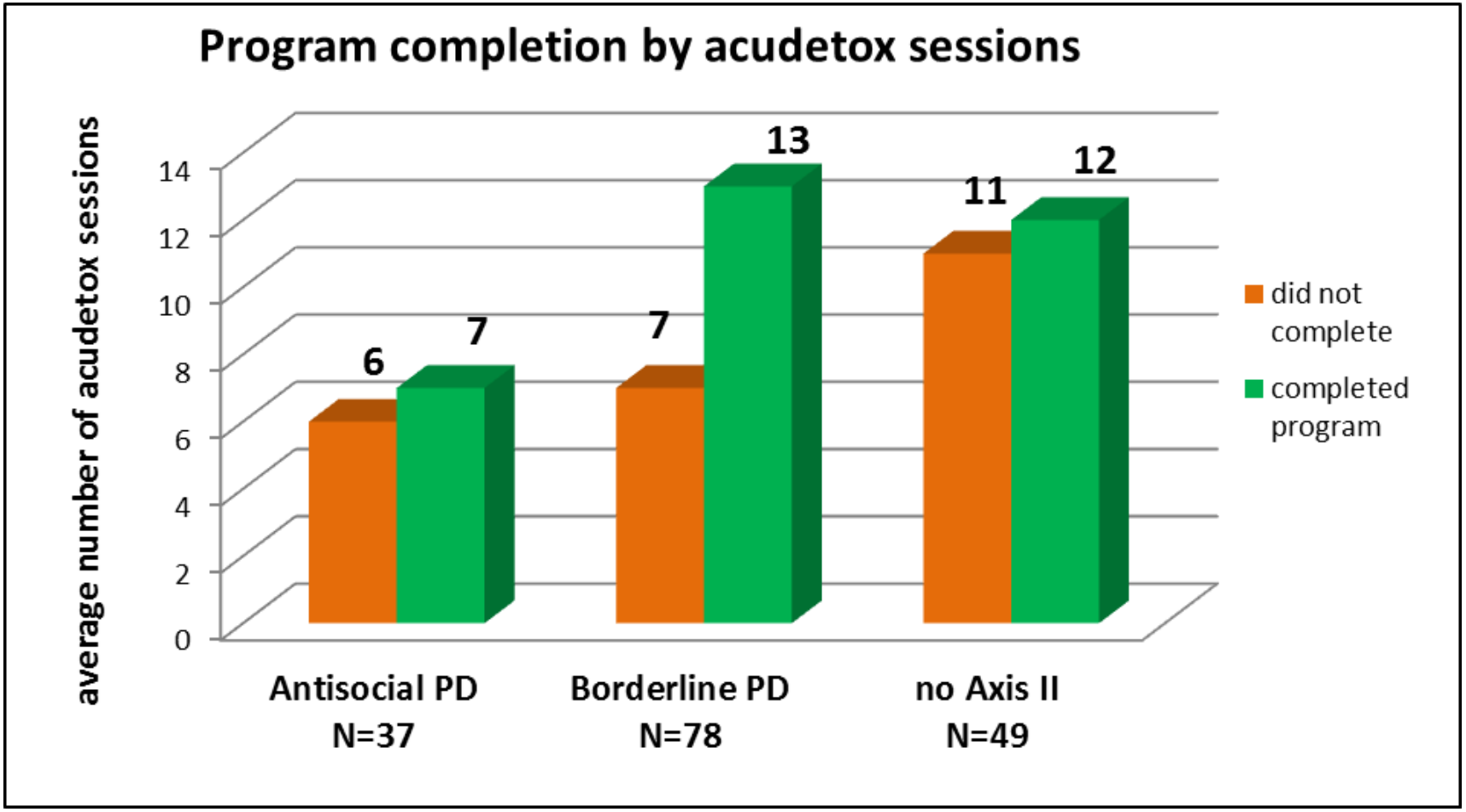
Focusing on those with personality disorders

- Of the 231 patients
  - 78 had borderline personality disorder
  - 37 had antisocial personality disorder
  - 49 had no personality disorder or marked personality traits
- 98% of those with no Axis II diagnosis successfully completed program
- 87 % of those with BPD completed (13% dropout)
- 59% of those with ASPD completed (41% dropout)

Of the Borderline PD patients

- 49 females – 83% completed program
  - 44 (90%) of those completing used acudetox
    - Average number of sessions = 12 ± 8
  - 7 (70%) of those not completing used acudetox
    - Average number of sessions = 6 ± 6
- 19 males – 100% completed program
  - 18 (95%) used acudetox
  - Average number of sessions = 14 ± 9

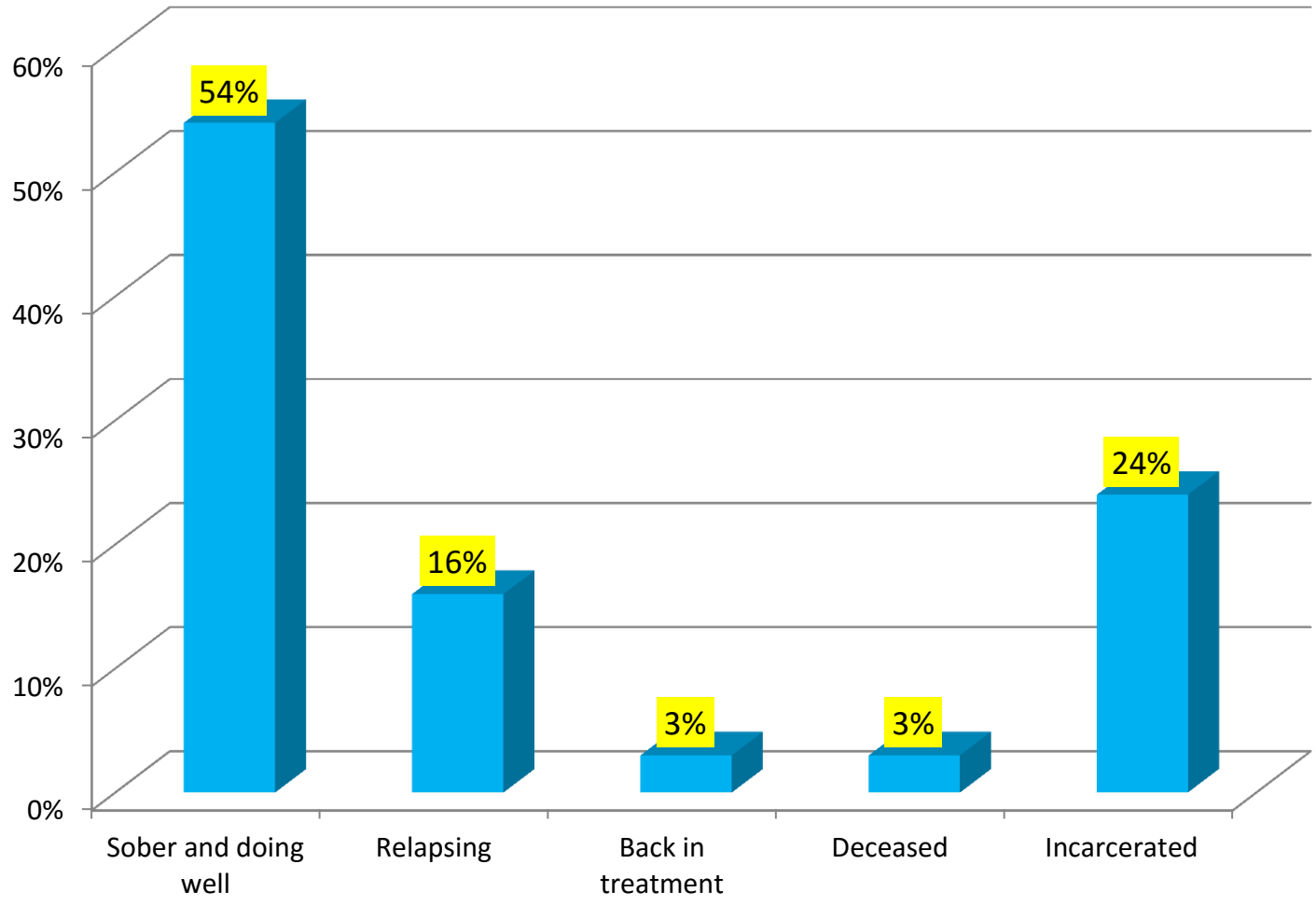
Use of NADA acudetox by Personality



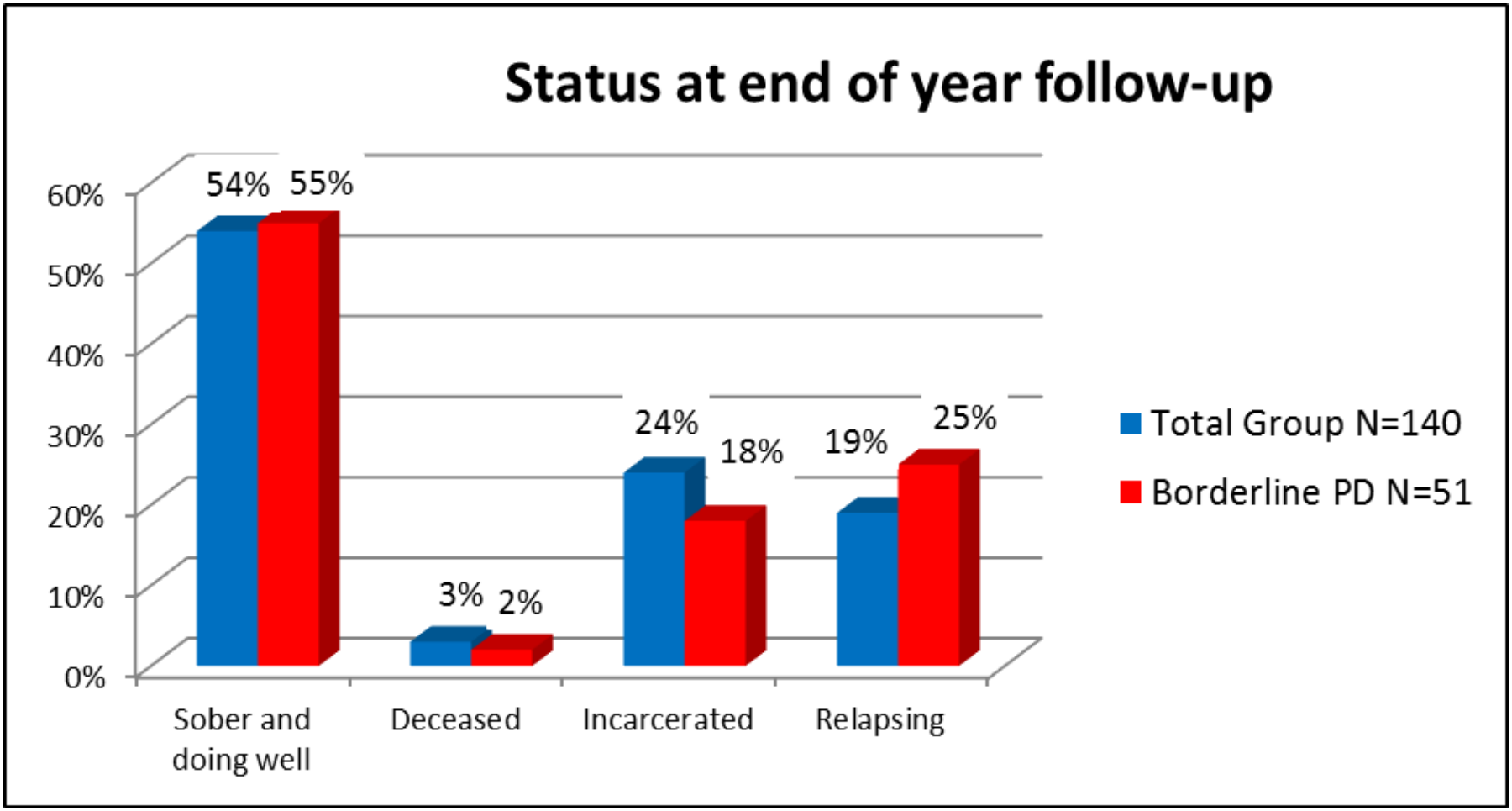
At the end of the year follow-up of 140 patients there were no differences between:

- Gender (p=.855)
- Race (p=.459)
- Primary drug dependence (p=.737)
- Primary psych diagnosis (p=.78)
- Tobacco use prior to admission (p=.604)
- Legal status (p=.062)
- Presence of Axis II diagnosis (p=.387)

Status at the end of the year follow-up for 140 patients



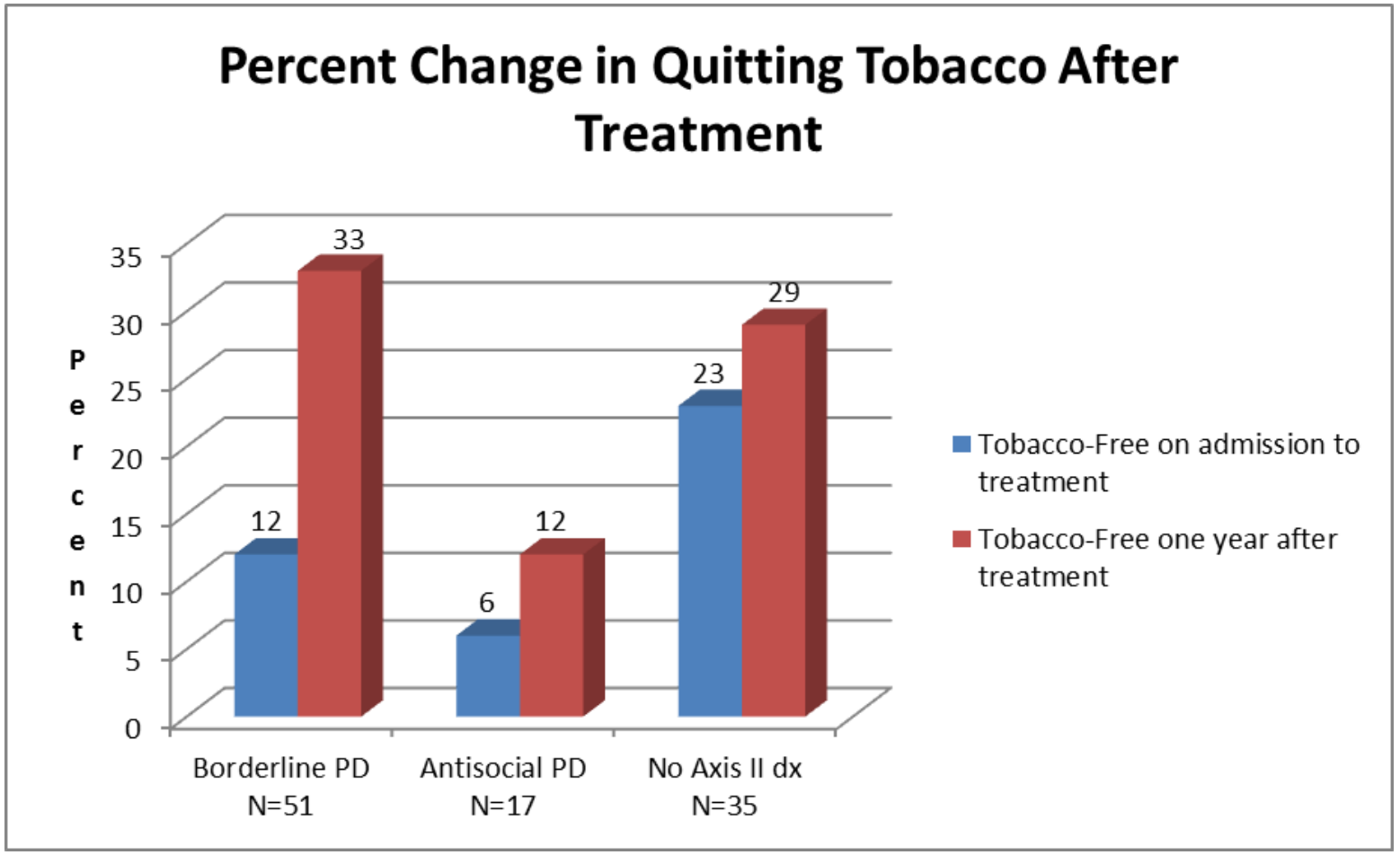
Patient with BPD did just as well as others without BPD by year's end



Tobacco use was significantly correlated with relapse

- Non-tobacco use increased from 14% to 27% at the end of the year.
- Those using tobacco were much more likely to relapse. (p=.01)
- Those continuously abstinent were more likely to not be using tobacco. (p=.03)
- For those who relapsed to drugs or alcohol
  - 9 ± 5 months to first relapse for non-tobacco user
  - 6 ± 5 months to first relapse for tobacco user (p=.008)

Those with Borderline PD were more likely to quit tobacco use after treatment



For all 140 patients

- Those not using tobacco at the end of the follow-up period participated in significantly more NADA acudetox sessions when they were in treatment (15±9)
- Than those who were still using tobacco (12±8)
- p=0.04

So Why Is NADA helpful in BPD?

- Patients with BPD usually come from a back ground of chaos; they think this is their “normal” and will seek to create chaos when it doesn’t exist, to feel normal
- They benefit from grounding techniques to experience a “new normal” – anything to increase the parasympathetic tone is helpful
- Start with NADA 5-point ear acupuncture protocol
  - Immediate calming effect
  - Allows the patient to learn what it is like to sit still
  - Helps with transference and counter-transference
- They are then more open to learning dialectical behavioral therapy (DBT), mindful meditation, biofeedback, tapping, yoga, Tai Chi, progressive muscle relaxation, etc.

Medications

- Should be seen as an aid only
- Pills as “transferential objects” (avoid benzos and opiates)
- Naltrexone – self injurious behavior - +/- benefit
- My goal is to reduce medication and discontinue if at all possible (remove external locus of control – encourage internal locus of control) NADA is very helpful with this.
- NADA correlates with the ability to significantly reduce the number, and dose of psychotropic medication.

Neuropeptide Model of BPD

Stanley B and Siever LJ Am J Psychiatry 2010;167:24-39

- Low basal opioid levels (leading to chronic dysphoria and lack of sense of well-being) with compensatory super sensitivity of μ-opioid receptors (SIB results in heightened relief of pain and restoration of sense of well-being)
- Dysregulation of oxytocin may distort the reading of social cues, establishment of trust and capacity for attachment
- Vasopressin associated with aggression

Oxytocin attenuates amygdala responses to emotional faces regardless of valence

Domes G et al.Biol Psychiatry 2007;62:1187-1190

- 13 healthy, non-smoking males, oxytocin and placebo – intranasally 45 minutes before fMRI sessions, observed pictures of facial affect with different intensity levels
- Higher activation in right amygdala in response to emotional faces compared with neutral faces in placebo condition
- A single dose of oxytocin attenuates right-sided amygdala responses to emotional faces

Oxytocin administration attenuates stress reactivity in Borderline PD: a pilot study

Simeon et al. Psychoneuroendocrinology 2011;36:1418-1421

- Random assignment to intranasal 40 IU oxytocin vs placebo
- Followed by Trier Social Stress Test – designed to induce anxious stress
- Decrease in stress-induced dysphoria in participants with BPD after oxytocin

Is Oxytocin a possible mediator of anti stress effects induced by acupuncture?

10th International Congress of Medical Acupuncture and Related Techniques, Edinburgh, 2002

- Oxytocin can be released in response to touch, warmth and light pressure from all parts of the body
- Some animal experimental data indicate that pain relief induced by acupuncture is abolished not only by opiate antagonists but also oxytocin antagonists