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Kajian Kes/*Case Study*

Cognitive-Behavioral Treatment of Panic Disorder with Agoraphobia

PONNUSAMY, S. & SHAZLI EZZAT GHAZALI

ABSTRAK

Kertas ini melaporkan satu kajian kes klinikal keberkesanan Rawatan Kognitif–Tingkahlaku (RKT) kecelaruan panik berserta agorapobia di dalam seting klinik psikologi kesihatan tempatan. M.N., seorang pemuda berusia 24 tahun, bermasalah mimpi ngeri, jantung berdebar, berpeluh, rasa menggigil dan ini berlarutan sejak satu setengah tahun yang lepas. Ini menyebabkan klien bimbang untuk pergi ke tempat yang agak sesak seperti ke stesen bus, pasar malam, pasaraya, masjid dan takut berseorang di tempat yang asing. Kajian kes ini berasaskan reka bentuk ABC yang mana subjek dinilai pada tiga fasa rawatan yang berbeza; pra-rawatan, pertengahan rawatan dan pos-rawatan. Empat ujian piawaian telah digunakan iaitu Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), Anxiety Scale of Minnesota Multiphasic Personality Inventory-2 (MMPI-2) and State-Trait Anxiety Inventory (STAI). Subjek telah memberi respon positif sepanjang 12 sesi rawatan intervensi yang berasaskan terapi model RKT tingkah laku dan ini boleh diperhatikan dalam pencapaian skor minimum setiap ujian psikologi yang ditadbirkan. Aplikasi pelbagai strategi tingkah laku dan kognitif menjadi lebih berkesan disebabkan oleh kebolehan pemahaman pesakit dan tahap kerjasamanya. Beliau telah memberi respon baik dalam pendedahan imageri berserta pendedahan beransuran in-vivo dan akhirnya berjaya pergi ke pusat-pusat membeli belah, menggunakan lif di Menara Kuala Lumpur, berjaya ke pasar malam dan menggunakan pengangkutan awam.

Kata kunci: Kecelaruan panik, agorapobia, Rawatan Kognitif-Tingkahlaku, kajian kes klinikal

ABSTRACT

This paper reports a clinical case study on the effectiveness of Cognitive-Behavioral Treatment (CBT) in treating panic attack with agoraphobia in a local health psychology clinic. M.N., a 24 year old male, complained of nightmares, heart palpitations, sweating, tremors and fearful feelings for the

past one and a half years. He felt anxious about going to crowded places such as bus stations, night markets, supermarkets, and mosques and being left alone in any place which he was not familiar with. This case study adopted an ABC design whereby the subject was assessed at three different phases: pre-treatment, mid-treatment and post-treatment. Four standard assessment measures were administered: Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), Anxiety Scale of Minnesota Multiphasic Personality Inventory-2 (MMPI-2) and State-Trait Anxiety Inventory (STAI). The subject responded well to 12 sessions of intervention employed in the study based on CBT model and this could be noticed by minimal score on the entire psychological test administered. The application of behavioral and cognitive strategies became more effective due to patient's ability to understand and also due to his cooperative behavior. He responded well to imagery exposure and in-vivo gradual exposure and successfully went to shopping malls, used lifts at Kuala Lumpur Tower, went to night markets and used public transport.

Key words: Panic disorder, agoraphobia, Cognitive Behavioral Therapy, clinical case study

INTRODUCTION

Panic attack can be defined as a sudden onset of intense fear or discomfort associated with a cluster of physical and cognitive symptoms, which occur unexpectedly and recurrently, such as pervasive apprehension about panic attacks, persistent worry about future attacks, worry about the perceived physical, social or mental consequences of attack, or major changes in behavior in response to attacks. Agoraphobia consists of a group of fear of crowded places such as going outside, using public transportation, and being in public places that causes serious interference in daily life.

Panic disorder, as defined by the Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (DSM-IV), affects 1 to 3 percent of the general population at some point in their lives (Kumar 2003). Panic disorder often occurs in patients with agoraphobia (26 percent) or social phobia (33 percent), which includes widespread anxiety about social interaction and performance (Roy-Byrne 1999). Panic disorders associated with high level of social morbidity and health care service utilization. Epidemiological studies throughout the world indicate a lifetime prevalence rate between 1.5 and 3.5%. The use of a multi component CBT strategy for panic disorder with agoraphobia is one of the preferred therapeutic approaches for this disturbance (Vincelli 2003). Controlled studies have demonstrated that CBT was superior to other treatments for panic where 85% of patients were panic-free at post treatment and improvements were maintained at follow-up (Carlos 1998).

CBT typically includes 10 to 15 sessions of treatments that help people change the thoughts and behaviors that lead to anxiety. It also helps them identify the particular sensations that they associate with fear – sensations such as a rapid heartbeat, paralyzing terror and dizziness. The patients learn how to respond to fear in order to minimize or eliminate symptoms and treatments usually consist of one-on-one sessions (Schmidt 2002). CBT includes many techniques, such as cognitive restructuring, exposure *in vivo*, exposure through imagery, breathing retraining, and applied relaxation is a widely used and highly effective treatment for panic disorder. Meta-analyses have found that specialized cognitive therapy, behavior therapy, and combined CBT were superior to general emotionally supportive psychotherapy in patients with panic disorder (Shear 2001). Also, meta-analyses support the efficacy of CBT in improving panic symptoms and overall disability. In addition, CBT appears to be effective over the long term period (Gould 1995). Furthermore, CBT results in a longer lasting benefit than drugs, and is more effective than relaxation therapy alone (Clark 1994). However, in Malaysia the application of CBT seems is not given priority as one of the main treatment approach for panic attack. Therefore, this paper reports a single clinical case study on the effectiveness of CBT treating panic attack with agoraphobia in a local psychological setting.

METHODS

SUBJECT

M.N., a 24 year-old male, came to a health psychology outpatient clinic after feeling fearful and being unable to sleep because of nightmares. His main complaints were nightmares, heart palpitations, sweating, tremors and fearful feelings for the past one and half years. His tremors usually lasted for 15 min which gradually resolved on their own.

CASE REPORT

Previously well until January 2004, M.N. suddenly woke up from his sleep after having a nightmare. He remembered that night; he went to sleep as usual in his bedroom alone and dreamt of a man wearing white cloth who warned him that his life would be in danger because many people wanted to harm him. As soon as he woke up, he felt nervous, hyperventilated, gasped for air and could not fall asleep anymore that night. Since then he frequently experienced irrational fearful feeling almost everyday. He described the fearfulness as occurring suddenly without any preceding signs or any precipitating factors. The anxiety feeling was associated with awareness of his own heartbeat which he worried might indicate any cardiac complications. He thought that he was going to die whenever he felt these experiences. Simultaneously, he experienced dizziness, sweating

especially on both palms, and shortness of breath, chest discomfort, tremors and cold. The symptoms occurred in episodes at no particular time reaching a maximum within 10 min and resolving after 15 min. In between attacks he was completely back to his normal life.

M.N.'s symptoms gradually became worse where it occurred 2 to 3 times a day until he became worried that these symptoms would recur at any time. Because of this, he felt anxious about going to crowded places (e.g. using bus to go to town or being left alone at any places which he is not familiar with). He preferred to be with his students or use his own motorbike rather than using public transport to go to town. After nearly one year of experiencing the anxiety, he became upset because of his disabilities, lost interest in mixing with his friends, experienced early awakening in his sleep (e.g. he woke up at about 4 a.m.) and could not fall sleep again. He felt guilty if he had negative ideas towards other people (e.g. looking at a dirty man on the street). However, he had no history of hopelessness, worthlessness, loss of appetite, loss of weight, poor concentration or indecisiveness. The symptoms became worse until he decided to shift to Kuala Lumpur believing that it would disappear by itself but it did not.

He had no hallucinations, delusions, ideas of reference, hearing his own thought or derealisation and no anxiety to any specific cues or situations. M.N., denied having any intrusive thoughts to perform any behavior in order to reduce his anxiety. Furthermore, no orthopnea, paroxysmal nocturnal dyspnea or reduce effort tolerance, dysphagia, heat intolerance or blurring of vision. About his pre-morbid personality, M.N. described himself as a friendly, jovial person and easily mixed around with people. He likes outdoor activities such as football, fishing and catching birds. M.N. was not too concerned about cleanliness and punctuality.

CLINICAL FORMULATION

The onset of M.N.'s anxiety state began around the time his brother got married and shifted to Kuala Lumpur. Previously he was very close to his brother, they stayed together for several years and he became very dependent towards his brother. Several times he mentioned that he was half his brother. After his brother's departure, he started to feel empty inside and insecure. He also started to feel anxious about being alone, unable to make decisions and could fall asleep. For the past one and a half years he had been very fearful, sensitive to bodily sensations and started to misinterpret normal situation and body sensation as life threatening events. He started avoiding crowded places and outdoor activities and still felt very anxious because of his internal stimuli. This led him to feel vulnerable and unable to cope. M.N.'s fright of certain sensations (e.g. increased heartbeat during exercise); resulted in him being hyper vigilant and repeatedly scans his body sensation. This internal focus of attention allowed him to notice

sensations which many other people would not be aware of. Once noticed, these sensations were taken as further evidence of the presence of same serious illness. The agoraphobic believed that if he played football, his heart would beat faster and he would collapse and die. By monitoring automatic thoughts and behavior, three things associated with his thinking maintained the Panic Disorder with Agoraphobia.

1. His anxiety disorders might be exaggerated by irrational beliefs concerning the consequences of facing up to the feared or difficult situation.
2. He was prone to making catastrophic misinterpretations of his symptoms, thereby making him more frightening and increasing his panic. He became acutely sensitized to his body, noticing minor bodily changes upon which he focused. He was constantly looking for these changes, especially in situations which have previously been difficult.
3. Because he avoided this situation, he was unable to overcome his irrational beliefs since he was never proved wrong.

Examples of automatic thoughts at the moment when he was feeling particularly anxious and having the attack: he was thinking that he may be going to die, fearing that he was going to get a fatal illness, fear of losing control and collapse and sometimes fear of getting an accident and heart attack. External stimuli (e.g. public transports, lift, and supermarket) and internal stimuli (e.g. his own thoughts, images) and too much sensitivity to body sensations made M.N. became more anxious and developed a panic.

RESEARCH DESIGN AND MATERIALS

Basically, psychological intervention employed in this case study was integrated cognitive and behavioral treatment model which is normally recognized as Cognitive Behavioral Therapy (CBT). The goal of this single case study which employed ABC design was to gradually reduce anxiety level, helping subject controlling panic attacks, and agoraphobic avoidance. Subject was assessed at three different phases: pre-treatment, mid-treatment and post-treatment. The following standard psychological assessment tools were administered to monitor client progress in psychological intervention at three different intervention phases:

Daily Schedule of Automatic Thoughts Records Form (DRAT)

M.N. was given a Daily Schedule of Automatic Thought (DRAT) to help identify negative thoughts and to monitor his own thoughts and progress. Furthermore this would help M.N. to challenge them, and to substitute more suitable and positive thoughts.

Beck Anxiety Inventory (BAI)

Beck Anxiety Inventory (BAI) was used to monitor progress at the initial, middle and final stages of the therapy and at the same time elicited the negative automatic thoughts. The BAI consists of 21 descriptive statements of anxiety symptoms, which are rated on a 4-point scale ranging from 0 to 3. The maximum score is 63 point. The BAI total score ranges are recommended for interpreting the intensity of self-reported anxiety (Beck & Steer 1993a). Total scores from 0-7 points are considered to reflect a minimal level of anxiety; scores of 8-15 indicate mild anxiety; scores of 16-25 reflect moderate anxiety; and score of 23-63 indicate severe anxiety.

Beck Depression Inventory (BDI)

Beck Depression Inventory (BDI) was administered to monitor M.N. depression level. The BDI was administered at the initial, middle and final stages of the therapy. Beck Depression inventory consists of 21 descriptive statements of depression symptoms, which are rated on a 4-point scale from 0 to 3. The maximum score is 63 points. The BDI total score ranges are recommended for interpreting the intensity of self-reported depression (Beck & Steer 1993b). Total scores from 0-9 points are considered to reflect a minimal level of depression; scores of 10-16 indicate mild depression; scores of 17-29 moderate depression; and score of 30-63 indicate severe depression.

Anxiety Scale of the MMPI-2 Supplementary Scale

This Scale was developed to measure the level of anxiety as well as personality. In general, T scores greater than 65 should be considered high scores and T scores below 40 should be considered low scores. The Anxiety Scale has 39 items. The contents of the items fall under four categories; thinking and thought processes negative emotional tones and dysphoria, lack of energy and pessimism, and malignant mention (Hathaway & McKinley 1989).

State Trait Anxiety Inventory (STAI)

The STAI was developed by Spielberger et al. (1970) and consists of 20 items for each form, descriptive statements of anxiety symptoms, which are rated on a 4-point scale ranging from 1 to 4. The scale yields measures of general (trait) and situational (state) levels of anxiety.

TREATMENT PROTOCOL

Psycho-education of panic attack with agoraphobia

According to M.N., he never understood what caused his problem. So, it was useful to teach and explain M.N.'s presenting problem: process, causes and the

maintaining factors. The psycho-education of panic attack was explained using Clark's (1986) Model of Panic Attack and he was able to explain his own problem by using the model.

Behavioral Experiments

M.N. was requested to do voluntary hyperventilation so that he might experience the same effects during panic attack. Breathing techniques gave M.N. the experience of a panic attack. The purpose of the experiment was to demonstrate to M.N the occurrence of symptoms and to correct his own catastrophic interpretation.

Relaxation Techniques

M.N. was taught to practice Progressive Muscular Relaxation (PMR) and Breathing Control. M.N. performed the relaxation techniques twice a day, in the morning and evening. Sometime he also practiced the methods when he felt tense in certain situation. According to Powell & Enright (1991) PMR can reduce anxiety by lowering muscle tone and autonomic arousal and this will clear the mind of worrying thoughts by concentrating on these procedures.

Eliciting Automatic Thoughts

Several techniques to elicit M.N.'s negative automatic thoughts were used. For example a Daily Records of Automatic Thoughts (DRAT) form, mental imagery, direct questioning, and ascertaining the meaning of event. By using DRAT, M.N. also learned to monitor and elicit his own negative automatic thoughts. In the few initial session, therapist helped M.N. to identify the thoughts during sessions.

Modifying Automatic Thoughts

The purpose of restructuring automatic thoughts is to replace negative thoughts with more realistic and positive thoughts. The main methods used to search for more realistic and positive alternatives to negative automatic thoughts by using Verbally Challenging their validity. The aim of therapy was to teach M.N. to begin to challenge his irrational ideas and images and helped him developed a more logical and positive interpretations, by identifying what type of thinking error he made. M.N. learned to challenge and modify his negative automatic thoughts. He was also able to monitor his thoughts and modified to more rational way without having to write them on paper. At one stage he asked "why I have more negative thoughts rather than positive thoughts". This indicates the awareness of his thoughts.

Distraction

Thought-Stopping Technique: M.N would shout "STOP!" very loudly and clap his hands loudly simultaneously. Sometime M.N. would count people on the field while he was playing football because of his thought "I'm going to get panic attack". Coping Card Technique: Patient would read the coping card when he gets the thoughts (e.g. I have good health).

Imagery Gradual Exposure

It is similar to In-Vivo Gradual Exposure, but this time M.N. was asked to imagine the situation, for example e.g. supermarket, public transport and lift. This was practiced before implementation of *In-Vivo* Gradual Exposure.

In-Vivo Gradual Exposure in Lift

In Vivo Gradual exposure was carried out because M.N. was State (situational) anxious. If the patient was Trait dependent, normally cognitive restructuring followed by systematic desensitization was more useful. With guidance M.N. learned to climb the hierarchy gradually in lift, starting at the bottom one at a time. The same *In-Vivo* Gradual Exposure was also used in crowded places (Pharmacy). Finally M.N. was able to cope with situation that he avoided like night market, lift, bus stop and other crowded places. During the In-Vivo Gradual Exposure, each stage of hierarchy, the therapist carefully monitored the level of anxiety.

Flooding

After a few attempts M.N. successfully achieved the target (e.g. first step: walk near to the lift) during gradual exposure, the therapist stops the techniques and focused on other methods of psychotherapy. At one session the therapist asked M.N. to go into a pharmacy and sat for 10 minutes. He was able to sit in the pharmacy and relaxed. He also successfully used the lift few times when directed by the therapist. At first time patient asked to do flooding he felt quite anxious (10%) however his level of anxiety reduced after the flooding was repeated for 5 times.

Relapse Prevention program

Relapse means the return of symptoms after initial improvement. M.N. was thought to spotting risk situation and always be preplanning ahead by modeling and rehearsal. He also has specific skills like PMR, breathing control, gradual exposure and positive self-talk skill to react or to face anxiety-provoking situation. Meanwhile he also thought to learn from lapse because someone who does not learn from lapses is destined to repeat the same behavior again. M.N. also can react constructively (e.g. do not beat up himself emotionally) because internal

thoughts can create negative feeling and can cause relapse. He also thought to avoid catastrophic reactions or in other word keeping things in perspective by avoiding overreact to small mistakes. Finally by using maintenance road map would help M.N. to spot the risk factor and be prepared ahead. However, he was also advised to seek help and refreshing his skill again with clinical psychologist.

RESULTS

The results of psychological intervention by Cognitive-Behaviour Therapy (CBT) are shown in Table 1. M.N. coped with his anxious feeling. He was able to progress positively with the psychotherapy sessions and reduced his levels of anxious significantly. Although in certain situation he had anxious feeling but was able to distract these thoughts and did not end up with a panic attack. He learned to monitor his own negative thoughts and understand the contribution of negative thoughts to the panic attacks. The patient's depression level based on BDI was reduced after the few initial sessions. Although patient has mild depression because of the present symptoms, his depression reduced to minimal range after he started to learn about his problem and understood that his problem could be overcame via psychological treatment.

TABLE 1. The results of psychological intervention from three different phases

Measures	Pre-Treatment (1st session)	Mid-Treatment (6th session)	Post-Treatment (12th session)
BAI	26/63 (Severe Anxiety)	15/63 (Mild Anxiety)	3/63 (Minimal Anxiety)
BDI	12/63 (Mild Depression)	7/63 (Minimal Range)	4/63 (Minimal Range)
STAI:			
State Anxiety	37 (Above Min)`	24 (Below Min)	23 (Below Min)
Trait Anxiety	30	29 (Consistent)	29

For State Anxiety, the score above the Min 35.72 and S.D. 10.4 indicated M.N.'s State Anxious and the score above Min 34.89 and S.D. 9.19 for Trait Anxiety indicated Anxious Traits. The result showed that M.N. was not Trait Anxious but he was Anxious in specific situation. During treatment, his level of state Anxiety reduced below the Min level. M.N. obtained raw score of 21/39 and the T-Score equal to 65. His result reflected distress, anxiety, discomfort and general emotional upset. These high scores also tend to indicate inhibition and over control, incapability of making decisions without hesitation and uncertainty, conformity and being easily upset in social situations.

DISCUSSION

As a psychological treatment program both behavioral and cognitive techniques were used. Both approaches have their own advantages and each approach addresses the specific presenting problems of client. During the initial stages therapy focused on psychological education of M.N.'s presenting problem. The application of behavioral and cognitive became easier because of M.N. demonstrated willingness to learn about his problem and cooperated very well with therapist. He was quite, relieved, when therapist explains the panic attack model suggested by Clark (1986). He mentioned that "now he understood his problem" and the following sessions he drew the cognitive model of panic attack on cardboard and showed to the therapist.

Regarding the *In-Vivo* Gradual Exposure, M.N. was at just reluctant to co-operate. After, he went through Imagery Exposure; he agreed to try In-Vivo Gradual Exposure step by step. He tried and successfully went to shopping malls, used lifts at Kuala Lumpur Tower, went to night markets and used public transport. M.N. was interested to discuss automatic thoughts, that he identified on the DRAT forms. In the first few sessions, M.N. would sit together with the therapist to discuss, challenge and restructure the negative thoughts to positive thoughts. He became quite skillful at changing the negative automatic thoughts. He also claimed that, he was able to make decisions by himself. He also developed confidence.

BDI and BAI were used successfully to monitor the progress of M.N. The BDI and BAI showed that the level of M.N.'s depression and anxiety decreased. M.N. was able to monitor his improvements by completing the questionnaire. Every time M.N. completed the BDI and BAI he would say, "I am okay", whenever he compared his results with those scores when he first commenced therapy. Administration of STAI Form provided valuable information about M.N.'s anxiety. M.N. was state anxious but not trait anxious. He being state anxious, rather then trait anxious gave the therapist the opportunity to implement In-Vivo Gradual Exposure. The administration of the Anxiety Scale the MMPI-2 provided other general information about M.N.'s personality and his anxiety. The Daily Record of Automatic Thoughts also gave specific data about M.N.'s negative automatic thoughts. The Behavioral Interview and assessment also gave a clear picture about M.N.'s problem and provided suitable information to formulate the case.

The therapist established good rapport with M.N. He became very co-operative and open-minded about the psychotherapy processes. He was very punctual and never gave excuses about his homework. Sometime he would do extra homework, like drawing the model of panic attack. This good therapeutic relationship helped the therapist and patient to implementing all behavior and cognitive treatment as planned early. M.N. would give his feedback and ask about the therapist opinion about the therapeutic process. M.N.'s co-operation

level and his motivation to lead a normal life had helped the psychotherapy succeed.

CONCLUSION

The effectiveness of an integrated Cognitive-Behavioral Treatment model (CBT) on a male subject with panic disorder with agoraphobia was examined. A single-subject clinical case study with ABC design was employed. The psychological intervention consisted of 12 sessions mainly focus on psycho-education, breathing exercise, progressive muscular relaxation, cognitive restructuring, thought-stopping technique, imagery and in-vivo gradual exposure and flooding. As evidenced by several trials and by this single case study, CBT is a highly effective treatment for panic disorder with agoraphobia. The results suggested that CBT was effective in helping M.N controlling panic attacks, and agoraphobic avoidance. M.N. was able to cope with his anxious feelings and resume outdoor activities. Overall, CBT helped M.N. understood the nature of panic disorder and also helped him to change reactions toward anxiety-provoking situations.

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Ponnusamy, S.
Shazli Ezzat Ghazali
Unit Psikologi Kesihatan
Fakulti Sains Kesihatan Bersekutu
Universiti Kebangsaan Malaysia
Jalan Raja Muda Abdul Aziz
50300 Kuala Lumpur