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Cognitive Behavioural Therapy for Anger Management: Effectiveness in Adult Mental Health Services

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Abstract. This paper reports on the development and running of an anger management service that has been provided in Southampton for the past decade. It discusses some of the challenges that the service has had to face, (including over-popularity with referrers and high attrition rates) and describes the model that is used. The paper also examines the outcome of one particular therapeutic group. The results of this evaluation show that those who drop out of the group have higher initial depression and poorer self-esteem compared to those who remain in the group. In addition, those who complete the anger management group show improvements in anger control and have improved self-esteem. The paper concludes with practice recommendations.

Keywords: Anger management, cognitive behaviour therapy, group evaluation.

Introduction

The need for effective anger management intervention is widely recognized: however the practicalities of delivering such a service can be daunting. Problems of high attrition at every stage of the process from referral to treatment delivery are the chief obstacles (Siddle, Jones and Awenat, 2003). In response to this, O'Loughlin, Evans and Sherwood (2004) provided three-session educational classes on anger management, with no assessment and no pretensions to offering therapy. They report high levels of satisfaction from those who completed.

There are, however, a number of published papers which testify to the success of the CBT approach to anger management. Beck and Fernandez's (1998) meta-analysis found 50 studies, incorporating 1,640 participants treated with CBT, with a mean effect size of 0.70. More recently published studies of CBT for anger management have been conducted on student populations (e.g., Deffenbacher, Dahlen, Lynch, Morris and Gowensmith, 2000) or specialist populations, such as drug users (Reilly and Shopshire, 2000) and adolescents (Kellner and Bry, 1999). There is also a large body of research on anger management for forensic populations and/or in institutional settings (e.g., Renwick, Black, Ramm and Novaco, 1997; Watt and Howells, 1999). Siddle et al. (2003) and Dyer (2000) have also described effective anger management outcomes in non-clinical groups.

The Southampton Cognitive Behavioural Therapy (CBT) Anger Management Service has been in existence continuously since 1993. This paper looks at some of the challenges that this Anger Management Service has faced over the past decade and provides details on the outcome

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of one particular outpatient anger management group. This group was facilitated by a Trainee Clinical Psychologist who used pre- and post-intervention measures for each group member. All other groups had incomplete data so unfortunately could not be used in the analysis. The three challenges that an outpatient anger management service must deal with are retention; the problem of over popularity with referrers (leading to a sometimes unmanageable volume of referrals, many of which are not suitable); and running a vocal and potentially volatile group.

This paper will cover the following topics: an account of the delivery of the service and the challenges faced; description of the model used and the development of the service, and presentation of one particular group.

Delivery of the service

The second author set up the manualized programme in 1993 using nurse therapists. Later recruits were found among different mental health professionals, including trainee clinical psychologists and psychiatrists. The programme has now been formalized as a learning experience, with identified learning objectives, to provide an introductory route to more formal CBT training. The variety of professions in each team of facilitators (normally three) has been advantageous. Each brings their own strengths and work closely together, as well as in conjunction with the second author who organizes the programme. The half-hour supervision following each session, concentrates on adherence to the manual, the dynamics and culture of the group and the progress of individuals. Issues of risk are taken seriously, and it has so far been possible to establish an ethos for the programme whereby anger is reflected upon, but not expressed. It is stressed that anyone experiencing increased arousal in a session should leave without explanation, and return when calmer. Combined with the exclusion of individuals with exceptionally poor impulse control, it has been possible to maintain this ethos.

Originally, the clinical psychologist undertook all the assessments, but as the programme grew in popularity this was no longer practical. Now a formalized screening assessment has been devised which can be conducted by the trainee facilitators. The anger management group demands sensitivity from the group facilitators. Our programme has achieved this through close and skilled supervision, when using trainee facilitators. Service constraints have necessitated this, but it has become a strength as therapists from a variety of professions have opted to participate in order to gain experience and skills in CBT. We did not have a clinical psychologist with enough time to run the groups, only to organize and supervise them, but our experience suggests that our approach to this challenge works.

Anger shares a number of features with the addictions, such as its being more frequently identified as a problem by others than by the angry person. Where a referral stems from health professionals, families or the criminal justice system identifying that an individual "needs" anger management, in the absence of a commitment to work on change by the individual, the prospects for the collaborative approach of CBT achieving anything are negligible. Further, such pressure might deliver someone to an assessment appointment, but is unlikely to be able to force regular attendance or serious work on change within a group.

Referrals are frequently triggered by particular instances of violence, for which substances may be a contributory factor. The CBT approach of constant monitoring of mood, thought and behaviour, and working on change week by week, cannot operate if the problem is genuinely a one-off, with no ongoing anger. Likewise, CBT cannot operate if the individual's

ability to note their level of physical arousal and thoughts is frequently impaired by substance misuse. All these considerations have led to the development of strict exclusion criteria for the programme, and the ongoing attempt to educate referrers. Sometimes the referrer is phoned to check on substance use and motivation. A further test of motivation to attend is an "opt in" form completed by the client. No appointment is offered unless this is returned.

Even with this filtering system, the volume of referrals is daunting. For instance, 57 assessment appointments were offered in the course of preparing two groups in 2003. Sixteen of these did not attend. Seven did not choose to join the programme. There is further attrition in the process of setting up the group. Our approach to this problem has been to process a large number of referrals and to offer the group to a large number initially, in the expectation that it will reduce.

Even after the groups start, retention remains a problem. For the 16 groups for which we have full attendance data, the mean attendance from week two onwards is 63%. Some participants drop out because of changing circumstances e.g., employment and childcare issues. However, motivation is undoubtedly an issue.

Description of the model

The manualized programme consists of 12 weekly sessions of 75 minutes each. Homework monitoring is set each week, and the first part of each group session is structured around the homework tasks. These are broken down in an increasingly sophisticated manner, concentrating on arousal in the early weeks, and moving on to recording and challenging thoughts. As a starting point the programme takes Novaco's (1976) idea that anger, properly used, is a strength and a resource, and his emphasis, based on Meichenbaum's (1985) Stress Inoculation Training, on tackling issues of arousal before cognitive appraisal becomes practical.

The group lays emphasis on arousal control. The focus is on retraining attention to bodily arousal by making space, and by using controlled breathing. Chronic high arousal is a common accompaniment to an anger presentation, and the role of this in creating a dangerously low threshold for loss of control is explained. Lifestyle issues around stress reduction are also discussed.

The approach taken flows from a conceptualization of information processing that emphasizes different levels of processing in cognition and memory. The concepts of "hot cognition" and "cold cognition" have long been current (Ellis, 1962) and more recently this distinction has been researched and written about. For instance, Brewin (1989) talks of verbally and situationally accessible memory; Segal (1988) of automatic and conscious processing, and Teasdale and Barnard (1993) have produced a particularly comprehensive model in their Interacting Cognitive Subsystems (ICS), which has been influential in the spread of mindfulness based techniques within CBT.

The ICS model has two higher order meaning-making systems (the implicational and the propositional), whose intercommunication can become impaired at high arousal. It explains the greater accessibility of threat and trauma memories at such times, with a clear rationale for the hot and cool styles of cognition. The typical anger management client, in our experience, has suffered physical abuse and/or bullying in the past, and has learnt that giving free range to angry reactions produces immediate pay-offs in such situations, at the same time as nurturing a sense of brooding injustice which is easily triggered, through the accessibility of the implicational

memory, at times of perceived threat. Such people maintain a constant high level of arousal (justified by a felt need for hypervigilance), so easily reach a state of arousal that precludes new thought. This produces a habit of stereotypical appraisals that serve to maintain anger and arousal e.g. "I must/should get in first."

Following this model, once arousal has been noted and reduced, appraisal is guided through two flow charts. The first emphasizes the choice open to the individual and a realistic appraisal of the situation. The second leads on to a problem solving approach (where there is a realistic problem that can be tackled), to safe discharge (where the person is powerless), or to cognitive restructuring (where the style of thinking is implicated). Assertiveness and putting yourself into the other person's position are also covered, and the course ends with a consideration of "personal rules" or dysfunctional assumptions. Cognitive restructuring does not attempt to challenge rationality of thinking, but rather its utility, as certain styles of thinking maintain arousal and therefore the anger response. This is in line with the ICS approach to CBT, which works less by evidence testing, and more by appraisal of style of thinking and consciously making different behavioural choices (see Clarke, 1999 and Bennett-Levy, 2003, for applications of this theory to clinical practice).

Motivational interviewing assesses motivation to change (Miller, 1983) and is implemented in the assessment stage of recruiting to the anger management groups. Howells (1998) suggests that the motivation problem can be broken down by considering anger to be ego-dystonic or at variance with their self-image for some people (i.e. "anger is not me"), and ego-syntonic, or in line with their self-image (i.e. "anger is part of me and feels right") for others. In the latter case, where people are comfortable with their anger, they are particularly hard to engage. Howells recommends motivational interviewing (Miller and Rollnick, 1991) to recognize and work with ambivalence, by naming and facilitating discussion of both sides of the issue, while encouraging participants to recognize the advantages of change. Our experience suggests that the group format can greatly aid this process. Angry individuals are often alert to issues of dominance in a group, and once the facilitators have established that the dominant culture of the group is working on anger control, those who are progressing rapidly with this gain highest status, and participants with ego-syntonic anger and greater ambivalence either drop out or fall into line.

Detailed presentation of one group

In order to evaluate outcome and improve understanding of the high attrition from the groups, one group was studied in more detail to ascertain any differences between clients who remain and drop-out of the group in terms of depression, anxiety and self-esteem (as measured by The Hospital Anxiety and Depression Scale (HAD); Zigmond and Snaith, 1983 and the Rosenberg Self-Esteem Scale (RSE); Rosenberg, 1989). The analysis also examined pre and post-group measures on the Novaco Anger Scale (NAS; Novaco, 1979). The NAS has two parts. Part A includes how people think, feel and react to anger. Part B focuses on anger-provoking situations. The NAS has high internal consistency and test-retest reliability. In addition, the analysis also looked at the impact of improved anger control on self-esteem and mood.

In this group 11 clients completed the pre-group questionnaires (7 males and 4 females). Six completed the group (4 males and 2 females) and filled out post-group questionnaires. The results focus on pre-intervention scores for all eleven clients and post-intervention scores of the six who completed the group.

Table 1. Pre-group scores on the NAS, RSE and HAD for clients who stayed in and dropped out of the group

Measure	Stayed in group Mean (*SD*)	Dropped out Mean (*SD*)	Mann Whitney Test (*Z* and *p* values) (1-tailed)
NAS (part A)	129.9 (16.06)	140.26 (10.91)	1.278 .101
NAS (part B)	73.33 (14.26)	75.4 (18.12)	0.183 .428
RSE	13.35 (5.54)	20.19 (3.21)	1.647 .05*
HAD-depression	6.18 (3.06)	9.93 (2.80)	1.643 .05*
HAD-anxiety	12.58 (4.59)	14.66 (3.83)	0.915 .18

*Significant differences.

Table 2. A comparison of pre- and post-group scores on the NAS, RSE and HAD for clients who remained in the group

Measures	Pre-intervention Mean (*SD*)	Post intervention Mean (*SD*)	Wilcoxon *Z* score	*p* value (2-tailed)
NAS (part A)	129.9 (16.06)	114.67 (14.57)	2.201	.028*
NAS (part B)	73.33 (14.26)	62.17 (15.05)	2.201	.028*
RSE	13.35 (5.54)	9.83 (7.60)	1.992	.046*
HAD (depress)	6.18 (3.06)	4.33 (3.45)	1.826	.068
HAD (anxiety)	12.58 (4.59)	9.67 (6.47)	1.572	.116

*Significant differences.

Results

Table 1 looks at pre-group scores on the NAS, the RSE and HAD for clients who stayed in and dropped out of the group. As can be seen, there are significant differences in pre-intervention scores between those who stayed in the group and those who dropped out of the group. Those who dropped out of the group had significantly higher depression and lower self-esteem pre-intervention, than those who remained in the group.

Statistical analyses for pre and post-intervention questionnaires for the six group completers are summarized in Table 2. There are significant overall improvements in the NAS and the RSE on completion of the anger management group. Five of the six clients had improved self-esteem. No reliable change is seen in HAD scores for depression or anxiety.

Summary

There are some significant differences in pre-intervention scores for clients who dropped out and remained in one particular group. Clients who dropped out had higher initial depression scores and lower self-esteem. Clients who remained in the group showed significant post-intervention changes with improvements in anger control as measured by the NAS. In addition, self-esteem scores had improved, although HAD scores indicated no change in anxiety and depression.

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Discussion

The results show a significant improvement in anger control and self-esteem post-intervention. Mood state did not appear to change. This shows the effectiveness of the cognitive-behavioural approach to anger management (Novaco, 1976). Novaco (1979) describes how anger management can help prevent people from being victims of their own anger, improve motivation and to resolve inter-personal difficulties. Learning to understand and cope with anger can also improve self-esteem, by reducing arousal levels and using it assertively.

The results also show that those who dropped out of the group had significantly higher baseline scores on the RSE and HAD (depression). The attrition may therefore have been associated with poorer self-esteem and higher levels of depression. However, it is important to note that the HAD depression scores are all quite low in absolute terms (normal to borderline range), so this is not a group who are significantly depressed on average.

Several limitations of the study must be acknowledged. First, lack of a control group. Attributing improvements to the anger group is difficult since improvements may have resulted from other factors i.e. social desirability, support, etc. In addition, the small sample size made it difficult to generalize from the results and the non-parametric tests may not have picked up trends.

Second, during the course of the group some clients reported stressful life events. These may have reduced time spent on homework tasks and thoughts raised by the group (an important part of the therapeutic process; Novaco, 1979). As noted previously, high states of arousal are a significant component of the anger response (Teasdale and Barnard, 1993) and adverse life events may well have increased arousal and so contributed to the anger difficulties. Future studies may benefit from recording life events during the course of the group.

Third, some clients did not attend all sessions and may have missed information. This may have influenced outcome. Future studies need to consider attendance in the evaluation.

Finally, although the questionnaires are valid and reliable, they may not be sensitive to change.

Practice recommendations

Prochaska and DiClemente (1984) describe stages of (commitment to) change during therapy and suggest that one reason for failure to change is low self-esteem. Accepting a problem can bring self-esteem to a critical low level. Miller and Rollnick (1991) stress the centrality of self-esteem in making changes. The evaluation shows that people who drop out of the anger management group have significantly lower self-esteem than those who remain. If attrition is associated with poor self-esteem and motivation, then raising self-esteem may raise motivation. Depression may also create feelings of hopelessness (Beck, 1979) and reduce motivation. Whilst some people are unaware of their problem, others are aware that change is necessary (Miller and Rollnick, 1991). This realization can lead to lowered self-esteem.

Clients who remain in the group progress through stages of change. Clients who drop out of the group tend to be in the pre-contemplation stage of change. Future research could look at this process in more detail. It would also be interesting to look at the current evaluation to determine whether self-esteem improved because of increased anger control, or whether increased self-esteem motivated clients to work with their anger.

In conclusion, the results suggest that the cognitive-behavioural approach to anger management is successful in reducing and controlling anger. A randomized control trial is currently being carried out in Southampton to look at this in more detail.

References

Beck, A. T. (1979). *Cognitive Therapy of Depression*. New York: Guilford Press.

Beck, R. and Fernandez, E. (1998). Cognitive behaviour therapy in the treatment of anger: a meta-analysis. *Cognitive Therapy and Research*, *22*, 63–74.

Bennett-Levy, J. (2003). Mechanisms of change in cognitive therapy: the case of automatic thought records and behavioural experiments. *Behavioural and Cognitive Psychotherapy*, *31*, 261–277.

Brewin, C. R. (1989). Cognitive change processes in psychotherapy. *Psychological Review*, *96*, 379–394.

Clarke, I. (1999). Cognitive therapy and serious mental illness: an interacting cognitive subsystems approach. *Clinical Psychology and Psychotherapy*, *6*, 375–383.

Deffenbacher, J. L., Dahlen, E. R., Lynch, R. S., Morris, C. D. and Gowensmith, W. N. (2000). An application of Beck's cognitive therapy to general anger reduction. *Cognitive Therapy and Research*, *24*, 689–697.

Dyer, I. (2000). Cognitive behavioural group anger management for out-patients: a retrospective study. *International Journal of Psychiatric Nursing Research*, *5*, 602–621.

Ellis, A. (1962). *Reason and Emotion in Psychotherapy*. New York: Lyle Stuart.

Howells, K. (1998). Cognitive behavioural interventions for anger, aggression and violence. In N. Tarrier, A. Wells and G. Haddock (Eds.), *Treating Complex Cases*. Chichester: Wiley.

Kellner, M. H. and Bry, B. H. (1999). The effects of anger management groups in a day school for emotionally disturbed adolescents. *Adolescence*, *34*, 645–651.

Meichenbaum, D. (1985). *Stress Inoculation Training*. New York: Pergamon Press.

Miller, W. R. (1983). Motivational interviewing with problem drinkers. *Behavioural Psychotherapy*, *1*, 147–172.

Miller, W. R. and Rollnick, S. (1991). *Motivational Interviewing: preparing people to change*. New York: Guilford Press.

Novaco, R. W. (1979). *Therapist Manual for Stress Inoculation Training: therapeutic interventions for anger problems*. Irvine: University of California.

Novaco, R. W. (1976). Treatment of chronic anger through cognitive and relaxation controls. *Journal of Consulting and Clinical Psychology*, *45*, 600–608.

O'Loughlin, S., Evans, J. and Sherwood, J. (2004). Providing an anger management service through psycho-educational classes and avoiding therapy. *Clinical Psychology*, *33*, 17–20.

Prochaska, J. O. and DiClemente, C. C. (1984). *The Trans-theoretical Approach: crossing traditional boundaries of therapy*. Homewood, IL: Dow Jones/Irwin.

Reilly, P. M. and Shopshire, M. S. (2000). Anger management group treatment for cocaine dependence: preliminary outcomes. *American Journal of Drug and Alcohol Abuse*, *26*, 161–177.

Renwick, S., Black, L., Ramm, M. and Novaco, R. (1997). Anger treatment for forensic hospital patients. *Legal and Criminological Psychology*, *2*, 103–116.

Rosenberg, M. (1989). *Rosenberg Self-Esteem Scale Manual*. Windsor: NFER-Nelson Publishing Company.

Segal, Z. V. (1988). Appraisal of self-schema construct in cognitive models of depression. *Psychological Bulletin*, *103*, 147–162.

Siddle, R., Jones, F. and Awenat, F. (2003). Group cognitive behaviour therapy for anger: a pilot study. *Behavioural and Cognitive Psychotherapy*, *31*, 69–83.

Teasdale, J. and Barnard, P. J. (1993). *Affect, Cognition and Change: remodelling depressive thought*. Hove: Lawrence Erlbaum Associates.

Watt, B. D. and Howells, K. (1999). Skills training for aggression control: evaluation of an anger management programme for violent offenders. *Legal and Criminological Psychology*, *4*, 285–300.

Zigmond, A. S. and Snaith, R. P. (1983). *The Hospital Anxiety and Depression Scale Manual*. Windsor: NFER-Nelson Publishing Company.