
A cognitive behavioural intervention for panic disorder when comorbid with schizophrenia: A case study in an outpatient setting

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Abstract: *The prevalence of panic disorder is considerably higher in those diagnosed with schizophrenia and it is associated with a significantly poorer prognosis. To date little research has been published on the treatment of panic disorder when comorbid with a schizophrenia spectrum disorder. This case study examined the efficacy of cognitive behavioural therapy in a treatment intervention for panic disorder when comorbid with schizophrenia. Results indicated that the intervention was effective in reducing the frequency of panic attacks, and in reducing the client's overall level of anxiety. Further research is required to determine the effectiveness of such interventions in this cohort.*

The lifetime prevalence of anxiety disorders in people with schizophrenia spectrum disorders (SSDs) ranges from 30% to 85% (Pokos & Castle, 2006). Of this population, 28% to 63% of people experience recurrent panic attacks (Arlow et al., 2001), and 4% to 35% meet the diagnostic criteria for panic disorder (Pokos & Castle, 2006). The prevalence rate of panic attacks (PAs) and panic disorder (PD) in this population is considerably higher than in the general population, where the lifetime prevalence of PAs and PD ranges from 3.5% to 6.2% and

1% to 2% respectively (American Psychiatric Society, 2000). More significantly, however, is that the prevalence of comorbid PD is higher than in those diagnosed with other mental health disorders, where the comorbidity is reported to be 10% (American Psychiatric Society, 2000). The considerably higher prevalence of PD when comorbid with SSDs suggests that there is a significant link. The relationship between these disorders, however, remains unclear (Pokos & Castle, 2006).

A number of theories have been proposed to explain the link between SSDs and anxiety disorders. It has been proposed that anxiety symptoms may be early manifestations of schizophrenia because approximately 50% of people experience problems with anxiety prior to the onset of psychosis (Pokos & Castle, 2006). Other theorists have proposed that anxiety symptoms are a direct manifestation of psychosis; this is supported by the overlap

in symptoms, and that anxiety symptoms can be direct results of delusions and hallucinations. However, this is not always the case, as anxiety can remain unrelated to delusions and hallucinations (Pokos & Castle, 2006). The third hypothesis is that anxiety disorders and SSDs are distinct disease processes, and completely unrelated (Pokos & Castle, 2006). Additional research has studied the effect of medications on anxiety, particularly atypical antipsychotics, which are commonly used in the treatment of SSDs. A common side effect of this medication is akathisia, which is also a symptom of anxiety, and more recently it has been found that the newer atypical antipsychotics can induce symptoms of anxiety (Pokos & Sastle, 2006).

To date, there has been little research published on PD when comorbid with SSDs. This is partly due to diagnostic overshadowing where, prior to the publication of the DSM-IV, the diagnostic criteria for schizophrenia included an exclusion criterion for anxiety disorders (Pokos & Castle, 2006). As a consequence, PD as well as other anxiety disorders were not diagnosed and therefore not treated in this population. It is thought that even in today's clinical setting, anxiety disorders are going undiagnosed and untreated in people with SSDs due to the overlapping of symptom presentations.

However, research to date in the area of SSDs and comorbid PD has implicated the importance of clinical intervention for anxiety disorders in this population.

Research published on the prognosis of coexisting PD and psychotic disorders suggests that it is associated with poorer rehabilitative outcomes, higher rates of suicide, increased comorbidity with additional psychiatric disorders, and a poorer quality of life in comparison to persons diagnosed with a SSD without PAs (Goodwin et al., 2001). More significantly, however, is that when the severity of psychotic symptoms is controlled for, comorbidity with PD impairs one's quality of life more so than comorbidity with depression (Huppert et al., 1999). Research published on cognitive behavioural interventions for people with SSDs suggests that comorbid anxiety disorders increase treatment resistance of SSDs (Pokos & Castle, 2006), thus making interventions ineffective.

Given the limited scope of knowledge on PD when comorbid with SSDs, it is recommended that the best standards of practice that are applied by clinicians when treating PD in the general population are also used to inform treatment in the SSD population. Furthermore, clinicians need to be aware of and monitor the impact that SSD symptoms may be having on PD. In addition to this, paranoia has been found to have a significant impact in exacerbating the frequency of panic attacks in this population (Huppert & Smith, 2005). The reason for this, however, is unclear. Considerations regarding clients' level of insight should also be investigated, as this can be poor in people with SSD.

The most well known model informing psychological treatment of PD is Clark's (1986) cognitive theory of panic. Clark proposed that PAs result from the catastrophic misinterpretation of bodily sensations that are involved in normal anxiety responses. These physical symptoms of anxiety (e.g. heart palpitations, dizziness, and tightness in the chest) are catastrophically misinterpreted as being much more dangerous than they really are. Clark proposed that there is a vicious circle

which culminates in a PA. This can be initiated by misinterpreting a bodily sensation caused by another emotional or physical state as an impending PA, thus causing panic. PAs can also be triggered during a period of heightened anxiety or in anticipation of panic. However, Clark proposed that the misinterpretation of bodily symptoms is always involved in the panic cycle.

Research has revealed that cognitive behavioural therapy (CBT) is the most effective and cost-effective treatment for PD, and it is the recommended treatment of choice in New Zealand and Australia (Andrews, 2003). CBT interventions aim to extinguish a person's tendency to catastrophically misinterpret bodily sensations.

Cognitive behavioural interventions for the treatment of PD in the general population have been found to be highly effective in a number of independent and controlled studies. Approximately 85% of panic disordered patients respond positively in 10 to 15 CBT sessions. Preliminary studies that have investigated the effectiveness of CBT in the treatment of PD when comorbid with SSD have also had promising results. Arlow et al. (2001) found a statistically significant reduction in panic symptoms following 16 weeks of CBT.

The present study evaluates the effectiveness of CBT in the treatment of PD in a 42-year-old man diagnosed with schizophrenia and experiencing recurrent PAs, a significant level of anxiety, and displaying obsessive compulsive behaviours.

Method

Participant: George was a 42-year-old unemployed man who lived by himself and had very little social contact with others. He has regular contact with a Community Mental Health Team. George attended an activities clubhouse for approximately half an hour to an hour on the occasional Friday afternoon and left when he began to feel

anxious. He spent most of his time there working on the computers and he rarely interacted with others.

George closely monitored his physical health and had regular check-ups with his general practitioner. He had a longstanding problem of waking five to seven times per night which impaired his sleep, and he consumed, on average, five cups of instant coffee per day. Medications that he was prescribed at the time of assessment were clozapine 400 mg per day, sodium valproate 1400 mg per day, and quetiapine 100 mg to help him initiate sleep and to be used when required to reduce his anxiety. George took 50 mg of quetiapine before he leaves his house.

Presenting Problems

Panic Attacks: George appeared to have difficulty explaining his symptoms of panic and referred to it as a “yucky feeling”. During panic attacks his heart pounded, heart rate increased, he trembled or shook, got a tingling sensation in his arms, and he had a “funny” feeling in his head that he could not explain. When experiencing panic, he had catastrophic thoughts such as, “I’m having an epileptic fit” and “I’m not going to make it”, and feared that he would faint or die.

Due to his fear of experiencing recurrent panic attacks he began isolating himself and only leaving his home when necessary. He believed that his home was a “safe” place where there was no threat of panic. Situations where George had been experiencing panic were supermarket shopping, at the activities clubhouse, appointments, leaving his home, when walking up steep hills, and while at home and watching a game of cricket on television, which he found exciting.

When he experienced panic, George returned home as quickly as he was able to. He believed that his panic attacks were a “punishment” for minor offences that he had committed while unwell in 1997.

However, he did not know who was punishing him.

Anxiety: George worried about his health, his parents’ health, not having friends, being unemployed, his limited finances, being assaulted, becoming lost, and being late for appointments. To avoid getting lost, George did not walk through parks or near walking tracks, and he only walked to places when he knew exactly where he was going. He believed that the probability of him being assaulted was very high, despite never being assaulted before or ever witnessing an assault. George also experienced anxiety in social situations and worried that others would not like him, that people would be rude to him, and that he may not be able to maintain a conversation with others.

Obsessions, Compulsions, and Delusional Beliefs: George had been collecting what he referred to as “messages” since approximately 1994. He received these messages primarily from pieces of rubbish left on the ground, but also from marks on his hands that he gets when sleeping, how people hold their hands (especially if they are linking their hands together), and comments that people make to him. After he has received a message he then records and decodes it using a systematic method he has devised. This process can take up to 8 hours per day. He believes that collecting messages is the “cure” to his psychosis. Furthermore, he believes that “they” would not have commanded him to collect messages for such a long time if there was not a substantial reason for it. George fears that he may be punished for not collecting messages.

Assessment Measures

Self-Report Measure: The Beck Anxiety Inventory (BAI) is a self-report measure that assesses the severity of symptoms of anxiety. George obtained a score of 19 on the BAI, which suggests that his level of anxiety fell into the “moderate” range.

Self-monitoring forms: Although self-monitoring forms were given to record the frequency of his PAs and situations where he had experienced these, George did not complete these. As an alternative, time was spent at the beginning of each session obtaining subjective units of distress (SUDs) ratings of George's anxiety when at the supermarket and clubhouse, number of panic attacks over the last week, and number of times that George had left his home.

Results of baseline recording: George's baseline levels of anxiety and PAs was measured over a period of four weeks. During the baseline assessment he left his home on an average of twice per week, and this was to go to the supermarket and come to therapy. He attended clubhouse only once during this period.

Summary and Formulation

George is a 42-year-old man who lives alone, is unemployed, and has a 17-year history of psychosis. He has also been experiencing problems with anxiety and an obsessive compulsive behaviour of collecting messages, which he has been doing for approximately 15 years. His problem of main concern, however, is that he has recently begun experiencing recurrent panic attacks.

It appears that George was an introverted child who experienced difficulties forming friendships, despite having a desire to do so, and has an anxious personality. This is demonstrated by his excessive worry; more specifically, he worries about his parents dying of lung cancer, being assaulted, getting lost, being late, missing appointments, and that other people will not like him. Additional stressors for George are both of his parents being diagnosed with serious illnesses last year, alongside being unemployed and having no friends.

It is thought that in 2008, George increased the number of messages that he collected per day in order to distract himself from his

worries about his mother's health. Due to the time required for this, George had limited time to care for himself and stopped engaging in meaningful activities, thus increasing his feelings of stress. George's increased level of stress, combined with sleep disturbances and caffeine use appears to have exacerbated his anxiety and triggered initial panic attacks. Through experiencing recurrent panic attacks he has associated the physical sensations experienced during panic with the onset of panic attacks, thus causing apprehension and hypervigilance to these sensations. His anxiety is also being exacerbated by him anticipating panic when he leaves his home. When George experiences the physical sensations of anxiety he has catastrophic thoughts which further increase his anxiety and lead to panic. His current strategies for managing his panic are staying at home and utilising his medication.

Treatment Goals

Goals for therapy were to reduce the frequency of George's panic attacks to no more than one per week, to engage him in more activities outside his home, and reduce his level of anxiety at the supermarket and clubhouse to a SUD rating of 3/10.

Procedure

The individualised CBT intervention was based upon Andrews et al. (1996), Craske & Barlow (2001), and Hackmann's (2004) guidelines for the treatment of PD. Although George presented with other problems of concern, it was decided that his recurrent PA was the most significant of these, and the most meaningful change would be produced if these were reduced.

The intervention comprised psychoeducation, cognitive therapy, relaxation training, behavioural experiments, and relapse prevention.

Results

George attended a total of 20 sessions over a period of 21 weeks.

During the 4 weeks when the baseline of his anxiety was established, George experienced a total of seven PAs and left his home on 10 occasions. As shown in Figure 1, at the time of treatment cessation George had made

significant progress towards his goal of experiencing no more than one PA per week, and had obtained this goal on eleven weeks throughout the intervention.

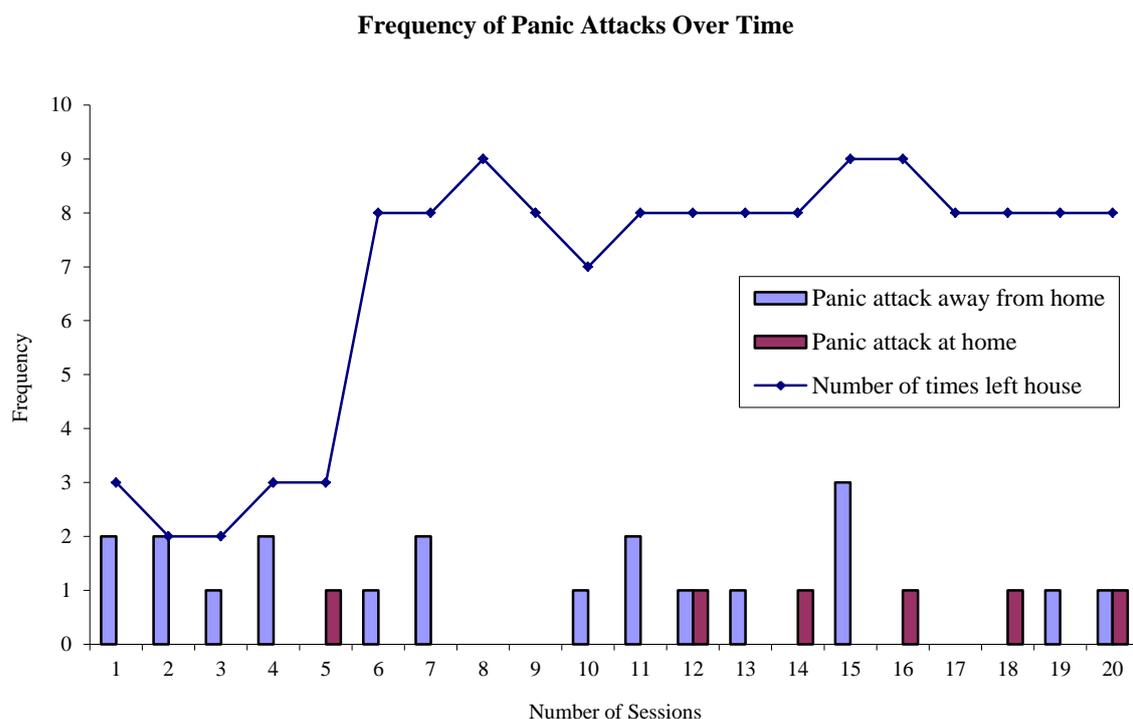


Figure 1: The number of panic attacks (at home and away from home) and the number of times that George left his home during each week of therapy.

During the 20 weeks of self monitoring, George went to the supermarket once per week and attended clubhouse a total of 12 times. SUDs were obtained that rated his anxiety on a scale of 0 to 10 where 0 was no anxiety present and 10 was the most anxiety that he had ever experienced. The SUD

ratings were averaged over four consecutive sessions to calculate the average rating of distress during the baseline period and as treatment progressed. As shown in Figure 2, George's goal to reduce his level of anxiety at the supermarket had been reached.

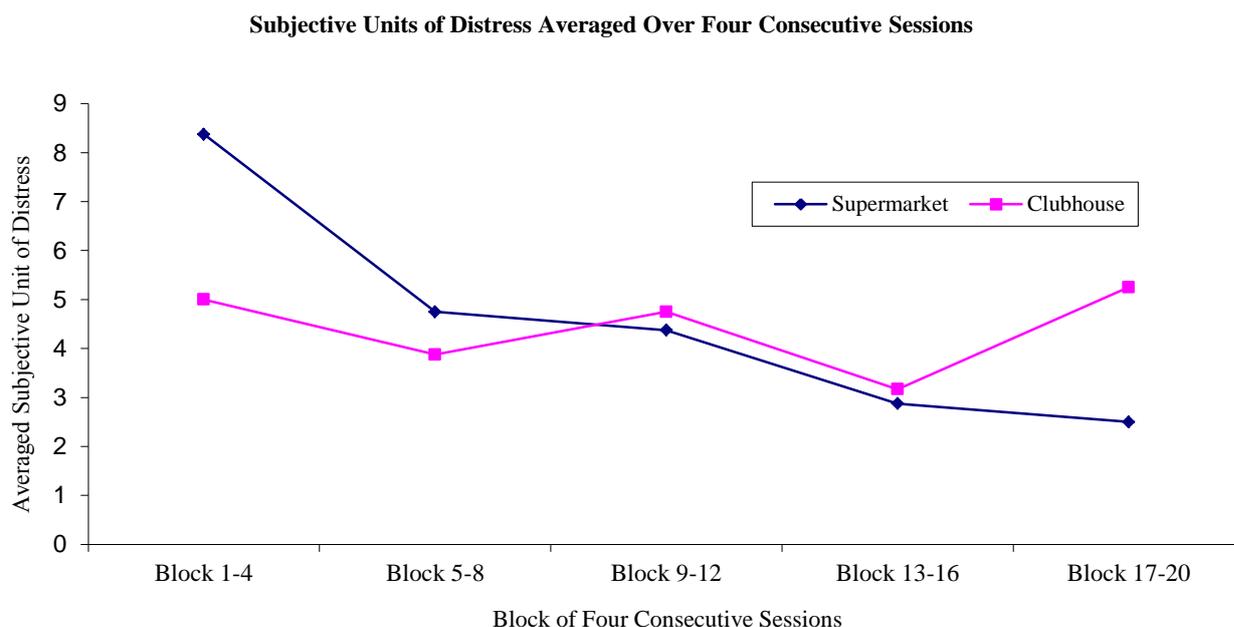


Figure 2: George's anxiety as measured by subjective units of distress (that range from 0 to 10 where 0 equals no anxiety and 10 is the most anxiety that he has ever experienced), and averaged over four consecutive sessions. Block 1-4 was the assessment period, when baseline measures of his anxiety in the feared situations were recorded.

Although there was no statistically significant reduction in George's level of anxiety when attending the clubhouse, he did start attending for longer periods at a time and he reported feeling less anxious while there. It is thought that George's inconsistent attendance prevented significant reductions in his reported level of anxiety.

In addition to the above, George's score of 19 on the BAI obtained during the assessment period had reduced to a score of 5, which suggested that his level of anxiety had decreased and now fell into the "minimal" range.

Discussion

George attended a total of 20 sessions and either achieved or made progress towards all of his goals; more importantly he reported meaningful improvements in his life due to progress made in therapy. George was now leaving his house on a daily basis to attend appointments or was engaging in meaningful activities that he enjoyed, thus improving his quality of life. Although

George was attending clubhouse more frequently and for longer periods at a time, there was no overall reduction in his level of anxiety. Despite this, however, he reported feeling less anxious when there and he believed that he had made progress towards this goal. In addition to this, George's level of anxiety as measured by the BAI had reduced significantly by the end of treatment.

There were limitations in this study that may compromise the results. Self-report ratings were obtained through retrospective reports at the beginning of each session. Retrospective reports should be interpreted with caution as they are more prone to bias and error. Furthermore, there was no follow-up after discharge to monitor if the client's progress had been maintained.

A number of challenges also arose in the assessment and treatment intervention with this client. Because of George's lack of insight into the nature of his panic and difficulty understanding some aspects of the intervention, it was decided not to

incorporate interoceptive exposure. Interoceptive exposure has been found to be the most effective when clients can identify all of their symptoms of panic (Taylor, 2000). Given that George had difficulty identifying a few bodily sensations involved in his attacks, the therapeutic benefit of incorporating this intervention was questioned.

An additional challenge encountered during the intervention with George was that he held a number of paranoid beliefs in relation to the cause of his panic. It was essential to challenge these paranoid beliefs in order to help George accept the true cause of his panic and prevent him from externalising the cause of his panic and believing that he had no control over his attacks. Identifying the presence of paranoid delusions should be of particular interest to therapists because the literature on comorbid PD and SSDs has found that paranoia is highly associated with PA and PD in this population (Huppert & Smith, 2005).

The third challenge encountered during the intervention was the client's limited cognitive capacity and his difficulties with retaining information and understanding certain aspects of the intervention. To accommodate these limitations there was considerable repetition of what was discussed in session, and summarising of information. George was often asked to explain concepts in his own words to ensure that he had understood the information, and behavioural experiments aided with the acquisition of information. These subclinical disturbances experienced by George are termed secondary or basic symptoms that are associated with SSD (Schultze-Lutter, 2009), and can limit a person's ability to engage in, and gain benefit from cognitive therapy (Gould et al., 2001).

The CBT package described in this case study appeared to be effective in reducing the frequency of panic attacks for this client, and secondary gains were made in the reduction of his level of anxiety as measured

by the BAI. However, the favourable outcome in this one case study cannot be generalised to the wider patient group in this cohort. Further research with larger populations and more stringent controls are required before the use of CBT for PD, as outlined by Andrews et al. (1996), Craske & Barlow (2001), and Hackmann (2004), can be recommended for individuals with comorbid SSDs. However, despite the current lack of empirical support for interventions in this population, preliminary studies indicate that CBT is an effective intervention, and it is recommended to follow policies of best practice as when treating those in the general population (Andrews, 2003).

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