ETIOLOGY OF SUBSTANCE ABUSE DISORDERS

Ms. Tapolagna Das
Assistant Professor
Dept. of Psychology
SKBU

WHAT IS SUBSTANCE ?

According to Reber's Dictionary of Psychology (2000), substance is a drug.

- The term substance can refer to a drug that has either positive or negative effect on mental functioning. A drug is any chemical substance that has the ability to alter our biological system. In psychology , we basically deal with psychoactive drugs or substances .

- In pharmacology, a drug is a chemical substance used in treatment, cure, prevention, or diagnosis of disease or used to enhance physical or mental well-being .

PSYCHOACTIVE SUBSTANCES

Which affect brain functions , mood and behavior .

- A **psychoactive drug** is a substance that affect mental functioning and act on the nervous system to alter states of consciousness, modify perceptions, and change moods.
- It typically activates dopamine receptors in the reward pathway of the brain.

ABUSE

- Use of any drug usually by self administration, in manner that deviates from approved social or medical patterns.

MISUSE

- Similar to abuse, but usually applies to drugs prescribed by physicians that are not used properly.

DEPENDENCE

- Repeated and increased use of drugs.
- Deprivation of which gives rise to symptoms of distress.
- Increased urge to use the agent.

CONT.

- Leads to physical and mental deterioration.
- Cessation of which results in specific syndrome.

INTOXICATION

- A reversible syndrome caused by a specific substance (e.g alcohol).
- Affects one or more of the following mental functions:

  memory, orientation, mood, judgment, behavioral, social and occupational functioning.

Tolerance

- Tolerance refers to a state of decreased response to a drug following prior or repeated exposure to that drug in comparison to the original effect .
- Progressively more drug is needed in order to obtain the same effect.

Withdrawal

- Occurs after stopping or reducing the amount of drugs that have been used .
- Characterized by physiological symptoms such as vomiting or tremor and psychological changes such as disturbance in cognition, affection and connation.
- Abstinence or discontinuation syndrome.

SUBSTANCE ABUSE

- Substance abuse reflects a maladaptive , harmful pattern of drug use :

- that causes failure to fulfill major role obligations ,
- involves physical hazards and social or interpersonal problems,
- but do not include physical dependence .

SUBSTANCE DEPENDENCE

- Cluster of cognitive, behavioural and physiological symptoms indicating that the individual continues to use the substance despite significant substance-related problems.

- There is a pattern of repeated self-administration that can result in tolerance, withdrawal, and compulsive drug taking behaviour.

- Three Cs : (1) *Control* regarding drug use i.e loss of control ,(2) Continuity or *Continued Use* in the face of adverse consequences ,(3) *Compulsion* to use the drug (Shaffer and Jones,1985) .

HISTORICAL BACKGROUND

- In 1932, the American Psychiatric Association created a definition that used legality, social acceptability, and cultural familiarity as qualifying factors.

- The first edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (published in 1952) grouped alcohol and drug abuse under Sociopathic Personality Disturbances, which were thought to be symptoms of deeper psychological disorders or moral weakness.

- In 1966, the American Medical Association's Committee on Alcoholism and Abuse defined abuse of stimulants (amphetamines, primarily) in terms of 'medical supervision'.

- In 1973, the National Commission on Marijuana and Drug Abuse stated:

  ...drug abuse may refer to any type of drug or chemical without regard to its pharmacologic actions. It is an eclectic concept having only one uniform connotation: societal disapproval.

DSM III published in 1980, was the first to recognize substance abuse (including drug abuse) and substance dependence as conditions separate from substance abuse alone, bringing in social and cultural factors. The definition of dependence emphasized tolerance to drugs, and withdrawal from them as key components to diagnosis, whereas abuse was defined as "problematic use with social or occupational impairment" but without withdrawal or tolerance.

- In 1987, the DSM-IIIR categories "psychoactive substance abuse," which includes former concepts of drug abuse is defined as "a maladaptive pattern of use indicated by...continued use despite knowledge of having a persistent or recurrent social, occupational, psychological or physical problem that is caused or exacerbated by the use (or by) recurrent use in situations in which it is physically hazardous." It is a residual category, with dependence taking precedence when applicable. It was the first definition to give equal weight to behavioral and physiological factors in diagnosis.

- By 1988, the DSM-IV defines substance dependence as ‘a syndrome involving compulsive use, with or without tolerance and withdrawal"; whereas substance abuse is "problematic use without compulsive use, significant tolerance, or withdrawal.’

- The DSM-IV-TR, defines substance dependence as "when an individual persists in use of alcohol or other drugs despite problems related to the use of the substance, substance dependence may be diagnosed.

CHANGES IN DSM V

- DSM-V does not separate the diagnoses of substance abuse and substance dependence.
- Criteria are provided for substance use disorder accompanied by criteria for intoxication, withdrawal, substance induced disorder and unspecified substance related disorder.
- Within substance use disorder, the DSM-IV recurrent substance related legal problems criterion has been deleted from DSM-V and new criterion- Strong desire or urge to use a substance has been added.

ICD - 10	DSM IV
Disorders due to psychoactive drug use	Substance related disorders
1. Acute intoxication 2. Harmful use 3. Dependence syndrome 4. Withdrawal state 5. Withdrawal state with delirium 6. Psychotic disorders schizophrenia like : predominantly delusional predominantly polymorphic predominantly depressive symptoms predominantly manic symptoms mixed	I. Substance use disorders 1. Dependence 2. Abuse II. Substance induced disorders 3. Intoxication 4. Withdrawal 5. Withdrawal delirium 6. Persisting dementia

7. Amnestic Syndrome 8. Residual & late onset psychotic disorders. flashbacks. personality or behavior disorder. residual affective disorders. Dementia. Other persisting cognitive impairment. Late onset psychotic disorder. 9. Other mental & behavioral disorders. 10. Unspecified mental & behavioral disorders.	7. Persisting amnestic disorder. 8. Psychotic disorder With delusions. With hallucinations. 9. Mood disorder 10. Anxiety disorder 11. Sexual dysfunctions 12. Sleep disorders

Summary

ICD – 10 uses the term disorders due to psychoactive substance abuse where as DSM –IV uses substance related disorders.

- ICD-10 considers all the disorders in one common list but DSM IV divides them into 2 groups : 1) substance use disorders – a) dependence b) abuse ; 2) substance induced disorders.
- *Substance abuse disorders* of DSM IV is a wide concept where as *harmful use* category of ICD- 10 is a restrictive concept.

The substance induced disorders category of DSM IV additionally include sleep disorders and sexual dysfunctions as specific category.

CLASSIFICATIONS

Classifications	Effects
Alcohol Related Disorders	CNS depressant, progress from mood lability, impaired judgment, and poor coordination to increasing level of neurologic impairment (severe dysarthria, amnesia, ataxia, obtundation)
Amphetamines (or amphetamine–like) Related Disorders.	General arousing agent, paranoia, delusions, hallucinations, referred to as amphetamine psychosis.
Caffeine Related Disorders. (Tea & Coffee)	Headache, marked fatigue or drowsiness, dysphoric mood, depressed mood or irritability, difficulty in concentrating, flu-like symptoms.

Cannabis Related Disorders **(marijuana, ganja, hush, weed)**	**Damage to CNS, endocrine and digestive system, pleasant sensations, colours and sounds may seem more intense ,time appears to pass very slowly, may suddenly become very hungry and thirsty .**
Cocaine Related Disorders,	Powerful burst of energy and sense of well-being, an elevation in the sympathetic ANS, hallucinations and deep depression
Hallucinogens Related Disorders (LSD, PCP, Psilocybin, Mescaline, DMT, Foxy, Dextromethorphan)	Increase body temperature, increased heart rate ,increased blood pressure, loss of appetite, sleeplessness, loss of thought process control, fusion of the senses ,bad trips, distorted perception of time, flashback.
Inhalants Related Disorders (Glues, Cleaning products (ammonia) ,Spray paints, Markers ,Gasoline and other Fuels, Shoe polish,White out)	Dizziness, incoordination ,slurred speech , unsteady gait, lethargy, depressed reflexes, psychomotor retardation, tremor, generalized muscle weakness, blurred vision , stupor or coma, euphoria.

Nicotine Related Disorders (Tobacco)	**Dysphoric or depressed mood, insomnia, irritability, frustration, or anger, anxiety, difficulty concentrating, restlessness, decreased heart rate, increased appetite or weight gain.**
Opioids Related Disorders (Morphine and Heroin)	Pinpoint pupils, sedation, constipation, bradycardia, hypotension and decreased respiratory rate, agitation.
Phencyclidine (or phencyclidine-like) Related Disorders,	Vertical or horizontal nystagmus, hypertension or tachycardia, numbness or diminished responsiveness to pain, ataxia, muscle rigidity, seizures or coma,hyperacusis .
Sedative-hypnotic or anxiolytic.	Slurred speech, incoordination , impairment in attention or memory, (transient visual, tactile, or auditory hallucinations or illusions,) grand mal seizures.

EPIDEMIOLOGY: (DSM – V)

- Individuals ranging from 18-24 years have relatively high prevalence rates for the use of virtually every substances.

- More common in men than women.

- Intoxication is usually the initial substance-related disorders and often begins in teens.

- Withdrawal can occur at any age .

- Alcohol use disorder is a common disorder. In the United States, 4.6% among 12-17 year olds and 8.5% among adults age 18 years and older.

Amphetamine type stimulant use disorder in US is 0.2% among 12 to 17 years olds and 0.4% among 18-29 years old individuals. Male to female ratio is 4:1.

Rate of cannabis is 3.4% among 12-17 year olds and 4.4% among 18-29 year olds.

Opioid use disorder in United States is 0.37% among 18 years and older adults. Male to female ratio 1.5:1.

- Use of hallucinogen is 0.5% among 12-17 year olds and 0.1% among adults age 18 and older in United States.

- Rate of inhalant use is about 0.4% among 12-17 years old and 0.1% among 18-29 years old in America.

Cigarettes are most commonly used tobacco product, representing over 90% of tobacco use.

Prevalence rate for caffeine related disorder is approximately 7% though real rate is not clear.

- The prevalence of phencyclidine use disorder is unknown. Approximately 2.5% of the population reports having used phencyclidine that varies from age , from 0.3% of 12 to 17 years old, to 1.3% of 18 to 25 years old, to 2.9% of those age 26 years and older.

- The prevalence of sedative, hypnotic or anxiolytic use disorder are estimated to be 0.3% among 12 to 17years and 0.2% among 18years and older.

- In India, prevalence rate of alcohol related disorder is 43.9%, opioid related disorder is 61.3%,cannabis related disorder is 15.5%, cocaine related disorder is 2.5%, sedative related disorder is 4.1%, amphetamine is 0.2% and for tobacco prevalence rate is 59%.

-Indian Journal Of Psychiatry,2010.

ETIOLOGY

BIOLOGICAL VIEWPOINTS

1) Genetic Studies :

- The genetic makeup of individuals predisposes them toward drug abuse and alcoholism .This "genetic loading," in combination with environmental and personality factors, could make for a significantly higher level of drug abuse or alcoholism in certain individuals or groups in the population (Schuckit,1980).

- For males , having one alcoholic parent increased the rate of alcoholism from 12.4% to 29.5% and having two alcoholic parents increased the rates to 41.2% .

- For females, for those with one alcoholic parent, the rate was 9.5% and for those with two alcoholic parents, the rate was 25.0%.

2) **Adoption Studies:**

- ✓ Goodwin and colleagues (1999) found that children of alcoholic parents who had been adopted by non-alcoholic foster parents were nearly twice more likely to have alcohol problems by their late twenties than the control group children whose real parents were non-alcoholic.

- ✓ Same study compared alcoholic parents' sons who were adopted by non-alcoholic parents with sons raised by their own alcoholic parents found 25% and 17% of rates of alcoholism respectively.

3) **Twin Studies:**

- ✓ Greater risk in monozygotic twins than dizygotic twins.

Temperament:

Some temperamental characteristics such as novelty seeking, harm avoidance , impulsivity, immaturity, anxiety are associated with substance abuse and dependence (Cloninger,1992).

NEUROBIOLOGY OF BRAIN

1) ***Selective functions of brain***

- The development of addiction is thought to involve 2 simultaneous process of 1) increased focus on and engagement in a particular behavior and 2) the attenuation or "shutting down" of other behaviors.

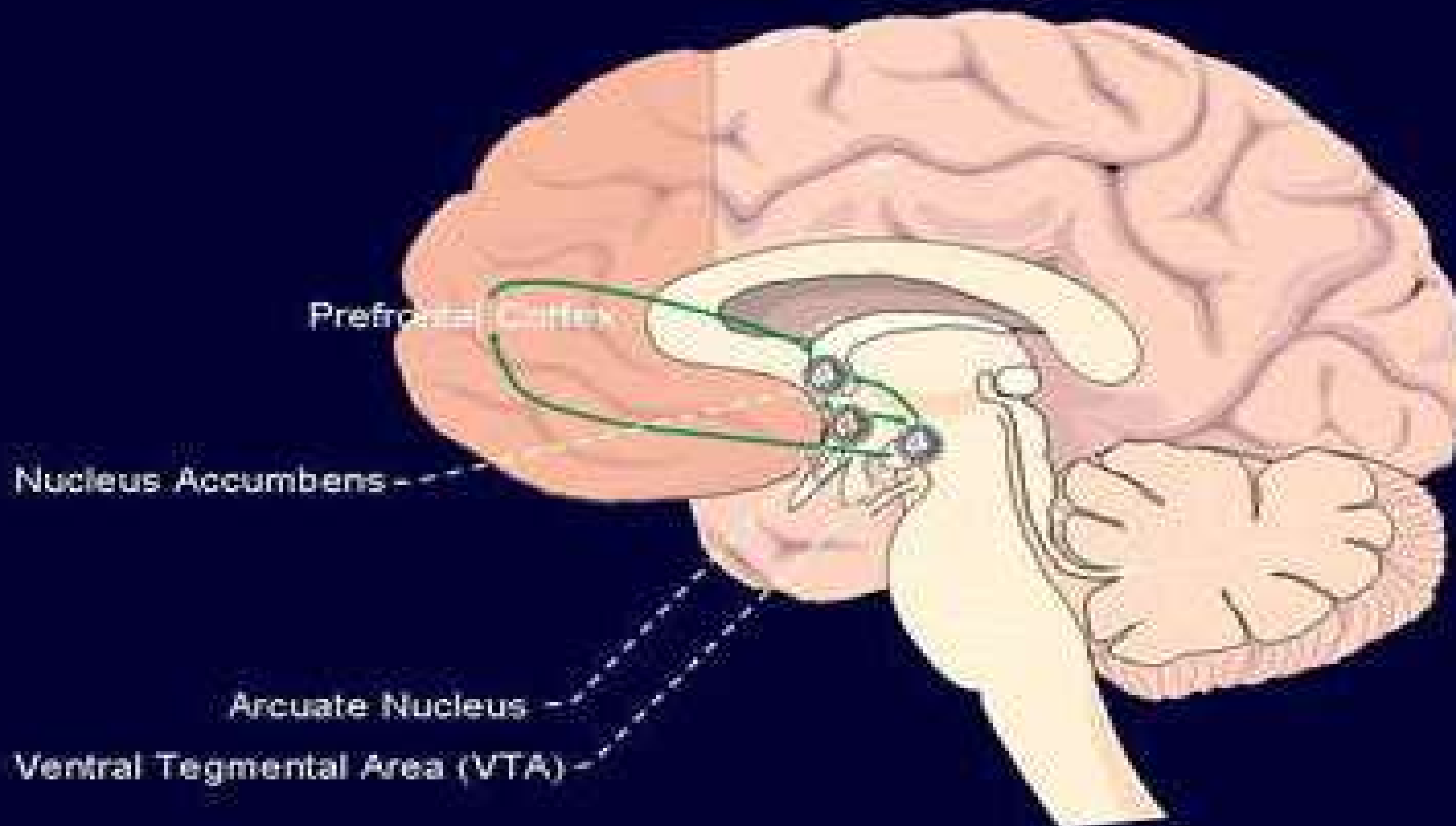
- The neuro-anatomical correlate of this is that the brain regions involved in driving goal-directed behavior grow increasingly selective for particular motivating stimuli and rewards, to the point that the brain regions involved in the inhibition of behavior can no longer effectively send "stop" signals.

2) The mesocorticolimbic dopamine pathway / Pleasure pathway :

- The MCLP is the center of psychoactive drugs in the brain . It is made up of axons or neuronal cells in the middle portion of the brain known as ventral tegmental area and connect to the other brain centers such as nucleus accumbens and then to the frontal cortex . Alcohol produces euphoria by stimulating this area in the brain and so as increasing dopaminergic activity in the same area which tend to change the brain's normal activity and activate pleasure pathway .In this way brain reward systems are reinforced, so further use is promoted.

(liebman&Cooper,1989;Littrell,2001)

Neuroanatomy of the Brain Reward System



Adapted from Nestler EJ, Malenka RC. Sci Am. 2004;290:78-85.

ROLE OF NEUROTRANSMITTERS

1) ***Opioid System:***

- Opioid may regulate the food intake and affective response to sweet taste , and they are also believed to mediate the responses to emotional and physical stress . Opioid drugs produce psychoactive effect by acting on central opioid system in nucleus accumbens (Cooper and Kirkham,1999).

- The role of opiate system in the development of alcohol dependence has also been proposed, with major hypothesis that these persons are deficient in the activity of their opiate systems and the intake of alcohol compensates for such deficiency (Niaua,R & Abramd,D. et.al,1997)

2) **Glutamate**:

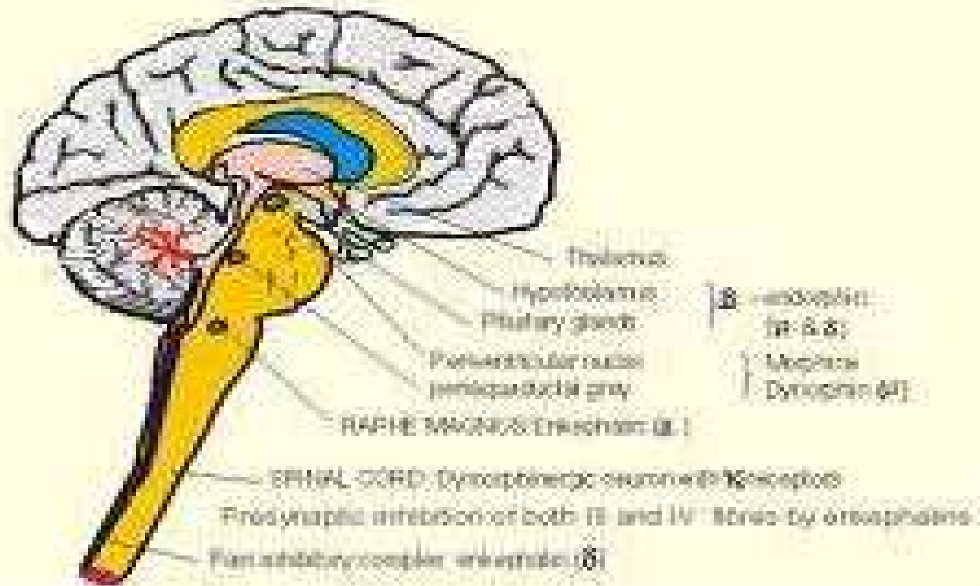
- At higher levels, some substances such as alcohol depresses brain functioning , inhibiting one of the brain's excitatory neurotransmitters, glutamate, which in turn slows down activity in parts of the brain.

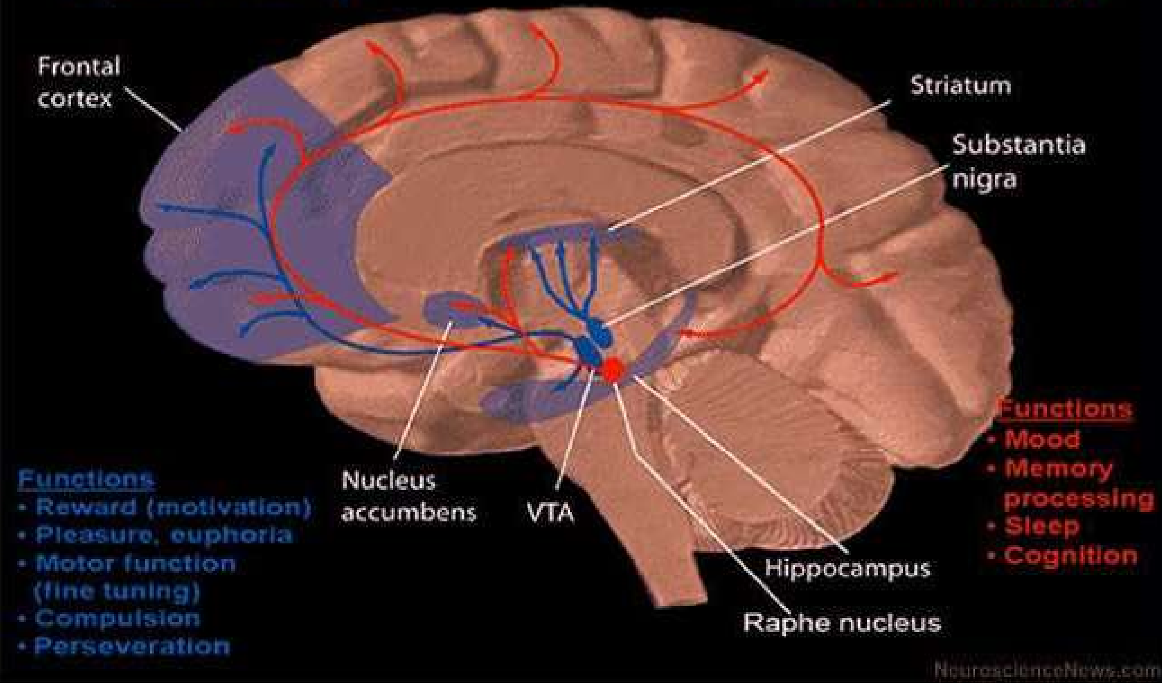
- Inhibition of glutamate in the brain impairs the organism's ability to learn, judgment, other rational processes and lowering self control. Drinker experiences a sense of warmth, expansiveness, self esteem and adequacy rise and the drinker enters a generally pleasant world in which worries are temporarily left behind (Koob & Mson, et.al.,2002).

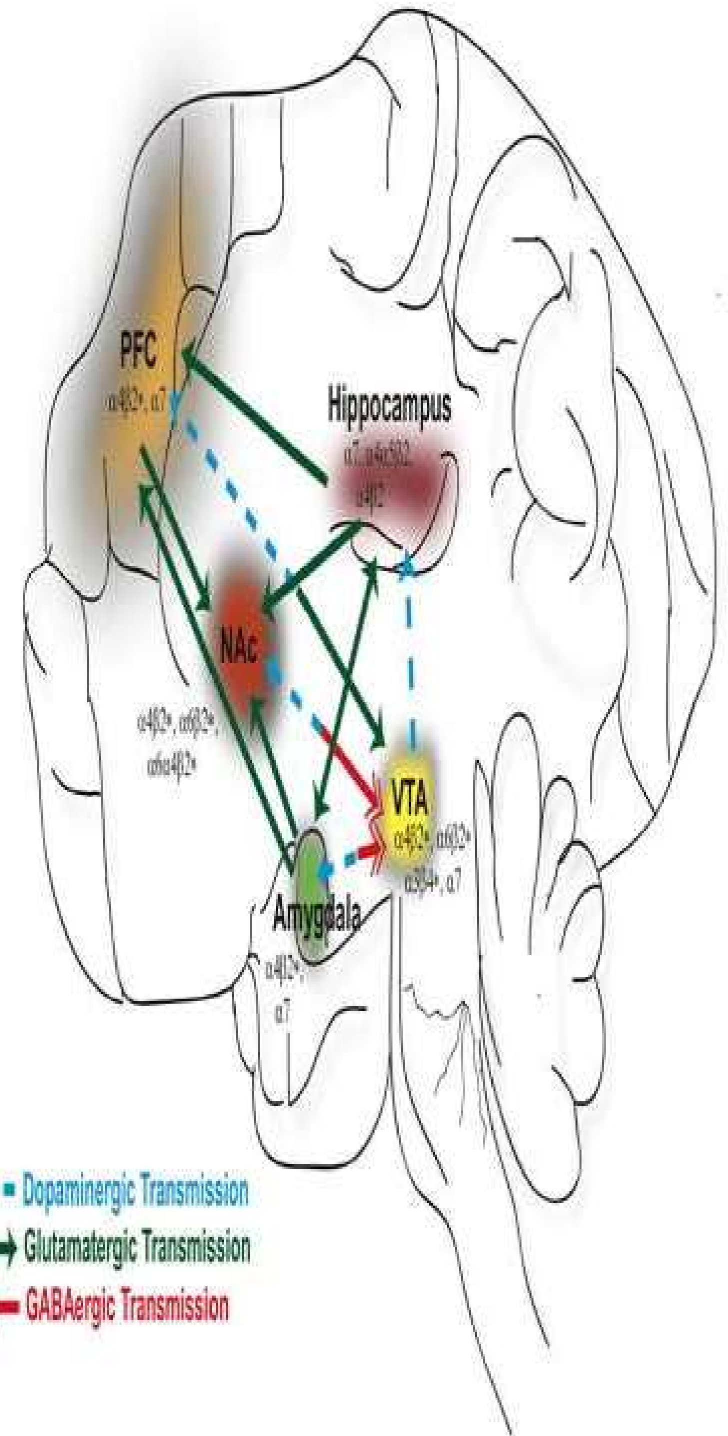
3) Serotonin:

- Studies in which serotonin functions was increased by means of brain or peripheral injections of serotonin or its precursor, serotonin reuptake inhibitors , serotonin agonists have found that an increase in the serotonergic functions leads to decrease in alcohol and other substance consumption because it modulates dopamine activities.

- So, lower activity of serotonin is associated with increment in abuse .


OPIATE RECEPTORS IN THE CNS
Thalamus
Hypothalamus
Pituitary glands
RAPHE MAGNUS


Dopamine Pathways
Serotonin Pathways
Frontal cortex
Striatum
Substantia nigra
Nucleus accumbens
VTA
Hippocampus
Raphe nucleus
Functions
• Reward (motivation)
• Pleasure, euphoria
• Motor function (fine tuning)
• Compulsion
• Perseveration
Functions
• Mood
• Memory processing
• Sleep
• Cognition
NeuroscienceNews.com


PFC
Hippocampus
NAc
VTA
Amygdala
Dopaminergic Transmission
Glutamatergic Transmission
GABAergic Transmission

4) **Membrane Studies:**

- A large part of the research on the membrane mechanisms for the development of tolerance and dependence has been focusing on substance induced changes in the membrane receptors and intracellular signaling systems .

- In studies on acute effects of glycine, NMDA, AMPA and Kaitin receptors have emerged as the possible sites of alcohol actions. Some of these sites have changed with chronic alcohol exposure, alongside changes in the ions (Valenzuela C.F & Harris R.A,1997)

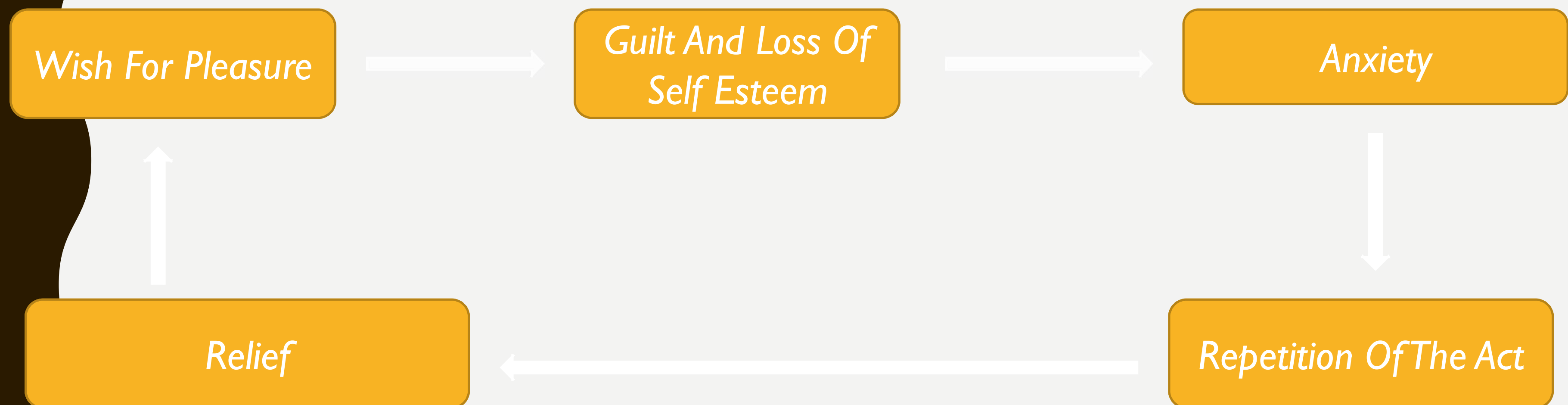
CRAVING : NEUROTRANSMITTER PERSPECTIVE

- Craving has been linked to the changes in the concentrations of the neurotransmitters in the brains like that of nucleus accumbens and hippocampus and which is one anatomical sites suggested for craving because it is seat for learning, memory and conditioned responses.
- Dopamine and endorphins in regions like nucleus accumbens and hippocampus has been associated with craving for cocaine and stimulant use .
- Changes in endorphins and serotonin levels have been linked craving for alcohol.

PSYCHODYNAMIC VIEWPOINT

Early Psychodynamic Theories

Freud considered abuse/ addiction as substitution for regressive, infantile auto-eroticism, which was first experienced as pleasurable then unpleasurable, the vicious cycle of most addiction.



- **Fixation** : children who are fixated at oral stage ranging from 0 to 2 years of psychosexual stages , have more vulnerability for substance abuse and to develop dependence . They either try to continue the oral pleasure (in case of over fulfillment) or to compensate the deficiency (in case of under fulfillment) via substance abuse .

- Karl Abraham stressed the role of alcohol in reducing sexual inhibitions in men. He theorized that male alcoholics have intense conflicts about homosexuality and that alcohol allows them to express these unconscious feelings in a way that is socially acceptable.

- Rado has suggested that addicts take drugs to find relief from a specific type of depression.

- Glover had proposed addiction as a way of expressing aggressive and sadistic instincts.

- Balint characterized the alcoholics as having a basic character flaw which he called the ‘basic fault’ , and suggested that a patients resort to alcohol as a means of correcting the fault within himself.

- Substance abuse is a masturbatory equivalent as some heroine users describe the ‘initial rush’ as similar to prolonged sexual orgasm.

B) Recent Psychodynamic Theories

- ***WEAK EGO FUNCTIONS***: Modern psychodynamic notion views substance abuse as an attempt to compensate for major deficits in ego development and affect (Khantzian , 1994) .Thus , drugs are used to reduce painful emotional states or as defense mechanism in relation to an internal conflict (Shaffer and Jones , 1985).

- ***OBJECT RELATION THEORIES***: The early experiences of the child with the mother have become increasingly important in understanding the etiology of the addictive core of the self.

CONT.

Thus, psychoanalysis of the substance has centered on stages of structural development, including appropriate functions of the ego and a secure sense of self. As traumatized adult, these individual seek self regulation outside of themselves through alcohol or other drugs or via addictive relationships.

- Wieder & Kaplan emphasized that the dominant conscious motive for substance use is reduction in distress that the individual cannot achieve by his own psychic efforts.

- Rothschild had stated that in substance abusers, the improvements of ego functions are typically defended against by denial.

- ***Object Deficits In later life*** : Need for drug is also seen as reflecting 'object deficits' ; lack of gratifying relation with others . Acc to this view point , the substance function as an external aid or transitional object in order for the person to maintain a sense of well being . Thus , substance abuse is a way to cope with the anxiety associated with intimacy i.e lack of emotional relationships (Hendin ,1974).

C) DEFENSE MECHANISMS

The perpetuating role of some of the defense mechanisms, conscious or unconscious or partially both, in persons with substance abuse disorders is well accepted.

- **Denial:** It is one of the commonest and the strongest defense mechanism by which the person denies the use pattern (amount or frequency of use) the problems associated with the use, the loss of control over one's use pattern and need for external help.
- Eg: 'People say things about me taking drugs for no reasons.'

- **Rationalization:** The person believes in and provides an apparently logical explanation for the substance use or its pattern, based on the circumstances and other persons around.

  Eg: 'Everybody around here is into using alcohol.'

- **Projection:** The person perceives and attributes the origin and / or perpetuation of substance use pattern or the related problems as emanating from some other person or source, instead of being part of one's own behavior.

  Eg: 'My friends always have thing for drinking.'

- **Intellectualization –**

Intellectualization allows us to keep from feeling emotional connection to our behavior. It allows us to focus on the thinking aspects of something to deflect personal connection.

An example might be the cannabis addict who tries to divert and deflect attention from talking about the impact of pot on his own life by trying to engage in a debate over legalization of pot.

- **Displacement:** Redirecting feelings to vulnarable substitutes.

  Eg: 'After I have few joints, I forget about how much I hate school.'

- **Identification:** Assuming desired attributes of another person through fantasized associations.

  Eg: I really admire his cool, and drugs are just part of it.

- **Regression**: Reverting to developmentally immature behavior.

  Eg: 'What's really wrong with getting high?'

- **Reaction Formation:** Demonstrating exaggerated moralistic actions that are directly contrary to cognitive and affective functioning.

  Eg: 'Anybody who is in drug is mentally deranged.'

- **Repression:** Excluding from awareness intolerable cognitions and affect.

  Eg: 'I can not really recall having any problems with substance abuse.'

- **Undoing**: Nullifying a perceived transgression through a reverse action.

  Eg: 'I like getting high, but I never do it.'

-Defense Mechanisms in Counseling Processes

By Arthur J Clark

BEHAVIOURAL VIEWPOINT

1) OPERANT CONDITIONING :

***Positive Reinforcement* :** The positive reinforcement models focus on the pleasurable , euphoric feelings induced by drugs , alteration of mood and posit that these powerful rewarding effects are the primary explanation of drug use (Carroll & Bickel ,1998).

***NEGATIVE REINFORCEMENT* :** People also become negatively reinforced to use substances . Findings of Steele & Joseph , 1988 stated that alcohol may produce its tension reducing effect by altering cognition and perception and narrowing attention to cues related to tension and conflict so people continue to take substances to avoid negative moods .

2) CLASSICAL CONDITIONING

- Acc to this viewpoint , drug is a non conditioned stimulus that becomes associated with many signals in the user's environment : sight , sounds, feelings, situations .These signals become powerful conditioned stimuli through their repeated pairing with the drug state and they may contribute to the reinstatement of drug seeking behavior (Wikler ,1973).

OPPONENT- PROCESS THEORY

The opponent process theory of acquired motivation has strongly influenced the notion of addictive behavior (Solomon & Corbit ,1974).

- A desire or craving for a drug , which clearly did not exist before experience with the substance , increases with exposure to it.

It is based on three important phenomenon:

- **STRESS AND COPING THEORY:** stressful life circumstances emanating from family members and friends, work, financial and other problems lead to distress and alienation and eventually to substance misuse.

PERSONALITY FACTORS

Is there an alcoholic person?

- Investigators have found that many potential alcohol abusers tend to be emotionally immature , expect a great deal of the world, require an inordinate amount of praise and appreciation, react to failure with marked feelings of hurt and inferiority, have low frustration-tolerance, and feel inadequate and unsure of their abilities to fulfill expected males or females role. Person at high risk for developing alcohol-related problems are significantly more impulsive and aggressive than those at low risk for abusing alcohol (Morey & Skinner,2004).

- The ***FREE-WILL MODEL OR LIFE-PROCESS MODEL*** proposed by Thomas Szasz and later refined by Jeffrey Schaler .

Individuals are capable of deliberate action in pursuit of chosen goals, and that physiology alone can never determine whether a person will take a drug, or how often they will take it. It depends on the will of the person.

- The free-will model is opposed by groups like the American Psychiatric Association and the National Institute of Mental Health.

The ***PLEASURE MODEL*** proposed by professor Nils Bejerot.

- Abuse "is an emotional fixation (sentiment) acquired through learning, which intermittently or continually expresses itself in purposeful, stereotyped behavior with the character and force of a natural drive, aiming at a specific pleasure or the avoidance of a specific discomfort."

- The pleasure mechanism may be stimulated in a number of ways and give rise to a strong fixation on repetitive behavior. Stimulation with drugs is only one of many ways.

The ***EXPERIENTIAL MODEL*** devised by Stanton .

Argues that abuses occur with regard to experiences generated by various involvements, whether drug-induced or not.

- This model is in opposition to the disease, genetic, and neurobiological approaches.

- Among other things, it proposes that abuse is both more temporary or situational than the disease model claims, and is often outgrown through natural processes.

The ***MORAL MODEL*** states that abuses are the result of human weakness, and are defects of character.

Do not accept that there is any biological basis for Abuse.

- Person with greater moral strength could have the force of will to break an abuse, or that an addict demonstrate a great moral failure in the first place by starting the abuse.
- The moral model is widely applied to dependency on illegal substances, perhaps purely for social or political reasons.
- Focus on individual choices, have found enduring roles in other approaches to the treatment of dependencies.

SOCIOCULTURAL VIEWPOINT

- **SOCIAL CONTROL THEORY**:

What causes drug use, like most or all deviant behavior, is the absence of social controls encouraging conformity. Most of us do not engage in deviant or criminal acts because of strong bonds with or ties to conventional, mainstream persons, beliefs, activities, and social institutions. If these bonds are weak or broken, we will be released from society's rules and free to deviate—and this includes drug use.

- **SOCIAL LEARNING THEORY**:

Modeling effects begins with observation and imitation of substance-specific behaviors , continue with social reinforcement for and expectations of positive consequences from substance use and culminate in substance use and misuse.

1) CULTURAL ATTITUDES :

- Culture shapes our behavior.

- Acceptable behavior in one's culture affects one's interest and behaviors and so as their drinking habits.

- De Lint (1978) found high consumption rates typically in wine drinking societies such as France , Spain ,Italy.

In India, the cultural traditions and permissiveness of alcohol use in Punjab has been seen to be associated with higher rates of alcohol use disorders in epidemiological studies where as Gujarat being dry state has been shown to be associated with lower rates of alcohol use disorders.

2) FAMILY

- If both parents smoke, a child is four times more likely to do so.

- Cloninger et.al 1981 found exposures to alcohol use by parents increases child's likelihood of drinking.

- Psychiatric, marital or legal problem in the family and lack of emotional support from family, cohesion, expressiveness, independence and intellectual cultural orientation are also related to substance abuse.

3) **SOCIAL MILIEUS :**

- The social milieu , in which a person operates can also affect substance abuse .
- Richardson et.al found tobacco use among high school students is highest in identifiable sub-groups: those with poor grades, behavior problems and taste of heavy metal music, and found peer group identification as a major cause behind abuse.

4) MEDIA

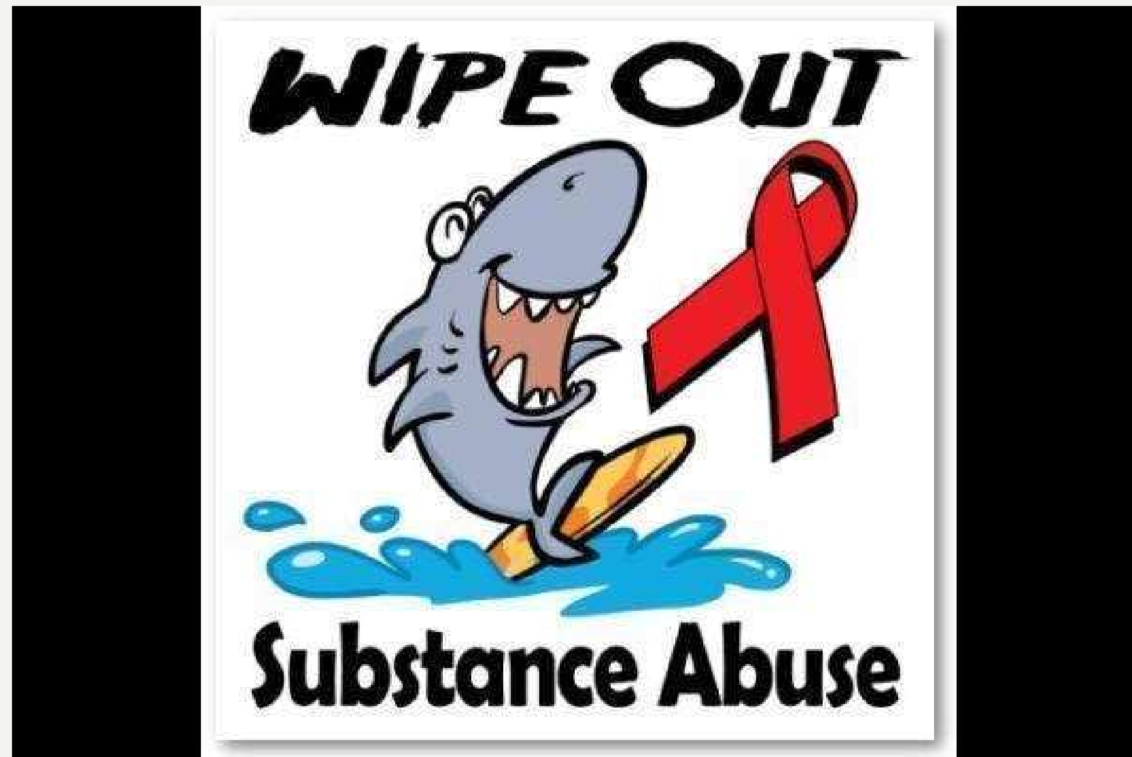
Commercials in which beer or substance abuse is equated with excitement, relaxation or being in style.

- Shaffer, 1991 in his analysis found that those countries that banned advertisements for spirits had 16% less consumptions than those did not.

COMORBIDITY

- Anxiety disorders (33%)
- Mood disorders (29%)
- Schizophrenia spectrum disorders (42%)
- Anti social personality disorders (14-69%)
- Borderline personality disorder (5-32%)
- Adjustment disorders (26%)
- Somatoform disorders(15-20%)
- Externalizing disorders (60%)
- Eating disorders(15%)
- Gambling (50-60%)

TREATMENTS



1) Pharmacotherapy / Medical Approach

- Disulfiram
- Naltrexone
- Nalmefene
- Acamprosate
- Lithium
- Benzodiazepines and other anxiolytics.
- Buspirone
- Serotonergic and Nor-adrenergic agents
- Fluoxetine
- Citalopram

2) Psychological Approach

- Motivational Enhancement Therapy
- Motivational Interviewing

3) Psychodynamic and Interpersonal Therapies

- Brief Therapies
- Family & marital therapy
- Self guided therapy

4) The Socio-cultural Approach

- Primary prevention
- Secondary prevention
- Media regulation
- Role of family
- Group help
  - Alcoholic Anonymous
  - Al-Anon/ Alateen

CONCLUSION

One does not usually intend to become an addict or abuse substance and no one wakes up one morning and decide to be a drug addict in first place . Substance abuse is a burning problem in which not only the victims but their family members also go through a great toil. There are numerous reasons and circumstances in which a person switch to substance abuse . As a mental health professionals , we should keep in our mind those various reasons which compels one to abuse or become an addict . If the aim is to ameliorate the suffering of the victim and to decrease the burden of their family members, we need to decide onto the most appropriate treatment , we must take into consideration all the possible reasons that leads to the abuse and try to cut them down for a successful and fruitful treatment.