Helping People Change: Supporting and Building Resilience and Self-Regulation

Carlo C. DiClemente, Ph.D. ABPP
Psychology Department
University of Maryland Baltimore County
www.umbc.edu/psych/habits
The work presented here is supported by projects funded by NIAAA, SAMHSA, and the Robert Woods Johnson Foundation.

Some of the concepts were developed in collaboration with Ray Daugherty from the Prevention Research Institute (PRI).

I am a consultant and receive royalties from a PRI program called Solutions and on the Advisory Board of Westbridge, a dual diagnosis treatment program.

I am indebted to all the graduate and undergraduate students in my HABITS laboratory at UMBC as well as colleagues around the country for their assistance and support.

Acknowledgements and COI
Overview

- Examine what know about mechanisms of change in Addictions and in Recovery
- Focus on the personal process of change
  - Change specific mechanisms
  - Change regulating mechanisms
- Discuss resilience in terms of capacity to change and access to mechanisms of change
- Understand how self-regulation and self-control is impaired in addiction
- Managing Self-Control and Scaffolding
- Implications for our work
Mechanisms, Moderators and Markers of Addiction

The search for the key components of the well maintained use disorder
Mechanisms, Moderators or Markers of Change

- **Mechanisms** are variables considered to be primary causative factors and essential to explaining some portion of the change (engine, gas).

- **Moderators** are variables that influence a change and may facilitate or hinder the change taking place. As such they are only secondarily causative (Flat tire; faulty brakes, road construction).

- **Markers** are indicators that various mechanisms or moderators are occurring (Speedometer; Air pressure gauge).
What are Addictions?

- Habitual patterns of intentional, appetitive behaviors
- Become excessive and produce serious consequences
- Stability of these problematic behavior patterns over time
- Interrelated physiological and psychological components
- Addicted individuals have difficulty modifying and stopping them
Traditional Models for Understanding Addictions

- Social/Environmental Models
- Genetic/Physiological Models
- Personality/Intra-psychic Models
- Coping/Social Learning Models
- Conditioning/Reinforcement Models
- Compulsive/Excessive Behavior Models
- Integrative Bio-Psycho-Social Models
Etiology of Addictions

A BIO PSYCH SOCIAL SPIRITUAL PERSPECTIVE

Environment → Physiology → Personality → Social Influences → Initial Use → Abuse → Self-Regulated Use → Dependence

Genetics → Conditioning → Reinforcement

Coping/Expectancies → Spiritual Values

All of these factors can have arrows to initial experience and then to any or all of the three patterns of use. Most could have arrows that demonstrate linear or reciprocal causality as well.
A LIFE COURSE PERSPECTIVE ON ADDICTION

- Cross sectional views and brief follow up studies offer confusing data about predictors and outcomes for prevention and cessation.
- Multiple biological, social, individual, environmental factors influence transitions into and out of both protective and problematic health behaviors.
- Understanding initiation and cessation of these behaviors requires a life course and a process of change perspective.
Change the Integrating Principle

- No single developmental model or singular historical path can explain acquisition of and recovery from addictions

- A focus on how individuals change offers a developmental, task oriented, learning based view of the Process of Change
  - can be useful to clinicians and researchers using a variety of traditional etiological and cessation models

- Today our focus will be on PATHWAY and PROCESS
BECOMING ADDICTED

- Happens over a Period of Time
- Has a Variable Course
- Involves a Variety of Predictors that can be both Risk and Protective Factors
- Involves a Process of Change
THE COURSE OF ADDICTION: A Behavioral Perspective

EXPERIMENTATION
CASUAL USE
REGULAR USE
ABUSE
DEPENDENCE – Severe Use Disorder
Mild to Moderate UD
EXPERIMENTATION
SUCCESSFUL RECOVERY FROM ADDICTIONS

- Occurs over long periods of time
- Often involves multiple attempts and multiple treatments
- Consists of self change and/or treatment or mutual help
- Involves changes in other areas of psychosocial functioning
The Transtheoretical Model of Intentional Behavior Change

STAGES OF CHANGE

PRECONTEMPLATION → CONTEMPLATION → PREPARATION → ACTION → MAINTENANCE

PROCESSES OF CHANGE

COGNITIVE/EXPERIENTIAL

Consciousness Raising
Self-Revaluation
Environmental Reevaluation
Emotional Arousal/Dramatic Relief
Social Liberation

BEHAVIORAL

Self-Liberation
Counter-conditioning
Stimulus Control
Reinforcement Management
Helping Relationships

CONTEXT OF CHANGE

1. Current Life Situation
2. Beliefs and Attitudes
3. Interpersonal Relationships
4. Social Systems
5. Enduring Personal Characteristics

MARKERS OF CHANGE

Decisional Balance
Self-Efficacy/Temptation
Understanding the Well Maintained Addiction

How Do We Measure and Understand Addiction Severity?
Currently best defined as a Severe Use Disorder

It is both an ENDING and a BEGINNING

It is the end state of a process of INITIATION

It is the beginning of a process of RECOVERY

Let’s look at this well maintained state of being addicted or having a severe use disorder and how we define it

Addiction
Severity and Patterns of Use

- How do we define severity of patterns of use?
  - Consumption/Engagement, Consequences, Context, and Control are frequently used to define severity of a pattern of use
  - Problems with all single factor ways of defining severity
  - Patterns can change
    - need to identify both current and lifetime severity (critical for harm reduction and recovery; NESARC Study)
  - Differs whether assessing risky behaviors or use disorders (NIAAA low risk guidelines or DSM-5)

Severity and Patterns of Use
How Do You Measure Addiction Severity?

- DSM V – number of symptoms/indicators (6 of 11)
- Quantity and Frequency (PDA, DDD)
- Consequences/Problems attributable to drinking/drug use
  - Physical, social, legal, or psychological
- Craving
- Co-morbidity (multiple problems)
- Environment (Use by Peers and Saturation of Environment [IPA])

How Do You Measure Addiction Severity?
Client Perception of Problem and Need for Treatment

A = Client’s Rating of Problem
B = Client’s Rating of Desire for Treatment

ASI Evaluation

Legend:
0-Not at all, 1-Slightly, 2-Moderately, 3-Considerably, 4-Extremely
# At a Glance: The Six Dimensions of Multidimensional Assessment

ASAM’s criteria uses six dimensions to create a holistic, biopsychosocial assessment of an individual to be used for service planning and treatment across all services and levels of care. The six dimensions are:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Acute Intoxication and/or Withdrawal Potential&lt;br&gt;Exploring an individual’s past and current experiences of substance use and withdrawal</td>
</tr>
<tr>
<td>2</td>
<td>Biomedical Conditions and Complications&lt;br&gt;Exploring an individual’s health history and current physical condition</td>
</tr>
<tr>
<td>3</td>
<td>Emotional, Behavioral, or Cognitive Conditions and Complications&lt;br&gt;Exploring an individual’s thoughts, emotions, and mental health issues</td>
</tr>
<tr>
<td>4</td>
<td>Readiness to Change&lt;br&gt;Exploring an individual’s readiness and interest in changing</td>
</tr>
<tr>
<td>5</td>
<td>Relapse, Continued Use, or Continued Problem Potential&lt;br&gt;Exploring an individual’s unique relationship with relapse or continued use or problems</td>
</tr>
<tr>
<td>6</td>
<td>Recovery/Living Environment&lt;br&gt;Exploring an individual’s recovery or living situation, and the surrounding people, places, and things</td>
</tr>
</tbody>
</table>
Attempts to connect severity with the Continuum of Care – The ASAM Criteria

**Note:**

Within the five broad levels of care (0.5, 1, 2, 3, 4), decimal numbers are used to further express gradations of intensity of services. The decimals listed here represent benchmarks along a continuum, meaning patients can move up or down in terms of intensity without necessarily being placed in a new benchmark level of care.
All these attempts offer important dimensions to consider.

All have their limitations:

- Single dimensions of the behavior are inadequate.
- Collection of categories or symptoms seems arbitrary.
- Not certain whether multiple dimensions indicate severity of the Addiction or severity of serious other problems of the individual (co-morbidity, consequences).
- No unifying conceptual framework or perspective.

Understanding Addiction Severity
The challenge is to create a new view that acknowledges the multidimensionality of addictive behavior patterns that can:

- Aid us with diagnosis
- Understand better how severity influences motivation both in initiation and in recovery
- Offer specifics for treatment planning and matching

A New View of Addiction Severity
Creating a New View of Addiction Severity

- Critical Assumptions
  - **Quantity and Frequency** must be part of how we define severity
  - **Dimensions and not categories** are needed to understand severity
  - **Highlight critical mechanisms** based on how the addictive behavior is operating in life of the individual
  - Include **biological, psychological and behavioral** factors
  - Include **Context** of Individual’s life so view of severity and recovery can be comprehensive
What follows is one attempt to create a multidimensional approach to assess addiction severity.
Although open to interpretation and difficult to clearly measure quantity and frequency of use are important for assessing relative risk.

Quantity and Frequency are clearly related to motivational goals (cutting down) and as indicators of change (creating a different pattern of use).

Amazingly quantity and frequency are not at all or only very indirectly included in DSM V and in many other views of severity.

Not in ASI or ASAM criteria.

Use Patterns are critical to Understanding Addictive Behaviors.
WHO Alcohol Risk Levels for Men and Women

**Males**
- Low Risk - 0 to 2.9 drinks
- Medium Risk - 3.0 to 4.3
- High Risk - 4.4 to 7.1
- Very High Risk - 7.2+

**Females**
- Low Risk - 0 to 1.4 drinks
- Medium Risk - 1.5 to 2.8
- High Risk - 2.9 to 4.3
- Very High Risk - 4.4+

Woods et al. 2018 Lancet
- **No Risk**
- **Low Risk** (within guidelines; sporadic; controlled use)
- **Infrequent High Risk** (infrequent binge drinking or problematic marijuana use)
- **Frequent High Risk** (frequent binge drinking, marijuana, or heroin use)
- **Extensive High Risk** (recurrent/daily excessive drinking, marijuana use, heroin use)

Defining Use Patterns
A small set of **mechanisms** characterize the end state of addiction and can be used to indicate severity

My candidates are the following:

- **Neurobiological Adaptation** – brain and biological adaptations to frequent exposure to addictive behavior/substance (a brain disease)

- **Reduced/Impaired Self-Regulation** – The sense of loss of control and compromised self-regulation despite consequences that are the hallmark of addictions (a behavioral out of control disease)

- **Salience and Narrowing of Behavioral Repertoire** – The addictive behavior becoming so valued a reinforcer that the behavior becomes more ubiquitous and potent in the life of the individual (a crisis of values)

DiClemente, 2018

**Mechanisms of Addiction Severity**
The more the impact on different **Domains of Functioning** the greater the severity of the impact of the addiction on the individual’s life.

Consequences and not simply salience.

Key Domains:

- **Biological** – Needing the substance to manage physical withdrawal, craving, serious physical consequences (COPD, HPC, Neuropsychological consequences, organic brain syndromes)

- **Psychological** – the addictive behavior becomes a valued psychological coping mechanism
  - way to manage negative emotions, the love affair with the addiction

- **Social** – How integrated the addictive behavior into the social context and network
  - meeting social and interpersonal needs (sex, fun, social events, work)
Three critical dimensions for assessing and understanding Addiction Severity

- **Use Patterns**: Quantity, frequency, risk levels

- **Three critical Mechanisms**
  - Neuroadaptation
  - Impaired self-regulation
  - Salience and narrowing of range of behavior

- **Domains**: Consequences, collateral problems and co-occurring conditions in three domains of functioning (biological, psychological, social)

Three critical dimensions for assessing and understanding Addiction Severity
Defining Severity of Addiction

Use Patterns

- No Risk
- Low-Risk
- Infrequent High Risk
- Frequent High-Risk
- Extensive High-Risk

Mechanisms

- Neurobiological Adaptation
- Reduced Self Regulation
- Salience/Narrowing

Domains

- Social
- Psychological
- Physical

Severity Scale:

- Mild
- Severe
Neurobiological Adaptation

- Ability to use more/tolerance
- Emotional/stress regulation tied to use
- State dependent learning
- Compulsive use
- Altered thresholds of stress & pleasure
- Increased strength and scope of cues
- Negative emotional states when use is blocked
- Possible withdrawal & other rebound effects
- FMRI indicators
Stages of the Addiction Cycle: Associations with Neurocircuits & Addictions Neurochemical Assessment


Modified from: Kwako LE et al. (2015)
Reduced Self-Regulation

- Use becomes more automatic
- Difficulty controlling or cutting back
- Using to cope and self-regulate
- Continued use despite consequences
- Impulsivity increases
- Upset if use is interfered with
- Underestimating consequences
- Both ECF and Affect Regulation effects
Increased Salience and Narrowing of Behavioral Repertoire

- More highly valued & meaningful; Alcohol/Drug Expectancies
- Integrated into lifestyle (related to life domains)
- Meets more basic needs
- Difficult to imagine life without it
- Feel conflicted when incongruent with other values
- Decreases in other important activities
- More time using; arranging for use
- Social interactions and networks narrowed to similar users
Defining Severity of Addiction: Binge

Use Patterns

- Low-Risk
- Infrequent High Risk
- Frequent High-Risk
- Extensive High-Risk

Indicators

- Neurobiological Adaptation
- Reduced Self Regulation
- Salience/Narrowing

Domains

- Social
- Psychological
- Physical
Defining Severity of Addiction: College Drinking

Use Patterns

- Low-Risk
- **Infrequent** High Risk
- Frequent High-Risk
- Extensive High-Risk

Indicators

- Neurobiological Adaptation
  - Moderate
  - Severe

- Reduced Self Regulation
  - Mild
  - Severe

- Salience/Narrowing
  - Mild
  - Severe

Domains

- Social
- Psychological
- Physical
Implications of for Recovery and Treatment

We must understand and address mechanisms of addiction in our work.
Quantity and Frequency (PDA and DDD) as well as greatest quantity at a single session are critical for understanding the change burden and thus:

- Relevant for setting goals and change targets
- Related to pros and cons analysis and perceptions of vulnerability
- Critical for Preparation stage planning tasks
- Relevant for support systems analysis
- Often has a complicated non linear relationships with motivation and treatment outcome

Intervention Implications: Quantity and Frequency
If measured accurately, could indicate need for **medications and type of medication** that might be a helpful motivational factor or support.

Connects with genetic vulnerability with implications for **goal setting and decision making**.

Indicator of needed intensity of treatment and need for **hospital detox and residential care**.

Physical problems and conditions related to our bodies and brains adapting to drinking (nutritional, liver, DTs, Organic brain syndromes) and other addictions **enhance or hinder motivational considerations** (concern, cons, commitment).

**Intervention Implications: Neurobiological Adaptation**
Intervention Implications: Reduced Self-Regulation

- Reduced self-regulation moderates successful treatment and change
- Premorbid, comorbid, or consequence of excessive drinking or substance use (ADHD, reduced self-care, impulsivity)
- Impaired self-control needs more scaffolding (more types of support when exhausted or impaired (TC, 90 in 90, residential)
- Critical for treatment planning, implementation, adherence, and maintenance
- Interferes with commitment and planning with greater need for relapse prevention coping strategies

Intervention Implications: Reduced Self-Regulation
Intervention Implications: Salience and Narrowing

- Need for *community reinforcement approaches* (social skills, activities, employment, family reconnection)
- Need for *new environment* to support decision making, commitment, action planning
- Changes needed at *systems levels of support* personal change journey
- More *intensive treatment* as salience and narrowing increase
- *Case Management* may be needed to provide more comprehensive support for change
Domains of functioning can be connected to drinking typologies to distinguish patterns of drinking
- (college student, social, coping, craving/compulsive drinking)

Specificity about how quality of life is compromised
- how to tailor treatment types and strategies

Related to consequences
- type and quantity of coping skills and activities needed in treatment planning

Identification of contextual problems that also need treatment
- (Physical, Mental Health, Domestic Violence, HIV risk)

Link to SAMHSA areas of recovery and wellness

Intervention Implications: Domains of Influence
Defining Severity of Addiction

**Use Patterns**

- Low-Risk
- **Infrequent** HIGH RISK
- Frequent HIGH-Risk
- Extensive HIGH-Risk

**Indicators**

- Neurobiological Adaptation
- Reduced Self Regulation
- Salience/Narrowing

- Mild
- Severe

**Domains**

- Social
- Psychological
- Physical
Defining Severity of Addiction

Use Patterns

- Low-Risk
- Infrequent High-Risk
- Frequent High-Risk
- Extensive High-Risk

Indicators

- Neurobiological Adaptation
- Reduced Self Regulation
- Salience/Narrowing

Domains

- Social
- Psychological
- Physical

Use Patterns Indicators Domains
- Probably both patients could have 6 or more DSM criteria and be diagnosed with a severe use disorder
- Same treatment?
- Same need for support?

How would you address needs of these two different people?
Recovery represents a series of tasks that are critical to moving through the stages to sustained change.

- Motivation is behavior and goal specific so pattern of use and severity are critical to goal setting.
- Neuroadaptation severity affects decision making, commitment, planning, relapse.
- Self-regulation severity reduces self-control critical for coping and needed to manage addictive behavior, reduce use, sustain change, and prevent relapse.
- Salience severity interacts with ambivalence, decision making, commitment, support, planning, and implementing action plans and relapse and recycling.
TASK COMPLETION AND MOVEMENT BETWEEN STAGES

PC
CON
PREP
ACT
MAIN

INTEREST CONCERN
RISK/REWARD DECISION
COMMIDMENT PLANNING PRIORITIZING
IMPLEMENT THE PLAN REVISE
LIFESTYLE INTEGRATION AVOID RELAPSE

→

←
Using these concepts and categories we can:

- Characterize the addictive behavior pattern using a **biopsychosocial framework**
- **Understand the change burden** (how difficult will be the change) in terms of its relationship to this broader view of severity of the disordered engagement in the addictive behavior
- **Identify critical issues** that can guide treatment and that can hinder or promote movement through the change process
- **Connect quantity and frequency** with important indicators and contextual factors to better characterize the severity of the addictive behavior pattern and not simply rely on a set of symptoms or a list of conditions, consequences or correlates
1. **Accurate and useful measurement:** finding cost effective efficient ways to assess these dimensions in addition to self-report

2. Evaluation of how aspects of severity and overall severity relate to **different treatment types and strategies**

3. Are these the only dimensions or the **right dimensions**?

4. Can we connect assessment with **personal feedback**?

5. Does this work with **all types of substances as well as process addictions**? (problems assessing quantity/ frequency, gambling behaviors, legality of the behavior)
Mechanisms of Change

What Do Individuals need to do to Manage addiction severity and Accomplish the Tasks needed to move forward through the stages of change?
What drives change and makes change happen for each individual?

Where should we look for these Mechanisms?

Are there some common Mechanisms that are responsible for change across addictions and across behaviors?
What is the client’s work in making change happen?

What is the provider’s tasks?

What is the difference?

Client = Processes and Coping Activities

Provider = Strategies and Services

MECHANISMS OF CHANGE: A CLIENT PERSPECTIVE
Processes of Change

- **Experiential Processes**
  - Concern the person’s thought processes
  - Ways of thinking and feeling that can help individuals move through the early stages of change.
  - Generally seen in the early Stages of Change

- **Behavioral Processes**
  - Various action oriented activities (including overt actions to change one’s behavior) that can help individuals move through the later stages of change.
  - Usually seen in the later Stages of Change
# Experiential Processes

<table>
<thead>
<tr>
<th>Experiential Processes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consciousness-Raising</td>
<td>Increasing awareness and information known about the current status quo and the behavioral change that is needed</td>
</tr>
<tr>
<td>Emotional Arousal</td>
<td>Experiencing strong emotions regarding the problem behavior</td>
</tr>
<tr>
<td>Self-Reevaluation</td>
<td>Considering how a target behavior—either the current or the ideal future behavior—fits or conflicts with one’s personal values, beliefs, and goals</td>
</tr>
<tr>
<td>Environmental Reevaluation</td>
<td>Individual considers how their current—or ideal future—behavior will positively or negatively impact others and their environment</td>
</tr>
<tr>
<td>Social Liberation</td>
<td>Considers social norms and societal sanctions regarding the current behavior and the targeted behavior change</td>
</tr>
<tr>
<td>Behavioral Processes</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Self-Liberation</strong></td>
<td>Making a choice and commitment to alter one’s behavior</td>
</tr>
<tr>
<td><strong>Stimulus Control</strong></td>
<td>Creating, removing, or avoiding any cue or stimuli that might trigger one to engage a particular behavior</td>
</tr>
<tr>
<td><strong>Counterconditioning</strong></td>
<td>Substituting a new behavioral response to a stimulus instead of a problematic behavioral response</td>
</tr>
<tr>
<td><strong>Reinforcement Management</strong></td>
<td>Creating rewards for engaging in a desired behavior and eliminating any rewards received from engaging in the unwanted behavior</td>
</tr>
<tr>
<td><strong>Helping Relationships</strong></td>
<td>Enlisting the support of others specifically for eliminating an old behavior or adopting a new one</td>
</tr>
</tbody>
</table>
Let’s Look at an Interview and see if we can see Processes of Change

The Rounder Video
Timing of POC Use in Change Process

Precontemplation
Consciousness Raising
Dramatic Relief
Environmental Reevaluation

Contemplation
Self-Reevaluation

Preparation
Self-Liberation
Countercoding
Helping Relationships
Reinforcement Management
Stimulus Control

Action

Maintenance

Behavioral processes are needed at the early stages of behavior change

Cognitive processes are needed at the later stages of behavior change
To Promote processes of change:

- Consciousness Raising
- Self and Environmental Reevaluation
- Emotional Arousal
- Self-Liberation and Commitment
- Counterconditioning and Stimulus Control
- Reinforcement Management
- Managing Slips and Relapses
Can we identify or develop exercises or activities that facilitate process use?

Are specific intervention strategies better at facilitating use of the various change processes?

For example, MI seems most appropriate for facilitating experiential process use and CBT for behavioral processes.

Can we put these together in a substance abuse intervention that specifically targets use of the TTM processes of change?

Can we facilitate change process use in a group format?

The Critical Challenge: connecting what we do to client processes of change
Group Treatment for Substance Abuse

SECOND EDITION

A Stages-of-Change Therapy Manual

Mary Marden Velasquez, Cathy Crouch, Nanette Stokes Stephens, and Carlo C. DiClemente
TTM Group Treatment

Each TTM group activity promotes the use of one or more specific experiential or behavioral change processes.

In the early change stage groups (e.g., precontemplation, contemplation, preparation), exercises that help elicit experiential processes such as consciousness raising or self re-evaluation are emphasized.

In the later stage groups (e.g., action, maintenance), more emphasis is placed on activities that engender behavioral processes such as stimulus control or self liberation.
Thinking About Changing Substance Use
Precontemplation-Contemplation-Preparation Sequence

* P/C/P Session 1: The Stages of Change
  * Change Process Objective: Consciousness Raising
* P/C/P Session 2: A Day in the Life
  * Change Process Objective: Consciousness Raising
* P/C/P Session 3: Physiological Effects of Alcohol
* P/C/P Session 5: Expectations
  * Change Process Objective: Consciousness Raising
* P/C/P Session 6: Expressions of Concern
  * Change Process Objectives: Self-Reevaluation, Dramatic Relief
Thinking About Changing Substance Use
Precontemplation-Contemplation-Preparation Sequence

* P/C/P Session 7: Values
  Change Process Objective: Self-Reevaluation
* P/C/P Session 8: Pros and Cons
  Change Process Objective: Decisional Balance
* P/C/P Session 9: Relationships
  Change Process Objective: Environmental Reevaluation
* P/C/P Session 10: Roles
* P/C/P Session 11: Confidence and Temptation
  Change Process Objective: Self-Efficacy
Taking Action for Changing Substance Use
Preparation – Action - Maintenance Sequence

* P/A/M Session 1: The Stages of Change
  * Change Process Objective: Consciousness Raising
* P/A/M Session 2: Identifying “Triggers”
  * Change Process Objective: Stimulus Control
* P/A/M Session 3: Managing Stress
  * Change Process Objective: Counterconditioning
* P/A/M Session 4: Rewarding My Successes
  * Change Process Objective: Reinforcement Management
* P/A/M Session 9: Managing Cravings and Urges
  * Change Process Objectives: Stimulus Control, Counterconditioning, Reinforcement Management
* A/M Session 10: New Ways to Enjoy Life
  * Change Process Objectives: Stimulus Control, Counterconditioning, Reinforcement
A Transtheoretical Model Group Therapy

Each group session is based on a specific TTM process of change. Motivational Interviewing counseling strategies are used throughout the sessions.
Members in Different Stages

- Precontemplation
- Action
- Contemplation
Interactions between Personal Process and Treatment Strategies

Personal Processes

Treatment Strategies

PP  TS
Resilience and Self-Regulation

- What does it take to make the changes to move into recovery?
- Managing neuroadaptation, impaired self-regulation, and building a new life space
- However we do not start from nothing and create recovery in completely helpless individuals
- Recovery involves the individual finding the inner strength, important values, and critical support systems
Understanding and Building Resilience

- Resilience
  - 1: the capability of a strained body to recover its size and shape after deformation caused especially by compressive stress.
  - 2: an ability to recover from or adjust easily to misfortune or change.
Resilience

- **Resilience** is the 'rubber ball' factor: the ability to bounce back in the event of adversity. ... **Resilience** relies on different **skills** and draws on various sources of help, including rational thinking **skills**, physical and mental health, and your relationships with those around you.

- **Resilience means** knowing how to cope in spite of setbacks, or barriers, or limited resources.

- **Resilience** is a measure of how much you want something and how much you are willing, and able, to overcome obstacles to **get** it. It has to do with your emotional strength.
Resilience

- The ability to use processes of change to achieve stage change tasks to make change happen
- Involves cognitive and emotional coping activities
- Involves self-regulation and self-control
- Can be supported, influenced, built and shaped
Mechanisms of Change

Change Generating – behavior specific change mechanisms

Change Regulating – Generic self-regulation and self-control mechanisms
Processes and stage tasks are change generating.

- Focused on specific goal and behaviors
- Directly related to the target behavior
  - Quitting heroin
  - Cutting down on drinking
  - Stopping smoking
  - Using marijuana less frequently
Self Regulation and Self Control: Change Regulating Mechanisms

- In addition to change specific mechanisms we need to consider change regulating mechanisms or moderators.

- **Self Regulation:** The ability to manage both internal and external demands in a way that is responsive to feedback and available information, flexible in seeking solutions, and that does not overtax the system.

- **Self regulation** requires **Self-Control**
Self-Control

- Is the exertion of control over the self by the self
- Occurs when a person attempts to change the way he or she would otherwise thing, feel or behave
- Is needed to follow rules or inhibit immediate desires and to delay gratification
- Involves overriding or inhibiting competing urges, behaviors, or desires as well as production of behaviors that are not immediately reinforcing
- Differs from automatic processes since involves effort

Muraven & Baumeister, Psych Bull 126, 247-259, 2000
Although other things are going on in environment, treatment, etc., personal self evaluations and processes are important mechanisms of successful change.

However, self evaluations require basic self-regulation and self-control.

**Self Regulation:** The ability to manage both internal and external demands in a way that is responsive to feedback and available information, flexible in seeking solutions, and that does not overtax the system.
Self Regulation is closely connected to the Personal Process of Change

- Most self regulation models include self-observation, self-evaluation, decision making, willingness to consider change, and planning (Miller & Brown, 1991, Bandura, 1986; Kanfer, 1986)

- Self Regulation Components (skills, abilities) include: Executive Cognitive Functioning and Affect Regulation (Giancola et al., 1998; Zinn et al., 2004)

- Self Control and self regulation seem to be essential mechanisms in both initiation and modification of addictions

- Both are also critical to beginning and completing the tasks of the stages of change
Self-Control Strength

- “Is necessary for the executive component of the self (i.e., the aspect of the self that makes decisions, initiates and interrupts behavior, and otherwise exerts control) to function (Baumeister, 1998)”

- “Acts of volition and control require strength”

- This strength is a **limited resource** that is like a **muscle** that can become **fatigued** and depleted but can be **replenished** with regular exercise followed by periods of rest

- *Not just a Skill or a Capacity*

Muraven & Baumeister, Psych Bull 126, 248, 2000
Managing Self-Control Strength

- Not a limitless resource
- Must be conserved
- Can be increased but not infinitely
- Can be strengthened by exercise of self-control but need time to consolidate gains in strength
- Is involved in all efforts to inhibit or perform behaviors but less or not involved when they become automatic or habitual

- What depletes SC strength?
- Coping with stress (focus attention, monitor, stop thoughts, urges, etc)
- Affect Regulation and managing negative and emotions of depression, anxiety, anger
- Managing or stopping addictive and excessive behaviors
- Inhibiting thoughts and behaviors may require more self-control than performing behaviors
What Can We Do About Impaired Self Regulation?

- Recognize that impaired self regulation disrupts the client’s process of change
- Provide “scaffolding” - external support systems that can support the change process
- Provide a way the client can build and rebuild self-control muscle
- Make sure the building is well built before you take down the “scaffolding”
Scaffolding: A strategy for Managing Self Control Deficits
One way to think about scaffolding
Self Regulation implies and is involved in the Personal Process of Change

- Most models of self regulation include self-observation, self-evaluation, decision making, willingness to consider change, and planning (Miller & Brown, 1991; Bandura, 1986; Kanfer, 1986)

- Self Regulation Components (skills, abilities) for behavior change include: Executive Cognitive Functioning and Affect Regulation (Giancola et al., 1998; Zinn et al., 2004)

- Self Control and self regulation are essential mechanisms in the initiation and the modification of addictions

- Both are critical to instigating and completing the tasks of the stages of change
Where Do We Find the Critical Mechanisms of Change

Resilience means recognizing the unique contributions of the individual to the recovery process (the handles are on the inside)
RECOVERY THERAPISTS TREATMENTS ENVIRONMENT

CLIENT
Focus on Theory and Treatments I

- Treatments with very different philosophies and rationales have produced similar outcomes in “horserace” studies
  - (Sloane et al. 1975; Project Match, 1997; Moos et al., 1999; 2000)

- Putative Active ingredients (strategies) of treatments have not proved particularly prognostic of successful change
  - (Longabaugh & Wirtz, 2001; 2003; Moos & Finney, 1999; Crits-Christoph et al., 1999; UKATT, 2005; Orford, 2006)
Focus on Theory and Treatments II

- Therapy **dose (compliance)** is often related to successful change accounting for a small to moderate amount of variance
  - This is more patient than treatment driven
  - Do some patients stay but do not change?

- **Empirically supported therapy** movement has codified treatment packages for specific conditions that have been effective but tell us little about the mechanisms
  - Do you use treatment manuals? How?
Focus on Provider and Patient Interaction

- Therapeutic relationship variables, particularly empathy linked to outcomes
  - some therapists clearly can affect outcomes for better or worse
    - (PMRG, 1998; Miller et al., 1993)

- Working alliance have been linked to successful change but is influenced by patient motivation and patient perspective is most predictive
  - (Connors et al., 1997; 2000; Norcross, 2002)

- Do these create change or moderate change (flat tire?)
Attribute by Treatment Interactions

- Matching patients to therapies is difficult and not proven a significant mechanism in alcoholism treatment
  - interactions have some support but are not well understood
    - (Babor & DelBoca, 2003)
- Some connections between patient characteristics and therapist practices:
  - patient and treatment dimensions, e.g. patient anger and MET, reactivity and structure
    - (Beutler & Clarkin, 1990; Project Match, 1998)
- Static and trait-like attributes, however, seem at best more like moderators and not mechanisms in these matches
Environment Centered

- Environment provides the context for any change, so does seem to be critical element in change.
- Environments can make people change drinking and drinking related behaviors.
  - (ignition locks).
- However, it is much more likely that environment influences and moderates personal behavior change rather than serving as a primary mechanism of intentional change.
  - (drinking age laws can influence drinking and driving).
- How do these influence personal change?
My Focus on the Personal Process

- There is growing evidence that a constellation of patient process of change variables have the greatest potential to be mechanisms since they are
  - directly related to a particular change (*behavior specific*)
  - are involved in changes that occur with and without active ingredients of formal treatment (*self-change, mutual help, placebo*)
  - Involve a number personal activities and experiences that are interactive, at times collaborating and at other times competing
Evidence for Personal Process of Change Variables I

- Patient intention/motivation
  - Pre-treatment motivation predicts drinking outcomes up to 3 years post treatment (PMRG, 1997, 1998)
  - Patient goals predict outcomes in psychosocial and pharmacotherapy (Hall et al., 1990)

- Natural, Un-aided or Self-Change
  - “Spontaneous recovery” and self-guided change produce significant changes and support personal change mechanisms like decision making, commitment, self reevaluation, behavioral coping (DiClemente in Miller & Carroll, 2006; Tucker et al., 2004; Sobell et al., 1993)

- Placebo responding (inert ingredient; significant changes)
Evidence for Personal Process of Change Variables II

- Importance of patient behavior during treatment
  - Commitment language (Amrhein et al., 2003)
  - Patient to therapist talk ratio (Miller & Rollnick, 2013)
  - Setting a date for change

- Patient evaluations of strengths and vulnerability
  - Temptation and Craving (PMRG, 1997b; Anton et al., 2006)
  - Self Efficacy (PMRG, 1998; DiClemente et al., 2001)
  - Temptation minus Confidence (PMRG, 1998; Shaw & DiClemente, 2016)
  - Awareness and acknowledgement of consequences
Evidence for Personal Process of Change Variables III

- Significant drinking reductions occur after brief interventions in opportunistic settings (Bernstein et al., Monti et al., Gentiello et al., Soderstram et al.,) and in routine settings (Babor et al., Fleming et al., Ockene et al.)

- There are developmental periods and events (job, marriage, pregnancy, aging) that trigger change for many individuals

- Success profiles at the end of treatment from Project MATCH (Carbonari & DiClemente, 2000)
Key mechanisms for change reside in the individual for intentional change to be sustained.

Clients are really consumers of services and to be engaged and valued, and for whom recovery products and services need to be tailored to be consumer focused and friendly.

Each client has a unique history and set of problems that make change challenging.

Why Focus on the Client
Success Profiles From Project MATCH

- TSF, CBT, and MET treatments produced similar drinking outcomes.
- No important differences on Stage Subscales, Working Alliance, Temptation to Drink, Abstinence Self Efficacy, Experiential and Behavioral Processes of Change by TX at EOT.
- However, process dimensions of change were important in discriminating between the drinking outcomes in Project MATCH.
- What happens to process dimensions during treatment and how do they relate to long-term drinking outcomes?

End-of-Treatment-Process Profiles Predict Outcomes

- Client status during follow-up period:
  - Abstinent
  - Moderate drinking
  - Heavier drinking

- Client profile on Stage of Change subscales, temptation to drink, abstinence, self-efficacy, experiential and behavioral processes of change

TTM Profile: Outpatient PDA Baseline

TTM = Transtheoretical model
TTM Profile: Outpatient PDA Post-treatment

PDA = percent days abstinent

TTM Profile: Aftercare PDA Baseline

TTM variables

Standard scores

Pre Con Act Main Conf Temp

Abstinent  Moderate  Heavier

TTM Profile: Aftercare PDA Post-treatment

Abstinent
Moderate
Heavier

TTM variables:
Pre, Con, Act, Main, Conf, Temp, Exp, Beh

Standard scores

Participants were substance abusers (primarily cocaine, heroin, and marijuana) who entered treatment in a variety of programs.

The participants (N=61) were divided into 2 groups based on reports of abstinence or continued use at 6 months after a three month treatment period.

Groups were not significantly differ at baseline on drug use, age, level of income, race, education, or gender.

Question was do these two groups differ on Process Profiles at intake and three months into treatment.

The profiles included levels of URICA subscales of Precontemplation, Contemplation, Action, Maintenance, Self Efficacy, Behavioral and Experiential Processes of Change, and Temptation.
Participants were substance abusers (primarily cocaine, heroin, and marijuana) who entered treatment in a variety of programs.

The participants (N=61) were divided into 2 groups based on reports of abstinence or continued use at 6 months after a three month treatment period.

Groups were not significantly differ at baseline on drug use, age, level of income, race, education, or gender.

Question was do these two groups differ on Process Profiles at intake and three months into treatment.

The profiles included levels of URICA subscales of Precontemplation, Contemplation, Action, Maintenance, Self Efficacy, Behavioral and Experiential Processes of Change, and Temptation.
The Process is Multidimensional

- The process of change is multidimensional
- Therefore multiple mechanisms are needed to insure engagement in and completion of the multiple tasks needed to create and sustain successful change of drinking behavior
- Competing demands, contextual problems, and poor self regulation skills lead to incomplete or problematic completion of change tasks which in turn leads to failed attempts to change and undermines recycling and the readiness, willingness, and perceived ability to change
The Smoker’s Recovery Journey

- Social pressure
- Price
- Policy
- Products & Services
- Social Support

Satisfied Dependent or Casual Smoker
- Dissatisfied but ambivalent
- Decided to Make a Quit Attempt
- Choosing A Method
  - NRT, TX, Cold Turkey, Quitline

Long Term Success
- Quit Attempt
- Short Term Success
- Relapse And Recycling
- Hinder Progress

Promote Progress
- Social pressure
- Price
- Policy
- Products & Services
- Social Support

Smoking In Network

Tobacco Advertising

Promotion

Social Support

Long Term Success
- Quit Attempt
- Short Term Success
- Relapse And Recycling
- Hinder Progress

Psychiatric Conditions And Other Life Problems

Beliefs & Myths

Promote Progress

Special Events

Quitting History

Personal Concerns

Products & Services

Social pressure
Where should we look?

- Mechanisms of change reside in the personal process of change dimensions both change specific and change regulating.

- Moderators of change are most likely found in the treatments and the strategies as well as in the contextual environment of the individual’s life.

- Separating out mechanisms from moderators and markers is difficult, however, since these interactions are dynamic, reciprocal, and not unidirectional.
How Do Interventions Work?

Dynamic Model: Stepping into a Flowing Stream
How Does Treatment Work?

- **Client**
  - Therapist

- **Adherence**
  - Treatment

- **Environment**
  - Recovery

**Relationship**
- Empathy
- Working Alliance

**Active Ingredients**

**Relapse Prevention**
Is the Integrating Principle the Client Process of Change?
What about looking at it another way?
How Do Treatment and Mutual Help Fit In

Self Regulation

Client process → Treatment: A Mediator or Moderator of Client Processes → Client process → Outcome

Support Systems
Family & Friends
Mutual Help
Treatment
Stage of Change Labels and Tasks

- **Precontemplation**
  - Not interested

- **Contemplation**
  - Considering

- **Preparation**
  - Preparing

- **Action**
  - Initial change

- **Maintenance**
  - Sustained change

- **Interested and concerned**

- **Risk-reward analysis and decision making**

- **Commitment & creating effective/acceptable plan**

- **Implementing plan and revising as needed**

- **Consolidating change into lifestyle**

---


Theoretical and practical considerations related to movement through the Stages of Change

- Motivation
- Decision-Making
- Self-efficacy

Precontemplation → Contemplation → Preparation → Action → Maintenance

- Personal Concerns
- Environmental Pressure
- Decisional Balance (Pros & Cons)
- Cognitive Experiential Processes
- Recycling
- Behavioral Processes
- Relapse
TASK COMPLETION AND MOVEMENT BETWEEN STAGES

INTEREST CONCERN
RISK/REWARD DECISION
COMMIMTMENT PLANNING PRIORITIZING
IMPLEMENT THE PLAN REVISE
LIFESTYLE INTEGRATION AVOID RELAPSE

PC
CON
PREP
ACT
MAIN
PROCESS OF

FORMAL

INTER

VENTIONS

CHANGE
Conclusions

- Need include a process perspective on motivation, self regulation and change in order to understand our own and our patient’s challenges for change, self-management, and coping.

- In this time of empirically-supported and evidence-based treatments we also need to look at more basic mechanisms of self-control, motivation, and the personal process of change in order to create interventions that would be most effective.
Closing Quotes

“...the Project MATCH process data support a common process of behavioral change, with the treatments providing different paths to achieving the same coping activities and drinking outcomes. There may be “different strokes for different folks”, but they all seem to be swimming in the same river”. (DiClemente, Carroll, Miller, Connors & Donovan, 2003)

“Models of change should be broadened so that treatment is seen as a complex system of parts, facilitating a nexus of cognitive, social and behavioural changes, embedded within a broader system of events and processes catalysing change. Such a model helps explain the relative absence of between-treatments outcome differences in UKATT and in the alcohol problems treatment and more general psychotherapy research literatures”. (Orford et al., 2006)
References

Victor is a 39-year old African American male who is married with two young children. He lost his job last year and has been hustling on the street to make money for his family. Since losing his job he returned to using crack cocaine. When he is high he stays away from home so his wife doesn’t find out and has admitted to several anonymous sexual encounters when he’s been high. Victor came to the clinic today reporting feeling “hopeless” and “down”. He tested positive for HIV last month and is worried that he has infected his wife. Victor does not know how he contracted HIV but reports that he doesn’t think he used condoms when he had sex high and never uses one with his wife. He wants to protect his wife from HIV but is unsure how to bring up using condoms. Victor is not currently engaged in HIV treatment because he reports being ashamed of his diagnosis and fears that no one will hire him if they know he is getting treated for HIV. Victor stated during his appointment that he “desperately needs to get his life together for his family” and knows that he has to get a job and stop doing drugs. However, when asked how his drug use impacts engaging in risky sex, Victor denied any relation. At the end of the visit, Victor agreed to an appointment with an addictions counselor and a case manager to discuss employment. He said he will think about a mental health appointment but feels that once he gets a job he will feel better.
<table>
<thead>
<tr>
<th>Stages of Change</th>
<th>Precontemplation</th>
<th>Contemplation</th>
<th>Preparation</th>
<th>Action</th>
<th>Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behaviors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quitting crack cocaine use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attending mental health treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV treatment engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using condoms regularly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attending sexual risk reduction counseling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attaining employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage of Change</td>
<td>Definition/Posture</td>
<td>Client Tasks</td>
<td>Provider Tasks</td>
<td>Motivational Focus</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------</td>
<td>-------------</td>
<td>--------------</td>
<td>-------------------</td>
<td></td>
</tr>
</tbody>
</table>
| Precontemplation | Unaware of problem
Not thought about change
Not considering change | Increasing awareness, concern
Hope, and confidence | Engage and accept client
Build rapport
Increase client’s perception of risks and problems | Express empathy
Avoid arguments
Roll with resistance
MI Process:
- ENGAGING client in discussion
- FOCUSING on specific behavior |
| Contemplation    | Thinking about change
Considering change but unsure | Risk-reward analysis of pros and cons of change
Tip decisional balance
Solid decision to change | Normalize ambivalence
Evoke reasons for change, risks for not changing
Help tip decisional balance
Strengthen client’s self-efficacy | Acknowledge ambivalence
Develop discrepancy
Roll with resistance
Support self-efficacy
MI Process:
- FOCUSING continues
- EVOKING change talk (DARN language) |
| Preparation      | Making a plan to change
Setting goals (usually within a month)
Thinking about change in the near future | Commitment to change
Creating an effective and appropriate change plan | Offer a menu of options
Help client determine the best course of action
Develop a plan, considering barriers for quitting and social support | Develop discrepancy
Support self-efficacy
MI Process:
- EVOKING change talk (DARN & CAT language)
- PLANNING begins when client is ready to discuss the “how” of change |
| Action           | Making specific changes to lifestyle
Taking steps toward change | Adequate implementation of change plan
Problem solve and revise plan as necessary | Help client implement the plan
Help client identify and develop skills to cope with change
Help client problem solve | Support self-efficacy
Express empathy
MI Process:
- EVOKING change talk (CAT language)
- PLANNING continues |
| Maintenance      | Continuation of desirable actions
Evaluating effectiveness & planning to sustain efforts | Integration of new behavior into lifestyle
Develop strategies for preventing relapse
Engage with social support | Help client identify strengths & strategies to prevent relapse
Resolve relational issues & associated problems
Provide support | Support self-efficacy
Express empathy |
| Relapse          | Submitting to old habits
Part of the process
Need additional practice of new behavior | Revise change plan
Re-Implement new plan | Determine triggers & develop prevention plan
Help client recycle through stages again | Express empathy
Acknowledge ambivalence
Support self-efficacy
Develop discrepancy
Roll with resistance |