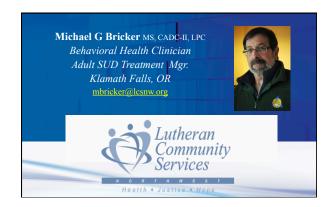


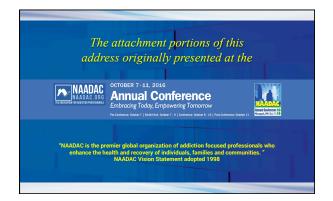
Bet you never thought about gambling as an Attachment Disorder...

"What's Love Got to Do With it?"

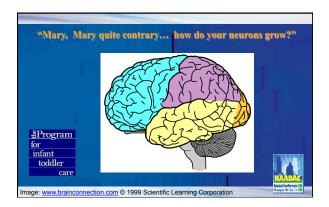
Addiction, Attachment and the 13th Step

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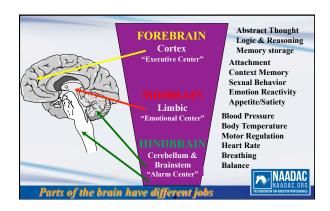


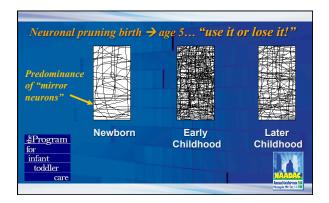
Brain architecture is built over time

- Brain development progresses in a hierarchical, "bottom-up" sequence, with advanced skills built on more basic capabilities. ("Epigenetic principle")
- As it develops, the quality of brain architecture establishes a sturdy or weak foundation for learning and behavior. "What fires together, wires together"
- Brain circuits consolidate with increasing age, making them more difficult to rewire.
- The timetable of brain plasticity varies: it is narrow for basic sensory abilities, wider for language, and broadest for cognitive and social-emotional skills.
- "mirror neurons" are crucial to the process, especially in infancy



The brain develops in order: At birth the brain is 25% of adult size & reaches 90% of adult size by age 5. The brain develops from the bottom up and from the back to the front. Program for infant toddler care of life. NAADAC MANAGEMENT OF THE PROGRAM OF THE BRAIN OF THE BRA





"Mirror Neurons" seem to be important in this process

- Discovered in the mid-1990's in monkeys
- Theoretically, they provide an internal "mirror" of other's actions, intentions and emotions
- This becomes an internal representation or map of interactions with important "others"
- · Could they be the foundation of attachment?



New Research suggests that great apes know what you're thinking

- Bonobos, chimpanzees, great apes and orangutans appear to be able to "read" the intentions of humans and other primates
- Research suggests that primates may have a "theory of mind" similar to humans – they can think about what others are thinking about
- Just published in Science (10/7/2016)
 Christopher Kupenye et.al.



Interaction	of nature an	<u>d nurture</u>
Biology shapes ability to:		The child's environment shapes:
Recognize speech		Particular languages learned
Discern sounds		Vocabulary
Link meaning to words		Dialect NAADAC
		SE ASSESTION FOR ADJUSTAN HERISSONAL

Mirror Neurons are important in parenting:

"When you focus on your children's inner experiences (feelings), something really important is happening. This focus helps you develop a balanced way of regulating your child's emotional states. For example, when you interact using mirror neurons you can both calm your child when he or she is upset, and you can teach your child to calm him or herself."

Jacque Ristau MS, LPC, 2006

The child's brain development is governed by 2 processes:

Blooming: As the child's brain grows there is an initial "sprouting" of neurons and synaptic junctions.

Pruning: Those neurons that are not encouraged to fire gradually atrophy in favor of neuronal connections that are used.

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Due to the infant's limited psychomotor capacity, the brain at this point is a passive recipient, waiting for an experience. As experiences, interactions and environmental stimulation are provided these activated neurons shape the actual structure of the brain.

And the result is:

To the degree that a particular experience is provided, the developing brain responds with neuronal growth. If these experiences aren't provided, the child goes from a potentially large neural substrate to one shaped by pruning and lack of stimulation, which alters the structure of the brain for life. Synaptic connections that are reinforced by an infant's exposure to language, sounds, facial expressions, and even lessons in cause and effect (e.g., the infant smiles, the mother smiles back) become permanent parts (blooming) of the brain's structure. Tentative connections that are not reinforced by early experience are eliminated (pruning). Examples include binocular vision, the developmental of language, musical competence, and the capacity for attachment.

" Addiction as an Attachment Disorder" by Philip J. Flores, Ph. D.



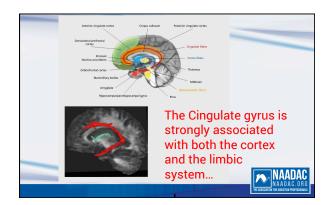


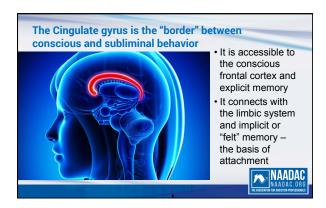
The Cingulate Gyrus

- The cingulate gyrus also connects many key sites.
- In this region, emotions, attention, and working memory interact.
- It is thought to help us to personally animate our attention and to attach it to things in external space.



The Posterior Cingulate gyrus is hard-wired into the emotional Limbic system, and is active in attachment





By the time a child is a year old, they have made the three most important decisions they will ever make:

• The world is a safe place for me, or it's not

• If I make my needs known, they will be met, they'll be frustrated or (worst of all...) I can never tell

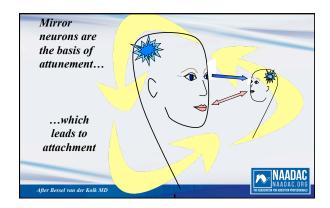
• Either the world is glad that I'm here, or it's not

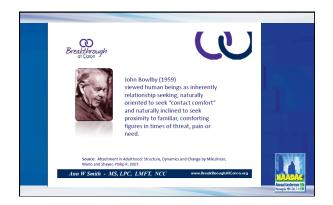






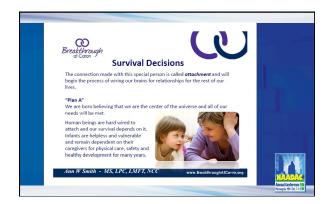


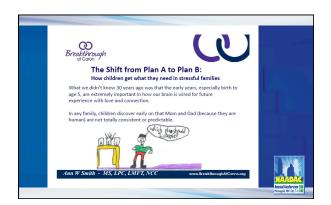








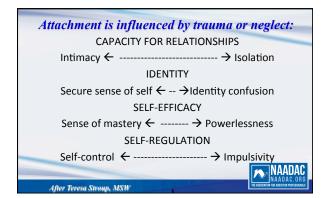


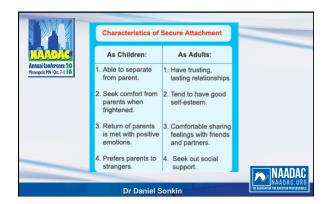


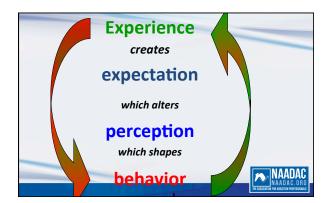












Where does it go wrong?

- As biological beings, we are "hard-wired" at birth for survival, attachment, pleasure and comfort (homeostasis)
- Brainstem & limbic functions: increases in
 - dopamine (motivation & pleasure)
 - oxytocin (bonding & comfort)
 - PEA (excitation & arousal)
 - Vasopressin (social & sexual motivation)
- Trauma or neglect create highly reinforced neural pathways in unconscious and pre-conscious "survival brain" systems

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Where does it go wrong?

- Inconsistent attachment results in diffuse memory formation ("fun-house mirror" neurons)
- Trauma → "splintered" memory formation
- stress → fragmented memory storage w/o markers for conscious recall → flashbacks
- Neglect → mis-attribution of self → Victim stance: "What's WRONG with me?"
 vs "What's happening to me?"



Where does addiction come in?

- We are "hard-wired" at birth for survival, attachment, pleasure and comfort. This is a biological imperative, and WILL be satisfied
- Brainstem & limbic functions
 - dopamine (motivation & pleasure)
 - oxytocin (bonding & comfort)
 - phenylethylamine PEA (excitation & arousal)
 - vasopressin (social & sexual motivation)
- For genetically vulnerable persons, drug intoxication fires the same parts of the brain, and feels like an acceptable substitute...

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Where does addiction come in?

- For genetically vulnerable persons, drug intoxication fires the same parts of the brain, and feels like an acceptable substitute...
- "Loaded feels like love!"





Fear - Cortisol	COMFORT - Oxytocin	
Aggression	Anti-stress hormone	
Causes arousal, Anxiety, Feeling stressed-out	Feeling calm and connected, Increased curiosity	
Activates addictions	Lessens cravings & addictions	
Suppresses libido	Increases sexual receptivity – promotes orgasm in women	The Renefits
Associated with depression	Positive feelings	The Denegus
Can be toxic to brain cells	Facilitates learning	The Benefits of Oxytocin
Breaks down muscles, bones and joints	Repairs, heals and restores	
Weakens immune system	Faster wound healing	
Increases pain	Diminishes sense of pain	
Clogs arteries, Promotes heart disease and high blood pressure	Lowers blood pressure, Protects against heart disease	
Obesity, Diabetes, Osteoporosis	Which way would you vote?	MAAD.

Addictions	Motivated	
Depression	Feelings of well-being, satisfaction	
Anhedonia - no pleasure, world looks colorless	Pleasure, reward in accomplishing tasks	
Lack of ambition and drive	Healthy libido	D .
Inability to "love"	Good feelings toward others	Dopamine Levels
Low libido	Healthy bonding	Levels
Erectile dysfunction	Healthy risk taking	
No remorse about personal behavior	Sound choices	
ADD/ADHD	Realistic expectations	
Social anxiety disorder	Maternal/Paternal love	
Antisocial behavior		T NA ADA
	Depression Anhedonia - no pleasure, world looks colorless Lack of ambition and drive inability to "love" Low libido Erectile dysfunction No remorse about personal behavior ADD/ADHD Social anxiety disorder	Depression Feelings of well-being, satisfaction. Anhedonia - no pleasure, world looks colorless accomplishing tasks accomplishing tasks. Lack of ambition and drive lately blibdo land by the satisfy bording. Low libido Healthy bonding Erectile dysfunction Healthy risk taking No remores about personal Sound choices behavior ADDIADHD Realistic expectations Social anxiety disorder Maternal/Paternal love

Actions of PEA on Brain Chemistry

- Stimulates dopamine's nerve terminals and activity for feeling pleasure, libido and emotional wellbeing;
- Increases our arousal level and decreases logical thinking;
- Increases and stimulates paying attention to what we're attaching to (at the expense of everything else...);
- Elevates mental alertness and mood
- Enhances and uplifts our mood, emotions and <u>de</u>creases self-control.

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Where does addiction come in?

- Brainstem & limbic functions are similar in positive attachment and intoxication
 - dopamine responds to pleasurable events that are novel and significantly better than expected
 - oxytocin may function to "bond" the user to the new and pleasurable experience
 - PEA triggers the "giddy" lovestruck feeling
 - vasopressin may close the motivation loop
- For attachment-deprived persons, drug intoxication fires the same parts of the brain, and feels like an acceptable substitute...
- So, in the absence of dependable attachment:



LOADED WILL DO!

The 13th Step: People Who Prey on Newcomers Some 12-Step members try to get fresh recruits on their backs before they're on their feet. But newbies don't have to take harassment lying down.
NAADAC ORD

Some typical signs of "affection addiction:

- · Mistaking infatuation or intense sexual attraction for "love"
- "Looking for Mr. Goodbar" frantic pursuit of sex or romance
- Using sex in an attempt to find "love"
- Falling in love on-line, or by letters (eg. from prison)
- · Problems maintaining relationships when novelty wears off
- · Unhappiness or anxiety when alone
- Using sex to mask loneliness
- Consistently choosing abusive or emotionally unavailable partners

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 NAADAC ORB

After Robert Weiss LCSW,

Patrick Carnes, and others

Some typical signs of "affection addiction:

- Giving emotionally, financially or otherwise to partners who can't (or don't) reciprocate
- In relationship, feeling detached, fearful or unhappy when not in a relationship, feeling desperate and alone
- Using sex, money, seduction, drama or playing the victim to "hook" or hold onto a partner
- Missing out on important life domains (eg. career, family, friends, recreation) in order to find, create or sustain romantic relationships
- Giving up sex or social contacts for long periods to "solve the problem"

After Robert Weiss LCSW,



Patrick Carnes, and other:

Some typical signs of "affection addiction:

- Being unable to leave unhealthy or abusive relationships despite repeated promises to self or others
- Returning to previously unmanageable, unsatisfying or painful relationships despite promises to self or others

Some clients turn instead to other kinds of "Process Addictions"

After Robert Weiss LCSW,



Patrick Carnes, and other

The goal of attachment is homeostasis in a "felt sense of security"

3 main characteristics

- Safe haven who you turn to when upset
- Proximity who do you want to be close to
- Secure base who is always there for you
- (Remember Maslow's Pyramid?)

3 main functions

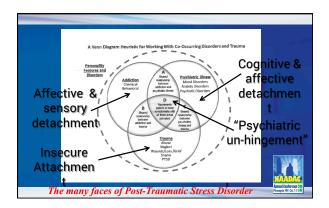
- Reduces stress hormones like cortisol
- Increase bonding neuropeptides like PEA, oxytocin & vasopressin
- Shift from sympathetic (activating) to parasympathetic (calming) Autonomic NS
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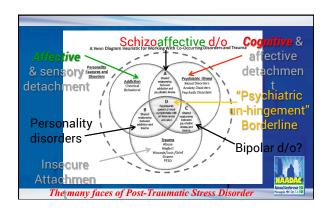
Implications for Recovery

- When we get sober, we now have lost our "attachment surrogate"
- The biological imperative is still in force
- Lacking the developmental attachment skills, secure sense of self and self-soothing skills...
- ...we look for something else to fill the void, eg.
 - · cross-addiction
 - "process" addictions
- and last, but not least...
- ...the "13th Step"! We find someone who feels like they're "the ONE..."
- ...so we <u>still</u> don't develop the skills!









Implications for Recovery

Now we're faced with 3 unpleasant alternatives:

- Sequential engulfment or "honeymoon hopping" (ultimately unsatisfying)
- 2. Isolation (violates the biological imperative)
- Grow up! Get to know who I am so that I can connect in a healthy, meaningful way.
- So how do we do THAT?
 We need to find develop-
 - We need to find developmentally appropriate "corrective experiences"
 - Unconditional acceptance
 - Peer support groups
- Reciprocal positive relationships
 - Counseling & therapy
 - Sponsorship & mentoring
 - Community service



Implications for Recovery

Task is to make the unconscious conscious Healthy recovery provides sequential "developmentally corrective experiences"

Empathy, genuine-ness and unconditional positive regard (sound familiar?)

This allows the INNER experience of attachment to develop, including

Healthy boundaries between "self" and "other"

Opportunities to risk new behaviors in a safe, supportive learning environment



Implications for Recovery

Clients with attachment issues may tend to self-sabotage with old patterns

Knowing what the "old patterns" look like may help keep them from repeating

Review of past relapse experiences through the "attachment lens"

What did relapse "feel like?" Familiar?



Working hypothesis: attachment issues operative at 2 points in time?

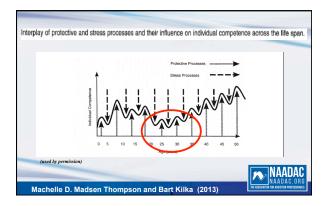
Early initiation of substance misuse?

- CNS depressantsAges 7-10 suggest early sexual abuse?
- Ages 10-12 suggest insecure attachment

Antisocial PDO's

- Early MJ and ETOH
- →CNS stimulants > age 14
- · Early initiation of abstinence?
 - Boundary issues w. Staff - "13th Step" violations
 - Withdrawal from support as Tx proceeds
- · Beware the "antisocialborderline dyad"
 - People who "need to be needed" and people who need to dominate
 - "velcro for victims"





This transition time in early recovery is filled with existential discomfort:

S on

Of a

B****

E verything's

REAL!!

This is the time when many clients turn to substitute addictions...





Two of the most common are:

GAMBLING: seems to be the most common "addiction substitution" for persons addicted to psychostimulants, especially methamphetamine –

- Stimulates excitatory neurotrans
 - · Glutamate, norepinephrine Phenylethylamine - arousal
 - Dopamine pleasure & reward

PORNOGRAPHY: seems to attract persons addicted to CNS depressants like alcohol, opiates and anxiolytics
• Appears to stimulate "calming" neurotransmitters

- GABA, serotonin
 Oxytocin & vasopressin
 Dopamine pleasure & reward







Close but no cigar, the saying goes. But new research shows that when it comes to gambling, the human brain seems to take a very different approach. In our head, near misses, such as a lottery ticket just one number away from the jackpot, are interpreted as wins.

Nicole Branan July 20, 2009

Using functional MRI, Luke Clark of the University of Cambridge and his colleagues looked at the brains of 15 canioning and his colleagues locked at the blains of his volunteers who were playing a computerized slot machine. Unsurpri-singly, wins activated the players' reward system, whereas complete misses did not. When the wheel stopped just one position from the pay line, however, the reward system of volunteers' brains got excited the same way it did after a win-there was much activity in the striatum and the insula, areas involved in reinforcing behavior with positive feedback. NAADAC ORG



This type of reinforcement makes sense in behaviors that involve actual skill, such as target shooting, because a sense of reward provides encouragement to keep practicing, Clark says. "A near miss in a game of chance doesn't mean that you are getting better," he notes, yet it seems that the brain mistakenly activates the same type of reinforcement learning system in these situations.

Nicole Branan July 20, 2009

The findings expose the underpinnings of gambling addiction, according to Clark. Even though all volunteers were non-gamblers, those whose brain showed a greater response in the scanner also reported feeling more desire to continue trying after near misses. Excessive recruitment of these reward areas, therefore, may be a risk factor for compulsive gambling



F63.0 (312.31) Gambling Disorder

Persistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress, as indicated by the individual exhibiting four (or more) of the following in a 12-month period:

- Needs to gamble with increasing amounts of money to achieve the desired excitement
- 2. Is restless or irritable when attempting to cut down or quit gambling
 3. Has made repeated unsuccessful attempts to cut back or quit.

- 4. Is often preoccupied with gambling
 5. Often gambles when feeling distressed
 (eg. Helpless, guilty, anxious,
 depressed)
 6. After losing money gambling, often
 returns another day to get even
 ("chasing" one's losses)
 7. Lies to conceal the extent of involvement
 with gambling
 8. Has jeapordized or lost a significant
 relationship, job, educational or career
 oppor-tunity because of gambling
 9. Relies on others to provide money to
 relieve desperate financial situations
 caused by gambling.



Gambling Disorder and Attachment?

Persistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress, as indicated by the individual exhibiting four (or more) of the following in a 12-month period:

- Needs to gamble with increasing amounts of money to achieve the desired excitement
 Is restless or irritable when attempting to cut down or quit gambling ↑↑ cortisol
 Has made repeated unsuccessful attempts to cut back or quit.

- 4. Is often preoccupied with gambling
 Limbic "acquired drive state"
- - ("chasing" one's losses)

 7. Lies to conceal the extent of involvement with gambling

 8. Has jeopardized or lost a significant relationship, job, educational or career opportunity because of gambling Instant vs delayed gratification

 9. Relies on others to provide money to relieve desperate financial situations caused by gambling.

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Does gambling activate the "attachment

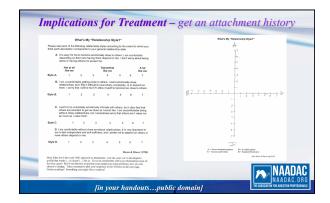


7	7
_	_

	Adverse Childhood Experiences (ACEs) Attachment Sur	vey			
identify any things you remember about how of Then complete the HOV	Henrify and hat a few of your strengths — how did you survive." What are some things about you that you represented in the family for families by one gave up in BEFORE THE AGE of Γ 1. Then enter your narrows of 30 you were, you can get that in the actue how. J. Add up the checken by your "yes" column to get your Transmitted Wignesser, and the contraction of the contraction of the property of the contraction of the property of the property of the property of the contraction of the property of the propert	(per/cer)	for each to	pe of treams	Of you can
1. STRENGTHS:		36 - 4	3 46-5	5 56-65	66+
2 ACEs	Did this ever happen to you as a child before you were 12 years old?	Xne	1000	How old mere you?	J. NOW?
Emotional Altras	Did a parent or other adult in the household offee or very offee, onear at you, insult you, not you down			were you:	
	and/or threaten you in a way that made you think that you might be physically but! Did a named or other adult in the household often or very aften, used, with, then or three consection at you?				_
Physical Abuse	Or ever hit you so hard that you had marks or were injured?				
Second Almos					
	Did stryone attempt or actually latte oral, sual, or vaginal intercourse with you? Did you after or very after feel that no one in your family level you or thought you were important or uncist?	_		_	_
Emotional Neglect	Or your family didn't look our for each other, feel close to each other, or repport each other?				
Physical Neglect	Did you often or very often feel that you didn't have enough to set, had to wear dirty clother, and had no one to protect you? Or your parents were too drank or high to take care of you or take you to the doctor if you needed it?				
Mother Treated					
Violently	Sometimes, other, or very other kicked, bitter, hit with a firt or something hard, three-need or hurt by a weapou?				
Household Substance Abuse	As a child, did you ever live with suyone who was a problem drinker or alcoholic or lived with agreese who used storet draws?				
Hamscheld	Was a homehold member ever depressed, mentally all er sent to a mental hospital?	_		_	_
Mental Bluers	Has a family member ever attempted solvide?				
Parental Separation Divorce	As a child, were your parents ever separated (didn't live together) or directed?				
Incarregated	Did a homeshold marrier are no to return, or was constantly in and our of ind?		_	_	_
Household Member					
	Add the column - this is your RESILIENCY SCORE				
REMEMBER - skin is	Add the column : this is year TRAUMA	SCORE			
NOT who you are!	Add the column a thin				_
 NOW: Across ear 1 – Never or almost ne 	th YES row that you marked, how much or how often does this experience of childhood trau ever $2 - \text{Hardiy Ever}$ $3 - \text{Some of the time}$ $4 - \text{Most of the time}$			your life <u>to</u> most alway	
 How many long-ter with your intimate relation need to get counse 	m friendship or romantic relationships have you had that lasted for 5 years or more? simplify(s) and close friendships? were y mouthy 2 protey much 2 somewhat dissaturated from greened your relationship issues? 2 YES I wanted to 2 NO. Did you follow through with co	On a D very o	erage, ho implified YES	w satisfied f. Have you NO	are you n ever felt D n's
Thank you for you	er courage in looking at these issues! If this raised some troubling memories or emotions, please	sec a D	empire (Commelor e	r Clergy.
		ADC-2.LP			-

	Adve.	rse Childhoo	i Experiences	(ACEs) Attach	ment Survey		
		Wh	at's My "Attac	hment Style?"			
RELATIONSE	HIP QUESTIONNA	IRE PLEA	SE READ THE	DIRECTIONS			
Please rate each of relationship style.	the following relations	hip styles accord	ng to the extent to	which you think eac	h description com	esponds to you	general
	y for me to become em sbout being alone or hav			ortable depending or	them and having	them depend o	n me. I don't
	Not at all like me			iomewhat like me			lot e me
Style A.	1	2	3	4	5	6	7
B. I am ur depend	comfortable getting clo on them. I worry that I	se to others. I wa will be hurt if I a	nt emotionally clo llow myself to bec	se relationships, but ome too close to oth	I find it difficult t ers.	trust others co	empletely, or to
Style B.	1	2	3	4	5	6	7
	to be completely emotic fortable being without c						
Style C.	1	2	3	4	5	6	7
D. I am cor to depend	infortable without close on others or have others	emotional relatio depend on me.	nships, It is very i	inportant to me to fe	el independent an	self-sufficient	and I prefer not
Style D.	1	2	3	4	5	6	7
	g answers here – your a						

	NICHD SECCYD—Wisconsin
ADULT ATTACHMENT S	CALE
Please read each of the follow describes your	ving statements and rate the extent to which it
	hips in general. That is, we want you to think about tionships including your romantic relationships,
relationships. Please use the statement is	scale below and indicate the degree to which each
characteristic of you by placi the right of each statement.	ng a number between 1 and 5 in the space provided to
12	5
Not at all characteristic	Very characteristic





Gambling Disorder interventions which may address the attachment issue Pharmacological Behavioral Holistic (mind/body/ (physical) (mental) spirit) • DBT and ACT · Naltrexone - has been Cognitive-Behavioral shown to block the (mindfulness, somatic awareness & distress reward mechanism Therapy related to endogenous tolerance; relationship with gambling) Visualization and somatic awareness (self-regulation · Counteropioids conditioning Nalmefene – has the same effect with less • Relapse hepatic toxicity Potenza, Marc (2008): The Neurobiology of pathological gambling and drug addiction: New findings prevention of ANS homeostasis) 12-Step and Peer skills training Support NAADAC NAADAC.ORG

Protective and Resiliency Factors

Developmental - Children

Adult - in Recovery

- · Self-value
- · Self-regulation
- Hope future goals
- nope luture goal
- Problem-solving
- Supportive belief structure
- Friends & Family
- Support for achievement
- · Active diversion new activities
- Supportive community
- Step 2Steps 4 !
- Steps 4, 5 & 10
- Step 11
- Steps 6 & 7
- Steps 2 & 3
- Steps 8 & 9
- · Sponsorship & service
- Step 12
- · Fellowship/service



(after Machelle D. Madsen Thompson and Bart Kilka - 2013)

The 12 Steps offer developmentally sequenced corrective experiences:

- 1. The experience of abandonment & betrayal
- 2. Permission to Hope attunement to others
- 3. Risking Attachment
- 4. Risking attunement with self
- 5. Risking attachment with another
- 6-7 Repairing my relationship with myself
- 8-9 Repairing my relationship with others
- 10. Owning responsibility for my attachments11. Cementing attachment to my Higher Power
- 12. Expanding that relationship to others



The Women for Sobriety "New Life Acceptance" Program

- I have a life-threatening problem that once had me I now take charge of my life and my disease. I accept responsibility for my life.
- 2. Negative thoughts hurt only myself My first conscious sober thought must be to remove negativity from my life
- 3. Happiness is a habit I will develop *Happiness is created, not waited for*
- Problems bother me only to the degree I permit them to I now better understand my problems, and don't let them overwhelm me
 I am what I think I am a capable, competent, caring compassionate
- 6. Life can be ordinary, or it can be great *Greatness is mine by conscious effort*



- 7. Love can change the course of my world Caring becomes all-important
- 8. The fundamental object of life is emotional andb spiritual growth Daily I put my life into proper order, knowing which are my priorities
- 9. The past is gone forever No longer will I be victimized by the past. I am a new person
- 10. All love given returns I will learn to know that others love me
- 11. Enthusiasm is my daily exercise *I treasure all moments of my new life*
- 12. I am a competent woman and have much to give life *This is what I am and I will know it always*
- 13. I am responsible for myself and my actions

 I am in charge of my mind, my thoughts and my life



