Module 6: Psychological Factors and Tobacco Use Disorder
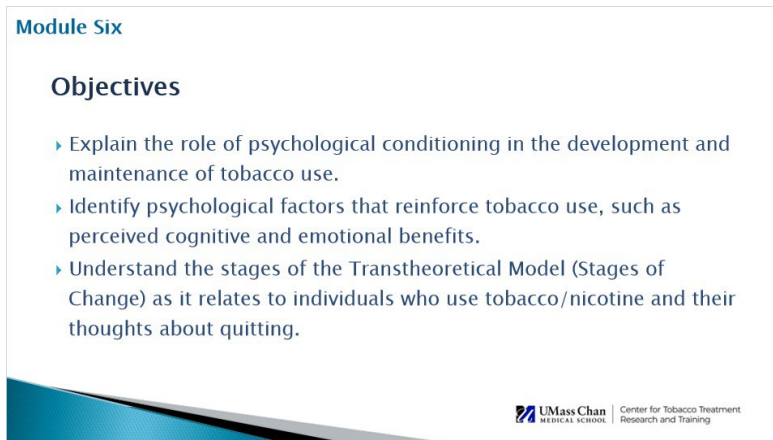
1.1 Psychological Factors and Tobacco Use Disorder
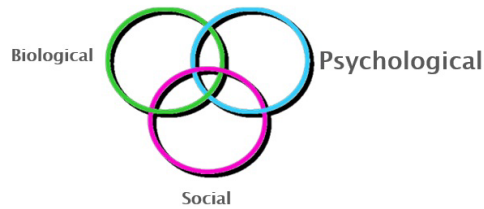
Module Six:

Psychological Factors and Tobacco Use Disorder

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.2 Objectives

Module Six

Objectives

- Explain the role of psychological conditioning in the development and maintenance of tobacco use.
- Identify psychological factors that reinforce tobacco use, such as perceived cognitive and emotional benefits.
- Understand the stages of the Transtheoretical Model (Stages of Change) as it relates to individuals who use tobacco/nicotine and their thoughts about quitting.

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.3 Psychological

Module Six

Tobacco Use Disorder: The Biopsychosocial Model

Biological

Psychological

Social

"Biopsychosocial" recognizes that health is impacted by a complex interaction among the biological, psychological, and social factors

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.4 Marta

Module Six

Marta

"I have been in recovery and haven't used alcohol for three weeks now. I want to try and stop smoking, too. I can feel how nicotine is ruining my life like the alcohol did. On the other hand, the cigarettes do help me think clearer and maintain my weight. Whenever I get stressed, I reach for a cigarette. And I love my after-dinner smoke. I don't know how I'll deal without cigarettes! Well, no matter what, I think I WILL try to quit the cigarettes, too. I mean if I can cut the alcohol, I can quit smoking."

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.5 Brainstorm: What are some of the psychological

Module Six

Brainstorm: What are some of the psychological factors that affect Marta?

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.6 Untitled Slide

Module Six

Here are some possible responses:

- Marta has a strong association between alcohol and cigarettes
- She is confident she can quit due to her success quitting alcohol
- Stress management and "clear thinking" are seen as benefits to smoking
- She sees ways in which cigarettes are ruining her life

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.7 Social Learning Model helps describe how tobacco use develops

Module Six

Social Learning Model helps describe how tobacco use develops

- Learning a new behavior involves the interplay of biological, psychological and social factors.
- Tobacco use is a learned behavior through intensive repetition and reinforcement.
- Since the nicotine in tobacco is highly addictive it is a powerful reinforcer.

Bandura & Walters, 1977

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.8 Social Learning Model describes 3 ways in which a behavior is initiated and maintained:

Module Six

Social Learning Model describes 3 ways in which a behavior is initiated and maintained:

- Classical conditioning
- Operant conditioning
- Modeling

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.9 Classical Conditioning: Pairing of Cues and Behavior

Module Six

Classical Conditioning: Pairing of Cues and Behavior

▸ Repetition is the key component in the pairing of cues (environment, thoughts, emotions) and a behavior (tobacco use)

▸ These cues (antecedents) come to be strongly associated with the behavior; cues bring on the urge to smoke

Examples:
"After a meal, I always feel like having a cigarette"
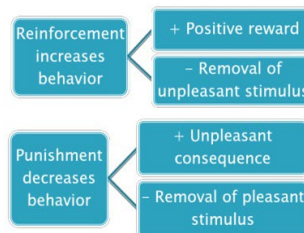*"Every time the phone rings I automatically light a cigarette"*
"When I hang out with Jimmy I always vape"

UMass Chan | Center for Tobacco Treatment
MEDICAL SCHOOL | Research and Training

1.10 Operant Conditioning:

Module Six

Operant Conditioning: Pairing of Behavior and Consequences

▸ Consequences determine the likelihood the behavior will occur in the future

▸ For Tobacco Use:
  ◦ Reinforcements are immediate and definite (stress relief)
  ◦ Punishments are delayed and indefinite (heart disease, cancer)

Reinforcement increases behavior
+ Positive reward
– Removal of unpleasant stimulus

Punishment decreases behavior
+ Unpleasant consequence
– Removal of pleasant stimulus

UMass Chan | Center for Tobacco Treatment
MEDICAL SCHOOL | Research and Training

1.11 The Perceived Positive Effects of Tobacco Reinforce Use

Module Six

The Perceived Positive Effects of Tobacco Reinforce Use

▸ Psychological Effects:
  ◦ Stimulation/arousal
  ◦ Relaxation/reduce stress
  ◦ Mood regulation
  ◦ Appetite suppression
  ◦ Weight management
  ◦ Pain management
  ◦ Reduces anxiety/social facilitation

▸ Cognitive Effects:
  ◦ Enhanced memory
  ◦ Enhanced attention
  ◦ Increased speed of processing

"Improvements" may be result of relief from withdrawal symptoms

UMass Chan | Center for Tobacco Treatment
MEDICAL SCHOOL | Research and Training

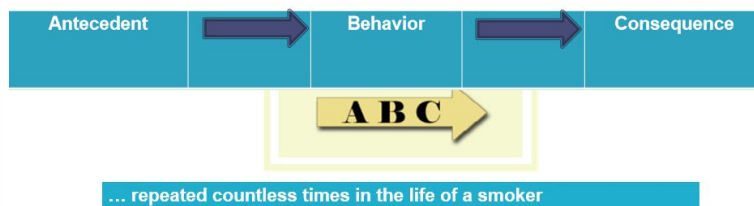### 1.12 The Role of Modeling in Trying and Maintaining Tobacco Use

Module Six

The Role of Modeling in Trying and Maintaining Tobacco Use

‣ Learning occurs partly by observation of others (models)
‣ Children especially are impacted by what they see
  ◦ Parents, siblings, peers smoking or vaping
  ◦ How tobacco use is portrayed in social media, movies, TV, magazines, etc.
‣ Increasing smoke and tobacco–free environments is important to reduce exposure
  ◦ Individual: Not smoking in the home, in the car
  ◦ Public: Smokefree workplaces, restaurants, parks, etc.

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.13 Untitled Slide

Module Six

Repetition of this Sequence Results in a Persistent Behavior

| Antecedent | → | Behavior | → | Consequence |

A B C

... repeated countless times in the life of a smoker

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.14 Antecedent (Cue)

Module Six

A B C **Antecedent (Cue)**

‣ The situation, thought, or mood that occurs before the behavior
‣ These are also called cues or triggers
‣ Examples of smoking antecedents:
  ◦ *Having lunch with a friend who smokes*
  ◦ *Driving in the car*
  ◦ *"I really would like a cigarette right now."*
  ◦ *Feeling angry*
‣ Changing or avoiding the trigger can help break the link with the behavior

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.15 Behavior

Module Six

ABC → **Behavior**

- Is an action; something that a person does or says
- It must be observable
- In this case, the behavior is using tobacco
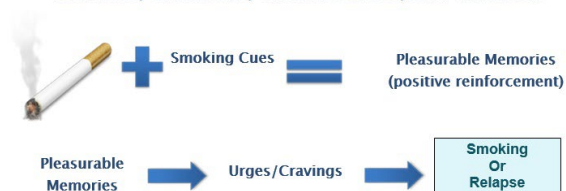- Practicing coping skills and alternate behaviors can eventually replace tobacco use

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.16 Consequence

Module Six

ABC → **Consequence**

- This occurs after the behavior – for example, the feeling of stress relief after smoking a cigarette
- Consequences influence the future occurrence of the behavior (Operant Conditioning)
  ◦ Positive consequences increase likelihood (positive reinforcement)
  ◦ Negative consequences decrease likelihood (punishment)
- Medications used in tobacco dependence treatment help to alter the positive effects of smoking – changing the consequence

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.17 Pattern is Repeated

Module Six

This Pattern is Repeated Many Times a Day for Many Years

Tobacco use becomes paired with and linked to a wide range of activities, situations, circumstances, and emotions

[cigarette] **+** Smoking Cues **=** Pleasurable Memories (positive reinforcement)

Pleasurable Memories → Urges/Cravings → Smoking Or Relapse

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.18 The Behavior of Tobacco Use Becomes Automatic

1.19 Cues that affect behavior
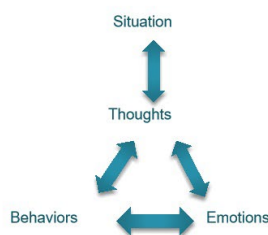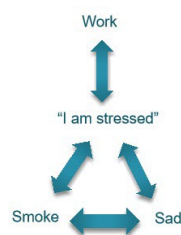
1.20 Attitudes & Beliefs influence tobacco use

1.21 Stressors are linked to tobacco use

Module Six

Stressors are linked to tobacco use

Psychosocial Stressors are often named the top reason for starting and continuing tobacco use.
◦ Childhood abuse (verbal, physical, sexual)
◦ Socioeconomic stress
◦ Nonspecific stressors (daily stressors)

Low-tolerance for distress may be related to early relapse in adult smokers.
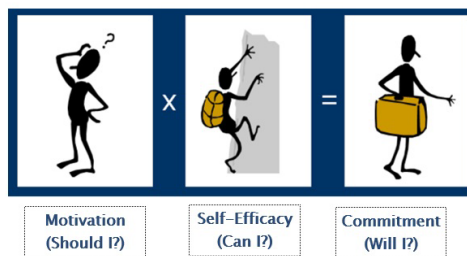
Falba, 2005; Freund, 1992; Brown 2009

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.22 Basic Requirements for Change

Module Six

Basic Requirements for Change

Motivation (Should I?) X Self-Efficacy (Can I?) = Commitment (Will I?)

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.23 Motivation and Outcome Expectancies

Module Six

Motivation and Outcome Expectancies

▸ Outcome expectancy is the belief that if the desired task is performed (or goal is accomplished), it will have the desired result.
▸ Motivation is related to personal values.
▸ Example: "If I quit smoking…
◦ My smoker's cough will go away."
◦ I'll be less winded when playing tennis."
◦ I will have more money."
◦ I will be proud of myself."

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.24 Self-Efficacy

Module Six

Self-Efficacy

- Is the level of confidence in one's ability to perform a particular task or accomplish a particular goal.
- Interventions can increase self efficacy about the ability to quit smoking.
- Examples:
  - During preparation to quit practice coping skills by delaying selected cigarettes
  - Discuss past experiences with other successful behavior changes

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.25 Learned Helplessness is a Barrier to Change

Module Six

Learned Helplessness is a Barrier to Change

- Low self-efficacy ("I can't quit")

AND

- High outcome expectancies ("It's really important that I quit")

CAN LEAD TO

- A state of learned helplessness, in which the client feels as if it's not in their control

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training
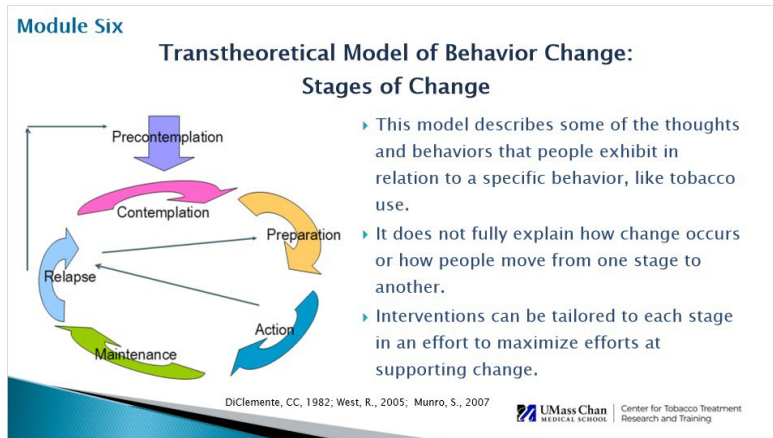
1.26 The Tobacco Dependence Cycle

Module Six

The Tobacco Dependence Cycle

- This diagram can help tobacco users visualize the process experienced everyday.
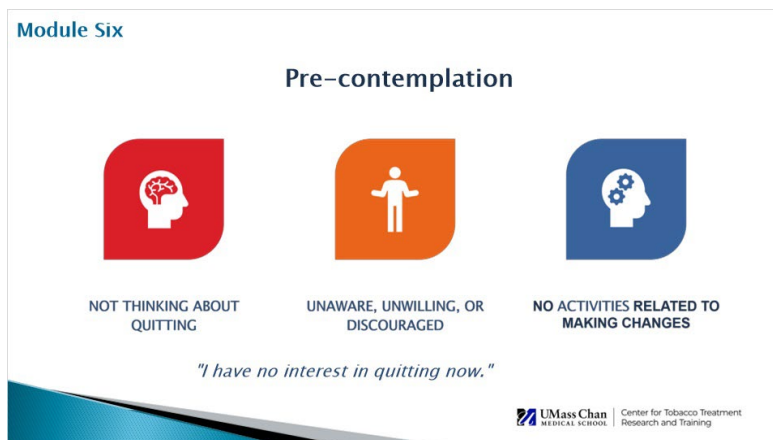- Notice how the Biological, Social, and Psychological aspects are all represented here.

Puff/Chew
Feel temporary pleasure, relaxation/reduced stress, improved concentration.

Triggers
Pleasurable effects become paired with situations and emotions associated with smoking.

Loss of control
Need cigarettes to feel normal.

Urge
Feel an urge to smoke to relieve withdrawal symptoms.

Withdrawal
Pleasurable effects wear off withdrawal symptoms set in, feel stressed.

Nicotine Dependence Cycle

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.27 Transtheoretical Model of Behavior Change:

1.28 Pre contemplation

1.29 Contemplation

1.30 Preparation

1.31 Action

1.32 Maintenance

1.33 Relapse

Module Six

Relapse

▸ Often part of the process of change for many behaviors

▸ Can include moving to any previous stage

▸ Common among tobacco users

The Stages of Change Sample Words

Stages of Change (Transtheoretical Model)

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.34 Goals & Goal Theories

Module Six

Goals & Goal Theories

▸ What is a goal?
- "the object or aim of an action"
- "what an individual is trying to accomplish"
- "an image of a future level of performance"
  - All from Cochran & Tesser, 1996, p. 100
- "an end state that is considered attainable given some level of ability and some expenditure of effort"

(Geen, 1995, p. 23)

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.35 Influences on Goal Effort

Module Six

Influences on Goal Effort

▸ Difficult, clearly defined goals elicit greater effort & better performance

▸ Highly valued goals elicit greater effort

▸ Expectations that a goal is attainable elicit greater effort

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.36 Influences on Goal Effort

Module Six

Influences on Goal Effort

▸Commitment to the goal
  ◦ Essential for goals to motivate behavior
  ◦ Predicts persistence when facing setbacks

▸Rewards, incentives (*with caution)

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.37 Strategy versus Effort?

Module Six

Strategy versus Effort?

▸Depends on complexity
  ◦ Simpler goals: effort and persistence
  ◦ Complex goals: strategy needed *as well as* effort and persistence

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.38 Goal Framing

Module Six

Goal Framing

	Proximal	Distal
Acquisitional	Acquire a new behavior or enhance a previous behavior (learn to dance; improve your golf game; eat healthier) & get frequent feedback. **Predicted to lead to best performance	Acquire a new behavior or enhance a previous behavior; infrequent feedback
Inhibitional	Inhibit an unwanted behavior (cut food intake; stop smoking) & get frequent feedback **Worst performance predicted	Inhibit an unwanted behavior; infrequent feedback **2nd best performance

(Cochran & Tesser, 1996)

1.39 Goal Intentions & Implementation Intentions

Module Six

Goal Intentions & Implementation Intentions

▸ How to keep our eyes on the prize?

▸ How to maintain motivation for difficult behavior changes?

▸ Need more than good intentions…

(Achtziger, Gollwitzer, & Sheeran, 2008; Mann, de Ridder, & Fujita, 2013)

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.40 Untitled Slide

Module Six

Goal Intentions & Implementation Intentions

▸ Goals need to be shielded
- from competing demands
- from "unwanted thoughts and feelings"
- from temptations

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.41 Goal intentions & Implementation Intentions

Module Six

Goal intentions & Implementation Intentions

▸ **If–then** statements specify "when, where, and how goal–directed responses should be initiated"
- If I feel the urge to smoke, **then** I will chew gum or have a glass of water instead.
- If I am around people who smoke, **then** I will excuse myself to avoid temptation.
- If I start feeling stressed, **then** I will practice deep breathing exercises to calm myself instead of smoking.
- If I successfully avoid smoking for a day, **then** I will reward myself with a small treat.

▸ Keeps opportunities for goal striving cognitively accessible, and more salient

▸ Increases likelihood of planned response

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.42 Summary: Psychological Factors

Module Six

Summary: Psychological Factors

▸ Smoking is a learned behavior

▸ Psychological factors contribute to the initiation and maintenance of smoking and include:
  ◦ Perceived psychological and cognitive benefits
  ◦ Attitudes about smoking/quitting, personality, stress, and emotions

▸ The Transtheoretical Model describes 5 stages of change and relapse

UMass Chan MEDICAL SCHOOL | Center for Tobacco Treatment Research and Training

1.43 Untitled Slide

Module Six

Module 6 Required Quiz

To take the quiz, click on the 'course homepage' link below, it will take you to the course main homepage where you can click on the module quiz 'button' to start the quiz.

Course homepage

SIGN OUT   LIVE COURSES   GRAND ROUNDS/RSS'S   CERTIFICATION COURSES   ONLINE COURSES   CALENDAR   ABOUT

CONTACT US   HELP   MY CME

TESTS

Show Completed Tests: ☐

TOBACCO TREATMENT SPECIALIST CORE TRAINING - CTTRT

Module 1 Overview of the Tobacco Problem

🖥 LAUNCH COURSE   ▤ POST-TEST