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To Evaluate the Effect of Cognitive Drill Therapy on Social Anxiety - A Preliminary Study

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Abstract

Cognitive drill therapy is a new and effective approach for the treatment of social anxiety. Key component of this therapy involves verbal exposure to dreaded negative outcomes. Verbal exposure is kept continued until there is a noticeable decrease in the felt anxiety. The process starts with the generation of cognition of the feared outcomes, followed by a change in time perspective to the present or past. To examine the effectiveness of cognitive drill therapy in the treatment of social anxiety. Methods: In the Present intervention study by using the random sampling method, a pre-post test of the experimental and control group was used. The sample consisted of 52 subjects (26 in each group), based on pre-test scores on social anxiety with a diagnosis of moderate social anxiety. The pre-post assessment measure was LIEBOWITZ SOCIAL ANXIETY SCALE. For intervention, I0 sessions of structured CDT (weekly one session) were used individually on the experimental group. Afterward, a post-test was administered to both groups to identify the difference in social anxiety. An Independent sample t-test was applied to find the difference between the two groups before and after the intervention. Findings revealed a significant change in pre-post-test scores on the symptomology of social anxiety. Sample size and age group can be increased/varied for wider generalizations.Cognitive drill therapy produces faster results and provides a unique framework for exposure to the cognitive determinants of irrational fear.

Keywords: cognitive drill therapy (CDT), social anxiety, anxiety, psychoeducation, psychotherapy

Introduction

Social anxiety disorder, commonly known as social phobia, is an anxiety disorder in which a person feels uneasy when interacting with others due to a concern about being embarrassed or judged by others (NIH, 2014). This kind of uneasiness will be experienced as fear and anxiety and will be accompanied by anomic arousal, including diaphoresis, apnea, tremors, tachycardia, and nausea (ADAA, 2014). The severity of symptoms can range from mild uneasiness to a nearly crippling fear that pervades all aspects of life (American Psychiatric Association, 2013). The uneasiness that people with Social Anxiety Disorder experience can be generalized to day-to-day life activities such as eating in front of others or using a public bathroom. People with social phobia urge social contact and wish to participate in social situations, but their anxiety can become intolerable (NIMH, 2014). Social anxiety can lead to isolation and either the absence of development or a slowdown of social skills, which can escalate existing social anxiety. Comorbidity also occurs with other anxiety disorders, depression, as well as substance abuse disorders according to the DSM-5 (American Psychiatric Association, 2013). Other

anxiety disorders also go along with social anxiety, and social anxiety can lead to depression due to loneliness, isolation, and inability to make social contact. People may use drugs or alcohol to cope with social anxiety (NIMH, 2014). Social anxiety disorder is the third most predictable mental health disorder, with a lifetime prevalence rate of approximately 12% (Kessler et al.2005). All kinds of anxiety disorders, especially social anxiety disorders, have the significantly highest frequency rate among generalized anxiety disorders (GAD), specific phobias, panic disorders, agoraphobia, etc. People with social anxiety are always worried about being judged and also feel shy and anxious while going to stage performances or participating in group activities, going for an interview, as well as expressing themselves in social surroundings. Social anxiety can be seen at any level, from school life to college life as well as medical, technical, and other competitive exams, and due to social anxiety, reduces people's self-confidence and that's why many people experience substance abuse as well as feeling depressed. According to DSM-5, the annual frequency of social anxiety disorder is 7% in both children and adults in the United States (American Psychiatric Association, 2013). Adults and older children with anxiety disorders are more likely than others to underachieve or drop out of school (Van Ameringen et al. 2003). 4.1% of inhabitants are affected by some kind of anxiety and more than 121 million inhabitants, or 5 crore people, have some sort of anxiety disorder in India (national mental health survey 2015-2016).

According to the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, fifth edition), there is a total of 10 diagnostic criteria for social anxiety disorder.

1. Fear or anxiety manifests itself when confronted with something we know little about. For me, these moments come around all too often - a date, a job interview, meeting someone for the first time, giving an oral presentation - yet it is not just my life that fills me with anxious thoughts. Children are susceptible to feeling anxious as well when they are left in situations where there could be hazards at stake due to a lack of judgment, which can lead to concerns and disorders during childhood years until adulthood without intervention or change.
2. A lot of people are afraid that if they show signs of anxiety, it will result in negative consequences like being shunned by society or becoming an outcast.
3. Social interactions will always produce at least a small amount of distress.
4. Fear and anxiety are irrelevant to the reality of what is happening.
5. The fear and anxiety will be grossly disproportionate to the reality of the situation.
6. The social fears, anxieties, and other negative feelings will persist for over 6 months.
7. This disorder can hinder the sufferer from being able to function normally in some aspects of life, whether it be socially or professionally.
8. The fear or anxiety cannot be attributed to an underlying medical disorder, drug use, side effects of medication, or severe trauma.
9. Another psychological disorder
10. If someone has an additional medical condition that would make them feel too self-conscious, then their social anxiety is either unrelated or disproportionate. A person might also be diagnosed with performance situation-specific social anxiety disorder (such as public speaking) (American Psychiatric Association, 2013).

A newer form of psychotherapy called cognitive drill therapy (CDT) is successful in reducing stimulus bound anxiety. CDT focuses on psychotherapy principles such as fear conditioning, cognitive appraisal, and linguistic approaches. Cognitive Drill Therapy has proven to be a reliable and highly organized type of therapy that leads people with complex anxiety or fears to overcome the stimuli at hand by facing them. Numerous clinical studies support its effectiveness for conditions such as traumatic disorders or irrational fears caused by high levels of stress due to very recent life events; panic disorder (Dwivedi & Kumar, 2015); specific phobias such as spiders or heights; obsessive-compulsive disorder (Arya, Verma & Kumar, 2017); posttraumatic stress disorder-particularly related to events that only happen once; generalized anxiety disorder (Verma et al., 2018). An individual who has irrational fears is diagnosed with varying degrees of severity, depending on what they are afraid of. Treatment

for the fear may involve cognitive behavioral therapy in combination with exposure therapy. There are many different versions of treatments for these types of patients. However, one version proposed by Rakesh Kumar (Arya et al., 2017) is called Cognitive Drill Therapy. This type of therapy relies heavily on verbal exposure to stimuli that cause discomfort, as it attempts to shift one's focus from avoidance to mastery through repeated exposures to a fearful situation while using cognitive techniques and other tools such as breathing exercises or muscle relaxation techniques. For example, an individual who was terrified of speaking in front of large crowds could use CDT to get over his or her irrational fear through repeated practice of talking in front of larger crowds until their reactions decreased significantly and their level of anxiety became much lower than when they first started practicing this technique.

From a psychological standpoint, threat perception is what drives irrational fear. Irrational fear causes people to behave cautiously and focus on their perceptions of threats rather than fixing them. With enough time spent focusing on the issue at hand, people who experience irrational fear will see themselves become less afraid overall. Fear is what the Future perceptions are filled with potential dangers. Focusing on these possible dangers rather than present ones will make them seem more manageable. Once they're made less dramatic, it's easier to solve problems related to fear because there isn't anything holding us back anymore. As our minds continue to ponder the possible outcome of future events, we can use Cognitive Drill Therapy to correct this orientation. For us to do so, we need to have tensely altered statements prepared beforehand. Our goal is to trigger an anxious state when they process these transformations - to show them how irrational their fears are and how they've been exaggerated beyond reason. We need the patient who has been assigned these tasks (referred to from now on as the patient) to learn through experience and become confident enough that they don’t need to suffer anymore. Having a sequence of anxiety curves means managing fear responses effectively. Repeating these transformational sentences compulsively helps alleviate stress while also strengthening one's ability to overcome fearful thoughts - eventually becoming immune even if they face them again, which would make it easier than before because the distorted reality has been shattered without any mental barriers blocking off possible outcomes from consideration.

Psycho-education

In the present study, psychoeducation is an essential part of treatment and it is given to every patient before they receive any kind of drill therapy. While some patients do not need psychoeducation, it is still mandatory for these patients to go through at least some form of education. Through psychoeducation, a patient is allowed to know what will happen during their treatment, which makes them feel more comfortable about proceeding. Drill therapy can't commence until this education has taken place, which means there need to be enough staff members present for it all to happen properly. After carefully taking note of the symptoms and properly assessing the patient, before starting a therapeutic drill, it is necessary to do psychoeducation. It was necessary for every patient undergoing therapy, but not just any kind of treatment. Psychoeducation includes teaching about their condition and what could happen next if it isn't dealt with. This usually starts with understanding how stress can affect mental health on a scientific level, then discussing how it happens on an individual level and how treatment can help reverse that process. I typically go over psychoeducation with patients so they understand this type of stress issue rather than them thinking they're experiencing something else entirely, but it always depends on who my patient is or where they are in life when deciding which information would be best given first.

Method

Participants

A sample of 50 young adult students from academic institutions was identified as having the presence of significant social anxiety. They had no comorbid psychiatric, neurological, or medical illnesses. None of the participants had undergone

any psychotherapeutic intervention for social anxiety. The score on Liebowitz Social Anxiety was used for the presence of social anxiety and the inclusion of participants. With a score of 65 to 80, a moderate level was considered for a person having significant social anxiety. A number of 25 participants were invited to participate in each group of the study that is the experimental group and the control group. The experimental group was given intervention for social anxiety, whereas the control group was not given the treatment.

Tools

The Liebowitz Social Anxiety Scale (LSAS) was developed by Liebowitz (1987). The LSAS has a broad scope in the assessment of both social interactions and performance/observation situations. Since its invention, the LSAS has been used in many cognitive-behavioral treatments of social phobia. The LSAS is the most frequently used form of social anxiety assessment in research, clinical-based, and pharmacotherapy studies. The scale is composed of 24 items divided into 2 subscales; 13 concerning performance anxiety and 11 about social situations. It has good reliability and validity. This scale will be used as the primary measure of the severity of social anxiety.

Procedure

Prospective participants were contacted at various educational institutions with the permission of the educational institute and the consent of the participants. A brief interaction was done individually or in the group to introduce the problem of social anxiety. Those who volunteered to get screened for social anxiety were administered the Liebowitz Social Anxiety Scale and a cut-off score of 65 was used for the presence of social anxiety and inclusion of participants. Those who scored 65 and more than moderate level were invited to participate in further assessment after giving consent to participate in the study. The following tools were individually administered:

(i) Proforma Socio-demographic and
(ii) Liebowitz Social Anxiety Scale (LSAS)

Inclusion

1. Subjects who know both languages Hindi and English
2. Subjects who were preparing for competitive exams such as NET, SSC, and any other competitive exam.

Exclusion

1. Those with other known psychiatric or neurological problems, including substance abuse, were not included.
2. Those who are already under treatment for social anxiety were not included.

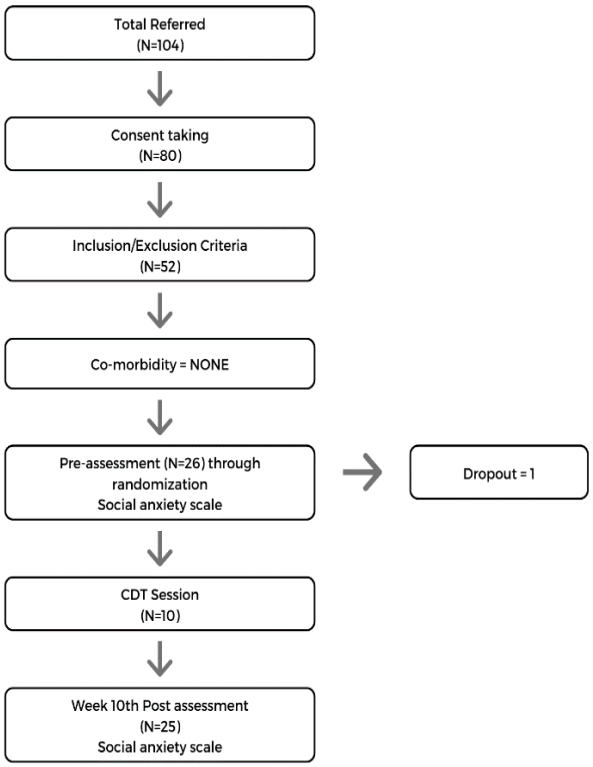


Figure 1: Experimental

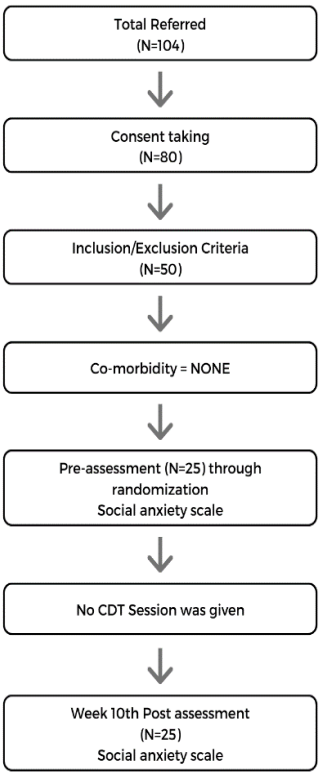


Figure 2: Control Group

Execution of Cognitive Drill Therapy

The cognitive drill therapy was done in face-to-face interaction. First of all, participants were asked to relax by deep breathing. When they felt relaxed and calm, participants were asked to imagine/herself in the feared situation and tell the drill statement one by one. At the beginning of the sessions, when participants imagine a particular situation and repeat the drill statement if they feel stressed or anxious, and uncomfortable, then a pause of 15-30 seconds or larger was given before resuming. The drill was done one by one on the statement. A therapy continues from the application of the drill statement until the anxiety level of the feared statement falls to a low level and the next drill statement has nil or low activation of body-mind reaction. A session of CDT lasted from 45 minutes to more. In the present study, 10 individual sessions were conducted, and all assessment and CDT interventions were done one by one systematically. Post-intervention assessments were conducted after the completion of the CDT intervention. Participants were also given CDT homework to repeat drill statements twice a day, and they were encouraged to use cognitive drill therapy when they felt uncomfortable or stressed.

To Calculate the result t-test was evaluated, and the obtained scores and t- value is summarized in the following tables and graphs.

Table no:1 Experimental group

	TOTAL	MEAN	N	t-test
PRE	2028	81.12	25	**27.26**
POST	992	39.68	25	

significant level in 0.01 level **

Graph no:1

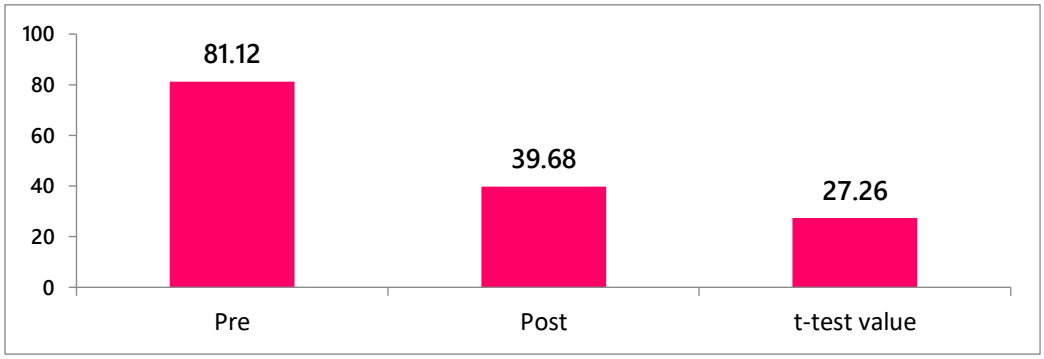


Table no:2. Control Group

	TOTAL	MEAN	N	t-test
PRE	1914	76.56	25	**0.6001**
POST	1786	71.44	25	

Non-significant

Graph no:2

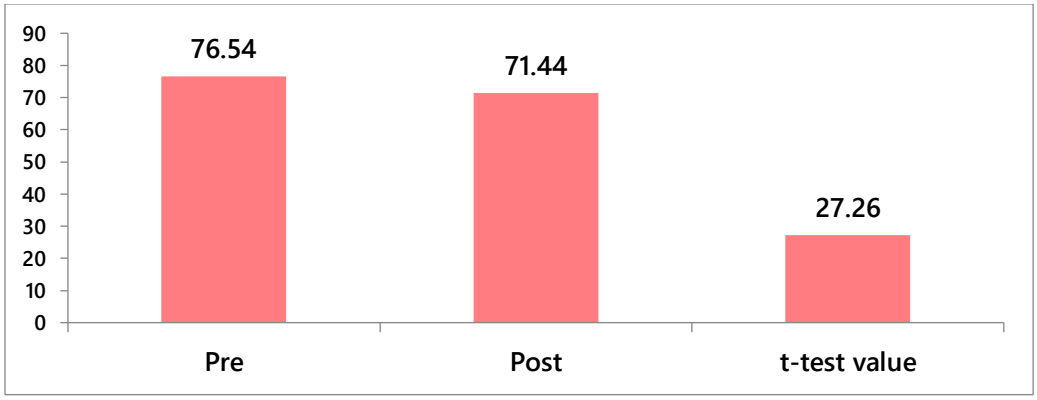
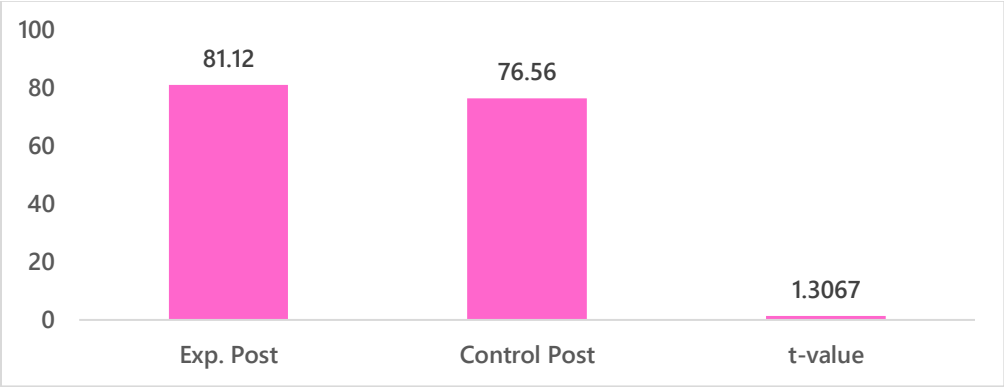


Table no:3 Experimental Pre and Control Pre-analysis Outcomes

	TOTAL	MEAN	N	t-test
EX-PRE	2028	81.12	25	**1.3067**
CON-PRE	1914	76.56	25	

Non -significant

Graph no:3



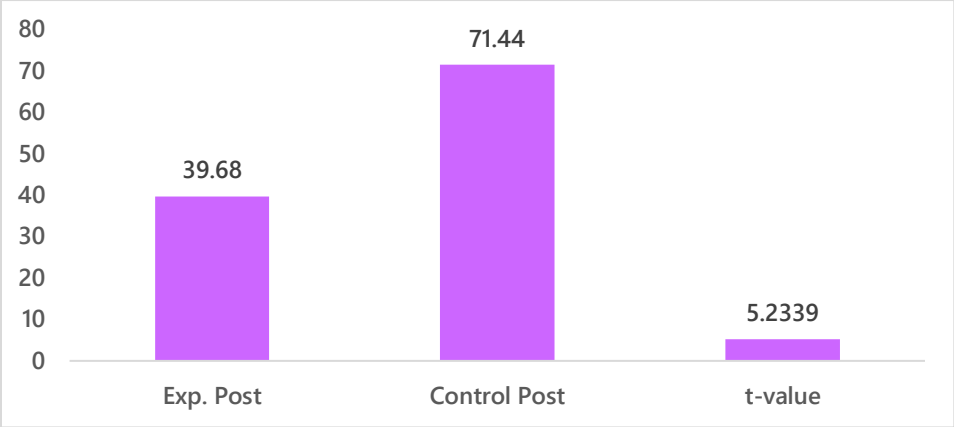
Experimental post and control post-analysis outcomes

Table no-4

	TOTAL	MEAN	N	t-test
EXP-POST	992	39.68	25	**5.2339**
CONT-POST	1786	71.44	25	

Significant on 0.001 level

Graph no:4



Result & Discussion

An inspection of table no-1 reveals a mean value; of 81.12, for the pre-score of the experimental group and a mean value; of 39.68, for the post-score of the experimental group, and the obtained t-value is 27.26 that is found significant at 0.01 level. For this firstly, data was gathered via the administration of the Social Anxiety Scale (SAS), which is developed and standardized by Liebowitz. Subsequently, 25 participants with moderate anxiety scores were identified and placed into the experimental group. The score has reduced after using cognitive drill therapy which indicates the significance of the CDT. The data is further represented graphically to highlight the exact pattern in graph no.1. An inspection of table no-2 reveals the mean value; of 76.56, for the pre-score of the control group 76.56 and a mean value of 71.44 for the post-score of the control group, and the obtained t-value is 0.6001 and it is found non-significant, while the experimental group was given therapy, the participants of the control group were not given any therapy, their pre and post score did not show any difference. The data is further represented graphically to highlight the exact pattern in graph no-2. Table no -3 indicates no significant differences between the experimental pre-mean score of 81.12 and the control pre-mean score of 76.56 and the value obtained t-test 1.3067, graph no-3 highlights the exact pattern of the data however table no-4 the experimental post score of 39.68 and the control post score 71.44 and the t-test value 5.2339 revealed significant result, graph no-4 also highlight the exact pattern of the value. Through the application of cognitive drill therapy over 10 sessions, substantial and clinically significant changes were made in the student's social anxiety. In addition to this, students showed improvements in their social relations with others, improve confidence, and engagement during conversations. They even led them on occasion. The CDT resulted in significant changes in the student's anxiety reactions. Overall functioning improved as well. Therapy exposed them to deep emotions that they would not have been aware of otherwise if they only received exposure without looking into what caused these feelings. The exposure helped ease anxiety because it allowed for a better understanding of why they felt this way about certain things or places before fear was involved. It doesn't matter what triggers these feelings since no one can control everything around them but themselves anyways; however, knowing WHY you feel anxious about something does help tremendously so there's hope for relief if nothing else. Cognitive Drill Therapy conceptualizes stimulus-bound anxiety as a two-layer structure; (a) Top Layer also called surface structure/conscious structure. (b) The bottom Layer Structure/unconscious Structure is also called the underlying fear structure consisting of imagined feared consequences/ subconscious structure because the patients remain dimly aware of the bottom layer. The top layer structure consists of objects of fear such as closed places, heights, open places, crowds, animals, insects,

pointed objects, and social situations like asking a question in class, talking to superiors, making a presentation on stage, giving a speech, talking with authorities as seen in social anxiety, these neutral objects elicit fear and disgust reactions in the patients. These reactions are usually associated with psychophysiological arousal characterized by accelerated/shortness of breath, faster heartbeat, tense muscles, sweating, blurred vision, and trembling. The patients subjectively feel discomfort, uneasiness, and psychic pain at a cognitive level. To deal with the arousal or to prevent the arousal, the patients would avoid exposure by taking alternative routes so that feared objects are not encountered, and shy away from social situations. These attempts are successful for a temporary period, and the cycle continues. The Top Layer can be summarized as follows the bottom layer consists of a series of underlying fears and imagined feared consequences such as fear of negative evaluation, ridicule, rejection, loss of self-image in social anxiety; fear of failure, going blank, feeling insulted and embarrassed, negative evaluation or opinion by others. In Cognitive Drill Therapy, it is believed that the patients remain struck in the top layer and rarely deal with the underlying fear structure. For efficient handling of these problems, we need to directly address the bottom layer and expose the patients to this underlying fear structure. Once this underlying fear structure is destroyed, the patients will show proportionate improvements in social anxiety. Drill therapy utilizes the principles of exposure therapy to attack the underlying fear structure. The protocol of the therapy is very specific, clear, and straightforward. A patient is given proper psychoeducation which consists of sharing the diagnostic label of the problem, communicating the understanding of the two-layer structure, and handling magical thinking that merely by having thoughts in one's mind actual physical events cannot be caused. Education regarding the anxiety curve and the mandatory requirement of homework is also given. The patients are specifically educated about the future orientation of anxiety. They are made to realize that anxiety looks into the future. Under conditions of fear, their subvocal speech center's around imagined possibilities of harm in some future time; and our task is to convert this future orientation into past or present orientation. The objects of phobia are implicitly and mistakenly perceived as predictive of harmful future consequences. One of the important goals of Cognitive Drill Therapy is to destroy the perceived predictability of neutral objects leading to harmful consequences. The neutral objects are neutralized in the process. The patients are also educated regarding the Concept of Universal Probability, which means that harmful consequences can occur to any person

any at time. All of us are having more or less equal probability of such an outcome. having been the psychoeducation, the patients are required to imagine objects of phobia and repeat covertly or verbalize the imagined feared consequences by converting the tense to the present or the past. **For example, imagine yourself on a stage and verbalize "everyone is laughing at me for forgetting on stage"; "Due to forgetting on stage, my negative image is being created". Initially, it leads to a quick spike of fear reaction, and with continuous repetitions, it leads to the resolution of fear within minutes. This procedure is repeated for as many objects of fear as possible both in sessions and in homework. Drill & Daring is the slogan. Perform drills and dare to expose yourself to objects of phobia. The resolution of phobia can occur in a single or a few sessions.

The Implication of the study

Faster outcomes can be obtained with cognitive drill treatment, which also offers a special framework for exposure to the cognitive causes of irrational concerns. The reported case studies on the effectiveness of cognitive drill therapy are very positive. It is a simple therapy that patients can learn quickly and that aids in the long-term maintenance of therapeutic gains. The theories of learning and appraisal theories are the foundation of cognitive drill therapy. Social anxiety has an impact on millions of people. From young children to elderly folks, it is evident. Socially anxious people worry about what other people will think of them. The socially anxious pupils will experience blushing and avoid speaking in front of the class, taking part in group activities, performing on stage, and expressing themselves in social circumstances. From elementary school

through graduation, as well as in medical and technical education, this type of anxiousness can be observed in pupils. People who suffer from social anxiety have lower self-esteem, and these people are more likely to take drugs and have negative moods. CDT, as it is a structured, directive & collaborative form of psychological as well as psycho-social treatment as well, is time-saving, low-cost, and improves self-esteem also.

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