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Research Paper

Cognitive Distortions and Its Therapy for Alcohol Addiction

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ABSTRACT

Aaron T. Beck, an assistant professor in psychiatry, at the University of Pennsylvania identified distorted, negative cognition (primarily thoughts and beliefs) as a primary feature of depression and developed a short-term treatment. In the early 1960s he termed it as "cognitive therapy." Cognitive distortions were defined by BECK in 1967. He explains, it as a result of processing information in ways that predictably resulted in identifiable errors in thinking. Cognitive distortions are negative or irrational patterns of thinking. These are unhealthy activities of mind that include negative interpretations regarding self and external world. Though various theories point to the origins of negative thinking and called them cognitive distortions, this article & findings are primarily based on descriptions given by Beck. WHO (1969) has defined alcoholics as "excessive drinkers whose dependence on alcohol has attained such a degree that they show noticeable mental disturbance or an interference with their mental and body health". WHO in 2005, defines addiction as the repeated use of a psychoactive substances to the extent that the user is periodically or chronically intoxicated, shows a compulsion to take the preferred substance, has great difficulty in modifying substance use and exhibits determination to obtain psycho active substances by almost any means.

Keywords: *WHO, cognitive distortions, Alcoholics, cognitive restructuring, addiction, cognitive distortion scale.*

Cognitive distortions were defined by BECK in 1967. Cognitive distortions are negative or irrational patterns of thinking. Cognitive distortions may also be referred to as thinking errors or automatic negative thoughts. They play vital role in certain mental health conditions, all compulsive behaviour patterns, in addiction also. Alcohol misuse is an attempt to cope with negative thoughts about events that lead to negative emotions. Hence, alcoholism is a chronic relapsing disease characterized by denial and inability to discontinue its use despite knowing its adverse consequences. A person is considered to suffer from chronic alcoholism if his use of alcohol is up to the extent it interferes with successful physical and social functioning.

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Person with alcoholism may have alternating periods of sobriety and relapse. Most people relapse at least once during recovery because consumption of alcohol tends to induce a pleasant feeling, characterized by physical relaxation.

Effect of Alcohol - a paralyzing influence on the cerebral cortex is executed by alcohol. Since the cortex is the seat of memory and other higher mental functions, its paralysis frees the drinker from disturbing memories & thoughts. Unrestrained by critical judgment and social inhibitions and obvious of responsibilities, defeats and hardships, the alcoholic becomes a free emotional being. The psychotic drinker strives to remove perplexing thoughts and painful memories, lift the lid off emotions and escape the world of reality. As the concentration of alcohol in the body increases, there is a mental clouding. When larger amount is consumed, it affects complex thought processes also. The subject is unnecessarily loud and the ideas expressed are uncensored, disconnected and often inappropriate. The subject has a feeling of increased power and ability. Perceptions are hazy.

- **TYPES OF DRINKING**: People drink for different reasons
- **MISERY DRINKING**: is usually done by those who face some personal failures or loss of someone who is near &dear to them.
- **NDUSTRIAL DRINKING**: is by a worker while at work or at meal times. They take alcohol to get relieved from discomfort of hunger or occupational strain like scavenger.
- **EMERGENCY DRINKING:** is indulged by persons who are nervous. For example: an actor consumes alcohol before entering the highly demanding Performance.
- **SOCIAL DRINKING**: Persons drink to give company to others at party, functions, conferences etc.

CAUSES for ADDICTION

1. **HEREDITARY FACTORS:** Some studies describe that the habit runs in families. Children of alcoholics consume 4 times more than the children of non-alcoholics. This is supported by studies done by WINAKUM et al. and RAE PEERKS (1945, 1970). Alcoholics tends to develop withdrawal symptoms when alcohol consumption is stopped suddenly which shows that brain cells got adopted to the presence of alcohol in the blood. According to learning theorists, each drink when it relieves tension, tends to reinforce consumption.
2. **PSYCHOANALYTICAL THEORY:** It explains repressed homosexuality in men can lead to alcoholism. Moreover K.A. MENNINGER explains alcohol addiction is a partial suicide. It's a form of self-destruction, deriving from elements of aggression, exited by thwarting ungratified erotism.
3. **PSYCHOLOGICAL FACTOR:**
    - Emotionally immature, poor impulse control.
    - Feelings of inferiority (unworthy feeling among family members)
    - Low frustration tolerance& low self esteem
    - Domestic conflicts (arguments, violence in married couples leads to separation)
    - Business worries (job loss, business loss, work stress)
4. **PERSONALITY FACTORS:**
    - Childhood history of antisocial personality disorder (there is no specific alcoholic personality)
    - Persons who have harsh super ego turn into alcoholics to diminish their stress.

5. SOCIAL FACTORS:

- Influence of bad company (friends peer pressure)
- Exposure to cinemas in which alcoholics take control over people
- Urbanization (lack of family involvement leads to enter in the alcohol abuse).
- Religious reasons (High religious commitment was associated with increased risk for alcohol use disorders).
- Unemployment (by alcohol, coping with stress triggered).
- Marital disharmony (domestic violence and arguments between couples)
- Easy availability of alcohol shops leads to addiction

AARON BECK pioneered research on cognitive distortions in development of a treatment method known as cognitive behavioral therapy (CBT). After his CBT invention, Researchers have identified 50 types of cognitive distortions. The 10 most common cognitive distortions are, polarized thinking, fallacies, over generalization, personalization and blaming, filtering, discounting the positive, should statements, emotional reasoning, labeling, jumping to conclusions. Apart from these, heaven's reward fallacy, always being right, fallacy of change, fallacy of fairness, control fallacies etc. are often seen in addicts. This study reveals the type of cognitive distortions existing among alcoholics. By using Cognitive distortion scale, in alcoholics, these distortions are identified and treated by cognitive restructuring**.**

Scale for Cognitive Distortion

Manual for cognitive distortion scale developed Dr. DEVENDRA SINGH SISODIA & Mr. DHARMENDRA SHARMA of M.L.S University of Udaipur, was taken as the English version (original scale). By using Likert technique, the authors measured cognitive distortion with 25 statements. This scale has high Content validity &Reliability. The scale describes, score of 111 to 125 may be considered high cog distortion, 25 to 40 representing very low cognitive distortion. It is suitable for group & individual administration.

DESCRIPTION OF TYPES OF COGNITIVE DISTORTION

OVERGENERALIZATION

Those struggling with this distortion will base their conclusions on a single incident. If something wrong happens once, they expect it over and over again. It has been associated with Addiction, PTSD patients and other anxiety disorders. In over generalizing, a person may come to a conclusion based on one or two single events; despite the fact reality is too complex to make such generalizations. If a friend misses a lunch outing, this doesn't mean he or she will always fail to keep commitments. Over generalizing statements often include the words "always," "never," or "all." In TAMIL questionnaire questions 5,7,15, 16 are MENTIONED under over generalization. Those questions are, 5) Everybody lies, its no big deal, 7) No matter how hard I try, I can't help getting in trouble, 15) I have settled down all things that I have done, 16) All overrule the law, it's no big deal.

PERSONALIZATION& BLAMING

Personalization happens when someone believes everything others do or say somehow is a direct reaction to them. When engaging in this type of thinking, an individual tends to take things personally. Personalization leads to guilt, shame, and feeling of inadequacy. This type of thinking also causes a person to blame themselves for external circumstances outside the person's control. Personalization occurs when they hold personally responsible for an event that isn't entirely under their control. This can be understood, from an example, when women received a note that her child was having difficulties at school. She told herself, "this shows

what a bad mother I am," instead of trying to pinpoint the cause of the problem so that she could be helpful to her child". Blaming is another distortion seen among recovering addicts. This happens when someone engages in blaming, holding others responsible for their emotional pain, usually blaming others for every problem they have. This is the opposite of personalization. Instead of seeing everything as their fault, all blame is put on someone or something else. It can be associated with heightened anxiety and depression. In TAMIL Questionnaire 6, 12, 19, 25 are framed for assessing this distortion. 6) How hard you try it makes no means to keep away from fights, 12) In the past, I have lied to get myself out of the trouble, 19) I have done bad things that I haven't told people about, 25) sometimes you have to hurt someone if you have a problem with them.

CONTROL FALLACIES

This specific distortion involves two beliefs. Both relate to being in control of every situation in someone's life. First type describes, we feel externally controlled and see ourselves as helpless victims of fate. In another one, we feel internal control assuming responsibility for the pain or joy of everyone around us. Someone who sees things as internally controlled may put himself or herself at fault for events that are truly out of the person's control, such as another person's happiness or behavior. A person who sees things as externally controlled might blame his or her boss for poor work performance. In TAMIL Questionnaire, questions 9, 10, 18 come under this category. Those questions are, 9) Sometimes lies are the result of asking too many questions by some people, 10) you shall get what you intend to, though that may hurt someone, 18) often when anybody known gets hurt - its not because of my mistake.

SHOULDS STATEMENTS

Everyone struggles with the infamous "SHOULDS." These statements appear as ironclad rules we set for ourselves and those around us. When someone breaks these rules, we feel angry, defeated, and even try to punish ourselves. Thoughts that include "should," "ought," or "must" are almost always related to a cognitive distortion. For example: "I must lose weight to be more attractive." This type of thinking may induce feelings of guilt or shame. "Should" statements also are common when referring to others in our lives. These thoughts may go something like, "He should have called me earlier," or, "She ought to thank me for all the help I've given her." Such thoughts can lead a person to feel frustration, anger, and bitterness when others fail to meet their expectations. No matter how hard we wish, we cannot control the behavior of another, so thinking about what others should do serves no healthy purpose. This distortion can diminish self-esteem and raise anxiety levels. In TAMIL questionnaire, questions 1, 14, 17 come under this category. Those questions are 1) People need to be roughed up once in a while to achieve their goals, 14) norms are for others, 17) Only important thing is getting the needs fulfilled.

EMOTIONAL REASONING

Feelings are powerful and can overrule our rational thinking and reasoning. When someone engages in emotional reasoning, they assume unhealthy emotions reflect the way things are. If this type of thinker feels scared, there must be real danger. If this type of thinker feels stupid, then to him or her this must be true. This type of thinking can be severe and may manifest as obsessive compulsion. For example, a person may feel dirty even though he or she has showered twice within the past hour. In TAMIL questions20, 21, 23, 4 is for emotional reasoning. 20) I often lose my temper as people provoke me, 21) Even if I tell truth people won't believe me, 23) If so ever I have lied to someone if you have a problem with them, 4) Even when people show disrespect to you, we have to be with them.

FALLACY OF CHANGE

Here, someone expects that other people will change to suit them if they pressure them enough. This happens when someone generalizes one or two qualities into a negative global judgment about themselves. For example, they may say, "I'm a loser" when they failed at a specific task. Mislabeling can be emotionally loaded and have long-term consequences on someone's self-esteem. This distortion assumes that other people must change their behavior in order to be happy. This way of thinking is usually considered selfish because it insists, that other people change their schedule to accommodate yours or that your partner shouldn't wear his or her favorite t-shirt because you don't like it. In TAMIL question 22) sometimes you have to hurt someone if you have a problem with them.

ALWAYS BEING RIGHT

When someone struggles with this distortion, they'll be on a constant pursuit to put others on trial to prove that their opinions and actions are correct. To someone with this struggle, being wrong is unthinkable, and will go to any length to demonstrate their rightness. This thinking pattern causes a person to internalize his or her opinions as facts and fails to consider the feelings of the other person in a debate or discussion. This cognitive distortion can make it difficult to form and sustain healthy relationships. In TAMIL, question 8, 24 taken for this 8) Walking out of the fight is being a coward, 24) If I really want to do something I don't care if it's legal or not.

DISCOUNTING THE POSITIVE

This extreme form of distortion occurs when a person discounts positive information about a performance, event, or experience and sees only negative aspects. A person engaging in this type of distortion might disregard any compliments or positive reinforcement he or she receives. They reject positive experiences by insisting they "don't count". If they do a good job, they may tell themselves that it wasn't good enough or that anyone could have done as well. Discounting the positive takes the joy out of life and makes them feel inadequate and unrewarded. In this project, question 3 come under this category. The question is 3) People are so much in habit of lying that it has become difficult to trust anybody.

LABELLING

This distortion, a more severe type of overgeneralization, occurs when a person labels someone or something based on one experience or event. Instead of believing that he or she made a mistake, people engage in this type of thinking, automatically label themselves as failures. Labeling is an extreme form of all or nothing thinking instead of saying "I made a mistake ", They attach a negative label to themselves. "I am a loser" or "a failure". Labeling is quite irrational because these labels are just useless abstractions that lead to anger, anxiety, frustration, low self- esteem. This makes them feel hostile and hopeless about improving things and leaves little room for constructive communication. In TAMIL questions 2, 11, 13 are 2) If I made a mistake, its because I got mixed up with the wrong crowd, 11) people are always trying to hassle me, 13) I often feel that people always provoke me to fight with them.

POLARIZED THINKING

This famous black-and-white way of thinking or an all-or-nothing approach to living can be quite dangerous. This distortion occurs when people habitually think in extremes. There's only perfection and failure; they don't see shades of gray in life. Most of the time, they'll place themselves in "either/or" situations and make decisions using this mentality, often acting in extremist ways. Something is either good or bad, right or wrong. Black-and-white thinking fails to acknowledge that there are several shades of gray that exist between black

and white. By only two possible sides or outcomes, a person ignores the middle-and possibly more reasonable-ground. If a situation falls short of perfect, they see it as a total failure. Its like the situation of a young women on a diet, when ate a spoonful of ice cream, she told herself, “I have blown my diet completely.”

JUMPING TO CONCLUSIONS
This happens when someone jumps to conclusions without really knowing what the other person feels or is thinking about. They interpret things negatively when there are no facts to support their conclusion.

FORTUNE TELLING – Predicting that things will turn out badly, expectation that a situation will turn out badly without adequate evidence is fortune telling.

CATASTROPHIZING
This occurs when a person sees any unpleasant occurrence as the worst possible outcome. A person who is catastrophizing might fail an exam and immediately think he or she has likely failed the entire course. With this type of cognitive distortion, things are exaggerated or blown out of proportion, though not quite to the extent of catastrophizing. It is the real-life version of the old saying, “Making a mountain out of a molehill”. The same person who experiences the magnifying distortion may minimize positive events. These distortions sometimes occur in conjunction with each other. A person who distorts reality by minimizing may think something like, “Yes, I got a raise, but it wasn’t very big and I’m still not very good at my job. Exaggerating the important problems and shortcomings, or you minimize the importance of your desirable qualities is also called the “binocular trick”.

FALLACY OF FAIRNESS
Recovering addicts often struggle with this distortion as they feel resentful because they believe they know what is fair, and others around them don’t feel it. For example, they’ll blame their own, that “life isn’t fair.” This fallacy assumes that things have to be measured based on fairness and equality, when in reality things often don’t always work that way.

HEAVEN’S REWARD FALLACY
In this pattern of thinking, a person may expect divine rewards for sacrifices. People experiencing this distortion tend to put their interests and feelings aside in hopes that they will be rewarded for their selflessness later. But they may become bitter and angry if the reward is never presented.

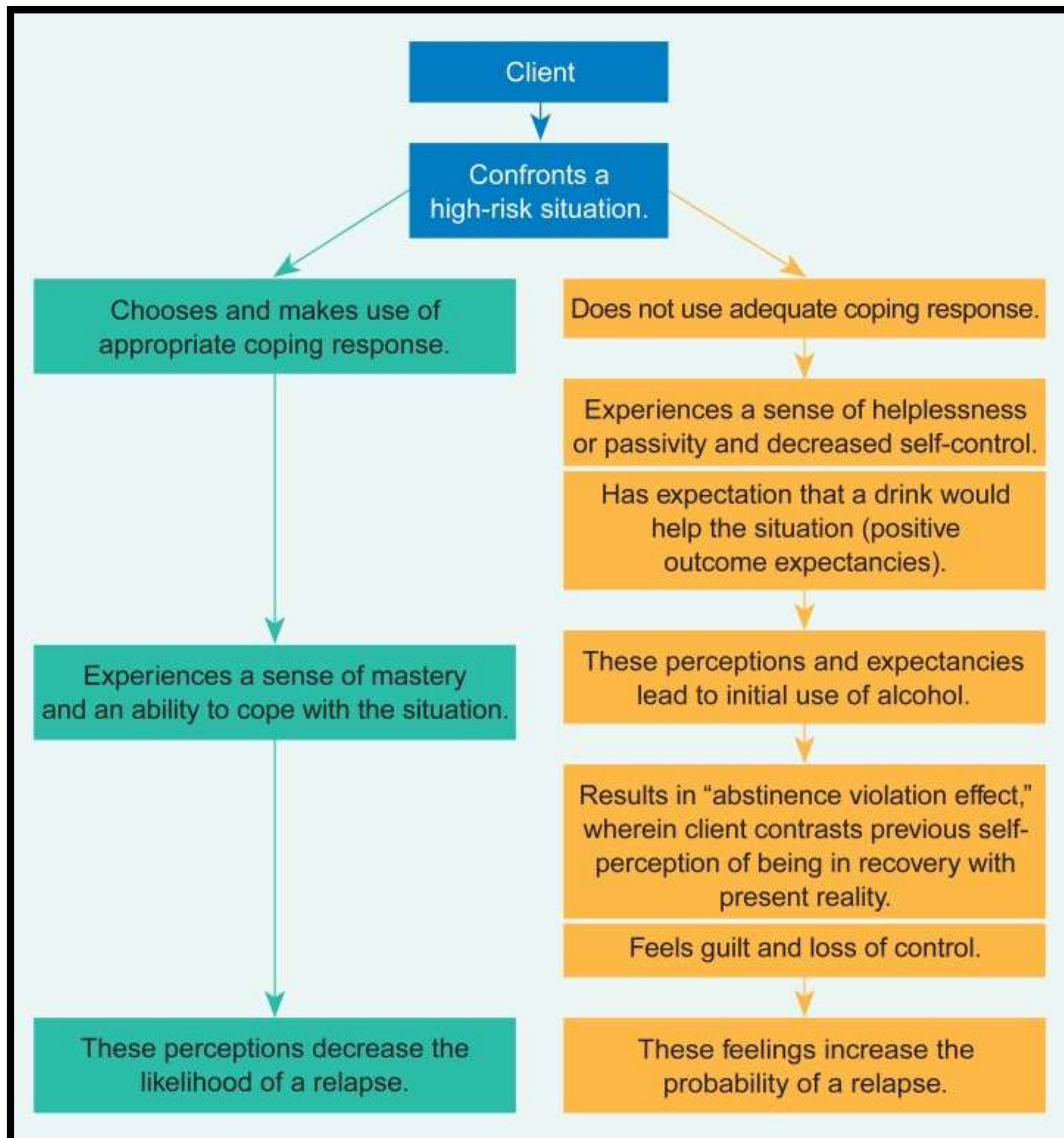
FILTERING
People will take the negative details of a situation and magnify those while filtering out any positive aspects. This cognitive distortion, similar to discounting the positive, occurs when a person filters out information, negative or positive. A single negative detail is filtered, dwelling on it exclusively happens. This distorted thought pattern has the tendency to ignore positives and focus exclusively on negatives; it can worsen anxiety and depression symptoms. For example, receiving many positive comments about a seminar presentation to a group and one comment, something mildly critical makes the person to filter that presentation in seminar was not up to expectation. If this obsesses emotional reaction for days and ignores all the positive feedback, it is filtering.

USING COGNITIVE-BEHAVIORAL THERAPY (CBT)

Cognitive-behavioral theories explain alcoholism as a learned behavior that can be changed using behavior modification interventions. Treatment interventions teach clients the skills they need to confront or avoid everyday situations that may lead to drinking, the cognitive-behavioral approach (Kazdin 1982) views the etiology and persistence of pathological drinking as learned behavior. Functional analysis of client's drinking obtained through structured assessment instruments is necessary for this. Role play scenarios, homework assignments are developed to enhance clients mastery, help retain the trained skills.

Clients who are hospitalized are selected for the project, hence the advantage of skills training essential for abstinence from alcohol, preventing relapse is easy.

Adapted from MARLATT (1985) CBT model of relapse process



CBT has additionally been proven effective for people who struggle with depression, anxiety, addiction, and unhealthy behaviors. For these conditions, addiction more than 500 outcome studies have demonstrated the efficacy of CBT for a wide range of psychological problems,

medical problems with psychological components (Butler, Chapman, Forman, & Beck, 2005; CHAMBLESS & OLLENDICK, 2001). CBT includes, a focus on helping patients solve problems; become behaviorally activated; and identify, evaluate, and respond to their depressed thinking, especially to negative thoughts about themselves.

The basic principles of cognitive behavior therapy are as follows:

- Principle (1) CBT is based on an ever-evolving formulation of patients' problems and an individual conceptualization of each patient in cognitive terms, their worlds, and their future. Hence it is goal oriented & problem focused.
- Principle (2) CBT emphasizes collaboration and active participation. Therapists also create experiences, called behavioral experiments, for patients to directly test their thinking (e.g."If I even look at a picture of a spider, I'll get so anxious I won't be able to think"). Therapists do not generally know in advance to what degree a patient's automatic thought is valid or invalid, but together they test the patient's thinking to develop more helpful and accurate responses.
- Principle (3) CBT is educative, aims to teach patient, emphasizes relapse prevention& time limited with structured sessions by using variety of techniques to change thinking, mood &behavior.

In a cognitive-behavioral therapy session, the therapist might try to incorporate various **cognitive distortion exercises** that can help people change their negative thoughts:

- **Reframing**: Patients learn to balance negative thoughts into more positive ones. For example, someone might replace "I am incapable of doing this work" with "I am struggling, but I can ask for help to improve."
- **Thought records and journaling**: Patients also track their thoughts to identify triggers for anxiety or unhealthy behaviors, then work with their therapist to cope with these triggers.
- **Behavioral activation**: Patients additionally practice new behavioral habits to shift their mood, which can gradually change thought patterns to be more positive.
- **Core belief work**: Patients identify their core beliefs, or ways of looking at the world, to develop insight into their patterns. Additionally, addressing negative core beliefs can reduce depression and anxiety.

The core theory of CBT is that thoughts create feelings, and feelings create behaviors. By replacing negative thoughts, there is an increase in positive feelings and actions.

For example, someone might experience the impression that they are incapable of sobriety. As a result, this may lead to depression, anxiety, and isolation. Thus, by challenging the negative thought, the individual can reduce the risk of relapse.

NEGATIVE THINKING OR IRRATIONAL BELIEFS in ADDICTION

Almost everyone in addiction struggles with negative thinking patterns. These thinking patterns can range from low self-esteem to assuming the worst after a simple conversation with someone. In addiction recovery, these negative thinking patterns are dangerous as said by AARON BECK and DAVID BURNS. These patterns can often increase anxiety and depression, fueling unhealthy behaviors that could lead **to relapse**. Experiencing cognitive distortions in addiction recovery is very common. These distortions can be caused by insecurity & self-doubt. Chronic alcoholism leads to cognitive impairment. Defects in new learning, visual spatial function, abstract thinking, and psychomotor skills can be seen in all chronic drinkers.

HOW TO FIGHT COGNITIVE DISTORTIONS IN ADDICTION RECOVERY

Beck developed the basis of cognitive-behavioral therapy (CBT) that can help people struggling with negative thinking patterns. Through this treatment, patients can identify negative thinking patterns and distorted thoughts. The approach also focuses on assisting patients in shifting or reframing thoughts to be more rational and positive. The methods of coping with distortions will depend on the type of negative patterns. While it takes time, with the cognitive restructuring, many can move away from these self-destructive patterns.

DEVELOPING THERAPEUTIC RELATIONSHIP

Research demonstrates that positive alliances are correlated with positive treatment outcomes (Raue&Goldfried,1994). Building trust & rapport is essential from the first contact, to accomplish the goal. When therapist can recognize that patients are experiencing increased distress, they will often address the issue at right time like, "You look upset. What was just going through your mind?" Watching for patients' emotional reactions in the session can alert therapist to ask questions for eliciting problem such as "Was there anything that bothered you,"

"Is there anything you want to do differently next time?" Asking these questions can strengthen the alliance significantly. Such an approach avoids spending additional unnecessary time & maximizes the time spent on helping patients solve problems they face. Some patients, particularly those with personality disorders, do require a far greater emphasis on the therapeutic relationship & advanced strategies to forge a good working alliance (Beck, Freeman, Davis, & Associates, 2004; J. S. Beck, 2005; Young, 1999). Overarching therapeutic goal is to improve the patient's mood during the session and to create better feeling & more functional behaviors.

Alcohol Anonymous **Group** can be conducted by Occupational Therapist to gain insight into their problems & overcome addiction. Paraphrasing of statements can be done by therapist. .

COGNITIVE RESTRUCTURING

Cognitive restructuring was developed by psychologist **ALBERT ELLIS** in the mid – 1950s and it is a core component in cognitive behavioral therapy. Cognitive restructuring is a group of therapeutic techniques that help people notice and change their negative thinking patterns. Cognitive restructuring is a skill for carefully examining thinking when feeling upset or distressed about something. It is used to deal with any situation in which experiencing negative feelings. If evaluation indicates that distressing thought is accurate, an action plan to deal with situation can be developed. Most people experience negative thought patterns from time to time, but sometimes these patterns become so entrenched that they interfere with relationships, achievements, and even well-being. Cognitive Restructuring is a useful technique for understanding unhappy feelings and moods, and for challenging the automatic thoughts. It is used to reframe the unnecessary negative thinking patterns. It helps to approach situations in more positive frame of mind.

Cognitive restructuring has been used to treat conditions including depression, post traumatic stress disorder (PTSD), addictions, anxiety, social phobias, relationship issues and stress. Cognitive restructuring helps the person understand and change negative cognitions and this process brings changes in behavior. Negative cognitions include automatic thoughts that occur without a person recognizing them or challenging their logic. For example: someone who says hello to a neighbor and gets little or no response may think," She doesn't like me, nobody likes me, I'm just not someone that people like". The negative thoughts trigger

negative feelings (anxiety and depression) and maladaptive behaviors (avoidance of social situations, poor eye contact, and dysfunctional interactions inter actions with others).It divides into rational and irrational beliefs. Rational beliefs express personal desires or preferences ("I would like people to like me,"), In contrast with irrational beliefs ("people must like me or I will not be able to go on."). Irrational beliefs typically begin with the words ought to, must, and so on.

In this technique patients were taught to spot dysfunctional thoughts and thinking errors, elicit rational alternative thoughts, and reappraise beliefs about themselves, the trauma, and the world. Exposure type behavioral experiments were excluded. In early sessions, patients were helped to monitor automatic thoughts in daily thought dairies and evaluate them by probabilistic reasoning. In later sessions, patients progressed to identify, appraise, and modify distorted beliefs about the trauma, self, world, and future. Homework involved eliciting, monitoring, challenging, and modifying negative thoughts and beliefs and use of daily thought records. Most patients took home audio- tapes of their sessions to listen to and information sheets about the rationale, recognizing negative thoughts, and challenging thinking errors.

GUIDED DISCOVERY

Usually in the context of discussing a problem, therapist elicit patients' cognitions (automatic thoughts, images, and/or beliefs) by identifying which cognition is most upsetting to patients. Then ask them a series of questions to gain distance (i.e., see their cognitions as ideas, not necessarily as truths), evaluate the validity and utility of their cognitions, and/or decastastrophize their fears.

COGNITIVE AND BEHAVIORAL CHANGE BETWEEN SESSIONS

An important aim of treatment is to help patients feel better by each session. Because patients tend to forget much of what occurs in therapy sessions, it is important that anything you want them to remember be recorded so they can review it at home. Self help assignments can be given for this purpose. Behavioral changes as a result of problem solving and/or skills training in session (e.g., problem of isolation might lead to behavioral solution of calling friend) at work might lead to patient's assertively discussing the difficulty with a supervisor. It is of utmost importance to plan homework assignments carefully.

HOW DOES COGNITIVE RESTRUCTURING WORK?

Cognitive restructuring is at the heart of cognitive behavioral therapy, a well-studied talk therapy approach that can be effective at treating many mental health conditions, including depression and anxiety disorders. Restructuring is a technique of CBT where replacing negative and stress full thoughts are possible. In cognitive behavioral therapy (CBT), a patient and therapist work together to identify faulty thought patterns that are contributing to a problem and practice techniques to help reshape negative thought patterns. It can be used to recognize inaccuracies in the thought patterns. Cognitive restructuring techniques deconstruct unhelpful thoughts and rebuild them in a more balanced and accurate way.

COGNITIVE RESTRUCTURING TECHNIQUES

Although anyone can use cognitive restructuring techniques to improve their thinking habits, many people find it helpful to collaborate with a therapist. They can also explain how and why a thought is irrational or inaccurate.

A therapist can also help to learn how to "question" faulty thought patterns and redesign them and make more positive. A brief guide to some of the strategies involved in cognitive restructuring:

SELF-MONITORING

- To change an unproductive thought pattern, To be able to identify the error. Cognitive restructuring depends on ability to notice the thoughts that spark negative feelings and states of mind.
- It's also useful to notice when and where the thoughts come up. It may be that more vulnerable to cognitive distortions in certain situations. Knowing what those situations are may help to prepare in advance.
- Knowing that vulnerability exists can help to catch negative thought and change it.
- Some people find it helpful to journal as part of the process. Even if not sure at first what's caused anxiety or sadness, writing down thoughts may help recognize a cognitive distortion or pattern.
- To practice self-monitoring, start noticing distorted thought patterns more quickly.

QUESTIONING ASSUMPTIONS:

Another essential part of cognitive restructuring is learning how to question thoughts and assumptions, especially those that seem to get in the way of living a productive life. A therapist can teach how to use a Socratic questioning method to find out where and how automatic thoughts are biased or illogical.

Some questions you might ask include:

- Is this thought based on emotion or facts?
- What evidence is there that this thought is accurate?
- What evidence is there that this thought isn't accurate?
- How could I test this belief?
- What's the worst that could happen? How could I respond if the worst happens?
- What other ways could this information be interpreted?
- Is this really a black-and-white situation or are there shades of grey here?

If experiencing the cognitive distortion called catastrophizing, for example, it might tend to assume the worst possible outcome in a stressful situation. In questioning this thought pattern, could ask to list all possible outcomes. Could ask how likely each possible outcome is. Questioning allows to consider new possibilities that aren't as drastic as the catastrophic ones may fear.

PERFORMING A COST-BENEFIT ANALYSIS

Using this strategy, they would consider the advantages and disadvantages of maintaining a certain cognitive distortion.

- What do you get out of calling yourself a complete idiot, for example?
- What does this thought pattern cost you emotionally and practically speaking?
- What are the long-term effects?
- How does this thought pattern affect the people around you?
- How does it advance or limit your job performance?

GENERATING ALTERNATIVES

Cognitive restructuring helps people find new ways of looking at the things that happen to them. Part of the practice involves coming up with alternative explanations that are rational and positive to replace the distortions that have been adopted over time. For example, if they

didn't score as well on a test, instead of generalizing that they are terrible at math, they might explore ways they could change their study habits. Or, they could explore some relaxation exercises they could try before the next test. Generating alternatives can also include creating positive affirmations to replace inaccurate or unhelpful thought patterns.

BENEFITS OF COGNITIVE RESTRUCTURING:

Although it's helpful to work with a therapist at first, cognitive restructuring is a method to learn on your own. Being able to identify and change your negative thought patterns has many benefits. For instance, it may help to:

- lower stress and alleviate anxiety
- strengthen communication skills and build healthier relationships
- replace unhealthy coping mechanisms like substance use
- rebuild self-confidence and self-esteem

In any life situation where negative thought patterns develop, cognitive restructuring can help to change unhelpful thoughts.

PROCEDURE FOR COGNITIVE RESTRUCTURING USED IN THIS STUDY:

- First step of cognitive restructuring is calming their stress full thoughts and negative thoughts. So that deep breathing exercises were done by the participants to explore their thoughts and feelings.
- Second step is started by describing the situation that triggered their negative thoughts in a dairy on a regular basis for an evaluation.

Thought recording was done by writing their negative thoughts and emotions that occurs on particular situation.

- Third step is analyzing the thoughts by their thought recordings.
- Fourth step is identifying the automatic thoughts that they experiencing during addiction.
- Automatic thoughts are most distressing thoughts, In alcoholic clients it may occur due to occupational stress, family separation or feeling unworthy.
- Fifth step is to provide balanced thoughts and reinforce positive thoughts by providing counseling session and also by imagery methods.
- Projecting images which improve self-esteem and self-confidence can helps to promote balanced thoughts.
- Monitoring the present thoughts and feelings and create positive affirmations that can maintain these positive thoughts in future.

NEED FOR THE STUDY

- Craving for a substance is defined as a strong desire to consume that substance, representing criteria for substance dependence, according to ICD-10. **Craving** has been adopted as a new symptom in DSM-V (2013). Most investigators agree that craving is inherently a subjective experience& it can be best described as a state of desire or wanting the stimulating effects (Miranda et al.,2008) & anticipated reinforcement of alcohol. Craving for alcohol is typically measured in humans using the cue-exposure paradigm, which consists of systematically presenting individuals with alcohol and control cues (eg, visual, smell, taste cues) while recording subjective, physiological changes associated with the urge to drink.
- Withdraw from alcohol makes the suppression of certain neurochemicals. It will make the brain demand more alcohol so it can reach homeostasis, or its normal state of functioning. More simply, the brain begins to regulate chemical demands with

alcohol. Alcohol and other drugs flood our brain with reward chemicals like dopamine. Long after our last drink, our brains and memories still associate drinking with this flood of reward. When we're exposed to a cue or stimulus that triggers those latent memories, our brains beg us for more reward chemicals. And thus a craving is born.

- Cognitive impairment identification is also useful to treat patients in first weeks of abstinence. The practice of not doing or having something that is wanted or enjoyable is abstinence. When patients are ready to identify their distortions, they come out of the habit.

REVIEW OF LITERATURE

1. **Chandra Sripada., 2021**, conducted a study on “impaired control in addiction involves cognitive distortions and unreliable self-control, not compulsive desires and overwhelmed self-control”. The main contribution of this article is to introduce a new “distortion” model that aims to make sense of the characteristic pattern of partial control seen in addiction. This study concluded that impaired control in addiction involved a complex pattern in which some aspects of control are diminished while other aspects are preserved, yielding a seemingly contradictory set of overall findings.
2. **Timo Lehmann Kvamme, et.al., 2018**, conducted a study of “distraction towards contextual alcohol cues and craving are associated with levels of alcohol use among youth”. This study correlates drinking days with distraction but not response inhibition to contextual alcohol cues. The study concluded that both biased distraction towards alcohol cues and alcohol craving are associated with preceding drinking days, but not necessarily drinking status.
3. **Karl M Bowman, Elwin. M. Jellinek et.al., 2016,** has reported the study of “alcohol addiction and its treatment “. This study aimed to play a considerable role in all types of accidents, in delinquency and in the lowering of industrial efficiency. The medical and the social problems of the immediate effects of alcohol, are incomparably smaller than the problems of abnormal drinking and chronic alcoholism. This literature reveals that it bears on the planning of future research activities one of the many reasons for this anomaly is the elusive nature of addiction, which make its course difficult to trace.
4. **Andreas Larsson, Nic Hooper, Lisa A.Osborne et.al., 2015,** has reported the study of “behavior modification using brief cognitive restructuring and cognitive diffusion techniques its cope with negative thoughts”. The study aimed to compare a cognitive restructuring and cognitive diffusion technique for coping with a personally relevant negative thought. Daily online questionnaires assessing the total frequency of negative thought intrusions and their level of willingness to experience the negative thoughts were also used. This literature revealed that the current findings support the efficacy of using diffusion as a strategy for managing negative thoughts
5. **C Johnco, VM Wuthrich, RM Rapee et.al.,2014,** conducted a study about the influence of cognitive flexibility on treatment outcome and cognitive restructuring skill acquisition during cognitive behavioral treatment for anxiety and depression at Macquarie university, Sydney 2107, Australia. The study includes 44 older participants with anxiety and depression completed self-report and neuropsychological tests of cognitive flexibility. Qualitative and quantitative measures of cognitive restructuring were completed at post treatment. This study reveals that few participants showed changes in cognitive flexibility can still benefit from standardized cognitive behavioral therapy.

6. **Idan M. Aderka, et.al., 2013,** conducted a study on "The relationship between posttraumatic and depressive symptoms during prolonged exposure with and without cognitive restructuring for the treatment of posttraumatic stress disorder". The study concluded that changes in posttraumatic symptoms accounted for subsequent changes in depressive symptoms to a greater extent than vice versa, these pattern of results suggest that PE may work primarily by reducing posttraumatic symptoms, which in turn reduce depressive symptoms.
7. **Seth. J. Gillihan, Carmen. P. Mc Leon et.al., 2013,** conducted a study about a relationship between post traumatic and depressive symptoms. During prolonged exposure with and without cognitive restructuring for the treatment of post traumatic stress disorder. In the present study we examined the relationship between post traumatic and depressive symptoms during prolonged exposure treatment with and without cognitive restructuring for the treatment of post traumatic stress disorder. Method used for this study as female survivors (N = 135) with PTSD were randomized to either prolonged exposure alone or prolonged exposure with added cognitive restructuring. During treatment, bi-weekly self report measures at post traumatic and depressive symptoms were administered this patterns of patient results suggests that prolonged exposure primarily affects post traumatic symptoms. Which in turn affect depressive symptoms. In contrast prolonged exposure/cognitive restructuring results in a more reciprocal relationships between PTSD and depressive symptoms.
8. **Debra A. Hope, James A. Burns, et.al 2010,** has reported as the study of "Automatic thought and cognitive restructuring in cognitive behavioral group therapy for Social anxiety disorder". This study aimed to challenge irrational automatic thoughts& great exposure to provide disconfirming for these irrational thought as well as habituation to fearful stimuli. These prevent the study analyzing the semantic content of automatic thoughts related to poor social performance, negative labels by either, and the anticipation of negative outcome in feared stimulation
9. **R. Michalczuk, H. Bowden Jones et, al.,2010,** investigated a study on "Impulsivity and cognitive distortions in pathological gamblers attending the UK national problem gambling clinic: a preliminary report". The study reported that pathological gamblers had elevated impulsivity on several UPPS-P subscales but effect sizes were largest for positive and negative urgency. The pathological gamblers also displayed higher levels of gambling distortions, and elevated preference for immediate rewards, compared to controls.
10. **Patricia J. Deldin et. al., 2005** had reported the study of "Cognitive restructuring and EEG in major depression". The study analyzed to controls and individuals with major depression participated in four EEG recording blocks. Blocks 1 and 4 were resting base line. These predictive utility of EEG, is discussed with regard to identifying individuals who show mood improvement following cognitive restructuring.
11. **George M. Bodner, Theresa L.B. Mcmillen 1986,** conducted a study about the "cognitive restructuring as an early stage in problem solving". The study revealed that the students can successfully complete these cognitive restructuring stages, they cannot proceed on to the more analytic stages in problem solving that have received more attention from chemists. This literature shows the preliminary evidence for this hypothesis consists of linear correlations between student ability to handle dis embedding and cognitive restructuring tasks in the spatial domain and their ability to solve chemistry problems.
12. **Goldfried Marvin R, Linehan et.al., 1978**, has reported the study of "reduction of test anxiety through cognitive restructuring". This study aimed to compared two

procedures for reducing test anxiety with a waiting list control. In the first, systematic rational restructuring, the second, a prolonged exposure condition. This literature revealed that the greater anxiety reduction in the systematic rational restructuring condition also reported greater generalized anxiety reduction in social evaluative situation.

13. **Marketa Ciharova, et. al.,** investigated a study about "Cognitive restructuring, behavioral activation and cognitive behavior therapy in the treatment of adult depression: A network meta-analysis". The study resulted in comparable to the main analysis, with no evidence of difference between CBT, CR and BA.

Aim: Aim of the study is to identify presence of cognitive distortion in Alcohol patients and categorize type of cognitive distortion.

Objectives of The Study

- To find out whether cognitive distortion exists with alcohol addiction clients screening with Cognitive Distortion Scale (CDS) TAMIL VERSION, as developed by the researcher was done. Content validity of the scale, from a statistician was obtained to progress with the study. Manual for cognitive distortion scale developed by Dr. DEVENDRA SINGH SISODIA & Mr. DHARMENDRA SHARMA of M.L.S University of Udaipur was taken as the English version (original scale)
- To administer cognitive restructuring technique, after categorizing them in CDS is done for THOSE having moderate to very high cognitive distortion, for a period of time.
- Reassessment with the Cognitive Distortion Scale (CDS) TAMIL VERSION scale was done to know whether these distortions are lowered & which cognitive distortion still exists.

METHODOLOGY

- Pre therapy assessment by cognitive distortion scale to assess cognitive distortion in alcoholic clients was done.
- Moderate to very high cognitive distortion scorers in assessment are grouped and administered cognitive restructuring.
- Post therapy assessment was taken by same cognitive distortion scale to identify effectiveness of therapy in alcoholic clients.

STUDY SETTING: Bharatha Matha de-addiction center, Ariyankuppam.
STUDY DURATION:3 Months.
STUDY DESIGN: Experimental study.

OUTCOME MEASURE:
To assess cognitive distortions – Tamil version of cognitive distortion scale (CDS) by Mr. DEVENDRA SIGN SISODIA and Mr. DHARMENDRA SHARMA published in 2012 was prepared. VALIDITY, RELIABILITY of the scale was obtained, by doing a pilot study with the scale.

SELECTION CRITERIA:

- *INCLUSION CRITERIA:* Alcohol addiction patient admitted in the above mentioned centre with age group 35 and above.

- *EXCLUSION CRITERIA:* Very low to low cognitive distortions scorers are excluded for the study, since it was mentioned by ORIGINAL AUTHOR in NORMS that LOW SCORES INDICATE LOW LEVEL COGNITIVE DISTORTION. Moreover, i also found that only one cognitive distortion was seen in (low scoring) patient.

Procedure

Pre therapy assessment by cognitive distortion scale to assess cognitive distortion in alcoholic clients. Moderate to very high cognitive distortion scorers in cognitive distortion scale assessment are grouped and administered cognitive restructuring. Post therapy assessment is also taken by using cognitive distortion scale and Changes were identified with pre and post therapy assessment.

RESULT

A significant difference between the pre and posttest for cognitive distortions score and its therapy for alcohol addiction is noted by Statistical analysis.

Data Analysis

STATISTICAL TOOLS USED

- Percentage analysis
- Descriptive analysis (Mean, Median and Standard Deviation) and
- Paired sample t-test

Differential analysis (t-test)

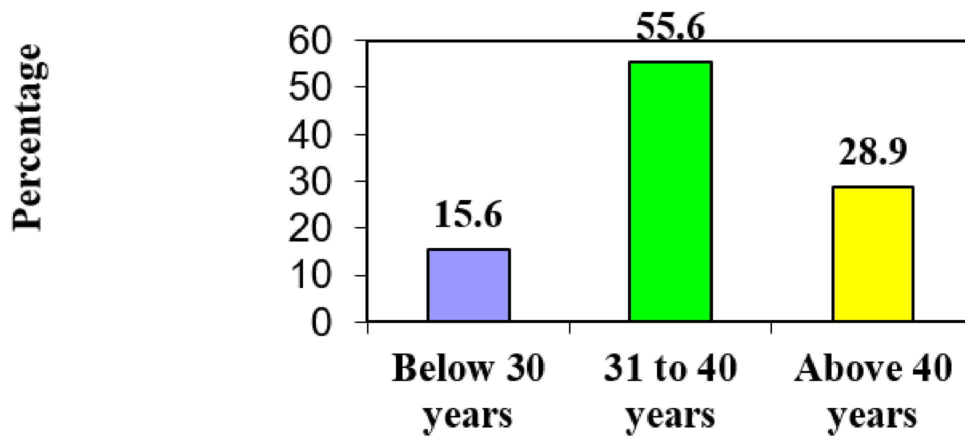
Differential analysis is an important procedure by which the researcher is able to make inferences involving in the determinealim of the statistical significance of difference between group with reference to selected variables. It involves the use of ‘t’ test. This‘t’ test is a numerical procedure that takes into account that the difference between means of two groups, the number of subjects in each group and the amount of variation of spread present in the score. Thus the ‘t’ test is used to determine whether the performance of two groups is significant or not. Statistics will help us to find whether one group differs from another set or not. We calculate the mean of each group and then find out whether the means of the two groups differ or not. To find out the difference between two means we use ‘t’ test.

If we know the ‘z’ value, then we can find out from, the normal curve the probability of getting so much of ‘z’ value. to calculate the ‘z’ value, we need the standard deviation of the sampling distribution of differences between two means. The standard error of difference between two means were also calculated.

Table 1 Distribution sample according to their Age

S. No	Age	Number of Participants	Percentage
1.	Below 30 years	7	15.6
2.	31 to 40 years	25	55.6
3.	Above 40 years	13	28.9
	Total	45	100

Graph 1 Distribution sample according to their Age

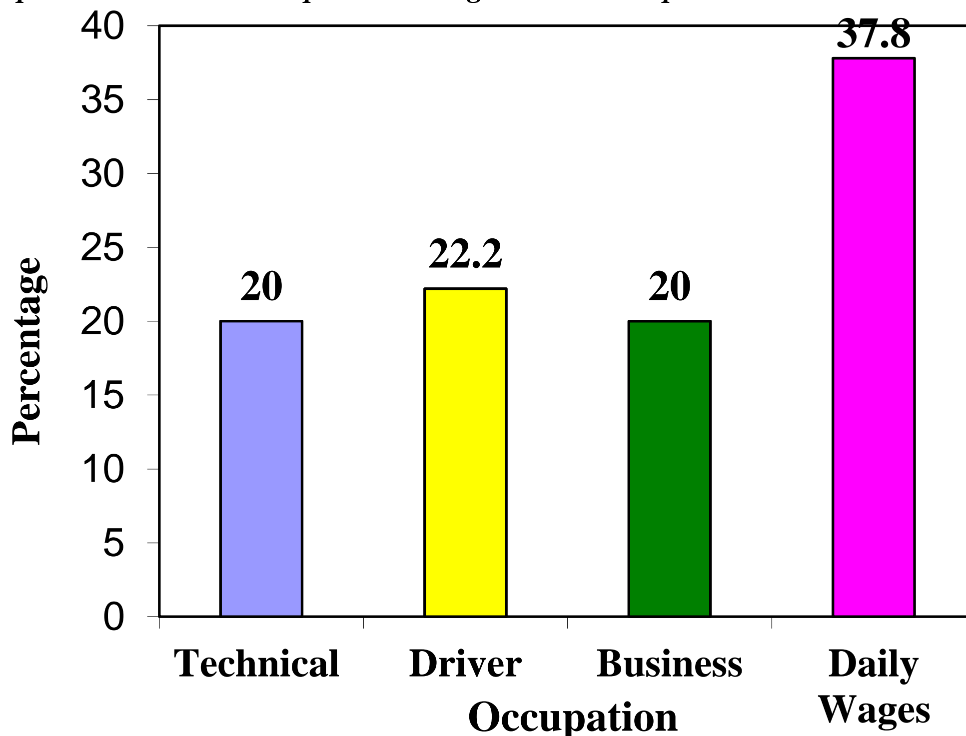


It is seen from the first table & graph that 15.6% of respondents are below 30 years of age, 55.6% of them are 31 to 40 years of age and 28.9% of them belong to above 40 years of age. Therefore, majority of respondents are below 40 years of age group.

Table 2 Distribution sample according to their Occupation

S. No	Occupation	Number of Participants	Percentage
1.	Technical	9	20.0
2.	Driver	10	22.2
3.	Business	9	20.0
4.	Daily Wages	17	37.8
	Total	45	100.0

Graph 2 Distribution sample according to their Occupation



It is seen from the table & graph that 20.0% of the respondents are technical worker, 22.2% of them are drivers, 20.0% of them are doing business and 37.8% of them work at daily wages. Therefore, majority of respondents belong to daily wages.

Table 3 t-test of Cognitive distortions and its therapy for alcohol addiction Score in Pre and Post value

Group	N	Mean	Standard Deviation	Standard Error Mean	t-value	Probability Value
Pre	45	84.00	11.47	1.71	19.285	0.001*
Post	45	58.16	11.66	1.74		

** Highly significant at 0.01 level*

In pre and posttest, values pretest (84.00±11.47) scored higher mean value than post test (58.16±11.66). The calculated 't' value 19.285 and Probability value is 0.001 at 0.01 level of significance. Hence, there is a significant difference between the pre and post test for cognitive distortions and its therapy for alcohol addiction.

Graph 3 Mean of Cognitive distortions and its therapy for alcohol addiction Score in Pre and Post value

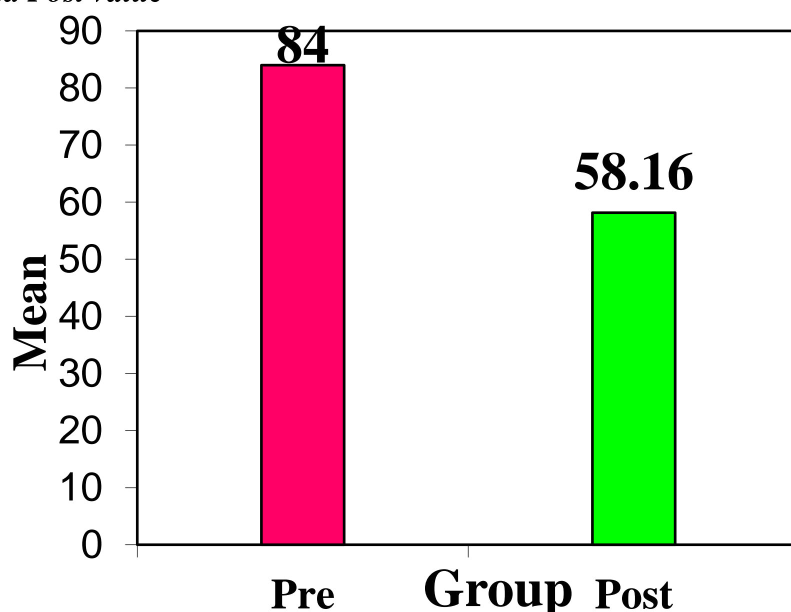


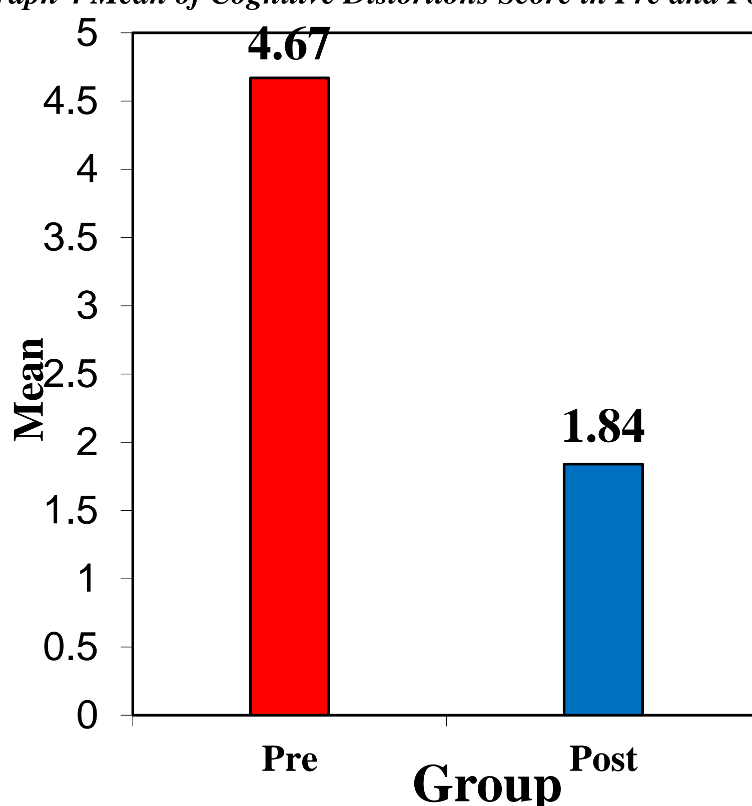
Table 4 t-test of Cognitive Distortions Score in Pre and Post value

Group	N	Mean	Standard Deviation	Standard Error Mean	t-value	Probability Value
Pre	45	4.67	1.54	0.23	15.875	0.001*
Post	45	1.84	0.80	0.19		

** Highly significant at 0.01 level*

In pre and post test, pre test (4.67±1.54) scored higher mean value than post test (1.84±0.80). The calculated 't' value 15.875 and Probability value is 0.001 at 0.01 level of significance. Hence, there is a significant difference between the pre and post test for cognitive distortions score.

Graph 4 Mean of Cognitive Distortions Score in Pre and Post value



Result

There is significant difference between the pre and post test for cognitive distortions and its therapy for alcohol addiction. Also, there is a significant difference between the pre and post test for cognitive distortions score.

DISCUSSION

Aim of the study is to find whether cognitive distortion exists with the alcohol addiction clients. Selection of clients for the study was done on the basis of Cognitive Distortion Scale (CDS) Questionnaire. Pre therapy assessment was made with cognitive distortion scale TAMIL VERSION, before administering cognitive restructuring. On the day of admission patients were experiencing physical symptoms and also psychological symptoms. so, after seven days of admission, clients were supposed to take pre therapy assessment. From next session cognitive restructuring therapy was given.

Cognitive restructuring is administered both by individually and also by groups. Individual sessions are made by administering balanced thoughts and made them to record their negative and automatic thoughts. Group cognitive restructuring is administered by awareness sessions and also by picturization of the life events. Positive and motivational images to provide balanced thoughts were provided.

Among 45 patients included for the study, occupational stress was the precipitating factor for 40 clients and 2 were addicted to alcohol because of binge drinking and 3 due to family separation. After administering cognitive restructuring for 3 to 4 months, post therapy assessment was done. Cognitive restructuring is administered 2 sessions in a week. Considering post therapy assessment scores, participants were noticed for reduced cognitive distortions than that of the pre therapy assessment scores.

The most available distortion in alcohol patient is given in the following table.

Sl.NO	NAME	PRE TEST	POST TEST
1.	Aarumugam	2, 5, 8	8
2.	Ashok Kumar	7, 1, 9, 4,3	1, 9
3.	Aravind	3, 8, 6, 7	7, 8
4.	Anand	2, 8	8
5.	Adhavan	1, 2, 9	9
6.	Arul prakash	2, 3, 5, 6	3, 6
7.	Ezhumalai	1, 2, 3, 4, 7	4, 7
8.	Harshavardhan	2, 3, 6	6
9.	Hariharan	1, 4, 5, 7, 9	9
10.	Kajendran	1, 2, 3, 5, 6, 7	7, 5
11.	Krishna Kumar	1, 2, 3, 5, 6, 7, 8	3, 7, 8
12.	Kumaran	2, 3, 7, 9	9
13.	Karthikeyan	1, 2, 5	1
14.	Kuberan	1, 2, 3, 4, 5	4
15.	Kumar	2, 6, 7 ,9	6, 9
16.	Manikandan	1, 4, 5, 6, 7, 8, 9	4, 6, 7
17.	Muthaiya	1, 2, 3, 7	1, 3
18.	Madhan raj	1, 2, 5	5
19.	Muthuraman	1, 2, 3, 4, 6	6
20.	Manikam	1, 2	1
21.	Mohan	1, 2, 7	1, 7
22.	Natarajan	1, 2, 3, 4, 5	5, 3
23.	Prabu Deva	1, 2, 5, 6	6
24.	Pradhap	1, 2, 8	1, 8
25.	Sankar	1, 2, 3, 4, 5, 9	1, 3, 9
26.	Saleem	1, 2, 3, 6	1
27.	Sathya Raj	1, 2, 5, 7, 9	7, 9
28.	Siva	1, 2, 4, 5, 8, 9	1
29.	Shanmugam	1, 2, 3, 5, 7, 8, 9	9, 8
30.	Shankaranathan	1, 3, 5, 6, 7	3, 5, 6
31.	Sriram	1, 2, 3, 5, 6, 7, 8, 9	5, 6, 7
32.	Saravanan	1, 2, 3, 5, 6, 7	3, 5
33.	Sivaraman	1, 2, 3, 4	1
34.	Satheeshkumar	2, 3, 7	7
35.	Sanjay	5, 8, 9	9, 8
36.	Sivakumar	1, 2, 6, 9	1
37.	Saminathan	1, 3, 6, 8, 9	1, 9
38.	Jeeva	1, 2, 4, 5, 7, 9	1, 4, 7
39.	Uthiranathan	1, 2	1
40.	Vivekanandhar	1, 2, 6, 7, 8, 9	6, 9
41.	Vedharanyam	1, 2, 3, 4, 5, 7, 8	1, 5, 8
42.	Velu	1, 3, 4, 7, 8	7
43.	Suresh	1, 3, 4, 5, 8	1
44.	Surya	1, 2, 9	9
45.	Senthil	3, 4, 6,8	3, 4

The numbers in the table reveals the following cognitive distortions,

1) Overgeneralization
2) Personalization and Blaming
3) Control Fallacies

4) Should statements
5) Emotional Reasoning
6) Fallacy of Change
7) Always being Right
8) Discounting the positive
9) Labeling.

After the post therapy assessment was done, personalization and blaming is the only cognitive distortion seen commonly in MOST OF THE alcohol addiction clients. The second most common distortion was overgeneralization. The least commonly seen distortion is should statements.

The table reveals that out of 45 participants, 35 of them exhibited personalization and blaming, overgeneralization for 34 participants out of 45, Control fallacies for 24 participants out of 45, Always being Right and Emotional reasoning in 21 participants out of 45, Fallacy of change and Labeling in 17 participants out of 45, Discounting the positive in 16 participants out of 45, should statement exists in 15 participants out of 45.

CONCLUSION

Cognitive distortions are negatively exaggerated irrational thoughts. When it comes to coping with cognitive distortions, many people require therapy to prevent these thought patterns from disrupting their progress. From therapy & data analysis, it was found that Cognitive restructuring reduces cognitive distortions. The study identifies, patients between age 31 and 40 were most addicted to alcohol. Hence, it is essential to reduce cognitive distortion to reduce relapse. Moreover, the HABIT TRAINING of patient has to be considered as an essential role of Occupational Therapist, to rehabilitate them from Drinking/ addiction.

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Conflict of Interest

The author(s) declared no conflict of interest.

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