**ABSTRACT**

***Background.*** Problem anger is frequently experienced by the general population and is known to cause significant problems for the individual and those around them. Whilst psychological treatments for problem anger are becoming increasingly established, this is still an under-researched area of mental health. We present an evaluation of a series of one-day anger management workshops for the public, targeting problem anger with a cognitive-behavioural approach.

***Aims*** . The main aim was to evaluate the effectiveness of a brief group-based anger intervention in terms of subjectively reported anger provocation levels and of depression and anxiety.

***Methods.*** Workshop participants completed a number of questionnaire measures at baseline before the intervention and at 1 month follow-up. The key questionnaires measured self-reported anger provocation levels (Novaco Anger Scale-Provocation Inventory), depressive symptomatology (PHQ-9) and symptoms of generalised anxiety (GAD-7). Change scores were analysed using repeated measures analyses.

***Results.*** We found a significant reduction in anger provocation among workshop participants at 1 month follow-up (*p* = .03). Reductions in depression and anxiety were not statistically significant.

***Conclusions.*** We conclude that this brief psychoeducational anger intervention was effective in a small community sample and suggest future work should assess the effectiveness on similar brief interventions using a larger client group and examine outcomes on a broader range of anger measures.

**KEYWORDS:** Problem anger; cognitive behavioural therapy; group therapy; workshop; community.

**INTRODUCTION**

Anger is considered to be one of a handful of universal human emotions, providing us with an evolutionary advantage when experienced in a transient and adaptive way (Ekman, 1992). Although not a formal diagnosis, anger is experienced by some people frequently and intensely and its destructive effects can cause serious impairment in day-to-day life. These people can be described as experiencing *problem anger*, and increasing evidence suggests this is linked to a variety of social, physical and mental health problems (DiGiuseppe & Tafrate, 2007; Novaco, 1978; Williams *et al*., 2000).

In the general UK population, a survey of 2000 people gave information on the prevalence of problem anger, and people’s perceptions of it (Mental Health Foundation, 2008). Nearly one-third of people reported they have a friend or family member who has trouble controlling their anger, and 12% of people say they have trouble controlling their own anger. In terms of impact of anger, 20% of people reported ending a relationship because of the way someone behaved when angry.

A variety of treatments exist for dealing with problem anger, many of which are largely based on cognitive-behavioural therapy (CBT) principles derived from Novaco’s (1975; 1993) seminal treatment. The overall efficacy of psychotherapeutic treatments for anger has been reviewed thoroughly in a number of meta-analyses (Beck & Fernandez, 1998; Bowman Edmondson & Cohen Conger, 1996; Del Vecchio & O’Leary, 2004; DiGiuseppe & Tafrate, 2003; Saini, 2009; Tafrate, 1995). These have all reported consistently that current treatments produce at least moderate effect sizes, although there can be large variability between studies. In a recent meta-analysis, Saini (2009) reports that this variability is due to a number of moderator variables and he concludes that community-based 8 session group interventions appear to be the most effective.

Saini (2009) makes some useful recommendations about the components of an anger intervention. However, delivery of evidence-based practice is constrained by local resources, where cost-effectiveness is a major consideration for any psychological treatment. Community-based psychology services may provide a feasible means of meeting this economic demand, whilst also attempting to widen access of treatment to a larger population of people.

In the UK, there are currently a small number of anger management courses available, some offered by NHS services and some by voluntary organisations. As discussed in the ‘Boiling Point’ report on problem anger by the Mental Health Foundation (2008), there is a need to expand this provision, most likely through the Improving Access to Psychological Therapies (IAPT) programme. In order to do this though, it is important that the effectiveness of existing services is first examined. To our knowledge, the only currently published empirical evaluations from general adult mental health NHS services have come from one group in Southampton, UK, who report promising results: The first study is Bradbury and Clarke's (2006) evaluation of an anger management service, where clients were offered 12 weekly group CBT sessions that focussed primarily on arousal control. Data from one particular therapy group indicated that therapy completers (*n* = 6) saw significant improvements in anger control and self-esteem, but not anxiety or depression. The second study is a small-scale randomised controlled trial (RCT) of this same service, which reports similar findings in a larger group of 35 participants, only 10 of whom completed (28.6% completion rate) (Naeem, Clarke, & Kingdon, 2009).

However, as Saini (2009) reported in his review, one third of all studies were conducted on undergraduate student samples, and the remaining studies cover an extremely heterogeneous range of clients. Relevant to this study, only 1 was from the UK. This means that with the exception of Bradbury and Clarke (2006) and Naeem et al.’s (2009) study, there is little evidence of the effectiveness of treatments for adults in the community experiencing problem anger without other more serious psychological difficulties in the UK. Moreover, there is a paucity of research examining the effectiveness of brief interventions in this client group.

Whereas Saini (2009) champions longer-term 8 week group interventions, the aim of this study was to fill a gap in the literature by providing preliminary evidence from a series of briefer community based one-day anger interventions, which were designed to be accessible to the public. Given the existing evidence-base, we predicted that participants would experience a decrease in subjective anger provocation following treatment, as measured by the Novaco Anger Scale-Provocation Inventory (Novaco, 1994). Additionally, we predicted that successful treatment of anger may have positive effects on other psychopathology, such as depression and anxiety. Although treatment generalisation is an under-researched area, we make this prediction because some studies have found general improvements in depressive and anxiety symptoms in non-clinical populations (Deffenbacher, McNamara, Stark, & Sabadell, 1990; Gerzina & Drummond, 2000).

**METHODS**

***Setting.*** Southwark Psychological Therapies Service (SPTS) is an outpatient adult mental health service which is part of the government initiative, ‘Improving Access to Psychological Therapies’ (IAPT). It is based in South-East London, serving the local Borough of Southwark. In response to an increasing number of self, and general practitioner (GP) referrals for problem anger, it was decided to set up a series of one-day low-intensity[[1]](#footnote-1) psychoeducational workshops grounded on CBT principles in 2011. Anger falls outside the range of psychological conditions covered in the stepped, or matched care model of IAPT, and is not covered by any current NICE guidelines. However, this programme was offered when it was realised that no interventions were available for a number of people with problem anger who were presenting to the service.

This workshop format for up to 30 people was based on the effectiveness of other one-day programmes such as stress (Brown, Cochrane & Hancox, 2000), self-confidence (Brown *et al*., 2004) and insomnia (Swift *et al*., 2012) which were run by SPTS to reach the community.

Information Governance approval was granted for the service evaluation project by South London and Maudsley NHS Trust, thus ethical approval was not required, nor consent from participants for use of data due to anonymization.

***Participants.*** There were 65 referrals (GP referrals and self-referrals) for the four workshops held over the course of 2011-2013. In total, 50 of these people (20 male, 29 female, and 1 unrecorded: *Mean age* = 38.80, *SD* = 10.64) participated in both the introductory talks and workshops.

***Measures.*** All participants were asked to provide demographic information and complete a set of standardised measures as part of the workshop (at initial referral/introductory talk, then repeated at the workshop and at follow-up). Most of this data had been collected as part of the IAPT service, but two anger specific measures were specially added for the workshops. The following measures selected for analysis allowed us to test our hypotheses:

*Novaco Anger Scale – Provocation Inventory* (NAS-PI; Novaco, 1994)*.* This 25 item scale asks participants to report the degree that anger would be provoked in various situations. Responses range from ‘very little’ to ‘very much’, with higher scores indicating a higher propensity to be provoked into an angry state. Normative data allow classification of anger scores compared to the general adult population. Only the provocation inventory was used because this takes considerably less time than the whole 85 item NAS, therefore creating less demand on participants.

*Patient Health Questionnaire-9 (PHQ-9).* The PHQ-9 is a brief 9 item scale based on the DSM-IV-TR (APA, 2000) diagnostic criteria for depression. Higher scores indicate increasing severity of depression (clinical cut-off = 10).

*Generalised Anxiety Disorder-7 (GAD-7).* The GAD-7 is a 7 item instrument that is used to identify probable cases of GAD. It measures severity of anxiety symptoms by requiring responses indicating frequency over the past week with higher scores indicating increasing severity of anxiety (cut-off = 8).

***Intervention.*** The workshops were held at a local library that was conveniently located in the borough and ran between 9.30am-4.30pm on a Saturday. They were led by two qualified clinical or counselling psychologists and facilitated by an assistant psychologist. Each therapist adhered to a manual, allowing time for group discussion where appropriate. The first morning session consisted of psychoeducation explaining what anger was and introduced a CBT model of anger focusing on the mediating role of appraisals of triggers, and consideration of the different personal experiences of anger and their consequences. In the second session, participants were taught how to self-monitor their anger, and also taught about challenging of anger related automatic thoughts. In the afternoon, several other practical strategies were taught, including avoidance of anger triggers or situations; relaxation techniques; problem solving; and assertiveness techniques. Following a summary of the day, participants were given time to set their own goals to be achieved over the following month**.**

***Statistical analysis.*** Paired samples t-tests were computed to assess differences in outcomes between baseline and one month follow-up. Alpha was set at *p* < .05 two-tailed throughout.

**RESULTS**

Table 1 displays outcome data for workshop participants. Data is reported for just over 40% of participants. The reduction in numbers of participant data from baseline (T1) to follow-up (T2) reflect the fact that many participants’ failed to complete the follow-up questionnaires.

The PHQ-9 and GAD-7 initial baseline scores are both just below clinical cut-off, indicating the group was not clinically anxious or depressed. Participants scored in the average range on anger provocation, as measured by the NAI-PI.

**INSERT TABLE 1 ABOUT HERE**

Paired samples t-tests were used to assess differences in outcomes between baseline and one month follow-up. Alpha was set at *p* < .05 two-tailed throughout.

Anger was our key outcome measure, and in line with our hypothesis, the scores on the NAS-PI were found to decrease significantly between baseline and follow-up: *t*(12) = 2.44, *p* = .03. A moderate effect size (*d* = 0.62) was found. This indicates that following the workshop, 43% (*n*=13) of participants on average reported significantly lower levels of anger provocation, with T2 scores falling into the below-average range. We also predicted decreases in mood and anxiety measures; although mean scores reduced following the intervention, the differences were non-significant for depression (PHQ-9: *t*(18) = 1.51, *p* = .16) and anxiety (GAD-7: *t*(18) = 1.72, *p* = .10). This is probably unsurprising given baseline scores were below cut-off.

Finally, given that a number of clients failed to complete the follow-up measures, we checked whether there were any differences at baseline between completers and non-completers. We found no differences in anxiety, depression or anger between these two groups at baseline (*ps* > .46).

**DISCUSSION**

This study aimed to evaluate the effectiveness of a series of one-day community-based CBT anger workshops provided by a South London IAPT service. The workshops were found to be effective in reducing participants’ self-reported level of anger provocation. However, no significant reductions were found in depression and general anxiety levels. Our findings add to the emerging literature on psychological treatment of anger and also to the evidence around the effectiveness of brief low intensity one-day cognitive-behavioural interventions (Brown *et al*., 2004). We found a moderate uncontrolled effect size (*d*=0.62) which is consistent with the findings of several recent meta-analyses, where treatment studies have tended to be more intensive, lasting several weeks (Beck & Fernandez, 1998; DiGiuseppe & Tafrate, 2003; Saini, 2009; Tafrate, 1995).

Our results showed that there was no significant treatment generalisation beyond anger to depression and anxiety symptoms. Although a reduction in such scores has been found in previous studies (Bradbury & Clarke, 2006; Deffenbacher *et al*., 1990; Gerzina & Drummond, 2000), it is likely that methodological differences and heterogeneity of samples across these has created variability in findings. For example, although the present workshops lasted for about seven hours, lasted longer and had more sessions, which may afford the opportunity to focus on practising therapeutic skills in-between each week. It is also possible that treatment generalisation is more likely in the context of more severe difficulties with anxiety and depression; our sample were below clinical cut-off at baseline.

***Limitations.*** Principally, we acknowledge that our follow-up analysis is based on a small dataset of approximately 40% of the initial sample, although the attrition rates from other studies would suggest this rate is not uncommon, and less problematic compared to rates found in some studies (Naeem *et al*., 2009).

Adding further outcome data with longer follow-ups would be beneficial, as would a randomised controlled trial as performed by Naeem et al. (2009) in their small-scale trial of a similar treatment.

***Conclusions****.* Our preliminary findings suggest that a brief, one-day intervention can provide meaningful help to reasonably large groups of people in the community specifically to help with problem anger. This initial evidence for the efficacy of a brief CBT approach would be enhanced by dissemination of data from similar services.

**FINANCIAL SUPPORT**

This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

**CONFLICT OF INTEREST**

None.

**REFERENCES**

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR*. Washington, DC: American Psychiatric Association.

Beck, R., & Fernandez, E. (1998). Cognitive-behavioral therapy in the treatment of anger: A meta-analysis. *Cognitive Therapy and Research*, 22(1), 63–74.

Bowman Edmondson, C., & Cohen Conger, J. (1996). A review of treatment efficacy for individuals with anger problems: conceptual, assessment, and methodological issues. *Clinical Psychology Review*, 16(3), 251–275. doi:10.1016/S0272-7358(96)90003-3

Bradbury, K. E., & Clarke, I. (2006). Cognitive behavioural therapy for anger management: Effectiveness in adult mental health services. *Behavioural and Cognitive Psychotherapy*, 35(02), 201. doi:10.1017/S135246580600333X

Brown, J. S. L., Cochrane, R., and Hancox, T. (2000). Large-scale health promotion stress workshops for the general public: a controlled evaluation. *Behavioural and Cognitive Psychotherapy,* 28(2), 139-151.

[Brown, J. S.](https://kclpure.kcl.ac.uk/portal/june.brown.html), [Elliott, S. A.](https://kclpure.kcl.ac.uk/portal/en/persons/susanne-elliott%283e7d6639-8542-4d51-be8a-8a2b1720010d%29.html), Boardman, J., Ferns, J. & Morrison, J. (2004). [Meeting the unmet need for depression services with psycho-educational self-confidence workshops: preliminary report](https://kclpure.kcl.ac.uk/portal/en/publications/meeting-the-unmet-need-for-depression-services-with-psychoeducational-selfconfidence-workshops-preliminary-report%281a19ec7b-5deb-4355-8092-2aaa4d71a034%29.html). [*British Journal of Psychiatry*](https://kclpure.kcl.ac.uk/portal/en/journals/british-journal-of-psychiatry%28d7d42f8b-6f3f-49d6-a112-1a9479617f2b%29.html), 185, 511–515.

Deffenbacher, J. L., McNamara, K., Stark, R. S., & Sabadell, P. M. (1990). A Comparison of Cognitive-Behavioral and Process-Oriented Group Counseling for General Anger Reduction. *Journal of Counseling & Development*, 69(2), 167–172. doi:10.1002/j.1556-6676.1990.tb01480.x

Del Vecchio, T., & O’Leary, K. D. (2004). Effectiveness of anger treatments for specific anger problems: a meta-analytic review. *Clinical Psychology Review*, 24(1), 15–34. doi:10.1016/j.cpr.2003.09.006

DiGiuseppe, R., & Tafrate, R. C. (2003). Anger Treatment for Adults: A Meta-Analytic Review. *Clinical Psychology: Science and Practice*, 10(1), 70–84. doi:10.1093/clipsy.10.1.70

DiGiuseppe, R., & Tafrate, R. C. (2007). *Understanding Anger Disorders*. Oxford: Oxford University Press.

Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion*, 6(3-4), 169-200. doi:10.1080/02699939208411068

Gerzina, M. A., & Drummond, P. D. (2000). A multimodal cognitive-behavioural approach to anger reduction in an occupational sample. *Journal of Occupational and Organizational Psychology*, 73(2), 181–194. doi:10.1348/096317900166976

Mental Health Foundation. (2008). *Problem anger and what we can do about it*. London: Mental Health Foundation.

Naeem, F., Clarke, I., & Kingdon, D. (2009). A randomized controlled trial to assess an anger management group programme. *The Cognitive Behaviour Therapist*, 2(01), 20. doi:10.1017/S1754470X08000123

Novaco, R. W. (1975). *Anger Control: the development of an experimental treatment*. Lexington, MA, BC, Heath: Lexington Books.

Novaco, R. W. (1978). Anger and coping with stress. In J. P. Foreyt & D. P. Rathjen (Eds.), *Cognitive Behavior Therapy* (pp. 135–173). US: Springer.

Novaco, R. W. (1993). *Stress inoculation therapy for anger control: A manual for therapists*. University of California, Irvine: Unpublished Manuscript.

Novaco, R. W. (1994). Anger as a Risk Factor for Violence Among the Mentally Disordered. In M. J & H. J. Steadman (Eds.), *Violence and Mental Disorder: Developments in Risk Assessment*. Chicago: University of Chicago Press.

[Swift, N.](https://kclpure.kcl.ac.uk/portal/en/persons/naomi-swift%288a2d7464-5297-4ee2-b188-cacf4d88896d%29.html), [Stewart, R.](https://kclpure.kcl.ac.uk/portal/robert.stewart.html), [Andiappan, M.](https://kclpure.kcl.ac.uk/portal/en/persons/manoharan-andiappan%28a6f9a7b8-63ae-4ef8-80d9-05134227ce7f%29.html), [Smith, A.](https://kclpure.kcl.ac.uk/portal/anna.2.smith.html), Espie, C. A. & [Brown, J.](https://kclpure.kcl.ac.uk/portal/june.brown.html) (2012). [The effectiveness of community day-long CBT-I workshops for participants with insomnia symptoms: a randomised controlled trial](https://kclpure.kcl.ac.uk/portal/en/publications/the-effectiveness-of-community-daylong-cbti-workshops-for-participants-with-insomnia-symptoms-a-randomised-controlled-trial%28489ae749-160c-4096-a8b6-61754be19981%29.html). [*Journal of Sleep Research*](https://kclpure.kcl.ac.uk/portal/en/journals/journal-of-sleep-research%28a47f3b0c-f261-4867-890b-fc8b8be55bef%29.html), 21(3), 270-280.

Saini, M. (2009). A meta-analysis of the psychological treatment of anger: developing guidelines for evidence-based practice. *The Journal of the American Academy of Psychiatry and the Law*, 37(4), 473–88.

Spielberger, C. D. (1999). *The State-Trait Anger Expression Inventory-2 (STAXI-2): Professional Manual*. Odessa, FL: Psychological Assessment Resources, Inc.

Tafrate, R. C. (1995). Evaluation of treatment strategies for adult anger disorders. In H. Kassinove (Ed.), *Anger disorders: Definition, diagnosis, and treatment*. (pp. 109–129). Philadelphia, PA, US: Taylor & Francis.

Williams, J. E., Paton, C. C., Siegler, I. C., Eigenbrodt, M. L., Nieto, F. J., & Tyroler, H. A. (2000). Anger Proneness Predicts Coronary Heart Disease Risk : Prospective Analysis From the Atherosclerosis Risk In Communities (ARIC) Study, *Circulation*, 101(17), 2034–2039. doi:10.1161/01.CIR.101.17.2034

1. The UK IAPT service model operates with a stepped-care approach, whereby ‘low-intensity’ refers to therapeutic interventions such as bibliotherapy, psychoeducation and group work commonly offered to people scoring lower on standardised measures of psychopathology. Individual face-to-face CBT tends to be provided in more severe cases and represents ‘high-intensity’ within this model. [↑](#footnote-ref-1)