

# CLINICAL APPLICATIONS OF LEARNING THEORIES



Prof.Dr.Nazan Aydın

# Objectives

1. Review basic concepts of Learning Theories.
2. Discuss clinical application of Learning Theories as psychotherapy in the case of some mental disorders;
  - A. Phobias
  - B. Addiction
  - C. Panic Disorder
  - D. Depression

# Psychotherapy

🔥 **Psychotherapy** - set of clinical techniques that are used to learn improving mental health.

1. Based on the principles and procedures of the scientific method.
2. Dealing with current problems and factors influencing them
3. Activating behavior change (not mere talk-therapy)

# Psychotherapy

## Applications

- 💧 Anxiety disorders
- 💧 Phobias, Panic Disorders, Obsessive Compulsive Disorder (OCD)
- 💧 Sexual Disorders
- 💧 Depression
- 💧 Addiction
- 💧 Marital problems
- 💧 Behavioral Medicine
- 💧 Childhood Disorders
- 💧 Behavioral Problems (ADHD, ODD)
- 💧 Eating Disorders



# PSYCHOTHERAPY OF PHOBIA

- Behavioral Psychotherapy (Exposure and Systematic Desensitization )

*(Classical and Operant Conditioning)*

- Cognitive Psychotherapy

*(Cognitive Learning)*

LOUD NOISE



ALBERT B ,11 MONTH OLD CHILD



LOUD NOISE

RAT

CRY

FEW PAIRING OF LOUD NOISE(US) AND RAT (CS)



THIS LEAD ALBERT TO AVOID NOT ONLY RAT (WHICH HAD NO CAUSE OF FEAR BEFORE) BUT ALSO SIMILAR OBJECT COTTONWOOL ,SEALSKIN etc.

# Exposure

Exposure to Feared Object (insect, exam, spider, flight fear )

**Relaxation Procedures** (Soft and pleasant voice,

Create relaxing imagery through visualization  
Relax various parts of the body )

(CLASSICAL CONDITIONING)

# Therapeutic techniques and procedures

- Relaxation training---to cope with stress
  - Progressive muscular relaxation
    - Soft and pleasant voice
    - Create relaxing imagery through visualization
    - Relax various parts of the body

# Systematic desensitization

Systematic desensitization: relaxation is paired with a stimulus that formerly induced anxiety

To treat a patient with a phobia, a therapist helps the patient develop a hierarchy of anxiety producing situations and then helps the patient face those situations.



# Systematic desensitization

Aims at anxiety and avoidance reactions

1. Desensitization – from visualizations to real life exposures. The patient moves up the hierarchy from least to greatest anxiety arousing scene (then REPEATED EXPOSURE)
2. \*Systematic desensitization typically includes the use of relaxation procedures such as progressive muscular relaxation

# *Hierarchy of fears-a list (for afraid of flying)*

in order to increase severity, of the things you associate with your fears. For instance, your hierarchy might resemble this one:

1. Watching a plane flying overhead.
2. Going to an airport.
3. Buying a ticket.
4. Boarding on the plane.
5. Seeing the plane door close.
6. Having the plane taxi down the runway.
7. Taking off.

# Systematic desensitization

Exposure to picture of feared object (insect, exam, spider, plane, )



• Relaxation Procedures (muscular relaxation, hypnosis)



Less Anxiety

(positive reinforcement)



Less Avoidance

**(OPERANT CONDITIONING)**

# Systematic desensitization

Exposure to toy of feared object (insect, exam, spider, plane, )



• Relaxation Procedures (muscular relaxation, hypnosis)



Less Anxiety  
(positive reinforcement)



Less Avoidance

**(OPERANT CONDITIONING)**

# Systematic desensitization

Brief Exposure to scary object (insect, exam, spider, plane, )



• Relaxation Procedures (muscular relaxation, hypnosis)



Less Anxiety

(positive reinforcement)



Less Avoidance

**(OPERANT CONDITIONING)**



# Systematic desensitization

Touching scary object (insect, exam, spider, plane, )



• Relaxation Procedures (muscular relaxation, hypnosis)



Less Anxiety

(positive reinforcement)



Less Avoidance

**(OPERANT CONDITIONING)**

# Cognitive Approach to Phobias



# The Cognitive Paradigm

Epictetus, Greek philosopher. Observed that people were not disturbed by things that had happened but by the *view* they take of things that happen.

**Thoughts cause Feelings and Behaviors.**

# The Cognitive Paradigm

- ❖ Cognition involves the mental processes of perceiving, recognizing, judging and reasoning
- ❖ The cognitive paradigm focuses on how people structure and understand their experiences and how these experiences are related to past experiences stored in memory

# Cognitive Psychotherapy

**Based on** assumption that most emotional and behavioral reactions are learned. Therefore, the goal of therapy is to help clients *unlearn* their unwanted reactions and to learn a new way of reacting.

Teaches the benefit of remaining calm or at least neutral when faced with difficult situations.

If you are upset by your problems, you now have  
2 problems:

**1) the problem, and 2) your upsetness**

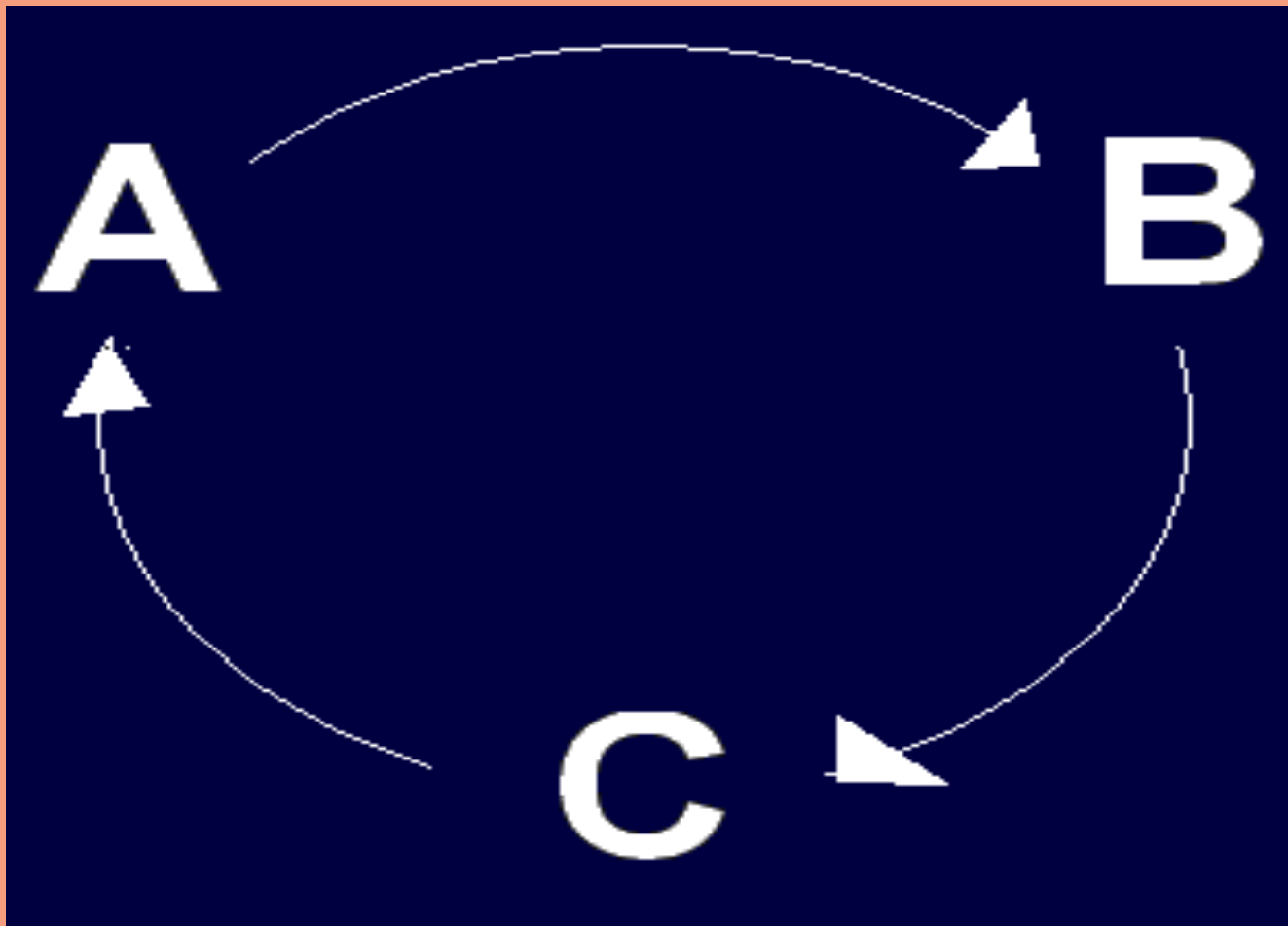


A - B - C

A =  
**A**ctivating  
Event

B = **B**eliefs,  
Thoughts,  
Attitudes,  
Assumptions

C =  
**C**onsequences,  
Feelings,  
Emotions,  
Behaviors,  
Actions



A - B - C

A = **A**ctivating  
Event



Traveling by plane

B = **B**eliefs,  
Thoughts,  
Attitudes,  
Assumptions

I can not bear  
I may have heart attack  
I may have senkop

C = **C**onsequences,  
Feelings, Emotions,  
Behaviors, Actions

Anxiety,  
Avoidance to get on the  
plane,  
Afraid of flight

# I can not bear.....

**Low discomfort-tolerance (LDT) arises from demands that one does not experience emotional or physical discomfort, with catastrophizing when discomfort does occur. It is based on beliefs that like “I must be able to feel comfortable all the time.”**

# Questions that explore to misbeliefs about the feared object

- 🔥 How a spider can be harmful for you?
- 🔥 Have you ever been in dangerous position with a spider?
- 🔥 Are there similarities between your body sensations/feelings during exposure with a spider and a man who is running?

# Addiction?



# Alcohol and Drug Addiction / Abuse



# ADDICTION

## STEP 1

Various Social Situations



Social Anxiety



Substance Abuse/ Alcohol Consume/Smoking



Less Anxiety

(it changes the way a person feels (e.g., powerful, energetic, euphoric, stimulated, less depressed))

*(positive reinforcement)*

**“ OPERANT CONDITIONING ”**



# *ADDICTION*

## ***STEP 2***

**Social Situations            Substance Abuse/Alcohol/smoking**

**“ CLASSICAL CONDITIONING ”**

Particular people  
drug-using associates, dealers

Craving

Substance  
Abuse

**“ CLASSICAL CONDITIONING”**

Particular people  
drug-using associates, dealers

Craving

Substance  
Abuse

Particular Places  
bars, places to buy drugs

Craving

Substance  
Abuse

**“ CLASSICAL CONDITIONING ”**

Particular people  
drug-using associates, dealers

Craving

Substance  
Abuse

Particular Places  
bars, places to buy drugs

Craving

Substance  
Abuse

Particular Things  
money or paraphernalia

Craving

Substance  
Abuse

**“ CLASSICAL CONDITIONING ”**

**Particular people**  
drug-using associates, dealers

Craving

**Substance Abuse**

**Particular Places**  
bars, places to buy drugs

Craving

**Substance Abuse**

**Particular Things**  
money or paraphernalia

Craving

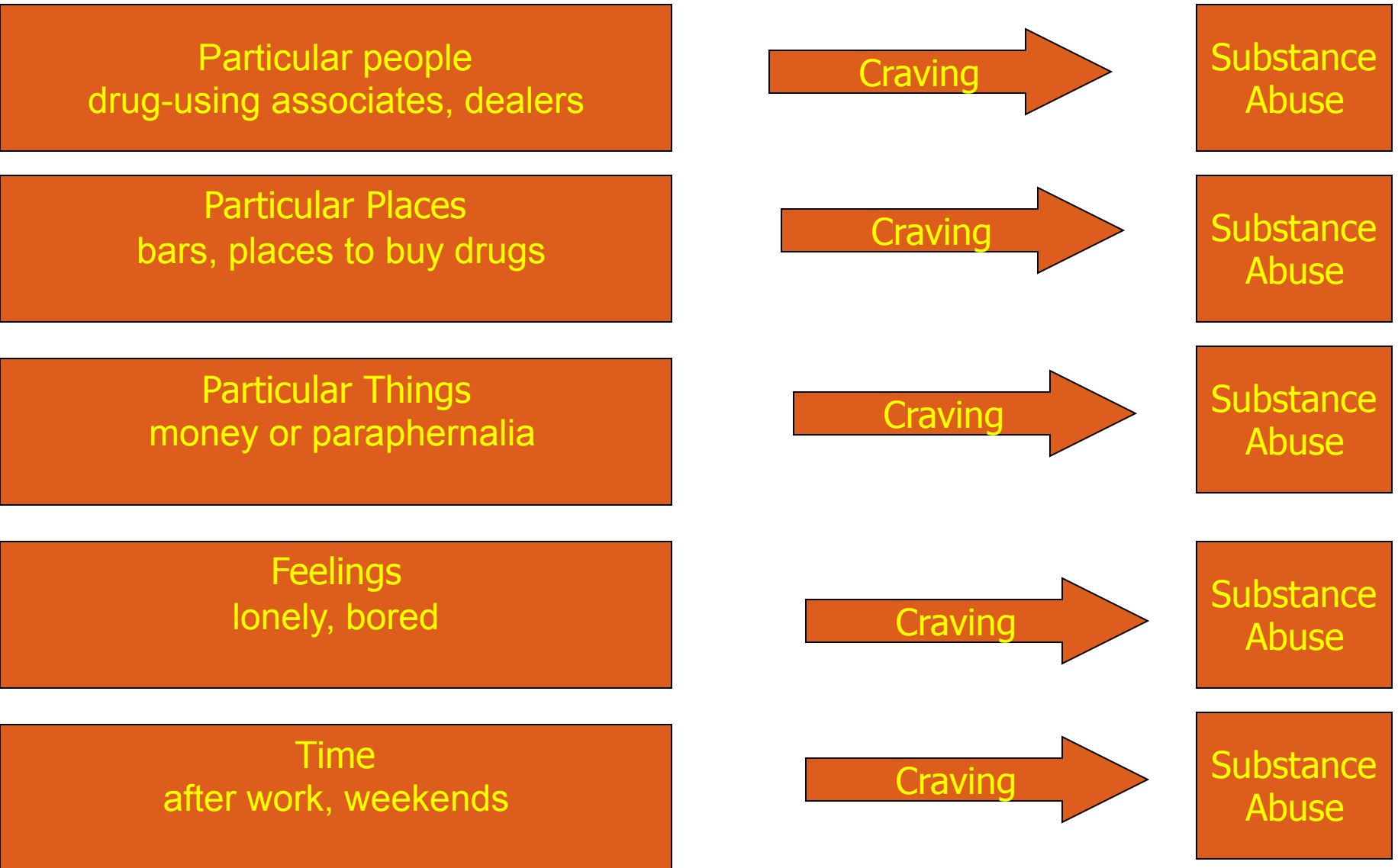
**Substance Abuse**

**Feelings**  
lonely, bored

Craving

**Substance Abuse**

**“ CLASSICAL CONDITIONING ”**



“ CLASSICAL CONDITIONING ”

# Identifying triggers

- 💧 What people are paired with your addiction?
- 💧 What places are paired with your addiction?
- 💧 What things are paired with your addiction?
- 💧 What feelings are paired with your addiction?
- 💧 What times are paired with your addiction?

# ***ADDICTION***

## ***STEP 3***

Abstinence of Alcohol or Drug



Craving



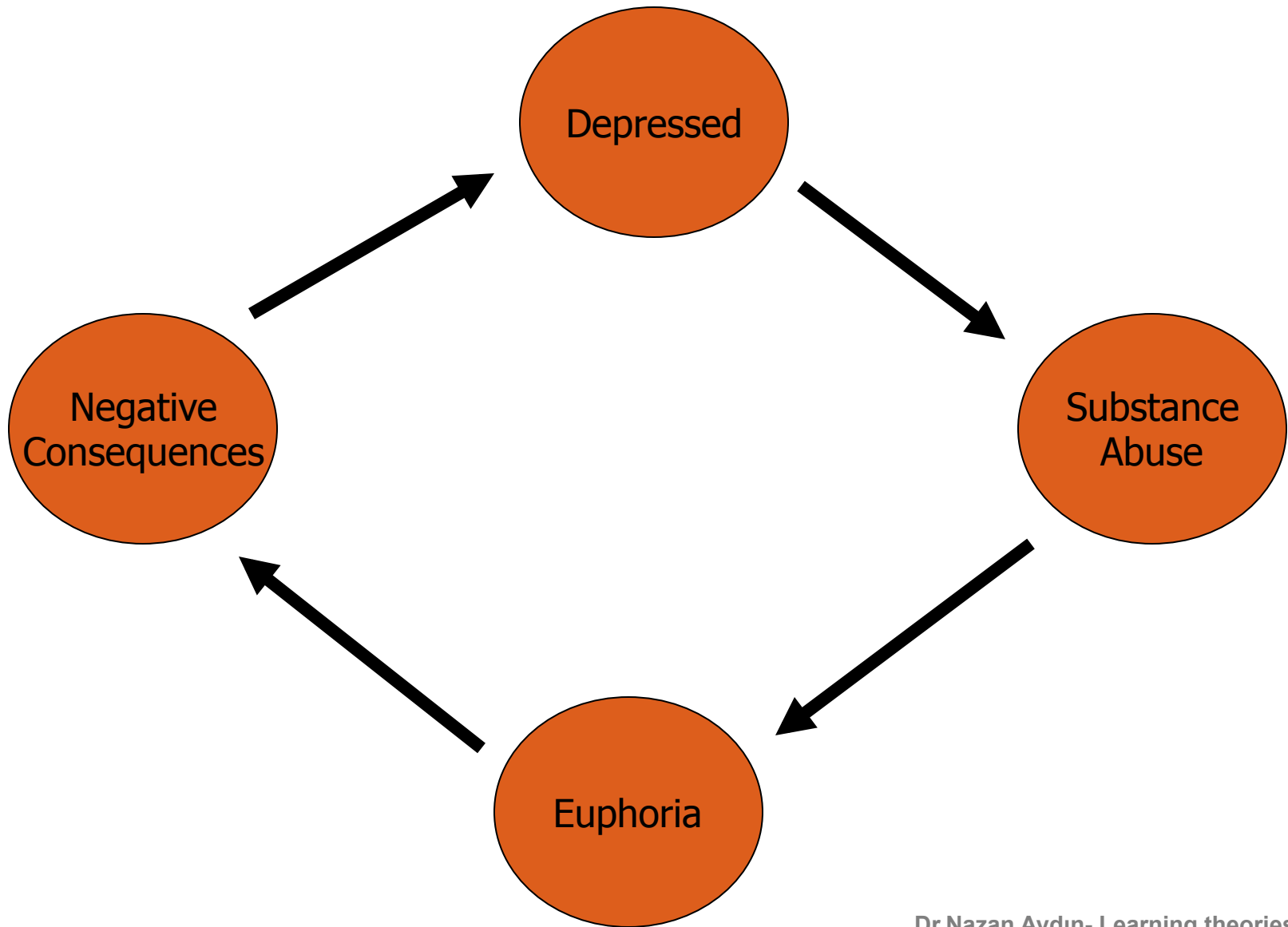
Anxiety Symptoms

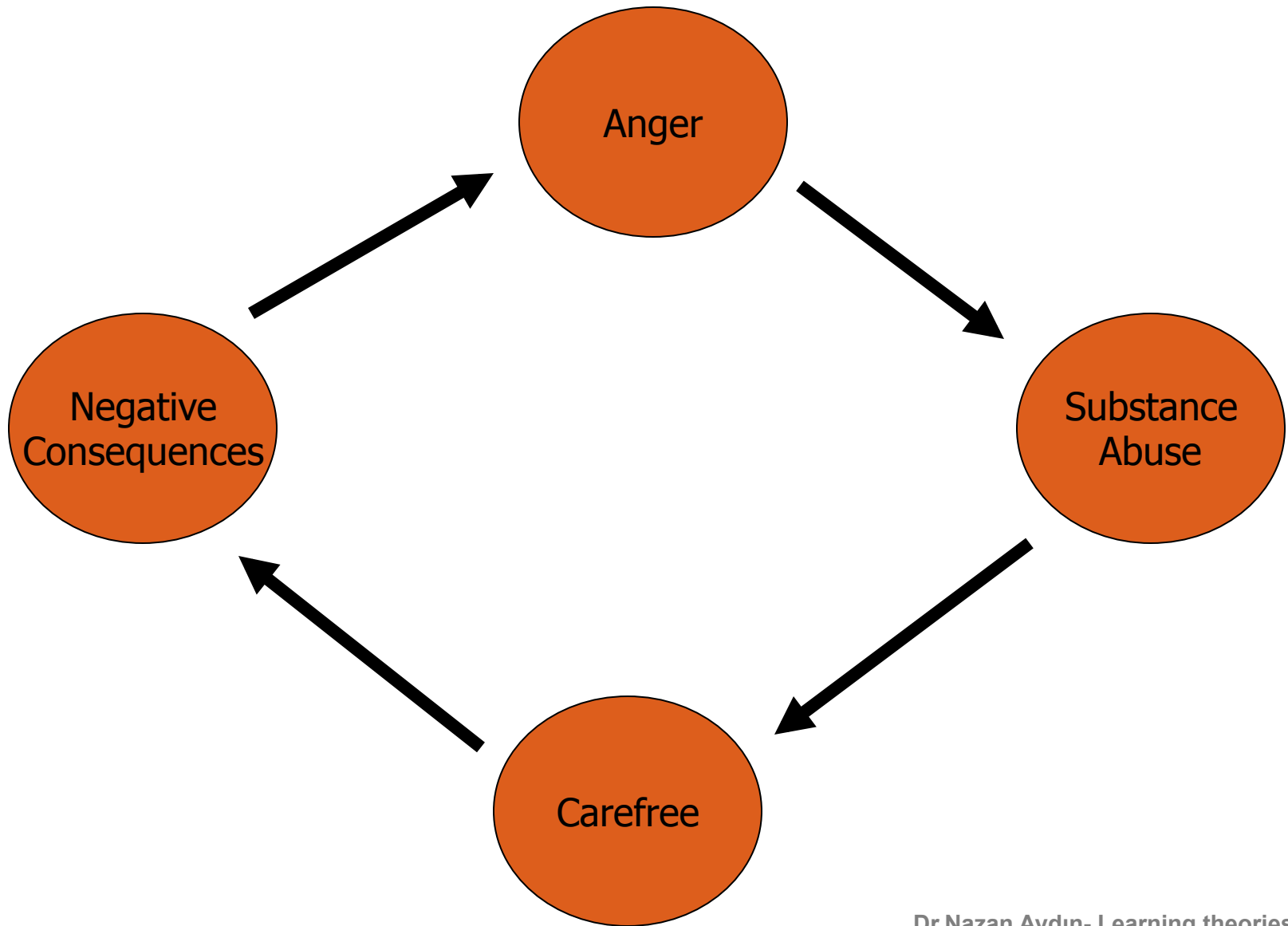


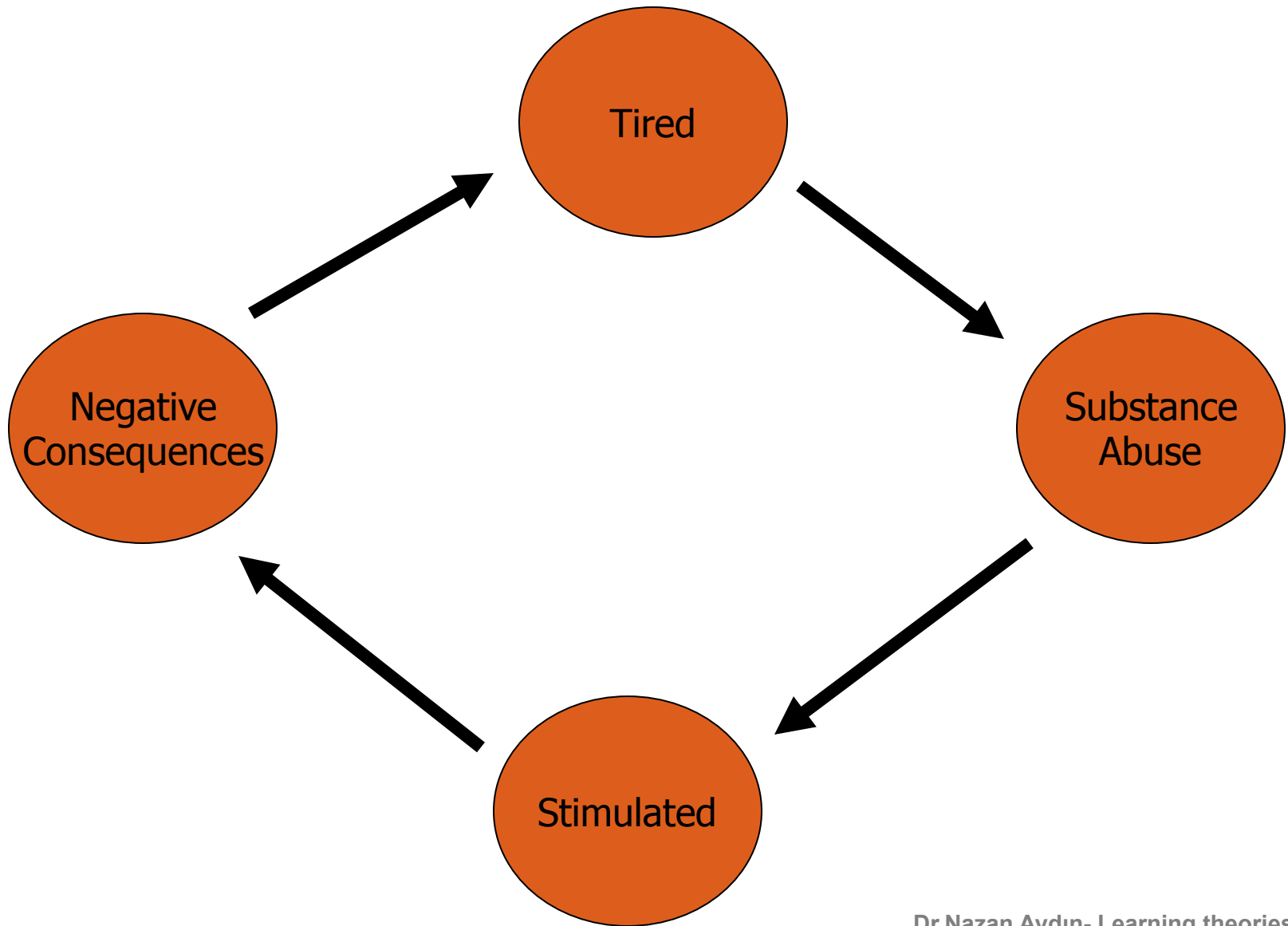
Consuming of substance / Alcohol  
**(negative reinforcement)**

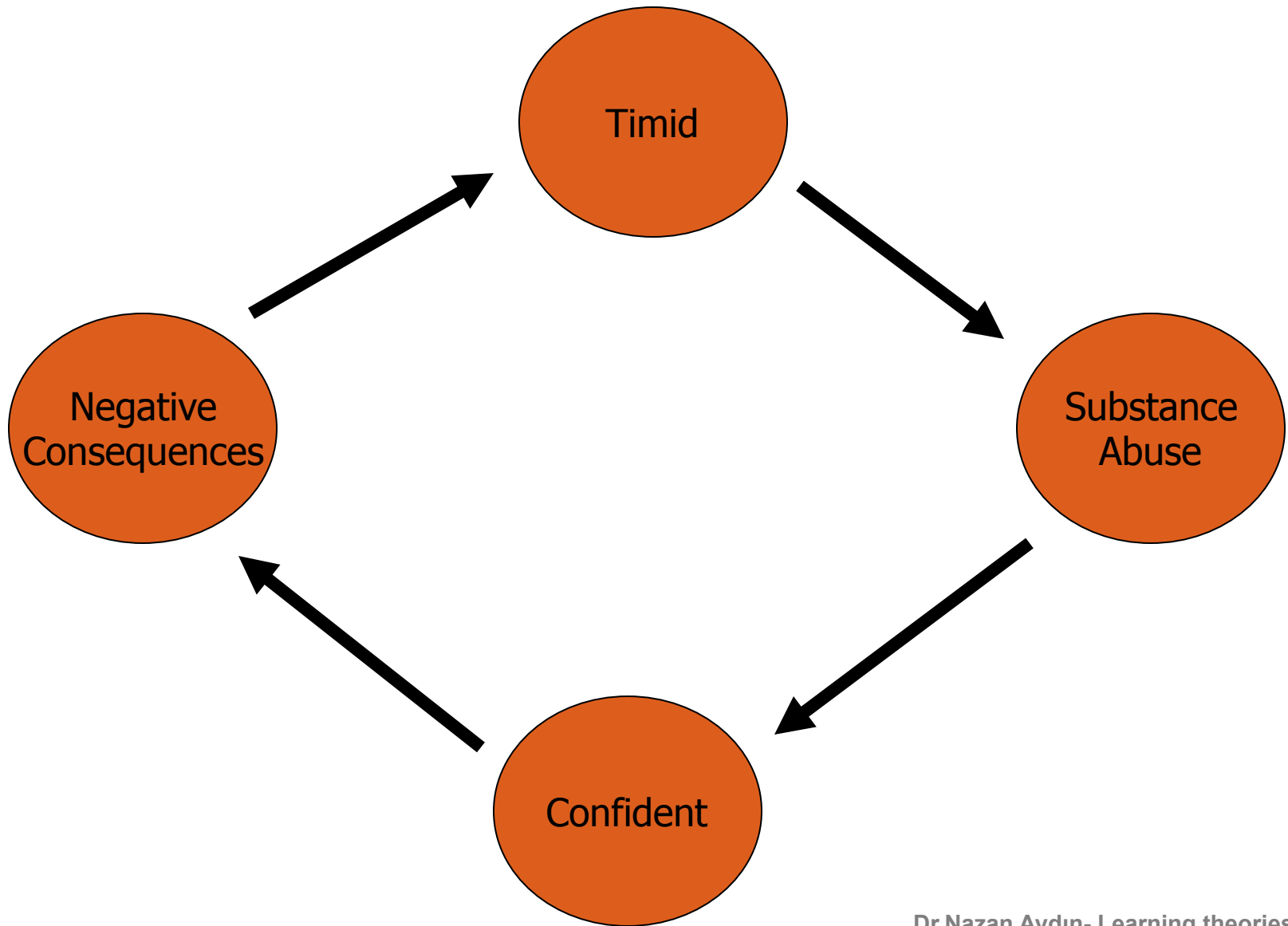
**“OPERANT CONDITIONING”**

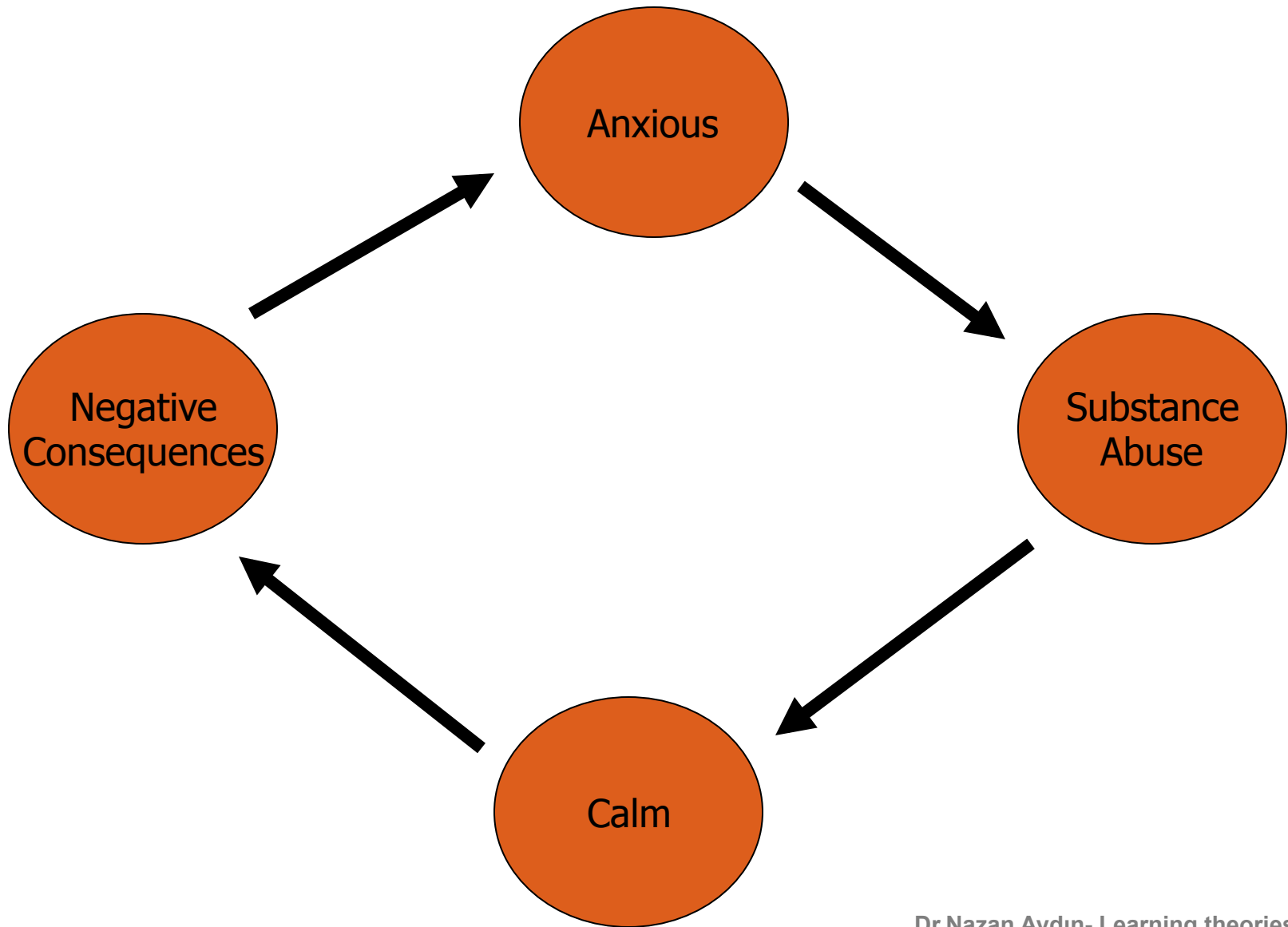


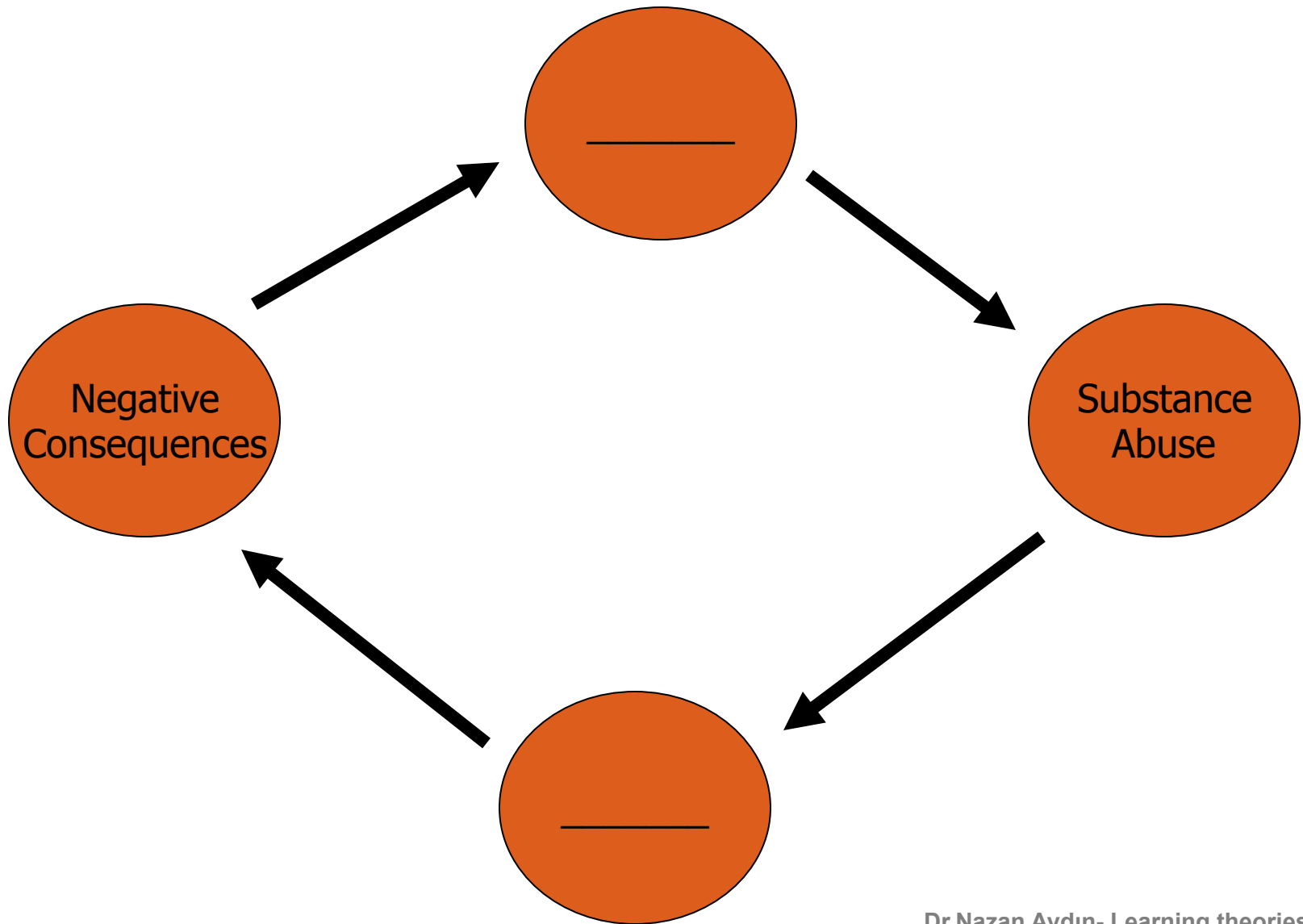




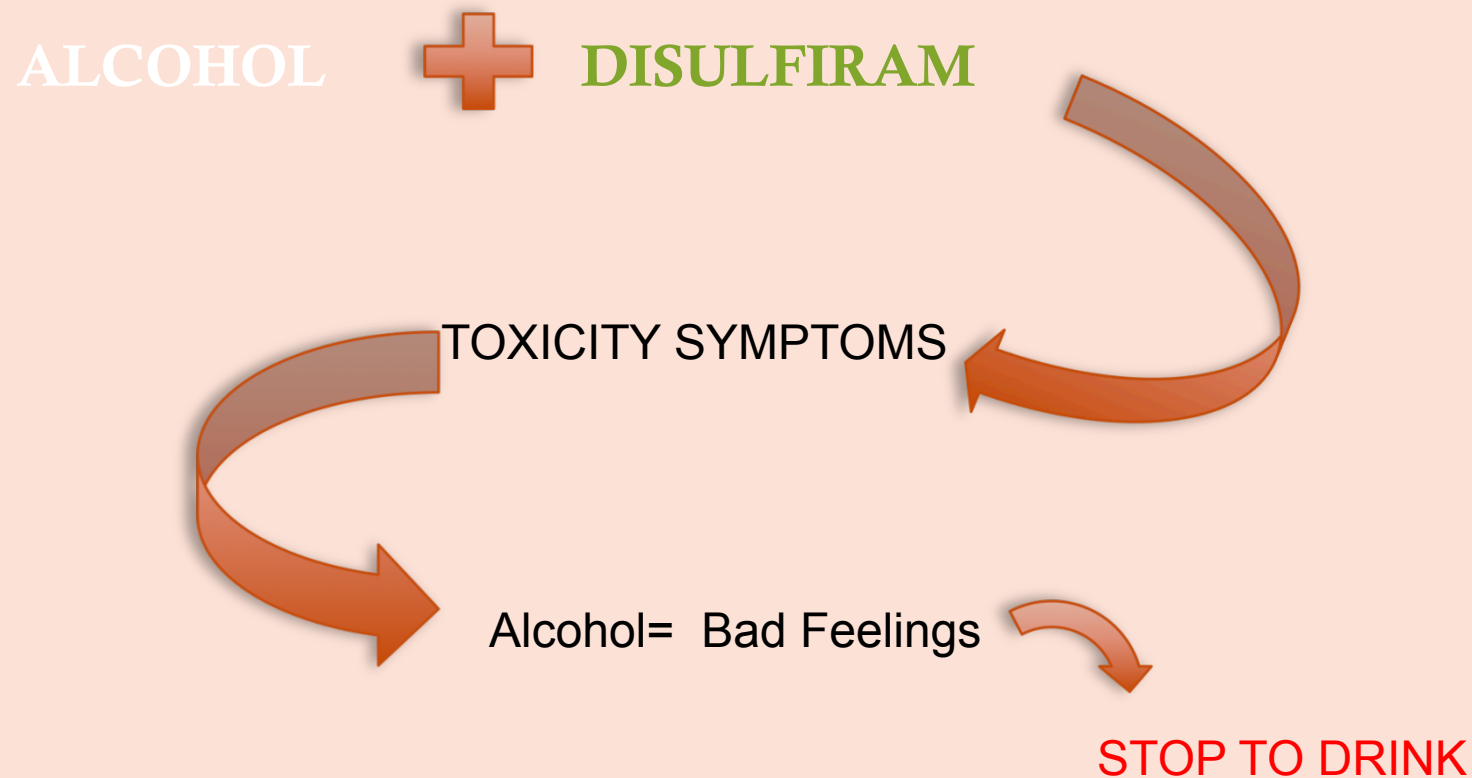








# TREATMENT of ALCOHOL ADDICTION



***(Aversive Conditioning)***

# Panic Disorder





# PANIC DISORDER

## Signs and Symptoms of Panic Attack:

Racing heart beat  
Hyperventilation  
Profuse sweating  
Uncontrolled shaking or trembling  
Hot flashes  
Headache  
Perceived threat or immediate danger  
Tingling sensation on the feet or hands  
Fear of the unknown  
Acid reflux  
Agoraphobia  
and nausea among many others.



# What are the criteria for agoraphobia?



- Anxiety about being in places where one might have a panic attack or where help or escape might be difficult
  - Outside alone
  - Being in a crowd
  - Standing in line
  - Being on a bridge
  - Traveling in a confined space
  - And so on
- Feared situations are avoided or reassuring companionship is sought
- This phobic avoidance is not better accounted for by another mental disorder

# What are the criteria for panic disorder?

- Both
  - Recurrent unexpected panic attacks
  - At least one of the attacks has been followed by a month (or more) of one (or more) of the following
    - Persistent concern about future attacks
    - Worry about the implications of the attacks
    - A significant change in behavior because of the attacks
- The presence or absence of agoraphobia
- Attacks are not substance-induced
- Attacks are not better accounted for by another mental disorder



# Examples of misinterpretation by which **physical sensations** is accompanied

## Duyum

## Tipik yanlış yorumlama

Heart palpitations

I am having heart attack

shortness of breath

My breathing will stop

Feelings of derealization or depersonalization

I am going to crazy

Tingling sensation, feeling shaky

I will faint

faintness and dizziness,

I will have stroke, I will die

# Questioning to reveal the logical errors

- 🔥 How do you know that it will occur in that way?
- 🔥 Anxiety aims to keep alive the body not to death.
- 🔥 Nobody has been died from panic attack.
- 🔥 What is the difference between a man running and a man having panic attack?

# Depressive Disorder



## Clinical Diagnosis of Major Depressive Episode

- └ 5 or more of the following nearly every day for 2 weeks
- └ Depressed mood
- └ Diminished interest or pleasure in all activities
- └ Decreased appetite, weight loss in the absence of dieting, or weight gain
  - └ Insomnia or hypersomnia
- └ Psychomotor agitation or retardation
- └ Fatigue or loss of energy
- └ Diminished concentration or indecisiveness
- └ Thoughts of death, suicidal ideation (with or without a plan)

# Cognitive Behavior Therapy

- Cognitive therapy assumes that thought patterns can cause a disturbance of emotion or behavior
  - Depressed mood caused by *cognitive distortions*
    - “Nothing good ever happens to me”
  - Emotional upset is due to *irrational beliefs*
    - “I must be loved by everyone”

# Learned helplessness

- 🔥 Absence of positive reinforcement





If a person experiences the breakup of a close relationship (A)

and holds the irrational belief (B) that " I'll never be loved again,"

this triggers negative emotions (C) that in turn feed back into support of the irrational belief.

Martha: The basic problem is that I'm worried about my family. I'm worried about money. And I never seem to be able to relax.

Therapist: Why are you worried about your family? ... What's to be concerned about? They have certain demands which you don't want to adhere to.

Martha: I was brought up to think that I mustn't be selfish.

Therapist: Oh, we'll have to knock that out of your head !

Martha: My mother feels that [ shouldn't have left home- that my place is with them. There are nagging doubts about what I should-

Therapist: Why are there doubts? Why should you?

Martha: I think it's a feeling I was brought up with that you always have to give of yourself. If you think of yourself, you're wrong.

Therapist: That's a belief. Why do you have to keep believing that-at your age? You believed a lot of superstitions when you were younger. Why do you have to retain them? Your parents indoctrinated you with this nonsense, because that's their belief .... Who needs that philosophy? All it's gotten you, so far, is guilt

# ***The Self-Defeating Rules (Irrational Beliefs)***

A small number of core beliefs underlie most unhelpful emotions and behaviours. Core beliefs are underlying rules that guide how people react to the events and circumstances in their lives. Here is a sample list of such of these:

1. I need love and approval from those around to me.
2. I must avoid disapproval from any source.
3. To be worthwhile as a person I must achieve success at whatever I do.
4. I can not allow myself to make mistakes.
5. People should always do the right thing. When they behave obnoxiously, unfairly or selfishly, they must be blamed and punished.
6. Things must be the way I want them to be.
7. My unhappiness is caused by things that are outside my control – so there is nothing I can do to feel any better.

## *The Self-Defeating Rules (Irrational Beliefs) (contd.....)*

8. I must worry about things that could be dangerous, unpleasant or frightening – otherwise they might happen.
9. I must avoid life's difficulties, unpleasantness, and responsibilities.
10. Everyone needs to depend on someone stronger than themselves.
11. Events in my past are the cause of my problems – and they continue to influence my feelings and behaviours now.
12. I should become upset when other people have problems, and feel unhappy when they're sad.
13. I shouldn't have to feel discomfort and pain.
14. Every problem should have an ideal solution

# Case 2

## The questioning of Socrates



T: You have mentioned that you are not good as a child. That is the reason for your idea that if you have not satisfied to your mother you can not satisfy anybody. How much believe to this idea?

P: As a proportional?

T: Yes

P: 80%

T: Your belief should be very strong and it seems so real for you. Could you explain to me, howcome if you could have satisfied your mother it means you would satisfy also other people.

P: My mom always knows very well which is correct. She is as if a symbol that knows matter what is acceptable or not for people. If I witness this condition.....

T: So, do you mean that your mother can decide which is useful or not?

P: Sure. She is right on this subject.

T: How do you consider that She is right ?  
Does she good at understanding the people?

P: Yes, She is smart for problem solving.  
She achieved more. If you have listened to her You would understand me.

T: You believe that your mom's judgement for people always on the point and already your idea is that If you can not get your mom satisfy you can not get other people satisfy. It shows your idea is very strong and that degree of your faith is 80 %. And you believe that If you do not satisfy your mother you are supposed as a bad child.

P: Yes

T: Are there more people that your mom likes?

P: No, my mom is a bit strict.

T: Strict?

P: She likes a few people, less people correspond her criteria.



T: How many people does your mom like really?

P: She likes really?

T: Yes, in your family or your enviroment, how many people are there your mom likes?

P: Not so much, a few person, she accept good...  
Yes, she likes her doctor, she thinks that he is a perfect doctor.

T: Ok, does her doctor only one person she like?

P: There is a close friend that she likes.

T: I wonder because I do not know your mother.  
How many people does your mom know for  
example your family, relatives, known persons.

P: She comes from a big family.

**T: 10-15**

P: 40-50

T: Does she like only 1-2 person from these  
40-50 people, does not she ?

P: Yes, it is not so much, isn't it ?

T: Ok, do you agree with her about this subject, only 1-2 person are good from these 40-50 people?

H: No, certainly more.

T: In this occasion, what do you think about your mom's assumptions and judgements ?

H: She has so critical suggestions.

T: She seems as strict. It is so difficult that can be placed as a good person in her list.

H: Yes

T: I wonder, Do you like any person in your family ?

H: Sure.

T: Who is?

H: My father.

T: What are your father's features in good way?

H: He is talkative, optimistic, has good relationship with other person, has good approach to the problems.

T: Yes, these are positive. Does he has much more for example being hardworking?

T: yes, he is hardworking and manage the money.

T: Yes, he seems as good person. Do other people think in this way that your father is good?

H: yes, more people like my dad.

T: At this view of point, can we say he has nice personality features?

H: yes, sure.

T: Does your mom like yor dad? Does she accept him as a good person?

H: Do you mean that Does she appreciate him? She thinks rarely as you mean.

T: In this case, does she think in opposite way?

H: Yes, she makes criticism about him. He is dislike that she has expected.

T: Ok, your mom can make criticism about a person who has good personality features? This person (dad) can not fit your mom's criteria.

H: Yes

T: Do you correspond to these criteria?

H: My mom is so critical person, Even if she makes criticism about my dad so it is too hard that not to find any point for me.

T: ok, If we had made a decision according to your mom beliefs it would be so difficult for us? We would find any right person in this case?

H: could you repeat?

T: It is too hard that say to right person from the view of point your mom.

H: Correct, You are right.

## CASE 3

C: My sister called me and said and left a message saying, “I’d like to take you out for your birthday.” And for some reason it really upset me all day yesterday and I was out in the coach house and I cried, I was very emotional and I thought I won’t go to lunch with you because I might say something and you’ll criticize me. She’s very critical. She has, I guess, an ideal life and she looks at my life and she’s the one who called me and told me to get a lawyer, and then I never heard from her for months when [husband] came out of the hospital. And she wonders why I don’t come around. How do you think we feel? They told me to go, to leave him. Because he’s mentally ill. So you’re supposed to go over there and feel like everything’s OK?



T: So actually it sounds you're feeling quite resentful toward them.

C: I am.

T: It's hard to sort of put on a funny face and go for a birthday lunch or whatever. It's a pretend. But it also ends up somehow in you crying and—

C: It makes me depressed. Yes.

T: Because in a way it's like you're mad at her for how's she's treated you.

C: Yes, I am.

T: And also it gets into a kind of vulnerability to, that she's going to criticize you or something—

C: I feel that I'm too sensitive. I mean sometimes when I have got angry in the past I just told her to—but I'm at the point now where I don't want to argue. Basically I want them to leave me alone. That's how I feel. And I know that's not good. Christmas is coming and I dread it.



