

Anger Management Group for Persons With Dual Diagnosis: A Pilot Study

Jessica Jones, Patricia Minnes, Janice Elms, Laura Paret, and Tania Vilela

Abstract

The current study evaluates the effectiveness of a community anger management group for individuals with dual diagnosis, a developmental disability and psychiatric disorder. Ten individuals who demonstrated difficulties in inappropriate anger expression and anger management participated. Caregivers were also encouraged to attend the group. Sessions were held over the course of 12 weeks and employed a modified cognitive-behavioural approach. Following treatment, assessments of anger disposition and control were available for nine clients and five carers. Both participants and caregivers reported a marginally significant decrease in client's anger behaviours, and a substantial improvement in client's anger regulation. Although results should be interpreted cautiously, the findings suggest that an anger management group may be an effective intervention for individuals with dual diagnosis.

Anger problems and aggressive behaviours in individuals with developmental disabilities have long been recognized as a challenge for clinicians, professionals and researchers within the field. The prevalence of maladaptive behaviour and anger difficulties in individuals with dual diagnosis, a psychiatric condition and a developmental disability, has been well documented (Atkinson, Feldman, McNamara, Uhlin, Niccols, & Leiserson, 1994; Bouras & Drummond, 1992; Cowley, Holt, Bouras, Sturmey, Newton, & Costello, 2004; Offord, Boyle, Campbell, Goering, & Wong, 1996; Yu & Atkinson, 1993). In a systematic literature review, Yu and Atkinson concluded that 38% of individuals with an intellectual disability also had another mental disorder. In a large study of 2202 individuals with dual diagnosis, Smith and colleagues (Smith, Branford, Collacott, Cooper, & McGrother, 1996) found 60% of individuals exhibited at least one behaviour problem and in 40% of these the problem was of severe or frequent occurrence. The authors found

that aggression, as a maladaptive behaviour response, was significantly related to anger disposition and dyscontrol in this population.

Rates of aggression and inappropriately expressed anger have been found to be high in individuals with developmental disabilities, such that aggression has been shown to be the primary reason for admission and re-admission to institutional settings and for prescription of behavioural control drugs (Taylor, 2002). Deficits in anger regulation have been found to be among the core elements of behaviour problems in people with dual diagnosis (Black, Cullen, & Novaco, 1997), and often have a negative impact on their educational, vocational, residential, and social functioning (Black & Novaco, 1993). Anger difficulties can also result in significant problems for hospital staff and service providers, such as increased risk of injury, increased financial cost (e.g., workers' compensation claims), decreased job satisfaction, and high employee turnover (Taylor, Novaco, Gillmer, & Thorne, 2004).

Early studies highlighted the success of drawing upon mainstream cognitive behavioural approaches used with other clinical populations and applying them to individuals with developmental disabilities (Benson, 1994; Black & Novaco, 1993). Modified treatment interventions based on the theoretical underpinnings of Novaco's model of anger (Novaco, 1976) were found beneficial in numerous case studies and clinical groups (Benson, Johnson-Rice, & Miranti, 1986; Murphy & Clare, 1991; Rose, 1996). Treatment efficacy, however, was equivocal due to lack of treatment follow-up or comparison groups. Since that time, research employing randomization to different treatment conditions, has demonstrated significant, yet modest, gains in anger management relative to controls (Lindsay, Overend, Allan, Williams, & Black, 1998; Rose, West, & Clifford, 2000; Taylor, Novaco, Gillmer, & Thorne, 2002; Willner, Jones, Tams, & Green, 2002). However, this research has also been criticized for differing sample characteristics and methodological flaws of design and measurement inconsistencies. The study described in this paper is therefore novel in its attempt to investigate the effectiveness of an anger management group treatment in a community-based dual diagnosis population.

The objectives of this study were to:

1. Implement and evaluate the effectiveness of a community based anger treatment group for individuals with dual diagnosis who have difficulties with inappropriate anger expression and anger management.

2. Educate individuals with dual diagnosis about anger profiles and teach ways to reduce verbal and/or physical aggression.
3. Teach individuals with dual diagnosis self-control, coping strategies and arousal reduction skills that enable them to manage anger-provoking situations in socially acceptable ways.
4. Evaluate carer's perceptions of individual's anger and the effectiveness of group treatment in reducing anger and aggression within their daily lives.

Method

Participants

The participants were 10 clients who were referred to a dual diagnosis mental health clinic for problems with anger and behaviour difficulties. Eligibility criteria for the group included 1) either professional or caregiver historical reports of inappropriately expressed anger, 2) identified dual diagnosis, 3) some expressive language ability, 4) ability to attend and complete the initial assessment package with an interviewer, and 5) consent to attend the group by themselves or preferably with an identified caregiver. Participants (4 males, 6 females) ranged in age from 16-41 ($M=23.1$, $SD=7.6$) and divided into two main age groups, 16-19 and 20-30, with one outlier at 41 years of age. From referral information, clients were all in the mild to moderate range of developmental disability and had a range of psychiatric diagnoses, not mutually exclusive, including behaviour disorder ($n=5$), impulse control disorder ($n=1$), anxiety disorder ($n=2$), PTSD ($n=2$), affective disorder ($n=5$), ADHD ($n=2$), autism spectrum disorder ($n=1$), adjustment disorder ($n=1$), and attachment disorder ($n=1$).

Four participants lived in their family home, three lived in a group home environment, two lived in a foster or family support home, and one lived alone. Caregiver group attendees were either community support workers or residential agency staff.

Participants on average attended 10.1 of the 12 sessions with three attending all 12 sessions and only one attending less than nine. Three participants chose to not have caregivers present; the remaining seven caregivers attended an average of 6.6 sessions with two attending every session, although there was substantial variability in caregiver continuity for group attendance.

Measures

Participants were assessed using the Novaco Anger Scale and Provocation Inventory (NAS-PI, Novaco, 2003), a measure of anger disposition, control and provocation. The measure is a two-part questionnaire involving 60 items rated on a Likert-type scale that describe the psychological, behavioural and physiological aspects of anger. The first section or NAS yields 5 scores of Total Anger, Cognitive, Arousal, Behavioral, and Anger Regulation while the second section, or PI, consists of 25 situations that may lead to anger expression.

The Cognitive Subscale measures hostile thoughts and attitudes (e.g., "I know that people are talking about me behind my back"), the Arousal subscale measures the physiological activation of anger (e.g., "My muscles feel tight and wound-up"), the Behavioral subscale measures overt expressions of anger ("When someone yells at me, I yell back at them"), and the Anger Regulation subscale measures the ability to control anger (e.g., "If I feel myself getting angry, I can calm myself down").

Procedure

Participants were given the NAS-PI, on average, one week before commencement of group treatment. Two hour treatment sessions ran for 12 sequential weeks with post treatment NAS-PI scores obtained within, on average, one month following group completion. Clients requiring reading assistance were read the standardized instructions from the protocol, with modifications made as necessary to aid comprehension.

Group sessions were scheduled at the same venue and time each week to aid group attendance and familiarity of the therapeutic environment. There were four group leaders: three experienced clinicians (one psychologist, one psychometrist and one social worker) and one psychology doctoral student. Groups were always conducted with at least one group leader and two facilitators. This high staff:client ratio allowed for group cohesiveness and structure, and at the same time allowed flexibility for difficulties to be dealt with outside the group to maintain safety and confidentiality.

Group Content

Treatment sessions employed a modified cognitive-behavioural approach that was based on Novaco's model (1976) involving the three components of anger: physiological, cognitive and behavioural. The group format

comprised three sequential phases of education, skill-acquisition and behavioural rehearsal. Treatment and management strategies included cognitive restructuring, behavioural skills training and arousal reduction. To emphasize treatment gains and personalize goals, clients and caregivers were given homework assignments between sessions. Caregivers were then involved whenever possible to discuss homework assignments within the group. Homework consisted of completing "hassle logs" to identify individual anger profiles and analyse incidents for reoccurring triggers or maintaining factors.

Each session involved group review and knowledge introduction before a break; followed by teaching coping strategies, skill acquisition and homework analysis followed by relaxation techniques. Sessional themes sequentially addressed: emotion identification, definitions of anger and aggression, individual anger profiles, behavioural and cognitive coping strategies (e.g., visual imagery, thought stopping, cognitive rehearsal and redirection), differentiating aggressiveness, assertiveness and passiveness, skill building (e.g., ways of handling anger-provoking situations through pro-social behaviour), and arousal reduction through progressive relaxation and visual imagery.

Results

Despite full attendance, one participant did not complete a post assessment, resulting in an assessment treatment group of nine individuals. Similarly, only five complete pre and post caregiver assessments were available. Caregivers who completed assessments included parents, support workers, and agency staff.

Data were statistically analyzed using SPSS, for clients and caregivers separately. As sample size was small, paired t-tests were conducted on the total anger (NAS), regulation and provocation inventory (PI) scores. Given the directional hypothesis that total anger would decrease and anger regulation would increase, one-tailed tests were used. To determine which of the three sub-components of total NAS (i.e. cognitive, behavioural, or arousal) changed following treatment, paired t-tests were also conducted. Participant and caregiver ratings of total anger (NAS) did not significantly decrease after treatment, nor did their reports on anger provocation (see Table 1). However, there was a marginally significant decrease in clients' self-rated anger behaviours (Behaviour Subscale) from pre-treatment ($M=61.33$, $SD=7.97$) to post-treatment ($M=57.44$, $SD=5.10$), $t(8)=1.74$, $p=.06$. In a similar way, caregivers also reported a marginally significant decrease

in angry behaviours from pre- ($M=65.60$, $SD=5.64$) to post- ($M=59.20$, $SD=6.87$) treatment, $t(4)=1.79$, $p=.07$ (see Table 2).

Table 1. Mean participant NAS-PI T-scores pre- and post-treatment (n=9)

	Pre-treatment		Post-treatment	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>NAS total</i>	63.78	9.54	61.11	5.99
<i>Cognitive Subscale</i>	60.56	13.11	61.44	9.71
<i>Arousal Subscale</i>	64.67	8.43	63.00	8.50
<i>Behaviour Subscale</i>	61.33	7.97	57.44	5.10
<i>Anger Regulation Subscale</i>	47.00	8.47	52.78	15.01
<i>Provocation Inventory</i>	53.00	9.35	53.33	6.98

Table 2. Mean carer-rating NAS-PI T-scores pre- and post-treatment (n=5)

	Pre-treatment		Post-treatment	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>NAS total</i>	64.60	7.77	58.60	11.84
<i>Cognitive Subscale</i>	58.60	9.84	55.80	14.60
<i>Arousal Subscale</i>	61.20	6.22	57.20	9.65
<i>Behaviour Subscale</i>	65.60	5.64	59.20	6.87
<i>Anger Regulation Subscale</i>	35.40	7.23	39.00	7.31
<i>Provocation Inventory</i>	47.00	8.06	48.40	4.83

Participants reported a marginally significant increase in their anger regulation skills (Anger Regulation Subscale) from pre ($M=47.00$, $SD=8.47$) to post-treatment ($M=52.8$, $SD=15.01$), $t(8)=-1.66$, $p=.07$. Similarly, caregivers also reported a significant increase in perceived participants' ability to regulate their anger from pre ($M=35.40$, $SD=7.23$) to post-treatment ($M=39.00$, $SD=7.31$), $t(4)=-5.31$, $p=.003$.

Given the potential for statistical bias due to the small sample size, it was decided to further investigate the clinical significance and treatment responsiveness of these findings as described by Jacobson and Truax (1991). Similar to Taylor et al. (2005), the proportion of participants who improved

post treatment by at least one standard deviation of the mean pre-treatment scores was deemed as a meaningful change. Interestingly, of the participants who improved with treatment, 50% improved by more than one standard deviation of the pre scores on total anger (NAS) and anger behaviours. One third of participants improved by more than one standard deviation on scales of arousal and provocation. Additionally, for the cognition scale, 66% of participants improved by more than one standard deviation from the pre-treatment mean, and 83% had anger regulation scores that improved substantially from pre-treatment.

The wide age range of participants suggested an additional analysis to test for age effects, but none were found.

Discussion

Despite the need for cautious interpretation, the results of this pilot study are encouraging. Following treatment, both caregivers and participants perceived some improvements in individual anger difficulties after attending the anger management group. Although total anger or provocation scores did not drop significantly, specific underlying components of anger improved. Both participants and caregivers reported improved anger control and reduced expression of anger behaviours following group treatment.

The anger management sessions in the current study were comprised of several interventions and therapeutic elements, and therefore it remains unclear which specific components of the anger treatment or management program were necessary for successful treatment, or whether all of the components in combination were required. Indeed the additional dynamics of group treatment itself may have played a significant role in efficacy. For example, Benson showed that individuals who were treated by group relaxation alone improved as much as those who were treated with a multi-modal anger management group (Benson, Johnson-Rice, & Miranti, 1986). In addition, Rose, West, and Clifford (2000) found that behavioural strategies alone were at least as effective as cognitive restructuring techniques, although their client population had lower levels of overall functioning. Rose et al. (2000) suggested that caregiver influence and contextual contributions play a significant role in overall treatment efficacy, and this may have been seen in the supportive caregiver results in this study.

Further research is needed with a larger sample, especially with a view to delineating which elements of a cognitive-behavioural approach in a group treatment program are the most beneficial for individuals with dual

diagnosis. Still, the results show promise in treating anger management difficulties for individuals with dual diagnosis using a relatively brief and efficacious group intervention.

References

- Atkinson, L., Feldman, M. A., McNamara, A., Uhlin, L., Niccols, A., & Leiserson, V. (1994). *Survey of aberrant behaviour and its treatment in persons with intellectual disabilities in Ontario*. Toronto, ON: Ontario Mental Health Foundation.
- Benson, B. (1994). Anger management training: A self control program for people with mild mental retardation. In N. Bouras (Ed.), *Mental Health in Mental Retardation* (pp. 224-232). Cambridge: Cambridge University Press.
- Benson, B., Johnson-Rice, C., & Miranti, S. V. (1986). Effects of anger management training with mentally retarded adults in group treatment. *Journal of Consulting and Clinical Psychology, 54*, 728-729.
- Black, L., Cullen, C. & Novaco, R. W. (1997). Anger assessment for people with mild learning disabilities in secure settings. In B. Stenfert Kroese, D. Dagnan, & K. Loumidis (Eds.), *Cognitive-behaviour therapy for people with learning disabilities* (pp. 33-52). London: Routledge.
- Black, L., & Novaco, R. W. (1993). Treatment of anger with a developmentally handicapped man. In R. A. Wells, and V. J. Giannetti (Eds.) *Casebook of the brief psychotherapies* (pp. 143-158). New York: Plenum Pub. Corp.
- Bouras, N., & Drummond, C. (1992). Behaviour and psychiatric disorders of people with mental handicaps living in the community. *Journal of Intellectual Disability Research, 36*(4), 349-357.
- Cowley, A., Holt, G., Bouras, N., Sturme, P., Newton, J., & Costello, H. (2004). Descriptive psychopathology in people with mental retardation. *Journal of Nervous and Mental Disease, 192*(3), 232-237.
- Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology, 59*, 12-19.
- Lindsay, W. R., Overend, H., Allan, R., Williams, C., & Black, L. (1998). Using specific approaches for individual problems in the management of anger and aggression. *British Journal of Learning Disabilities, 26*, 44-50.
- Murphy, G., & Clare, I. (1991). MIETS: A service option for people with mild mental handicaps and challenging behaviour or psychiatric problems: II. Assessment, treatment, and outcome for service users and service effectiveness. *Mental Handicap Research, 4*(2), 180-206.
- Novaco, R. W. (2003). *The Novaco anger scale and provocation inventory (NAS-PI)*. Los Angeles: Western Psychological Services.
- Novaco, R. W. (1976). The functions and regulation of the arousal of anger. *American Journal of Psychiatry, 133*, 1124-1128.

- Offord, D. R., Boyle, M. H., Campbell, D., Gocring, P., Lin, E., & Wong, M. (1996). One year prevalence of psychiatric disorder in Ontarians 15 to 64 years of age. *Canadian Journal of Psychiatry, 41*, 559-563.
- Rose, J. (1996). Anger management: A group treatment program for people with mental retardation. *Journal of Developmental and Physical Disabilities, 8*(2), 133-150.
- Rose, J., West, C., & Clifford, D. (2000). Group interventions for anger in people with intellectual disabilities. *Research in Developmental Disabilities, 21*, 171-181.
- Smith, S., Branford, D., Collacott, R. A., Cooper, S. A., & McGrother, C. (1996). Prevalence and cluster typology of maladaptive behaviours in a geographically defined population of adults with learning disabilities. *British Journal of Psychiatry, 169*, 219-227.
- Taylor, J. L. (2002). A review of the assessment and treatment of anger and aggression in offenders with intellectual disability. *Journal of Intellectual Disability Research, 46*(1), 57-73.
- Taylor, J. L., Novaco, R.W., Gillmer, B., & Thorne, I., (2004). Assessment of anger and aggression in male offenders with developmental disabilities. *Psychological Assessment, 16*, 42-50.
- Taylor, J. L., Novaco, R. W., Gillmer, B., & Thorne, I. (2002). Cognitive-behavioural treatment of anger intensity among offenders with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities, 15*, 151-165.
- Taylor, J. L., Novaco, R. W., Gillmer, B., Robertson, A., & Thorne, I. (2005). Individual cognitive-behavioural anger treatment for people with mild-borderline intellectual disabilities and histories of aggression: A controlled trial. *British Journal of Clinical Psychology, 44*, 367-382.
- Willner, P., Jones, J., Tams, R., & Green, G. (2002). A randomized controlled trial of the efficacy of a cognitive-behavioural anger management group for clients with learning disabilities. *Journal of Applied Research in Intellectual Disabilities, 15*, 224-235.
- Yu, D., & Atkinson, L. (1993). Intellectual disability with and without psychiatric involvement: Prevalence estimates for Ontario. *Journal on Intellectual Disabilities, 2*, 92-99.

Correspondence

Jessica Jones
Queen's University
Division of Developmental Disabilities
c/o 191 Portsmouth Ave.
Kingston, Ontario
K7M 8A6

jonesj@post.queensu.ca