

**Dr. D.L.N. MURTHY RAO ORATION**

## **COGNITIVE BEHAVIOUR THERAPY YESTERDAY, TODAY & TOMORROW**

**K. KURUVILLA**

Respected chairperson, ladies and gentlemen,

First of all, I would like to place on record my sincere thanks to my fellow members of Indian Psychiatric Society, for bestowing upon me the unique honour of delivering the first D.L.N. Murthy Rao Oration of the new millennium.

I have not had the privilege of being a student of Dr. Murthy Rao. Yet I claim an indirect discipleship to him because he was the former Director and Professor of Psychiatry of my alma-mater, All India Institute of Mental Health, the present NIMHANS. My claim of this indirect discipleship to Dr. Murthy Rao also rests upon the fact that many psychiatrists whom I consider as my teachers were Dr. Murthy Rao's students. One thing they all fondly remember about him was his outstanding ability as a clinician - a clinician deeply concerned about the welfare of his patients and strove to pass on this sense of concern for their patients to his students also. So I would like to pay my homage to this great clinician and teacher by talking about a topic which has made significant impact on clinical psychiatry in the last quarter of the 20th century, perhaps second only to the developments in psychopharmacology. I am referring to Cognitive Therapy or Cognitive Behaviour Therapy.

To many psychiatrists of my generation who entered into psychiatric training in the sixties, psychotherapy was a dirty word - mostly because we did not understand what it was and partly because the psychodynamically oriented psychotherapy which we saw as practised by a few psychiatrists in this country did not seem to do any good to the patients. The exciting

developments in the field of psychopharmacology made us believe that a pharmacological solution for every psychiatric problem is just around the corner. Eysenck's influential paper questioning the effectiveness of psychotherapy made us feel that all what is remaining to be done is giving a decent burial to psychoanalysis and along with it for other types of psychological interventions as well. But even at that time our wise teachers like Dr.N.C. Surya and Dr.Murthy, the then professor of psychology cautioned us that it was foolish to discard something just because we did not understand it. They also made us aware of the fact that Eysenck's criticism was applicable only to a particular form of psychological treatment and that Eysenck himself was an ardent advocate of the application of the principles of learning theory in the treatment of various psychological disorders. That advice became meaningful when some of us, after postgraduate training, had to work in general hospital psychiatry units and found that many patients who came to us had problems for which there were no pharmacological remedies. Yet, the patients, their families and the referring doctors expected us to do something effective to alleviate their suffering. This made some of us take a fresh look at the works of Wolpe, Lazarus, Eysenck etc. and find solutions for our patients' problems through Behaviour Therapy. It made sense, it worked, it was easy to learn and easy to teach. From there to Cognitive Therapy or Cognitive Behaviour Therapy was a short step because it made even more sense and worked even better.

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## COGNITIVE BEHAVIOUR THERAPY

### ORIGINS OF COGNITIVE BEHAVIOUR THERAPY

The development of Cognitive Behaviour Therapy (CBT) took place in three stages. The first stage was the growth of Behaviour Therapy (BT) from 1950s to 1970's in two independent and parallel streams in the United Kingdom and the United States. The British form of BT derived its inspiration from the works of Pavlov, Watson and Hull and concentrated on the understanding and treatment of neurotic disorders. Contributions to its growth were made by Wolpe and Eysenck. On the other side of the Atlantic the behaviourist movement was pioneered by the American psychologists who came under the influence of Skinner. Their interest was mostly in the chronic institutionalized patients whose maladaptive behaviour was considered to be unchangeable. Both groups advocated adherence to strict scientific standards. The early enthusiasm for the development of innovative ideas and techniques, later gave way to the evaluation of the efficacy of these techniques using stringent criteria, both in sample selection and outcome measurement. Learning theory played a significant role in the development of BT, but then faded out of sight. BT shifted from science to technology and its practitioners did not show much interest in theory building. The introduction of cognitive concepts filled this gap between science and technology. The rapid acceptance of cognitive concepts by behaviour therapists was probably a reflection of the dissatisfaction with uncritical and undemanding empiricism. The failure of BT in dealing with clinical problems like depression, unlike its success with anxiety disorders also enhanced the clinician's interest in the cognitive aspects. The work of behaviour therapists like Mahoney and Meichenbaum played a major role in drawing our attention to the importance of cognitions in behaviour modification. The behaviourists' interest shifted from the obliging white rat to human beings - first to the white, then the black and more recently to the yellow and brown varieties as well.

The second stage was the development

of Cognitive Therapy (CT) which took place in the United States from the mid sixties. The most influential pioneers in the development of CT were Aaron T. Beck and Albert Ellis. Beck who started as a psychoanalytically oriented dynamic therapist was attempting to validate the Freudian theory of depression as the result of anger turned towards oneself. Instead he found that his depressed patients consistently showed a negative bias in their cognitive processing. After much clinical observation and experimental testing, he developed the cognitive theory of emotional disorders and in particular, the cognitive model of depression.

Rational Emotive Therapy developed by Albert Ellis also provided support to the principles of cognitive therapy, through its assertion that individuals consciously adopt reasoning patterns and possess control over their thoughts and actions which in turn have impact on their emotions.

The third stage was the merging of cognitive and behavioural principles and strategies into a coherent whole, resulting in the emergence of Cognitive Behaviour Therapy. The behavioural emphasis on empiricism has been absorbed into CT. BT's style of conducting outcome research, with its demands for rigorous controls, statistical designs, treatment integrity and credibility has been adopted by CT. Cognitive therapists began giving greater importance to behavioural experiments and exercises. Behaviour therapists became interested in the patients thoughts, explanations, understanding, wishes and fears. In other words, Cognitive Therapy supplied content to Behaviour Therapy.

### THEORETICAL FOUNDATIONS OF CT

Cognitive Therapy as developed by Beck was based on the rationale that an individual's affect and behaviour are largely determined by the way in which he structures his world (Beck et al., 1979). CT views personality as being shaped by central values or core beliefs that one develops early in life as a result of factors in one's environment. These schema constitute the

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basis for coding, categorising and evaluating experiences and stimuli that an individual encounters in his world. Psychological problems are perceived as stemming from common place processes such as faulty learning, making incorrect inferences as a result of inadequate or incorrect information and not distinguishing adequately between imagination and reality. Therapeutic techniques are designed to identify, reality test and correct distorted conceptualisations and dysfunctional beliefs underlying these problems.

### EARLY THERAPEUTIC DEVELOPMENTS

**Depression** : CT was developed and gained recognition initially as a mode of treatment for depression. In the cognitive model of depression, depression is characterised by the cognitive triad; the depressed individual maintains a negative view of self, the world around and the future. He perceives himself as inadequate, deserted and worthless. The environment appears to him to be devoid of pleasure or gratification. The future is viewed pessimistically when the present problem will only get worse.

As a reality based intervention, CT accepts the life situation of the individual and focuses on altering only the biased view about his situation. It tries to improve his response repertoire and enable him to generate solutions. Thus CT is an active, structured, problem oriented and time - limited approach to the treatment of depression. It teaches the patient a number of measures to combat depression and these include monitoring negative automatic thoughts, recognising the relationship among cognition, affect and behaviour, critically examining the underlying thoughts, substituting negative cognitions with more objective interpretations and learning to identify and alter the higher - order dysfunctional beliefs that predispose the individual for cognitive distortions.

In mild to moderate depression it is possible to start with cognitive techniques straightaway, while in the severely depressed, it

is advantageous to start with behavioural techniques such as activity schedule, graded task assignment etc. Once the patient becomes more active, cognitive techniques like recoding automatic thoughts, finding alternative or more rational responses etc. may be introduced. As the patient improves further, attention is paid to his underlying assumptions, scrutinizing evidence that upholds them and testing their validity.

Early evaluation studies have shown CT's effectiveness in unipolar depression (Beck & Rush, 1978) and its comparability with antidepressants (Murphy et al., 1984). Some studies showed CT was more effective than antidepressant medication in the alleviation of depression (Rush et al., 1977) and CT's effect to be longer lasting (Kovacs et al., 1981).

**Anxiety disorders** : Once CT's effectiveness in treating depressive disorder was established, early cognitive therapists turned their attention to another common group of clinical problems viz. anxiety disorders. In CT anxiety is conceptualised as a condition where the person perceives certain innocuous situations as threatening. Once in such a situation, the individual dwells fearfully on the outcome. He underestimates his coping ability. The images created are often strong enough to induce physiological symptoms of anxiety and as anxiety persists, the individual dreads the unpleasant symptoms as much as the precipitating factor itself. The result is a vicious cycle in which anxiety reinforces fear and that in turn produces further anxiety.

Therapeutic strategies include understanding the individual's cognitive set or schema, how the patient views himself and his anxiety, reducing the catastrophising they engage in regarding the negative outcome and developing coping strategies to improve the chances for a positive outcome.

Evaluation studies have shown CBT to be effective in panic disorder, social phobia, generalised anxiety disorder, specific phobias and post-traumatic stress disorder (Barlow and

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Lehman, 1996; Clarke, 1997; Loerch et al., 1999).

### CURRENT STATUS OF CBT

The last decade of last century saw two types of developments in CBT. First CBT is being used for a wide variety of psychiatric, psychological and medical problems in individual and group therapy sessions both in developed and developing countries. Today CBT is perhaps the most widely used non-pharmacological intervention for emotional disorders. Secondly, evaluation studies which are more rigorous than the early ones are being carried out and some of them cast doubts on the early claims of efficacy, thereby forcing the cognitive therapist to refine his techniques and modifying his concepts. Since these two issues reflect the current status of CBT, I would like to discuss them at some length.

### APPLICATION OF CBT TO AN INCREASING NUMBER OF PROBLEMS

1. Psychotic conditions: Historically behavioural techniques like Token Economy based on the principles of operant conditioning were used in the management of chronic psychosis. Later social skills training was introduced for the management of negative symptoms and social skills deficit accompanying schizophrenia.

CT per se was employed in the treatment of post - psychotic depression. Principles very similar to those used in the treatment of primary depression were used. However in the recent years CT has been used in the treatment of delusions and hallucinations persisting despite adequate drug therapy. One technique used in treating delusions is "cognitive dissonance" which can be applied in an individual or groups setting. It centres around teaching patient to generate alternative explanations for his psychotic experience and is found to help in the reduction of symptoms.

Another CBT approach in the treatment of schizophrenia includes presenting schizophrenia to the patient as a biological vulnerability to stress, teaching him to identify

stressors and enabling him to cope with them using CBT principles. Hallucinations and delusions are taken as reactions to personal and interpersonal stress. The focus is on identifying triggering factors, examining supporting evidence for the patient's subjective interpretations and considering other possible interpretations.

Single case studies with follow up upto 4 years have shown that CBT can help in the reduction of symptoms, improve social functioning and reduce hospital days (Bradshaw, 1998). In a study where cognitive dissonance technique was used, significant improvement was seen in the CT group in comparison to the control group which had supportive group therapy (Levine et al., 1998).

In another study, those patients who had unremitted positive symptoms even after having had a minimum of 6 months of adequate dose of traditional neuroleptic or clozapine for at least one year, were given either CBT plus pharmacotherapy or pharmacotherapy with case management program. Clinically significant improvement was seen in 69% of the CBT group compared to 37% in the control group (Kuipers et al., 1997). When these patients were followed up for 18 months, continuing improvement was seen in 65% of the CBT group and only in 17% of the control group. Delusional distress and frequency of hallucinations were found to be reduced in the CBT group. The authors felt that the cost of CBT is compensated for by reduced service utilisation (Kuipers et al., 1998).

In a study on chronic schizophrenia, patients who showed positive symptoms despite adequate pharmacotherapy were treated in 3 groups: i) routine care with CBT; ii) routine care with supportive counselling and iii) routine care alone. Significant reduction in the severity of symptoms and number of symptom were noticed in the CBT group (Tarrier et al., 1998). Difference between the CBT group and other two groups persisted at 12 months follow up with regard to positive symptoms while negative symptoms had similar reduction in CBT and supportive

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counselling groups (Tarrier et al., 1999).

Drury et al. (1996a) studied the effect of adding CT to pharmacotherapy in the treatment of acute psychosis. They found that during hospitalization, those who had CT and pharmacotherapy showed greater decline in positive symptoms. At 9 month follow up moderate to severe residual symptoms were present only in 5% of the CT group compared to 56% of the control group. Insight, dysphoria and low-level psychotic thinking which were not targeted in the therapy also improved in the CT group (Drury et al., 1996b).

Jakes et al. (1999) examined the effectiveness of CT for delusions, in routine clinical practice. Cognitive techniques such as cognitive challenging, reality testing and normalization were used. Though only 1/3 of the patients showed reduction in their conviction of delusions, all patients reported reduction in their distress.

Overall, the current evidence supports the notion that CBT is a potent adjuvant to the pharmacotherapy of psychotic conditions.

**2. Depression in children:** Harrington et al. (1998) in a recent review reported that CT, Interpersonal Psychotherapy and Family Therapy are the most widely used psychotherapies for childhood depression. Although there is some support for the theories behind all these methods, CT is the best evaluated of the three. The authors felt that there is sufficient evidence to show that it is effective in dealing with depressive symptoms and mild depressive disorder in children. It may also be useful in preventing recurrences - but this has not been conclusively demonstrated. No satisfactory study has been found comparing psychotherapy with medication in childhood depression.

**3. Dysthymia:** It is postulated that dysthymia, which is characterised by low self-esteem and impaired social and interpersonal functioning will be amenable to CBT and that CBT can help the patient to develop a more adaptive behaviour and improved self - perception and also may help in control of symptoms and prevention of

relapse. Ravindran et al. (1999) compared patients receiving group CBT along with sertraline, with those who were receiving CBT and placebo, sertraline alone and placebo alone. Though the CBT plus sertraline group showed greater improvement than the sertraline alone group, the difference did not reach statistical significance. CBT had no effect on the quality of life but it improved in the drug alone group.

**4. Obsessive compulsive disorder:** Obsessional problems are conceptualised as consequences of the particular meaning or significance the patient attaches to the intrusive thoughts, images etc. When intrusions are interpreted as indicative of personal responsibility, it results both in distress and occurrence of neutralizing behaviour. CBT seeks to change responsibility beliefs and appraisals and thereby reduce distress and eliminate neutralizing response which may occur in the form of mental rituals (Salkovskis et al., 1998). However, in the treatment of compulsive rituals efficacy of CBT is yet to be convincingly demonstrated and the behavioural techniques such as exposure and response prevention still remain the most effective ones. Cognitive measures are found to make the patient more compliant for the behavioural techniques.

**5. Hypochondriasis:** CBT considers hypochondriasis as a state where bodily signs and symptoms are perceived as more dangerous than what they really are and a particular illness is believed to be more probable than it really is. Goal of treatment is correction of these cognitive distortions.

Warwick et al. (1996) treated patients with hypochondriasis with CBT in 16 individual sessions over 4 months. Treatment consisted of identifying and challenging misinterpretations of symptoms and signs, helping patient to develop more realistic interpretations, reconstructing images and modifying dysfunctional assumptions. Behavioural techniques like induction of innocuous symptoms deliberately by body focusing, graded exposure to previously avoided illness - related situations, prevention

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of repeated bodily checking and reassurance seeking. In comparison to waiting list controls CBT group improved in all but one measure of hypochondriasis. Disease conviction, a central theme of hypochondriasis was significantly reduced by CBT. Improvement was found to be maintained at 3 months follow up.

Clark et al. (1998) compared CT with behavioural management and found that both measures are effective in controlling symptoms of hypochondriasis. On all measures - except for mood disturbance - CT group fared better than the BT group. On follow up one year later, both groups remained better than the pretreatment levels.

6. Acute stress disorder : In individuals exposed to acute stressful situations like road traffic accidents CBT consisting of repeated exposure in imagination followed by cognitive restructuring - identification of irrational threat - related beliefs, evaluation of irrational beliefs and replacing them by realistic thinking, was found to be effective in reducing the chances for the development of post - traumatic stress disorder. CBT was superior to supportive counselling (Bryant et al., 1999).

7. Post traumatic stress disorder : CT of PTSD aims at identification of maladaptive cognitions, their relationship to emotions and modification of these cognitions. When CT was compared with imaginal exposure in PTSD patients both techniques were found to result in durable clinical benefits and relapses were few. No significant difference was seen between the two treatments (Tarrier et al., 1999).

8. Alcoholism : CBT of alcoholism aims at controlled drinking and not total abstinence. It addresses the issue of craving and teaches the patient management of slip drinking and reduction of relapses. CBT has been found to be useful in reducing drinking days and drinks per day. Improvement was maintained upto 15 months. Anton et al. (1999) found CBT to be effective in reducing the chances of an 'alcohol slip' from becoming a relapse.

9. Marital discord : CBT is effective in increasing relationship satisfaction and improving

communication. It also leads to reduction in depressive symptoms, dysfunctional cognitive patterns and increased activity level in those marital partners who have associated depression also (Emmanuels et al., 1996).

10. Personality disorders : There are single case reports demonstrating the efficacy of CBT in borderline, schizotypal and narcissistic personality disorders. Linehan et al. (1994) reported that a form of CBT which they called "Dialectical Behaviour Therapy" was useful in parasuicidal women, with borderline personality disorder. Patients were helped to identify and correct their maladaptive problem - solving behaviours and to develop techniques for regulating emotion and tolerating periods of severe distress.

11. CBT and behavioural medicine : CBT has proven to be a cost - effective and efficacious intervention in variety of ill and at risk population in terms of modifying health and illness behaviours, promoting effective coping skills and enhancing physical and psychosocial well being. Some of the conditions where CBT is found useful are listed below.

a) Bulimia nervosa : CBT approach to the treatment of bulimia consists of daily self monitoring, identification of high risk situations for binge - eating and vomiting, identifying and challenging of dysfunctional beliefs related to the disorder. Walsh et al. (1997) compared CBT to psychodynamically oriented psychotherapy, with and without antidepressant medication. It was found that CBT is superior to psychodynamic psychotherapy in reducing symptoms like binge eating and vomiting. CBT with medication was superior to medication alone. The authors concluded that "at present CBT is the psychological treatment of choice for bulimia nervosa".

b) Chronic fatigue syndrome : Though CFS is now accepted as a heterogenous and multi causal entity, CBT could be used to alter beliefs and behaviours that maintain fatigue and disability. Sharpe et al. (1996) in a randomised controlled study found that CBT reduced

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symptoms and disability in CFS sufferers. Walsh et al (1997) used CBT, consisting of graded tasks and cognitive restructuring in one group of patients and relaxation alone in another group. 70% of the CBT treated patients had a good outcome. They showed substantial improvement in physical functioning and maintained it at the 6 month follow up. Only 17% of the relaxation group improved.

c) Cancer: CBT is found to help cancer patients in three aspects: i) managing disease and treatment related reactions; ii) reducing emotional distress; iii) enhancing quality of life (Devine & Westlake, 1995).

d) Chronic pain: CBT seeks to help patients to control their pain and limit impairment through i) education about the role of thoughts and emotions on pain; ii) modification of contingencies for pain behaviour; iii) acquisition and practice of cognitive and behavioural skills to facilitate improved coping (Marcus et al., 1995).

e) Cardiovascular diseases: CBT is found to be useful in reducing hostility, a psychological factor which is found to be highly correlated with coronary heart disease (Gidron & Davidson, 1995). CBT is also useful in reducing the chances for reinfarction in post myocardial infarction patients who were depressed and have little social support. Cognitive and behavioural techniques are helpful in modifying behaviours like salt intake, eating habits, exercise and alcohol use which are correlated with hypertension (Dubbart, 1995).

f) AIDS and HIV: CBT is found to be useful in prevention of HIV transmission (Ford et al., 1996) immune enhancement in seropositive patients, (Eller, 1995) and helping those who face HIV related bereavement (Folkman & Chesney, 1995).

**CBT of Depression, How Effective is it? Recent Findings** The confidence of its practitioners on the efficacy of CBT in the treatment of depression, was badly shaken by NIMH study of Elkin et al. (1989), which found that CBT is not

an effective treatment in the severely depressed in comparison to antidepressant medication. The fact that this study had some significant methodological shortcomings, offered little comfort to cognitive therapists. However Shea et al. (1992) in a follow up assessment of the NIMH study subjects found that at 6 and 18 month follow up, CBT was nonsignificantly superior to pharmacotherapy, interpersonal psychotherapy, and placebo with clinical management. CBT patients also had a higher rate of "clinical recovery" as measured by end of treatment improvement.

The usual concept that CBT is useful only in mild to moderate depression is challenged by the meta-analysis report of De Rubias et al. (1999) that in the treatment of severe depression CBT is as effective as antidepressants.

The long term efficacy of CBT in the prevention of recurrent depression was examined by Fava et al. (1996). Patients with primary major depressive disorder who had successful treatment with antidepressant medication were allotted either to CBT or standard clinical management for the treatment of residual symptoms, after the withdrawal of antidepressant drugs. Outcome evaluation at the end of the 4 years showed a significantly lower rate (35%) of recurrence in the CBT group compared to the control group (70%). In a 6 year follow up study Fava et al. (1998) found that 50% of the CBT group and 75% of the control group relapsed. When the number of relapses were also taken into account, it was found to be significantly less in the CBT group.

**CBT in India**: Surveys done among psychiatrists in India have shown that only a small proportion of us practise any type of psychotherapy. Even among those who do psychotherapy, many describe their method as eclectic supportive psychotherapy which is neither fish nor fowl and can include anything from telling the patient a few reassuring words to the use of ill digested Freudian concepts. The possible reason for this state of affairs could be the lack of training

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opportunities, lack of time and economic factors. The above observations on psychotherapy in general is true with regard to the practice of CBT also. As a result of this, most practitioners of CBT in this country were clinical psychologists till recently. Writers like Neki (1976) have suggested that instead of the non directive psychotherapies developed in the west, psychotherapy which fits the Guru - Chela paradigm is more suitable for Indian culture. CBT which is a directive, problem oriented brief psychotherapy which uses the "Socratic" approach seem to fulfill this criterion. It is also a method which can easily be learned. So in the recent years a few psychiatrists in different parts of the country have taken interest in the practice of CBT and have found it effective in many of their patients. But the number of such practitioners is still small. Also significant evaluation studies have not been published on the efficacy of CBT in our population.

### FUTURE DIRECTIONS

In the history of medicine, one repeatedly sees how most effective therapeutic interventions go through a phase over use, followed by a period of disillusionment and abandonment before its rightful place in the therapeutic armamentarium is assigned. This has happened to antibiotics, steroids, hemodialysis, ECT and psychopharmacological agents. Judging from the plethora of conditions in which it is used and claimed to be effective, CBT seems to be going through the phase of overuse. Again, it is a fact seen in the history of medicine that no treatment can be effective in all conditions. So one looks forward to the time when based on rigorous evaluation studies the most appropriate indications for CBT are understood.

One area where CBT holds out great promise is the field of behavioural medicine. As listed earlier, in the recent years its effectiveness has been reported in many medical conditions. In addition, the concepts of CBT may be found to be helpful for patients undergoing stressful

medical procedures like organ transplantation and in improving doctor - patient communication. CBT principles may also help us to gain a better understanding about how people view their health and illness and what makes them accept or reject medical intervention. Even in this area of behavioural medicine the application of CBT needs to be subjected to empirical scrutiny before it is integrated into routine medical care.

Process research with CBT is still in its infancy and future research will need to identify the active ingredients of CBT, mechanisms of change in the patient and the interaction of therapy components and variables. It also remains an empirical question whether CBT has its effect by deconditioning depressogenic schemata and activating new ones, building new adaptive schemata to compete with negative ones, restructuring old schemata or teaching the patient compensatory skills without changing the schemata directly.

It is necessary not only to understand how CBT works, but also we need to understand why and for whom it does not work. We need to pay greater attention to non-responders and how CBT was applied to them to bring about greater refinement to this form of treatment.

As a psychiatrist practising in India, I hope in the coming years, more and more psychiatrists in this country will include CBT in their practice and we will be able to conduct large scale evaluation studies on our patients to see how CBT techniques are to be modified to benefit various segments of our population. For example what methods are most suitable for an illiterate patient who is unable to keep daily records of his negative cognitions? How can we integrate some of our cultural or religious concepts into the practice of CBT? At a more academic level, I also hope the time will come soon when every post graduate trainee in psychiatry will be required to undergo psychotherapy training under supervision for a certain number of hours, and Cognitive Behaviour Therapy will be one of the psychotherapies the trainee is allowed to choose.

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